Marko Peljhan

HERE WE GO AGAIN...*system 317*

a situation of the Resolution series

EXHIBITION CATALOGUE

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EXHIBITION CATALOGUE

The X-43A/Pegasus combination dropped into
the Pacific Ocean after losing control
early in the first free-flight attempt.
Photo: Jim Ross

Mach 7 wind tunnel test of the full-scale
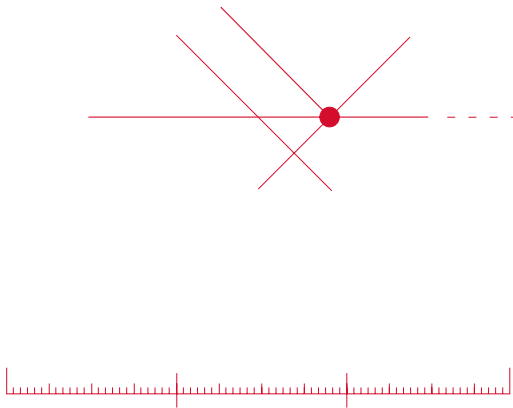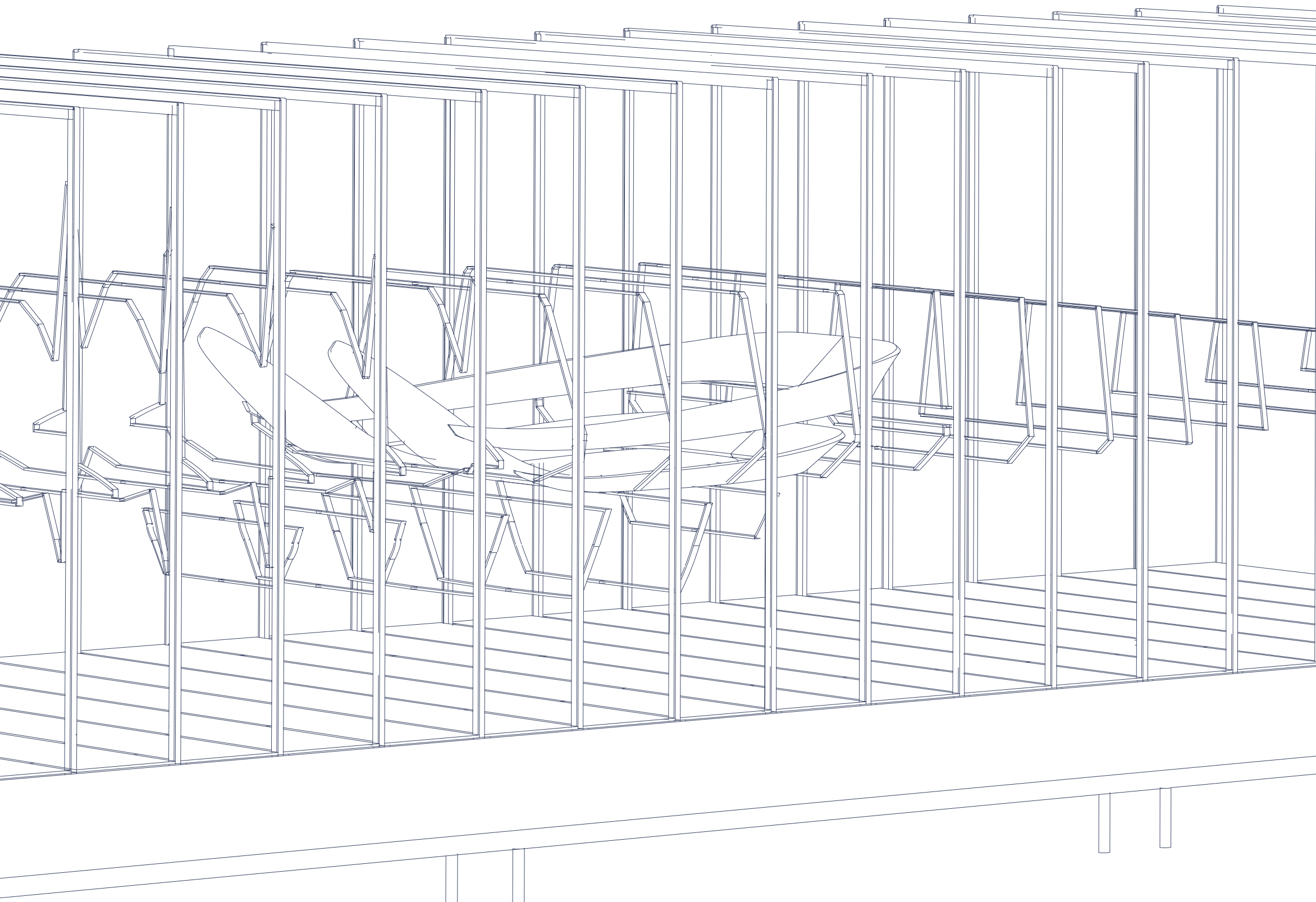X-43A model with spare flight engine in
Langley's 8-Foot High Temperature Tunnel.
Photo: Jeff Caplan/NASA Langley

Foreword

The beginnings of Marko Peljhan's artistic career coincide with the accelerated processes of globalization and computerization of the world and, on a local level, with the breakup of Yugoslavia, the war in the Balkans, and Slovenia's independence. With the latter, Moderna galerija became the principal national institution of modern and contemporary art, and, by focusing on pluralizing narratives, an increasingly active link between the local and international contexts. In contrast to its earlier decades, Moderna galerija developed an interest in the current moment, which involved a different, but no less responsible, addressing of the past. In the 1990s, the museum thus realized a series of important projects, many of them pivotal for the development of contemporary art in Slovenia, and often involving the prominent participation of Marko Peljhan.

At that time, Moderna galerija entered into partnership with a number of NGO art spaces with specific program profiles, ranging from more or less established galleries to media centers and institutions founded and run by artists. The rapid transition to capitalism opened the questions of (self-) financing, sponsorship and

sustainability. An early programmatic series of works by Marko Peljhan, *Egorhythms*, realized in Moderna galerija in 1992, brought to the fore an unusual, but possible relation between activist subversion and institutional backing. Amidst the turmoil and uncertainty of the transition to capitalism, at a time when business had already begun to exert a decisive influence on the development of culture and communication in the newly independent country, Peljhan called for a public debate between artists and business people as a conclusion to his series of performances.

The war in the former Yugoslavia confronted us, very directly, with the question of how a museum should react and what it could do in such a situation. In 1994, Moderna galerija initiated the project of framing a museum of solidarity for Sarajevo. The proximity of the war and the experiences of the refugees from the regions of the former Yugoslavia, which brought the issues of dislocation and exile home in a painfully concrete and radical way, left an indelible mark on Marko Peljhan's subsequent career and continue to resonate in his art in a variety of ways to this day.

I invited Peljhan to take part in Moderna galerija's *The Sense of Order* exhibition in 1996 with his work *Terminal*, which tracked in real time large transport airplanes flying over the territory of Slovenia on their way to destinations in Croatia and Bosnia and Herzegovina. Then, in 1998, in the *Body and the East* exhibition, which was also staged at Moderna galerija, the performative aspect of Peljhan's installations was foregrounded.

Also in 1998, Peljhan had a solo presentation at the Mala galerija, Moderna galerija's project space at the time, showing *System-7*, the first work in the then new *Resolution* series, which centrally challenges the strategic and tactical relations in society, the systems of social exchange and communication codes. The installation was conceived as an integral situation, confronting viewers with an allegorical installation of the artist and his collaborators in Projekt Atol.

The time since has seen an impressive progression from *Makrolab* to the Artic Perspective Initiative, which was also the subtitle of Peljhan's survey exhibition *Coded Utopia*, staged in collaboration with Matthew Biederman at Moderna galerija in 2011. It is certainly no coincidence that the work presented at this year's Venice Biennale is also part of the *Resolution* series. The war in the Balkans in the early 1990s marked the beginning of our contemporaneity, and the rupture with socialism was also a rupture with the temporal order of modernity and the beginning of contemporaneity. Twenty years ago, at the start of the *Resolution* series, visitors to Mala galerija could see an image of a time that had been and would be, and heard the sound of a time already gone. Today, we still live amidst conflicts and wars, with new ruptures imminent, and in need of defining the time after contemporaneity.

I would like to thank all who have participated in the realization of this demanding project. My special thanks go to Marko Peljhan, to curator Igor Španjol, to project coordinator Marko Rusjan, to the teams from Zavod Projekt Atol, Trošt&Krapež architectural firm, and the Šum journal, to my colleagues at Moderna galerija, and to Atej Tutta. A thank-you also to the authors of the texts in the catalogue and to Teja Merhar for the artist's bibliography.

Zdenka Badovinac
COMMISSIONER

Introduction

At the symposium "Living with Genocide", which Moderna galerija organized in 1996 as a response to the wars in the Balkans and the genocide against the Bosnian Muslims, Peter Weibel made the following statement: "We must recognize that in our century it has been just this kind of strong identification that has created war by creating the Other. Art therefore produced, as Freud called it, *Gefühlsbindung*, these emotional bonds between group members. Art is not against war. Only art which opposes identification processes, which does not produce *Gefühlsbindung*, which does not produce emotional bonds, is against war, against violence. The very fact that we have the German Neo-Expressionist movement, which wanted to have those kind of the same emblematic idioms, shows this is not an art which can say of itself that it is against war. In fact we could say this is an art that repeats the structure of civilization which produces war. I do not want to say that these people are in favor of war – they would probably sign any declaration against war – but this is a helpless mistake. The art they produce is a part of the system which can create war at any moment. Therefore de-identification, de-emotionalization and de-sublimation are today's strategies against war."[1]

One of Marko Peljhan's early large performance pieces, *Rhythmical Scenic Structure Atol*, was concerned with war. It ended with a repeated photo sequence of a Serbian policeman executing a Muslim inhabitant of the town of Brčko during the war in Bosnia. Peljhan explained that the work was staged "in the spring of 1993, which was not even a year after the war in Bosnia started, and it was all about the war. What was very interesting and frustrating here in Ljubljana was that nobody noticed it. There was a complete misunderstanding."[2]

The war in Yugoslavia was present also in Peljhan's *System-17*, based on a found object – a board with a tourist map from the surroundings of Dubrovnik. The holes in the board were traces of the fights during the siege of the city. In this simple object, different systems and their conflicts were present in a material, condensed way: the economy, tourist industry, history, mythology, nationalism, violence, cartography, forensics and war. It seems as if the bullets had written a new topography over the usual one – a topography of the real intruding on the "unreal" world into which the tourist industry had changed the ancient city and its beautiful surroundings. The holes were like forensic marks of the sites of real destruction and damage in the city and landscape.

1. "Living with Genocide: Art and the War in Bosnia", *M'Ars: Časopis Moderne galerije* [The Journal of the Moderna galerija] 11, nos. 1–2 [1999]: p. 56.

2. Hans Ulrich Obrist, "The Importance of Communication: Marko Peljhan's Concrete Utopias", http://www.artnode.se/artorbit/issue3/i_peljhan/i_peljhan.html

In 1995, Peljhan wrote a text, instrumental for the understanding of his work, entitled "The Art of Intelligence and the Art of War Making". In it, he explained the principle of conversion, of how military technology could be used for civilian purposes. The text was triggered by his experience while working on the *UCOG-144* project (UCOG stands for Urban Colonization and Orientation Gear). The project's research process consisted of the communication with the military-industrial complex and the collectioj of documents related to it. Peljhan started writing letters to defense industry corporations, requesting information on what they were producing and selling. To his surprise, mail started pouring in, and as a result, there was a shift in his working and research strategy.

UCOG-144 is also part of the *Resolution* series, in which Peljhan explores the tactical contents of modern society using the system of art, and more specifically, of representation which attaches to art as a realm for the presentation and promotion of ideas, concepts, and specific solutions. Another work from the *Resolution* series, a mixed media installation entitled *System-7* (1998), was based on a group portrait of the collaborators in Projekt Atol, the organization Peljhan established as the production framework for his endeavors. The image is deliberately theatrical and constructed: the artist and his collaborators pose holding weapons, like contemporary urban guerillas. Above them, an inscription asks: "Would you trust these people?" One can understand the work as a self-ironic questioning of the possibilities of a subversive and activist attitude in arts; on the other hand, one could connect it to the fact that Peljhan deliberately uses theatrical means for his strategies of resistance.

Peljhan's new work from the *Resolution* series, Here we go again...*System 317*, seems to repeat the same basic structure of his *Makrolab* project, which was designed as an autonomous nomadic unit for prolonged existence in isolated environments, where it could withstand extreme natural conditions. *Makrolab* had three basic structural dimensions – analytical, processual and performative – and made use of scientific and technological tools, knowledge and systems, projecting them in the social domain of art. Its first prototype *Mark I* was presented at *documenta X* in 1997. Afterwards, *Makrolab* made many nomadic moves: to Australia in 2000, Scotland in 2002, and, as a working station in the form of the *Mark IIex*, to the Campalto island in the Venice lagoon during the 2003 Biennale Arte. The next stage of the project is a long term art and scientific research activity in the Arctic, continuing to this day in collaboration with Inuit tactical-media workers, artists and hunters.

In the proposal for *Here we go again...System 317*, an autonomous micro-political vision of the contemporary geopolitical condition gave rise to a structure that is integrated in the global currents through escape. This scenario corresponds to the original *Makrolab* situation in a new context, and follows the proposition that individuals in limited spatial conditions produce a more evolutionary code than massive social movements. In today's world, war is happening somewhere all the time, and it affects other places too. Since contemporary time is actually war time, it is important that Peljhan's utopian response once again opens other possible uses of technology and parallel visions of our time.

Igor Španjol
CURATOR
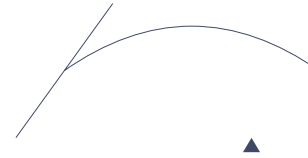
Scratching the Sky. Five footnotes to Marko Peljhan's *Here we go again... System 317*

ANDREAS BROECKMANN

The ambitions and expectations associated with Marko Peljhan's *Here we go again . . . System 317* are anything but clear: is this proposal for a hypersonic propulsion vehicle a piece of tactical technical resistance, or research on behalf of the military industrial complex? Or is it an elaborately realised metaphor for the futility of any technoscientific hope of salvation – a hope that is futile even for the less than 0.01 per cent, who are the presumed customers of the product?

Such ambiguity of aims and intentions has been an essential part of Peljhan's artistic work – from the locative media project *UCOG 144* (1995), through the long-term *Makrolab* endeavour (1997–2010), to the unmanned aerial vehicle of *System 77-CCR* (2004–2007) and the new *System 317*. All these projects appear to have technical and political traction well outside of the art world contexts in which they are publicly presented and perceived. The unease that accompanies this observation is calculated: what is it we are looking at – sculpture, installation, a form of circulationism (in Kolja Reichert's sense of diverse materials, objects and money being circulated into and out of the art world), or military-grade technology? An important dimension of Peljhan's work lies in provoking the shock of this last confrontation: importing potential weapon systems into an only superficially benign art context and thus opening it up – no, tearing open the curtain that keeps the one from seeing the other. The theatricality of this violent gesture is intended: it is part of Peljhan's play on the different registers of his techno-aesthetic instruments. (And a romantic art aficionado may hope that a similar irritation can also be carried into the research and development circles of the military industrial complex, where these issues are looked at as technical and political, rather than aesthetic and ethical, challenges.)

What follows is a series of historical references that probe how Marko Peljhan's project responds to certain conceptual questions from the modernist and the postmodernist avant-garde. Peljhan has consistently placed his practice within the tradition of overcoming the boundaries between art, politics and technology – what in the more benign parlance of art criticism is referred to as "art and life".

1. TECHNICITY AND THE LANGUAGE OF THE STARS

The Russian Futurist poet Velimir Khlebnikov (1885–1922) has been an important inspiration for Marko Peljhan ever since the early 1990s – as Khlebnikov was for many revolutionary avant-gardists, including Mayakovsky and Tatlin, who mourned the early death of their visionary comrade as an incalculable loss. In his writings, Khlebnikov developed a poetic system he termed the "language of the stars", in which letters and syllables in the Russian language were ascribed certain meanings. In the words and sentences of his poems, such as *Ladomir* (1919) and *Scratch Across the Sky* (*Tsarapina po nebu*, 1920), these meanings combined into a meta-semantics that, for Khlebnikov, pointed to the true mechanics of the material world. Similarly, Khlebnikov was fascinated by numbers and sought to discover the laws of time, elaborately and exhaustively trying to ascertain number-based rules for the incidence of historical events.

What is it that makes Marko Peljhan's artistic practice – which at first glance seems so much closer to the pragmatic Productivism of someone like Varvara Stepanova or Vladimir Tatlin – resonate with this somewhat esoteric poetic combinatorics? When Peljhan presented the *Makrolab* at documenta X in 1997, he dedicated a significant part of his lecture to an analysis of the work's title as read through the lens of Khlebnikov's language of the stars. Peljhan's installation *LADOMIR AB 7th SURFACE* (2008) translated Khlebnikov's "tables of destiny" into a three-dimensional hyperobject that superimposed the aims of the *Makrolab* onto Khlebnikov's historical speculations. The number 317 – which we now encounter in the title *Here we go again . . . System 317* – was of crucial significance for Khlebnikov, who was convinced that the occurrence of important events could, with certainty, be related to this number or its multiples, thus allowing for predictions of the future course of history.

This elective affinity between Peljhan and Khlebnikov is rooted, we can presume, in the technicist conception of *poiesis*, which for Khlebnikov implied an automatism of meaning that resides in the materiality of language and signs. For Peljhan's aesthetics, this translates into a conviction about the poietic automatisms of visionary technologies. Where Khlebnikov combines words from everyday language with neologisms engendered by the language of the stars, Peljhan conceives techno-neo-logisms that are intended to construct – mechanically, inevitably, and reliably – a new, superior meaning from this techno-aesthetic practice. Hence, the proposal for the hypersonic propulsion vehicle of *System 317* can be taken as a conceptual gesture that seeks to make another "scratch across the sky".

2. THE TRIUMPH OF FAILURE

Vladimir Tatlin made two attempts at such "scratches across the sky": first the proposal for the *Monument to the Third International*, and then *Letatlin.* The *Monument*, designed in 1920 and planned as a gigantic 400-metre-high tower of steel and glass to commemorate the triumph of the Russian Revolution, became – even in its unrealised form, as drawings and scale models – a signature piece that represented the historic transgression of the old order and a monument to the vertiginous ambitions of the new one. Soon afterwards, in the early 1920s, Tatlin was working on a project for a flying apparatus whose wings would be operated by a person lying inside. The *Letatlin,* whose name is derived from the Russian verb *letat',* "to fly", but of course combines it with *Tatlin*, was meant to be a flying machine that was as affordable and easy to use as a bicycle.

In the literature about pioneers such as Daedalus, Leonardo da Vinci, or Otto Lilienthal, the "dream of flight" is often presumed to be a fundamental anthropological constant. Its motivation, however, should not be treated as an unchanging anthropological fact. Instead, its historically specific, pragmatic, and utopian potential should be investigated – not least in the case of Peljhan's project *Here we go again . . . System 317.*

In Tatlin's case, in light of the emerging military aircraft industry of the 1920s, we can assume that the rear-guard humanism of the *Letatlin,* its artisanal individualism, was part of the message the artist wanted to send. At the same time, the development of the *Letatlin* was supported during its crucial construction phase, from 1929 to 1932, by the pioneering Union of Societies of Assistance to Defence, Aviation and Chemical Construction of the USSR (OSOAVIAKhIM). The organisation's campaign sought to awaken enthusiasm for flying as well as popular support for the Soviet aviation industry. A 1934 poster advertising a plenum of the Communist Party featured a portrait of

Tatlin – alongside four other Soviet inventors with their militarily interesting technological projects – and a photo of the *Letatlin* with OSOAVIAKhIM activists, under the title "The Inventor – the Foremost Combatant for the Most Modern Technology in National Defence".

The photo in the poster had been taken on a sunny day during an air show near Moscow in 1933. We see the biomorphic aerial device, spanning ten metres and weighing around thirty-five kilograms, with its wings and fuselage covered in white fabric, being carried by several young men in pilot uniforms across a flat, freshly harvested field. There does not seem to be the remotest chance that this bird will fly that day, nor is there any indication of such an ambition, even if another photo taken the same day shows Tatlin demonstrating to a young activist how the wings should be moved to gain aerodynamic traction. In fact, there is no need for the device to fly to make its point: it is an imaginative model for a potential that is yet to be realised – utopian in the best sense of the word, namely, with a potential that will certainly not be fulfilled in the here-and-now of that field outside of Moscow but that is not impossible either.

That may well be the message that was heard. Tatlin was soon being politically attacked – for his artistic "formalism" and lack of commitment to the doctrine of Socialist Realism, and also for not being a proper artist but merely an engineer. After being forced into "self-criticism", he abandoned his Constructivist projects and went back to the painting practice he had put aside during the revolution. Thus, in the end, the *Letatlin* becomes a metaphor for the degree to which a social system is ready to recognise and cherish, or sanction and punish, the transgression of its ideological boundaries.

3. VACATING THE IMMOBILE BODY

The fragility of the human body is a major challenge for the fulfilment of *System 317*'s mission. For the time being it must be assumed that a human passenger's body will simply and swiftly die under the conditions of hypersonic propulsion.

A somewhat ironic proposal for a way to compensate for the human body's inability to adapt to certain technical environments was put forward by the Austrian artist-philosopher Oswald Wiener in the mid-1960s. Wiener developed the idea of the "Bio-Adapter", a device whose purpose is to fully contain a human body and gradually, over time, take over the body and mind of its inhabitant.

Wiener's 1966 text – presented as a fragment, or work in progress, in its first publication in 1969 – describes different functional and theoretical aspects of the Bio-Adapter, how it constructs certain experiences and how, for instance, it deals with unavoidable temporary failures. The description singles out certain experiences as conducive to adaptation, namely ecstasy – sexual ecstasy in particular, to the induction of which Wiener devotes an especially long and detailed section. The Bio-Adapter is described as a "happiness suit" (*Glücks-Anzug*) and likened to an artificial "uterus". It is there to counteract deficiencies both in the rapport between the human individual and its environment and in the psychic make-up of the human subject itself:

> It is its [the Bio-Adapter's] purpose to supersede the world. That means it will take over the heretofore inadequate function of the "existing environment" as transmitter and receiver of vital messages (nourishment and entertainment, metabolism and intellectual exchange), and will be more appropriate for its individualised task than was the so-called natural environment, which was common to "everybody" and which is now obsolete.

The following description of the deficient human being can stand in for an analysis of the physiological problems that the body would encounter when placed in the *System 317* passenger capsule. Wiener writes:

Outside of its adapter, the human being is an abandoned, nervously activated and miserably equipped lump of slime (in terms of language, logic, thinking power, sensory organs, tools), shaken by the fear of life and petrified by the fear of death. After putting on its bio-complement, the human becomes a sovereign entity which no longer needs to cope with the cosmos and its conquest because it now ranks distinctly higher than the cosmos in the hierarchy of possible valences.

The gradual adaptation of the human "bio-body" to the Bio-Adapter takes place in several phases. In the first phase, the Bio-Adapter simulates the living environment that the inhabitant is acquainted with, through a variety of visual, auditory and tactile interfaces. Gradually, in the second phase, the old body functions are taken over by the adapter and replaced by modules that can generate experiences much better suited to the wishes and desires of the inhabitant. "Mechanical aggregates become unnecessary and are dismantled by the adapter and converted, or transferred to storage (where the cell tissues of the bio-body are also kept)," Wiener writes, describing these processes as a "gradual absorbing of the cell organisation by the adapter's electronic circuit complexes". In this second phase of the adaptation, the goal is not simplification, but the improvement, complexity, and expansion of the consciousness of the inhabitant – who is alternatively referred to as the "patient", "inmate" or "bio-module".

Wiener's text is a fantasy about a fully cybernated human body – pushing to the limits ideas for a complete replacement of the natural living environment by a highly individualised and simulated virtual world. "Consciousness," the text says, "becomes the self of the environment." In the fiction of the Bio-Adapter, the data-processing machine enables an explosion of human consciousness – which itself is the limiting capsule – to the point where the cybernated, expanded consciousness becomes *self-contained.*

So far, the exit strategy of *System 317* assumes the integrity of the human body that inhabits it, but in view of the scenario of the Bio-Adapter we should consider whether technically more satisfying solutions for the vehicle could be found if human bodies were adapted, vacated, or left behind altogether.

4. IM-HABITABLE

When it comes to speculation about *System 317* as a living environment, we have a more benign and comfortably banal model in the form of the "sleeping cells" of the Japanese capsule hotels, which were first introduced in the late 1970s. These are bed-sized boxes one metre high, equipped with some technical amenities and air conditioning, and intended only for well-insulated transit between a late night out and morning coffee at the office.

One such cell was presented in the exhibition *Les Immatériaux* in Paris in 1985 as an example of how the combination of technical development and capitalist economics led to new spatial solutions with a deep impact on subjectivities. In the exhibition, it was presented under the title "Habitacle," a term that joins the function of housing with the passenger's cabin and pilot's cockpit – a functional unit for accommodation, travel, and control.

In his short text for the catalogue, the philosopher Jean-François Lyotard, who curated *Les Immatériaux*, expressed his concern about the reductive approach to the human inhabitant that is associated with the sleeping cell: "Decline of the habitat as place of identification and enjoyment, [and instead] appearance of environments designed for useful organic functions? A prosthetic habitat of a body deprived of any dimension other than functional? . . . Restorative sleep as the only issue taken into consideration."

A wordplay that Lyotard himself did not use but that is in line with his analysis of the neologism of the "immaterials" would be to say that the *habitacle* – and thus also the presumed passenger cabin of *System 317* – is "im-habitable". In Lyotard's understanding, the "immaterial" is not something non-material, or without any materiality, but rather indicates a polyvalent status between different forms and modes of existence – like the code of DNA or software-based texts and images: porous and translatable

signs. By analogy, the "im-habitable" passenger cabin would be a space that is, at the same time or different times, a living environment, a prison cell, a body prosthesis, and a body replacement unit. (And it is positioned at the horizon of human existence on Earth.)

For Lyotard, such a collapse of the modernist subject in an im-habitable capsular environment is the result of a technoscientific development in the course of which the ambitions for increased technological perfection lead to a destabilisation of the subject of this very modernity. The confrontation with the results of this modernist perfectionism, this "face-to-face" with the subjects' technoscientific other, leads to sorrow, *chagrin*, which Lyotard identifies as a constitutive sentiment of the postmodern condition. As the technoscientific project of modernity reaches its completion, this sorrow replaces the two-centuries-old modernist hope.

The proposition here is that we must conceive of *System 317* as a monument to this sorrow, similarly to the way Lyotard, in 1984, envisaged the exhibition *Les Immatériaux* as "a sort of work of mourning for modernity": "We must mourn for modernity, or at least certain aspects of modernity that today seem illusory or dangerous." To ensure the survival of its passengers, or rather, imhabitants, *System 317* will require a saturation of bodies, sensors, and data, an intimate fusion between mind, body and apparatus, that necessitates the surrender of control. Lyotard continues: "In this face-to-face relation to a universe that is his to dominate – a heroic relation, I would say – in order to make himself the master of it, man must become something else entirely: the human subject becomes no longer a subject but, I would say, one case among others, . . . just one case among the many multiple interactions that constitute the universe."

5. IN THE MUSEUM OF ACCIDENTS

The French architect and technology critic Paul Virilio once proposed the establishment of a "Museum of Accidents", which, for every period of technological development, would exhibit the respective concomitant accidents, such as the derailment of a locomotive, the crash of an automobile, or the meltdown of a nuclear power station. He wrote: "Each period of technological development, with its instruments and machines, brings its share of specialized accidents, thus revealing *en negatif* the scope of scientific thought." Virilio saw this idea not only as a contribution to the general awareness of the risks inherent in technological innovation, but also as a way to develop a more sober, detached attitude towards technical malfunction, which, according to Virilio, is not an aberration, but an aspect, an *accidens*, an accessory, to the more narrowly intended functionality of a technical system.

With this proposal in mind, we can ask what the accidents, the unintended accessories, of *System 317* could be. One could be the death of passengers due to physiological strain; another, the self-incineration of the device from frictional heat due to its high speed.

Yet another aspect of the system could be that it has nowhere to land, and thus nowhere to go . . . But such aimlessness, this utopian absence of any conceivable destination, is consistent with the awkward position the device holds in the theory of accidents: Virilio distinguishes between the "local" accident, which happens in a particular place, and the "global" or "integral" accident, which happens simultaneously at a global scale. This integral accident can be of a more technological type – like the infestation of a prolific virus in globally networked computers – or of an ecological type, where the deterioration of the natural environment in general, or, say, the progressive extermination of bees in particular, results from a mixture of sustained technical, chemical, climatic and behavioural factors. "The post-industrial accident . . . goes beyond a certain place; you may say that it does no longer 'take place', but becomes an environment." The fatal paradox of *System 317* is that it assumes an isolated, "local" solution for an escape from an integral and global crisis situation.

POSTSCRIPT

In a text from 2003, Marko Peljhan tells the story of the scene which generated the first concrete ideas for the *Makrolab*. On a late-winter day in 1994, Peljhan and some friends were on the Croatian island of Krk, observing the barren landscape, listening to the sound of shelling coming from the Bosnian city of Bihać, a hundred kilometres away, and seeing airplanes in the sky above, on reconnaissance or humanitarian relief missions. As Peljhan writes: "The visible and the invisible merge into an extensive landscape, the past and the future converge, the machines of construction and destruction working in unison." The discussion among the group of artist friends was about how to respond to the Yugoslav calamity and what a performance art of the future might be. Peljhan, twenty-five years old at the time, thought of Velimir Khlebnikov, who himself was in his early thirties when another world went down in ruins during the First World War. Khlebnikov's utopian poem *Ladomir* – whose "principal preoccupation [. . .] is the destruction of the old order and synthesis of the new" – merged in Peljhan's mind with the scene on Krk to create the vision of a technoid vehicle that in 1997 would become *Makrolab*.

More than twenty years later, the payload of *System 317* appears more burdensome, its launch pads and interfaces furrowed by sorrow. Maybe the new avant-garde of futurist birds will have to be flightless and earthbound.

For Alex Adriaansens, pilot of instability.

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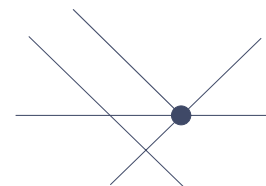
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War in a Mousetrap: *System 317*

EDA ČUFER

SKYBELLS

In the following text I will trace the correspondences between Marko Peljhan's cyber-materialist and techno-ecological art practice and the scientific poetics of the Russian Futurist poet, mathematician and ornithologist Velimir Khlebnikov (1885-1922).

One of Marko Peljhan's first works for the public, a college performance study called *Aristarh Lentulov: Nebesni Svod 1915–1989,* was a homage to the 1915 painting *Nebozvon* (*The Skybell*) by the Russian avant-garde painter Aristarkh Lentulov. This painting in the Proto-Cubist manner depicts a settlement of churches with their towers and cupolas stretching toward an intensely colourful, illuminated sky. Schooled in Paris during the height of the Cubist revolution in painting, Lentulov returned to Russia in 1912, where he became a major influence on the Russian Cubo-Futurist movement. The historic momentum captured in this image made during World War I and just two years before the Russian Revolution, has multiple resonances. The still mimetically treated ground with churches stretching toward the skies like arms of multitudes pleading for salvation is contrasted by the abstract treatment of the sky above it. In formal terms, this painting invokes the geometric abstraction of Kasimir Malevich or Vassily Kandinsky, whereas its affective impact aims for the enigma of the sounds and voices of the church "bells" reflected back from the heavenly spheres. What is the message that they transmit?

VIBRATING HEAVENS

Belonging to the group of Cubo-Futurists around Lentulov, Velimir Khlebnikov based his entire scientific poetics on coding and decoding what he called the "language of the stars" (*zvezdnie yazik*) or the language of *zaum*.[1] "The scale of Futurians," he said in *Our Fundamentals*, "at one end sets the heavens vibrating, and on the other it hides in the beats of human heart."[2] Khlebnikov's obstinate scientific poetics – moving between the radical utopia of the future and an obsession with the deep past, between a scientific study of language enmeshed in the vibrating universe and poetry about the troubled destiny of humankind – became the central subject of inquiry during Peljhan's early creative period, from the 1992 theatre performance *Marinetti: Hlebnikov Tristosedemnajst A Tišina KA Vasiliev* to a series of projects entitled *Ladomir Faktura/Surfaces*, developed between 1994 and 1997. These projects afterwards evolved into the still ongoing *Makrolab* (1997–) pursuits and situations.

Khlebnikov's image of "vibrating heavens" connected to the "beats of the human heart" works well as a metaphor, but for him this connection was very material and real. Khlebnikov acquired substantial knowledge of various natural sciences, mathematics and physics from his family and later during his university studies. He mastered the scientific method of observing natural phenomena, collecting data, classifying and systematizing routines as necessary prerequisites for extracting generalized conclusions about the laws of life and nature. He studied enough mathematics that he understood the state of the art of both mathematics and physics, and was aware of various scientific theories and technological developments of his time. His poetry, his studies of language and history and his political engagements around Society 317 thus form a syncretic scientific poetics held together by his vision of life and the natural world as a constantly vibrating entity of light rays, sonic waves and electromagnetic fields – a platform that was again completely in tune with the scientific and technological passions of his time. In other words, he studied language and time and wrote poetry with the awareness that life itself was structured as a language and kept itself in motion through time as a permanently vibrating entity of travelling signals between multiple senders and receivers with a number at its very core.

1. The English translations of the Russian neologism *zaum* – sometimes "transrational" language and sometimes "beyonsense" language – need to be explained. The English prefix *trans-* denotes the idea of "beyond", while the Slavic *za-* refers to something that is behind. The translation of the Slavic *um* as "rational" is similarly problematic. The equivalent of *um* in English is "mind", and while *razum* denotes the rational or conscious mind, reason, intellect or sense, *zaum* aims at signifying something that is a part of mind but not fully accessible to rational consciousness and is therefore an equivalent for "unconsciousness". The parallels between Khlebnikov's description of the laws of *zaumny yazik* and Freud's description of the language of unconsciousness are not accidental since they both use poetic forms (dreams, literature) to describe it.

2. V. Khlebnikov, "Our Fundamentals" (1919), in *Collected Works of Velimir Khlebnikov*, Vol. 1, ed. Charlotte Douglas (Cambridge, MA, 1987), pp. 376–391.

Peljhan's first systematic study of Khlebnikov was his graduation performance called *Marinetti: Hlebnikov Tristosedemnajst A Tišina KA Vasiliev* (1992), which was an experiment in transposing Khlebnikov's scientific poetics to a medium of theatrical performance, using analogous strategies to challenge the limits of theatre's canonical understanding of its own medium to those that Khlebnikov used with regard to his own time's canon of poetry. In this performance Peljhan mixed the old theatre's agendas with a radio play exploring Khlebnikovian sonic art proposals and a real-time computer animation work running on an early, not-so-portable computer, called *Mechanical Sensuality*, which featured a synthetic abstract rhythmical drama based on the imageries of the Russian and Italian Futurists. The long title of the performance was a code introducing the rules of communicating with the work and simultaneously reflecting the dramaturgy of the performance. The latter tracked the epic structure of Khlebnikov's *poemas* and *supertales* and utilized his narrative device that Vladimir Markov (after other critics of Khlebnikov's work) recognized as stringing (*nanizyvanie*), which is simply adding lines and pieces of text/image to one another, allowing the "coordinating conjunction to be accidental or replaceable by any other piece"[3].

— **3.** V. Markov, "The Literary Importance of Khlebnikov's Longer Poems". *The Russian Review*, Vol. 19, No. 4 (Oct. 1960): p. 354.

4. The source of the description of the events following Marinetti's visit in Moscow is V. Markov, *Russian Futurism: A History* (Berkeley: University of California Press, 1968).

5. I am paraphrasing Khlebnikov, who often referred to people as rays transmitting different affective qualities.

6. Khlebnikov, Vol. 1, p. 87.

7. Ibid. pp. 87–88.

MARINETTI : KHLEBNIKOV

One of the themes explored by Peljhan in this 1992 performance was the adversarial relationship between the Italian and Russian Futurists, which culminated during Marinetti's three-week visit to Moscow and Saint Petersburg in January and February 1914. The events and controversies that followed the visit are well described by art historians who emphasize disagreements between the Russians and Marinetti around the questions of the originality of the Russians and other, formal issues. But wouldn't it be reasonable to assume that during Marinetti's visit to Saint Petersburg, on the eve of the breakdown of major European and Eurasian empires in World War I, which started just a few months later, the historic importance of authorship/originality and art historical issues were rather minor compared to the fact that in 1914, Russia and Italy stood on the opposite sides of the clashing imperial divide? More so than other Russian Futurists, Khlebnikov had a *very* concrete geopolitical agenda. Initially he sympathized with pan-Slavism, i.e. the unification of Slavic peoples, but it was his belief in the importance of cultural and political unification of colonized Asian states that prompted him to found Society 317 in 1916, and led him to his visions of a future planetary politics in later years. An avid reader of newspapers, Khlebnikov was well informed about the politics in the Balkans. One of his first published texts (1908) was an anonymous manifesto posted on the walls of the university hallways in Saint Petersburg (and later published in a newspaper) calling for the defence of Bosnia and Herzegovina against the annexation by Austria.[4] Upon Marinetti's visit to Saint Petersburg, Khlebnikov turned into a "ray of furious lightning"[5]. He refused to attend the dinner where he could have talked to Marinetti and his Russian colleagues, and instead wrote two angry letters to express his rage. The first letter was addressed to his Futurist colleagues who welcomed Marinetti, accusing them of being "traitors" and of placing "the noble name of Asia beneath a European yoke".[6] The second letter was to Marinetti himself. After calling him names ("you untalented loudmouth") and mocking his dated Futurism ("the men of the future, born a hundred years too late"), Khlebnikov challenged Marinetti to a "duel", precisely predicting what would soon be real military frontlines. "I am convinced that we will meet one day to the sound of cannons, in a duel between the Italo-German coalition and the Slavs, on the Dalmatian coast. I suggest Dubrovnik as the place for our seconds to meet."[7]

The *realpolitik*, however, should not conceal a much more important aspect of the conflict between Marinetti and Khlebnikov. The trigger that presumably set in motion Khlebnikov's most ambitious *opera aperta* project, *The Tables of Destiny*, was the news of the Russian naval defeat by Japan in the Battle of Tsushima in 1905.[8] In his letters and writings a few years later he emphasized a connection between the objectives of the Russian Futurist movement and the year 1905, the year when he started his numerical research into the laws of time driven by the urge to predict the future to intervene in and redirect the material flow of history. In his 1913 letter to Alexei Kruchenykh he wrote: "We are writing after Tsushima."[9] And in his famous angry letter to Nikolai Burliuk during Marinetti's visit he again claimed: "We have no need to accept these views from the outside, because we launched ourselves into the future in 1905." The insistence on the year 1905 indicates that Khlebnikov's and Marinetti's disagreement about the idea of Futurism appears to be much more fundamental than it is commonly interpreted, and points to two entirely different ideas of Futurism in the early 20th century. In Marinetti's view, Futurism was about the celebration and reflection of contemporary life dominated by the masculine dynamics of machines. In Khlebnikov's view, Futurism was about the study of laws of time for the purpose of overthrowing the metaphysical or determinist idea of Destiny, and intervening into the materiality of historic time by human/scientific will. In his supertale *War in a Mousetrap*, which mirrors his scientific efforts of *The Tables of Destiny* in a poetic format, he used the Shakespearean trope of the "mousetrap" (mouse vs. mouse-trapper) to express the necessity of reversing their roles.

8. In her introduction to Khlebnikov's theoretical writings, Charlotte Douglas disputes his statement that he repeats in his writings from 1911: "I swore to discover the Laws of Time and carved that promise on a birch tree (in the village of Burmakino, Yaroslavl) when I heard about the battle of Tsushima. I've been working at them for the last ten years. […] I wanted to discover the reason for all those deaths." His biographical data, Douglas argues, indicate that at the time of the Battle of Tsushima (14 to 16 May 1905), the then twenty-year-old Khlebnikov was actually "many hundred miles from Yaroslavl" since from May to October 1905 he was supposed to be in the Pavdinsk region of the northern Urals with his brother observing birds. This, in my opinion, does not diminish the importance of Tsushima in Khlebnikov's scientific poetics. Charlotte Douglas, "Kindred Spirits", in Khlebnikov, Vol 1, p. 171.

9. Ibid., p. 81.

Yesterday I whispered: "Coo! Coo! Coo!"
And flocks of wars flew down to peck
the grain from my hands.
Unclean, a demon loomed above me
plumed with slabs of stone,
dangling a mousetrap from his belt
and destiny's mouse from his teeth.
[...]
"Mouse-catcher!" I shouted, "Grief!
Why keep destiny clenched in your teeth?"
He answered: I am the Destiny-hunter,
    Bone-Breaker by the will of numbers. [10]

Unlike Marinetti, Khlebnikov was not a metropolitan person. He had a short but dynamic life suspended between his European education and his participation in Saint Petersburg's urban-intellectual hubs, and his nomadic wanderings around Eurasia's rural border areas. One of the clearest contradictions that continue to haunt readers of his work is that between his scientific and "Futuristic" approach to the study of nature, history and language, and the "primitivist"[11] or anti-modern impulse consistently emerging throughout his poetry. Marinetti was among the first who accused the Russian Futurists (with Khlebnikov in mind) of archaism and metaphysical cosmism, and asked if this characteristic archaism was really fit to express the quintessence of contemporary life.[12] Khlebnikov, however, considered Marinetti's fascination with the merits of the Industrial Revolution dated by about a hundred years, while his own fascination with rays and waves and his ambition to govern the kingdom of time, paradoxically, kept him apart from his own contemporaneity.[13] The same irreconcilable conflict of ideas and moral impulses could also be traced in the two Futurisms', Italian and Russian, fascination with the phenomenon of war. Khlebnikov studied war and military operations as a key factor in the laws of history, while Marinetti sympathized with the Italian imperialism of the Mussolini era.

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11. "Primitivism" was a consciously pursued and politically oriented trend that permeated the works of the Futurists and other Russian avant-garde artists, in which influences of the Western avant-garde were combined in a deliberately crude way with features derived from peasant art, *lubki* (brightly coloured popular prints) and other aspects of Russia's artistic heritage.

12. Markov, *Russian Futurism: A History*, p. 155.

13. According to Osip Mandelstam, Khlebnikov did not know what a contemporary meant because he was a citizen of all history and the whole structure of language and poetry. "He is an idiotic Einstein who cannot make out what is nearer, a railroad bridge or the *Igor-Tale*." (Markov, "The Literary Importance of Khlebnikov's Longer Poems", p. 353).

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10. V. Khlebnikov, "War in a Mousetrap" [1919], in *Collected Works of Velimir Khlebnikov*, Vol. 3, ed. Ronald Vroon (Cambridge, MA, 1989), p. 312.

A HUNDRED YEARS LATER

A hundred years, i.e. the time since these events took place, is more than an average person's lifetime, but from the perspective of geopolitics and history it is a rather short period. In the dynamics of history, as Khlebnikov put it in *Our Fundamentals*, "a single stroke is of a century's duration".[14] Between 1989 and 1997, when Peljhan was working on his first works dedicated to the study of Khlebnikov, the world order that had been fought for in World Wars I and II was disintegrating and new cycles of war flared up in Bosnia and Herzegovina.

However, if we measure a hundred years by technological transformation, the world did radically change and is still changing with a speed that makes last year feel like the 19th century. The scale of scientific and technological development over the last century won the poetic war between Marinetti and Khlebnikov on the latter's behalf. Khlebnikov's scientific Futurism based on the imagery of people and nations as rays of light turned out to be far more advanced than the machinist and masculine imagery of his urban literary adversary. Connected to the idea of electromagnetic waves in one way or another, the technologies originating in the late 19th and early 20th centuries, from photography and film to radio, and the promise of wireless communication, led to the explosion of the cyber revolution that has turned the world upside down.

LADOMIR–FAKTURA (THIRD SURFACE)

In the last three decades, we have witnessed two major developments that represent points of connection between Khlebnikov's early 20th-century and Peljhan's early 21st-century poetic practices. The first is the rise of post-1989 neo-imperialism fuelled by revitalized capitalism enhanced by the Silicon Valley revolution. The second is the 21st-century geopolitics that is currently flexing its muscles in the cycle of wars that started in Bosnia and Herzegovina and from there stretched its dark clouds to the Middle East and Asia.

Khlebnikov's early insight into the relativization of the determinations of space and time that would inevitably occur as a consequence of global wireless interconnectedness and communication inspired him to create the very first political programme for planetary consciousness entrusted to Society 317 (1916) and The Presidents of Planet Earth. At the beginning of the 1990s, when Peljhan worked on the *Ladomir–Faktura* (1994–1997) series, it was still possible to catch some glimpses of Khlebnikov's utopianism and trust that wireless technologies could positively transform the world toward the evolutionary idea of planetary consciousness designed to fulfil and advance the dreams of a Communist International. *Ladomir* (1920) is the title of Khlebnikov's post-revolutionary *poema* translated to English as *Lightland.* In Peljhan's own description, the "title LADOMIR designates the universal land of the future, and is constructed by a method dating back to Old Russian. It consists of two roots – LAD, which means harmony and living creature, and MIR, which means peace, world, universe, and both these parts are conjoined by the vowel O, for which Khlebnikov has devised the meaning of the letter that increases size."[15] It is an ambitious work that was intended to be an encyclopaedia of Khlebnikov's ideas about language, time and the future of humankind. Unlike most

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14. Khlebnikov, Vol. 1, p. 210.

15. M. Peljhan, "Lecture for the 100 days – 100 guests dX programme", Kassel, 31 August 1997. Available at: http://www.ladomir.net/documenta-X-lecture-1997.

of his poetry, *Ladomir* is situated in the present of post-revolutionary Russia and is potentially giving the October Revolution a chance to realize the promised land. The poem begins with a Marxist revolutionary intonation:

And the fortified centers of world trade
where poverty's fetters shine in the many-paned windows,
the day will come when you turn them to ashes,
and the look on your face is a rapturous vengeance.
You who were weakened in ancient struggle and argument,
whose torments are figured in the constellations above you,
shoulder these barrels of gunpowder, persuade the palaces
to shatter to rubble and blow in the wind.[16]

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16. Khlebnikov, Vol. 3, p. 167.

17. The *Surfaces* series included a real-time computer-animated film *Mikrolab – First Surface*; a performative event *We were expecting you! – Second Surface*, in which Peljhan slept for twelve hours in front of an audience in a specially designed bed connected to live weather satellite imagery of the Meteosat satellite that used an interface and electrodes to stimulate micro-movements of his muscles; *Makrolab – Third Surface*, a mobile architecture project and a performance piece; and *Ladomir-Faktura – Fourth Surface – The surface of contact!*, which was a performance piece that staged Khlebnikov's poem *Ladomir* transposing its imageries that included defence industry images and slogans, live and recorded satellite feeds, mostly centred around the end of the conflict in Bosnia and a matrix display used to show textual messages and instructions for the public.

18. See M. Peljhan, "Seven years – encounters at the edges of time", in *Love and Resistance of Ivana Popović* (Zagreb: Museum of Contemporary Art, 2019), pp. 66–75.

Peljhan added the concept of *faktura* (surface) to the title of his series, developed in the "labs" of Russian formalists as a sort of joint project of linguists and artists aiming to develop a truly materialist aesthetics. *Faktura* stands for the principle of the reduction of material objects into abstracted forms – surfaces – as well as for the inscription of the seemingly immaterial qualities of language, feelings and thoughts into the visible and tangible surfaces that mediate revolutionary consciousness. It pertains to the materiality of objects and language as well as to how these reflect and change in accordance with technological developments and the rules of material production in a given era. *Faktura* also implies the material qualities of seemingly abstract entities, an attribute of this concept that was at the centre of Peljhan's explorations in this period. The objectives of the *Ladomir-Faktura* series could be described as an interrogation of the history of historic avant-garde problems and vocabularies through the lenses of advanced, contemporary technologies. The real-time element was central to Peljhan's interest during this period, since the concept of real time implies a construction of reality (or artwork as a reality), and not a composed process, and as such opens up a critical dimension of his interests in contemporary cybernetic processes.[17]

Peljhan experienced his own moment of epiphany, equivalent to Khlebnikov's 1905 Tsushima, while working on this series. The original plan of *Surfaces* was to give prominence to *Fourth Surface* as the most complex and synthesizing work of the series. *Makrolab* was initially planned as a less ambitious experiment exploring the possibilities of mobile stage architecture, and was meant to work in tandem with *Mikrolab – First Surface*. The initial objective was to search for a new form of theatre suspended between the virtuality of the moving image and the corporeality of architecture. The shift of focus to what evolved into *Makrolab* as an *opera aperta* (an equivalent to Khlebnikov's *The Tables of Destiny*) took place on the island of Krk on the northern Croatian coast, and is associated with the Yugoslav war. In his writings, Peljhan describes the moment when he was exploring the island together with the artist and collaborator Ivana Popović[18] and colleague Ivan Marušić, in search of an appropriate natural setting for the *Makrolab* mobile stage prototype, and arrived at the sign marking the entrance

to a territory called The Moon, near the town of Baška. They stayed there, talking about the art of the unfolding new era, and noticed two things that shaped the future of Peljhan's work: a clear blue sky punctuated by twin contrails of what was clearly a military jet sortie and thunder-like sounds coming from very far away, later identified as artillery explosions coming from the front line, which was less than 20 nautical miles away. From that specific isolated context *Makrolab* emerged as a vision of a nomadic war machine that integrates the idea of avant-garde art with the twisted spatial-temporal algorithms of contemporary warfare.

We can go even further back in time than a hundred years. The last few years were dense in anniversaries that, if he were still alive, would have urged Khlebnikov to continue calculating the future, adding new data to feed his algorithms in *The Tables of Destiny.* The year 2016 marked five hundred years since Thomas More published *Utopia*. The year 2017 marked five hundred years since the Protestant revolution in Northern Europe, and one hundred years since the Russian Revolution. These important monuments of time that designate two of the most important religious wars in modern history coincided with Donald Trump becoming President of the United States of America. His presidency is, needless to say, as much bad news for the Protestant ethic and its progressive democratic liberal capitalism as it is for the Leftist yearning for global emancipation. Once again, we are turning our eyes toward the skies, asking what "skybells" ring to us about what should be done.

Current power constellations are moving toward a catastrophic disposition where a morally bankrupt and politically weakened Western democratic empire has found itself under siege from within and without. From within, it is becoming undermined by its own great invention, the Silicon Valley cyber revolution, which is now loosely controlled by a few American tech companies, also called the "Big Four" (Google, Apple, Facebook, Amazon, or GAFA) or the "Big Five" (GAFA + Microsoft). As the owners and manipulators of Big Data and the rulers of the waves, these companies have become a sort of "empire within the empire", which operates according to its own rules and laws that are not necessarily loyal to those of the United States or any other sovereign democratic state. The cyberspace of the Internet is a seemingly immaterial, allocated, non-temporal, borderless, gravity-free and fluid entity, a new kind of kingdom with undefined territory and an undefined, or perhaps not yet named form of government that is without a transparent, or even any, moral compass.

Looking into the future of electromagnetic waves, Khlebnikov predicted that nation-states as we knew them would inevitably become anachronistic and that planetary consciousness achieved through planetary interconnectedness would, as he wishfully dreamed, evolve into a new form of planetary government that would be kind to all its

citizens. One hundred years later we are surrounded by almost everything Khlebnikov predicted except the new form of government that, even if not kind to everybody, would function according to transparent rules and laws. Departing from an apparatus of sound transmission viable in his time, Khlebnikov envisioned the technological evolution spanning from the utopia of television becoming real in mid-20th century ("If Radio previously acted as the universal ear, now it has become a pair of eyes that annihilate distance.")[19] to the Internet ("Majestic skyscrapers wrapped in clouds, a game of chess between two people located at opposite ends of Planet Earth, an animated conversation between someone in America and someone in Europe.")[20] He also predicted virtual reality, mind control and telemedicine. ("People will drink water, and imagine it to be wine. A simple, ample meal will wear the guise of a luxurious feast. […] Doctors today can treat patients long-distance, […]".)[21] In sum, waves would, he claimed, acquire greater and greater power over the minds of the nations, from which, he dreamed, everybody would benefit.

The new Empire of Waves, totalitarian and tyrannical in entirely unseen ways, is currently under no one's particular control, while everybody can take advantage of its powers to delude, deceive and spy, among many other useful and positive things the Internet can offer. The current "Presidents of Planet Earth" are becoming increasingly skilled in instrumentalizing the waves for their own unrealized imperial (or just petty criminal) appetites, and in doing so they are generating ever-bigger chaos in the realm of international politics. The US President Trump and the Russian President Putin are both applying essentially avant-garde performative strategies of transgression and disruption to ultimately generate a frightening estrangement effect for those who still believe that the rule of law should not be left to die in front of our eyes.

19. Khlebnikov, "The Radio of the Future" [1921], Vol. 1, p. 394.

20. Ibid., p. 395.

21. Ibid.

Peljhan's new project, *Here We Go Again: System 317*, is a response to this unstable constellation of powers, and addresses the unknown of the future that will evolve out of it. The premises are clear. Besides using waves and Big Data to discredit the elections and with them, the presidency and sovereignty of the United States of America, Vladimir Putin announced a new nuclear arms race last year by declaring that Russia had fielded a new generation of hypersonic missile technology. "Avangard", as the Russians call it, is a hypersonic glide vehicle designed to be carried by an intercontinental ballistic missile. Once launched, it is supposed to glide on the edge of the atmosphere and reach speeds twenty times that of sound, and avoid any known air or missile defence system. Peljhan's *Here we go again… System 317*, which falls into his ongoing *resolution22* series, explores possible counterstrategies to the new military era after the suspension of the Intermediate-Range Nuclear Forces (INF) Treaty, carried out by the US and Russian governments on 1 and 2 February 2019. Following Khlebnikov's ideas after a one-hundred-year interval, Peljhan's project poses a question without an answer. Would an exit from the rapidly deteriorating planetary conditions through a process of what he defines as "reverse conversion" be a viable possibility?

22. The projects of the *resolution* series were undertaken as research units in tactical solutions for the acute problems emerging in different social contexts of the post-Cold War world through the use of art and its distribution system as a territory where ideas and solutions can be presented and shared with audiences. The first *resolution* project, called *Terminal* from 1996, was conceived as a changing display of navigation charts above territories of conflict in former Yugoslavia. *Terminal*'s goal was to make the invisible events in the "sky areas" (telecommunications or air traffic) visible and thus available to public evaluations and analysis. The project used specialized VHF and UHF receivers to intercept real-time audio of communications between the pilots and flight controllers of the Flight Information Regions in the vicinity of Slovenia. The system recorded various military and relief flights over Slovenia and Croatia towards the southeast after the war in Bosnia. *Southern Communicator* was a similar project, adapted to skies over Africa and presented at the Johannesburg Biennale in 1997. The project was later advanced in a rendition called *Sky Area*, to which a real-time view of flight paths and positions was added with the help of the radar and positioning information provided in real time by the Deutsche Flugsicherung, the German flight control organization. Other projects from this series, such as *UCOG-144* (1996), *Sundown* (1998) and *Trust – System 15* (1999), *Territory 1995-2029* (2009) and others, all applied highly specialized defence and military technologies and redirected their use in the contexts of art. As such they were breaking new ground in the post-Cold War aesthetics that has since became categorized as "tactical media", "forensic aesthetics", "surveillance art" and similar.

THEORY OF WAR — SYSTEM 317

Khlebnikov was one of the first data collectors and analysts in the contemporary meaning of the word. He collected, classified and studied large amounts of seemingly unrelated data, including that on art and literature, folk tales, mythology, birds, geography, migrations, the rise and fall of cities and empires, daily news, distant and contemporary military battles and similar. In *Student and Teacher*, he explained that what he wanted "was to read the writing traced by destiny on the scroll of human affairs. […] I wasn't concerned with the life of individuals; I wanted to be able to see the entire human race from a distance, like a ridge of clouds, like a distant mountain chain, and to find out if measure, order, and harmony were characteristics of the waves of its life."[23] Military actions, he believed, most graphically traced the periodic movements of ruling civilizations over the globe like a pendulum, from East to West and back again, from the ancient powers of China and Persia to Europe and the New World. Movement is inevitably followed by countermovement, offense by defence. "The staff of victory," he wrote in *The Tables of Destiny,* "changes hands, passed from one warrior to another. Waves of two worlds, the altering spears of East and West, clashing through the centuries."[24]

Moreover, Khlebnikov pursued his self-invented career of big historic data analyst during a very specific time, between Tsushima and the Moscow uprising in 1905, World War I, the Russian Revolution, when his own life was caught in cycles of catastrophic wars. In his own time, Khlebnikov,

23. Khlebnikov, "Student and Teacher" (1912), Vol. 1, p. 280.

24. Khlebnikov, "The Tables of Destiny" (1922), Vol. 1, p. 430.

25. J. R. Kinney, "The Power for Flight: NASA's Contributions to Aircraft Propulsion", National Aeronautics & Space Administration, 2017.

like Peljhan in the present, presumably felt that he was witnessing and chronicling events of substantial historic magnitude. The key numbers in Khlebnikov's scale of time were 317 and its multiples. He believed that significant events in history occur at 317-year intervals. The unexpected defeat of the Spanish Armada by the British Navy in 1588 was a defining moment in modern history that enabled the sudden rise of the British Empire and the rule of the Anglo-Saxon, Protestant civilization, which extended to the new world of the United States of America through an imperial transfer. The old Russian Empire started cracking in 1905, 317 years after 1588, and thus, in Khlebnikov's calculations, we can expect that something of a similarly catastrophic magnitude will happen in 2222, somewhere in the world. But what can we do with this prediction? Peljhan's *System 317* abandons the idea that such a bird's eye view of history and military affairs has any practical meaning for people caught in the wars of their time.

In her introduction to Khlebnikov's *Theoretical Writings*, Charlotte Douglas draws a comparison between his fascination with war, as aroused by the Battle of Tsushima, and Tolstoy's *War and Peace*, as inspired by the Napoleonic Wars. In her view, both Tolstoy and Khlebnikov searched for a theory that would replace the metaphysical explanation of war as God's or Destiny's will, and tackle the problem with the methods of natural sciences. In other words, they were looking for a theory of war that would have an explanatory power similar to Darwin's theory of the evolution, or Gauss's theory of electromagnetic fields. The ambition was to crack the ultimate moral and behavioural enigma of humanity: Why have millions of people killed each other in wars throughout history although they know that it is wrong and are individually programmed for self-preservation? Why is the most advanced knowledge of every era used for building increasingly destructive weapons? Who needs hypersonic weapons operating at the scale of speed and forces against which the chances of survival are, to borrow NASA's own metaphorical language for the technological challenges of hypersonic propulsion, like "lighting a match in a hurricane"?[25]

In *War and Peace*, Tolstoy proposed an explanation that war was a natural necessity, that in making war "men fulfilled the elemental zoological law which bees fulfil when they kill one another in the autumn." Taking a wide view of history, he said, "We are indubitably convinced of sempiternal law by which events occur."[26] Concluding her comparison between Tolstoy and Khlebnikov, Douglas notes that "both Tolstoy and Khlebnikov were certain that a successful science of history would permit the prediction of the future. But Tolstoy's close analysis of concrete events – painstakingly detailed recreation of what he believed history really consisted of – led ultimately to pessimism about whether historical laws were, in fact, accessible. The more data he accumulated, the clearer the hopelessness of the process seemed to become. The science of history would work in principle, Tolstoy finally concluded, but not in practice."[27] Khlebnikov on the other hand remained optimistic to his last, and never gave up his conviction that with enough data at his disposal he, the proclaimed King of Time by his Futurist friends, could crack the code of time and reveal its laws.

THE KING IS OUT OF LUCK, THE KING IS UNDER LOCK

Clearly, the task that Khlebnikov set for himself was beyond him, but in resisting its impossibility he produced some astonishing works. The equation of "vibrating heavens" tuned to the "beats of the human heart" might work in theory, but falls short when the observing subject wants to contemplate it from the opposite ends of the vibrating string at the same time. In his ancient theory of war, the Chinese general Sun Tzu, Peljhan's favourite war philosopher, already understood that war was always situated and that the art of war lay in exploring the

alternatives before you entered into battle. Khlebnikov's attempts to defeat destiny by rationalizing its laws were undermined when he was drafted in 1916. On 16 April he wrote to Dmitry Petrovsky: "The King is out of luck/The King is under lock"[28], and shortly after he explained it more concretely in a letter to Nikolai Kulbin:

> I am surrounded by 100 men suffering from skin diseases, whom nobody looks after properly, so I could catch any one of them including even leprosy. That's the way it goes. But that's not all; again the hell of trying to turn a poet into a mindless animal who gets talked at in gutter language (…) I am still alive, while whole generations have been exterminated in the war. But is one evil a justification for another evil and their chains? (…) Marching, orders, it's murdering my sense of rhythm, and makes me crazy by the end of the evening detail, and I can never remember which is my right foot and which is my left. Besides which because I am so preoccupied I am completely incapable of obeying orders fast enough, or precisely enough. As a soldier I am a complete nothing. Outside the military establishment I am something. (…) And what am I to do about my oath of allegiance, when I've already given my allegiance to Poetry? What if Poetry prompts me to make a joke of my oath? And what about my absentmindedness? There's only one kind of military duty I'd be good for, and that's if they assigned me to a noncombat outfit to do farm work (fishing or gardening).[29]

I AM THE MOUSETRAP, NOT A MOUSE

Paradoxically, after his first-hand experience of war Khlebnikov became even more fixated in his search for the algorithms of salvation, whereas in his political agenda he shifted from Pan-Slavism and Asian Unionism to planetary politics formulated in a group of texts classified by his literary executors as "Visions of the Future". These insightful texts, though not coherent in literary terms, were all written as part of the political programme for Society 317, founded by Khlebnikov and Grigory Petnikov in 1916.

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26. Quoted from Douglas, Khlebnikov, Vol. 1, p. 172.

27. Ibid.

28. Khlebnikov, Vol 1, p. 106.

29. Ibid., pp. 106–107.

Maybe rightfully, from their point of view, some historians of Khlebnikov's literary legacy wish these texts never existed. They maintain that, if one ignores these science-fiction-like visions of the future, his meaningless calculations and his ties to the Russian Futurists, Khlebnikov's poetry could easily be seen as a 20th-century crown of the epic tradition of Russian 18th and 19th-century poetry. Markov, for example, sees Khlebnikov's poetic genius in his capacity to indefinitely alter and play with traditional rhythmical and metrical schemes.[30] However, from the Futurist point of view, the self-evident rupture between Khlebnikov's poetry and his Futurist scientific and political activism is quite essential and should be contemplated precisely through his efforts to reconcile and harmonize two ends of a vibrating string: the singular rhythms of a poet's heartbeat with the very material coordinates of science and language in action in the unpredictable vibrating skies of the 20th century. His visions of the future might be literarily weak and dangerously utopian, but cannot be ignored and should be investigated as a dialectical interplay of the singular subject "I", the mortal poet, and the destiny of "We" as he saw it outlined by the scientific-technological real utopia in progress.

Khlebnikov's cyber-utopianism ran in stark contrast with his primitivist metaphors and tropes such as the "mousetrap", to which he consistently returned during the years of Society 317. In his poem "Night in the Trenches" (1919) he wrote:

I am the mousetrap, not the mouse.

I swear by horseflesh, you're my witness, that from its hinges I will tear – though even God should bar the way – the gate to that Red edifice where I will have my say.[31]

In his notebooks from 1914 to 1922, Khlebnikov often referred to Shakespeare and other great literary predecessors. The proximity of Shakespeare's name to the title of his poem "Night in the Trenches", however, allows for the possibility that his interest in the mousetrap trope bears an intertextual connection to Shakespeare's stratagem of the "play within a play", which he demonstrated in *Hamlet* and to which the play's hero gave the name "mousetrap".[32] For both Shakespeare (in the early 17th century) and Khlebnikov (in the early 20th century), an ongoing "War in a Mousetrap" (the title of the already mentioned Khlebnikov's 1919 supertale) was nothing but an artist's or poet's will to reverse or redirect the movement of forces that convert, bend and mould him into an expendable creature that he ought to resist becoming. This is because of the oath of allegiance made to poetry/art, which obliges him to defend his right to live according to the internal rhythm of his heartbeat, and gives him the right to speak and react when this right is violated.

Khlebnikov's indirect connections and metaphorical links between the "trenches" of war and the "sound of the cannons" and the new post-revolutionary power structure represented in "Red edifice" are as clear as Shakespeare's attempts to "mousetrap" the criminal consciousness of the Elizabethan court, responsible for treating people like dispossessed and scared hordes of mice during the process of primitive accumulation in the England of the 16th and 17th centuries.

30. See Markov, "The Literary Importance of Khlebnikov's Longer Poems", pp. 353–370

31. Khlebnikov, Vol. 3, p. 162.

32. Quote from the notebook from 25 October 1921: "The Sea. The Death of the Future. The Break-up of the Universe. Saian. Rusalka and Vila. Sorrow and Laughter. Horse. Three Sisters. The Lightning Sisters. Ladomir. Razin. The Scarlet Saber. Garshin. An Abridged Shakespeare. Night in the Trenches." (Vol. 1, p. 403.)

EARTHBOUND SATELLITE

A fundamental shift in Peljhan's art practice occurred between 1992 and 1997, when his interrogation of early 20th-century avant-garde and Futurist vocabularies was interrupted by the dissolution of the Yugoslav state and the beginning of the 1990s wars on its territory. The ongoing *Makrolab* project (1997–)[33] thus represents a paradigm shift and a move into a new modality of artwork. *Makrolab*'s first edition was built in 1997 as a 14-metre long, octagonal, mobile and self-sustainable structure (a hybrid between architecture, sculpture, stage and environment) that could travel around the globe, anchor itself and function in the most isolated and remote parts of the Earth. Peljhan described the motives that lead him to this project in his lecture "The Art of Intelligence on the Art of Warmaking"[34], in which he noted the lack of historicizing of the rapidly developing field of art grounded in scientific and technological concerns. The art that utilizes contemporary new media and technologies as its primary materials is as much grounded in the history of aesthetic ideas as it is in the history of science and military and civil industries. "In this undefined context of the development of science and industry," Peljhan argued, "art has the role of a servant. It feeds on the remains left on the table of systems that are

stronger and have more impact" on the human condition.[35] In the course of their development, scientific ideas are first applied in the military industry, then the tools and equipment developed there go through the process of conversion in civil industry and become part of civil usage, and only from there do they become available to the artist to utilize for crafting ideas and images about the future of humanity. This delay puts art in a dated position by default, so that, as Peljhan argued, what "an artist, on the basis of the information with which he can work, makes into a picture and vision of the future, is (already) the reality of the pilot in the cockpit of a modern military airplane."[36] The cyber revolution and the spread of satellite technologies and the worldwide web in the late 20th century created a paradoxical condition where, in the era of information and data overabundance, artists, just as civilians, lack basic information about what is really affecting local or planetary events and affairs. The "metallic throat" of sounds and images coming out of the vomiting apparatus that Khlebnikov outlined in *The Radio of the Future* outgrew its purpose and turned into a white noise and entrapment machine that keeps humanity permanently in the dark. Or, as Inke Arns put it in her comparative study of Peljhan's and Khlebnikov's work, "our very visually saturated media age could simultaneously be termed as 'post-optical' ", because the very mechanisms that produce the abundance of visibility are ultimately hidden to the eye.[37] In his programmatic text "In Search for a New Condition", Peljhan argued that people "have less and less influence over social situations to which they become hostages."[38] The reality that is reterritorialized through the media is first deterritorialized (broken down into information) and transmitted to people via channels and filters that are ultimately invisible to them. Furthermore, Peljhan argued, when the wars in the former Yugoslavia started in 1991, people were in the same position as the ancients trying to figure out their future by reading the

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33. Between 1997 and 2007 *Makrolab* changed its location five times: Lutterberg, near Kassel, Germany (1997); Rottnest Island, Australia (2000); Karst, Slovenia (2001), Blair Atholl Estate, Scotland (2002); Isola di Campalto/Venice, Italy (2003); and Santa Barbara, USA (2006). The project is still evolving through the exploration of tactical media utilization in the global Arctic (through the *Arctic Perspective Initiative*, conceived with Peljhan's long-term collaborator Matthew Biederman) and was also partially present in Antarctica through the efforts of I-TASC (Interpolar Transnational Arts Science Constellation) during the International Polar Year as project 417 from 2007 to 2009. In 2006, plans for the new *Makrolab mark VII*, *Ladomir Antarctic Base* structure, conceived with Jan and Nejc Trošt, were unveiled at *Makrolab* in California.

34. M. Peljhan, "The Art of Intelligence on the Art of Warmaking" (Ljubljana: Projekt Atol, 1996).

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35. Ibid., p. 13.

36. Ibid., p. 15.

37. I. Arns, "Faktura and Interface: Khlebnikov, Tesla and the Heavenly Data Traffic in Marko Peljhan's Makrolab (1997–2007)", in *Ohne Schnur. Art and Wireless Communication*, ed. K. Kwastek (Frankfurt am Main: Revolver, 2005), p. 1. Exhibition catalogue.

38. M. Peljhan, "In Search for a New Condition," (1993). The text was distributed as a leaflet at the premiere of *RSS ATOL* performance at Moderna galerija (Museum of Modern Art), Ljubljana.

constellations, except that the skies in 1991 were full of signals and contrails. The only thing available to Peljhan as an emerging artist that could enhance his insight into the reality of human affairs in that situation was to start gathering information about technological advances directly from the military industry itself. He noticed that magazines such as *Aviation Week & Space Technology* were full of ads offering new military technologies to an abstract audience and set of invisible customers. He contacted several companies with the request to send him quotations or offers for various items, such as advanced antennae designs, GPS/GNSS receivers, inertial measurement units, rugged portable computers, new composite materials, flight automation systems, combat simulation systems, embedded high power computers, noise generators for jammers, as well as high-end, military-grade interception equipment. Within a few weeks his mailbox was full of affordable and unaffordable offers.[39] "Because of the high prices", he concluded in his lecture, "an artist cannot purchase some of these technological systems, but he can, to a certain extent, develop them on his own."[40]

The cyber-materialist and techno-ecological function of *Makrolab* is that it is set up to create a reverse system made out of the building blocks of the support systems that operate behind contemporary televisual and warfare industries. Within these parameters *Makrolab* operates as a hub where new and emerging technological systems and solutions are tested and incorporated, and runs in parallel with Peljhan's other series of smaller-scale projects, such as *resolutions* and *Situations41*. The lab is equipped with advanced technologies for receiving and sending electromagnetic signals (satellite, radio), from low and high frequencies to microwave, and deliberately set up in isolation – a situation in which the participant researchers can only observe the world through the "metallic throat" of the media, that is, outside of their daily routines and civil social relations. Arns characterized *Makrolab*'s operations as a sort of private surveillance system, such as the American ECHELON or Russian Irbene (Star). Its machinery allows *Makrolab*'s researchers to read the "skybooks" and map the vast "topography of signals in the whole electromagnetic spectrum"[42], intercepting data flows from private telephone conversations to military and stock market communications and beyond. The raw materials caught in the waves turn *Makrolab* into a "mousetrap" device, from which researchers and artists manufacture other individual projects that vary from artworks to academic and scientific analyses

and texts. During its years of drifting around the globe, *Makrolab* produced multiple recorded and unrecorded experiences, observations and results. Fraser MacDonald, who was a member of the 2002 crew in Scotland, called *Makrolab* a "machine for looking and living"; Lisa Parks and Ursula Biemann, who were on the same mission, thought of it as "an earthbound satellite"[43]. Both descriptions point to the reversal of the gaze achieved by the project and the use of its hardware and software for looking back into the unknown and invisible territories that opened up in the era of telecommunications, when the appearance of new sensing technologies capable of instantly converting multiple earthly existences into endless flows of images and data produced an impression that humanity was constantly under surveillance by a "metallic eye and throat" of the materialized idea of God.

39. The result of this research was the first of the *TRUST-SYSTEM* (Tactical Radio Unified System Transport) series projects, *TRUST-SYSTEM 15*, presented as part of *Generation Z* (curated by Klaus Biesenbach) at MoMA P.S.1 in 1999. For this project, a great number of companies from the United States and Israel loaned their sensitive technologies to the artist and allowed them to be displayed in such an unorthodox context.

40. Peljhan, "The Art of Intelligence", p. 15.

41. For *resolutions*, see note 20. Peljhan's use of the concept of *Situations* has a direct reference to Situationism and the work of SI (Situationist International), which he considers, beside the historic avant-gardes and the work of Khlebnikov, as another legacy that inspires and informs his work. In his use of Situationist tools he appropriates their structural and political component of "constructing situations" in real historical space-time coordinates with the purpose of intervening into the developments on the micro-structures of everyday life. By doing that, however, he creatively adopts and modifies Situationist strategies to meet the radically changed challenges of the post-communist period and the paradigm shift that occurred in the 1990s, leading to the historic crisis of our present age.

42. Arns, "Faktura and Interface:", pp. 62–79.

43. Fraser McDonald, "Sublime Geographies, Situated Histories," and Lisa Parks with Ursula Biemann, "The Earthbound Satellite," in *Makrolab: North 056° 48' 182'/West 003° 58' 299'/Elevation 1276ft*, (London/Ljubljana: Art Catalyst/Zavod Projekt Atol, 2003), pp. 6, 15.

In other words, *Makrolab* offers its participants an opportunity to look at the vastness of the data produced by global communications networks, to explore what can be found there, and to produce an understanding about these technologically produced data flows. These have become as vast as the oceans and are ultimately inseparable from the broader ecological systems that now coexist and interact in previously unseen and unpredictable ways, generating new creative opportunities as well as opportunities for maltreatment and abuse by groups and nations that control the technical and financial resources of the Earth and oversee political and military decisions.

Makrolab would be a paradise for Khlebnikov's data collecting aspirations. What he painstakingly collected by hand, spending hours and hours in libraries, is now available to harvest in almost infinite amounts, but only if you have the proper instruments and selection criteria. In this sense, *Makrolab* is a monument to Khlebnikov and also a continuation of his *The Tables of Destiny* by other means. As one of the commanders and researchers on-board *Makrolab*, Peljhan is mainly interested in continuing to explore three dynamic fields in addition to history, the three fields that are, in his estimation, as incalculable and non-representable in their totality as history: weather and climate change, migrations (of people, animals, money or matter) and telecommunications. With the current advances in networked high-power computing, the ultimate equation that could formulate the laws under which these three fields are interconnected, the equation for the functioning of the Earth as a socio-techno-biospheric system of systems, is perhaps closer. The Empire of Waves and its territories are now part of an *opera aperta* of history that has become even more unpredictable. The War in a Mousetrap continues!
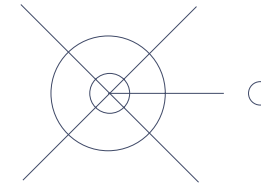
The Autonomous and the Enmeshed, Marko Peljhan's Theatre of Operations

MATTHEW FULLER
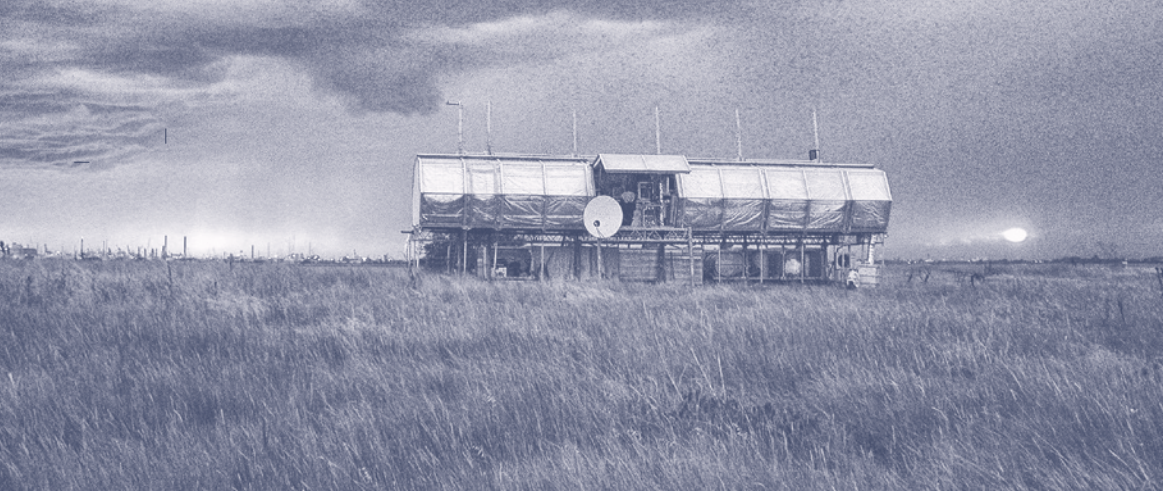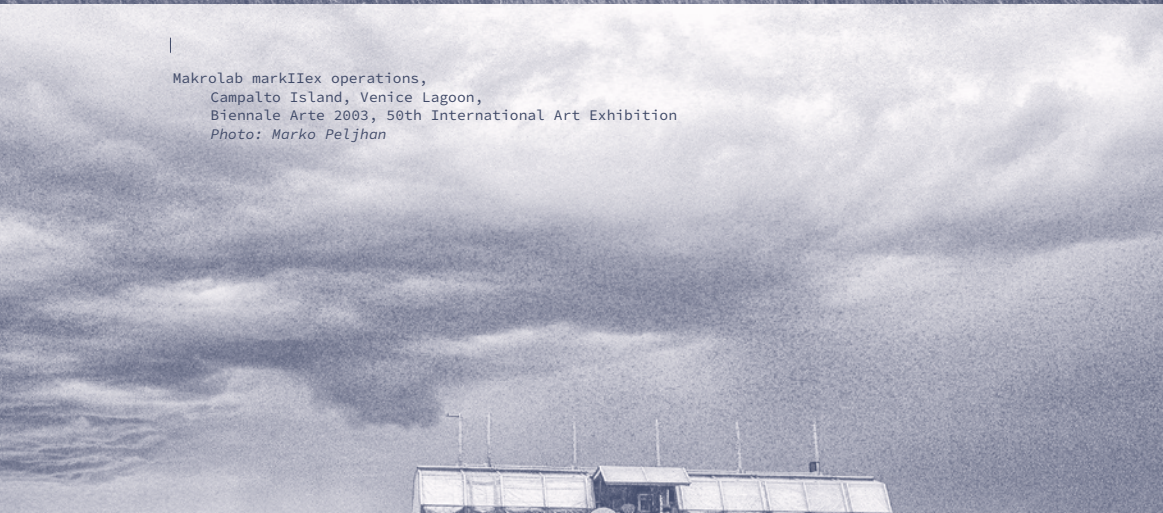
The autonomous stands on its own terms, is self-defining. The enmeshed is made up of the currents of its history; it is woven out of the ramifications of connection and becoming. Perhaps nothing could be more contradictory than these two tendencies. The one stands for self-determination, the other for deep involvement. It is the contention of this essay that Marko Peljhan's art establishes itself in the midst of the autonomous and the enmeshed, and that in their paradoxical interaction a significant aesthetic is worked out.

Autonomy is a word that is both political and technological. This in itself provides a clue to the terrain of work in which we are interested here. As a political term, it describes political entities that are able to self-determine, to self-rule or to self-name. As with a preponderance of words in contemporary political parlance, such terms are always to be weighed quizzically. Autonomy sits somewhere in relation to sovereignty and subordination. Sovereignty is the kind of autonomy afforded nation states, and thus comes with a freighting of artefacts of the history of such entities. But sovereignty is also a form of autonomy, the mad unruly position of the "uncrowned kings" that figure in the work of Antonin Artaud and Georges Bataille.[1] Holy Fools, without God, find other means to freely speak of bitter truths and cosmic visions. By contrast, subordination is the allocation of a position in a hierarchy, even if that position is that of its "top". The hierarchy itself is the ruling term, not some entity that is positioned within it. Tangentially to these terms, autonomy establishes its own idiom, its own terms of engagement. As a technical word, an autonomous machine is something that is capable of operating independently of direct human control. This may mean that it is self-guiding,

1.   For a discussion on how the question of the sovereign plays out in media culture, see, Adilkno, (Foundation for the Advancement of Illegal Knowledge) Sovereign Media.

is able to select a path of action of its own choosing, as in the case of vehicles. In architecture, the term indicates a structure that is self-sufficient in relation to sources of energy and water, and is capable of dealing with its own waste. Peljhan's work involves both of these kinds of autonomy in different ways, both the political and the technical, and it is in iterating these forms of autonomy that it also establishes itself in relation to the condition of being enmeshed.

The enmeshed refers to the condition of being composed of a confluence of forces. It is something that offers an ecological understanding and a technical one; each of these have their political dimensions. In the ecological sense of being enmeshed, there is a wide-ranging recognition of realities being formed out of the interaction of evolutionary conditions – of forces, propensities, limits and competition, but also the capacities of symbiogenesis, of the development of organisms – and in turn new ways of thinking about them – through their mutual imbrication. Equally, ecological enmeshedness requires that we attend to things such as food webs and the carbon cycle, the dances of interplay in a system that also imply its state of change. In technical parlance, enmeshedness refers to a number of ways in which technologies often involve sets of interwoven, overlapping or nested dependencies. The recent critical attention to infrastructure or to the way in which technologies produce certain kinds of lock-in or channelling effects is pertinent here.[2] Enmeshing can also articulate ways in which technologies, such as networks, develop forms of interoperability and the sharing of load.

In turn, this sense of ecological enmeshedness requires that we understand the way in which things that are constructed as independent, or as a question of solely personal concern when articulated via economic mechanisms, may have significant effects when understood as part of an ecology. As only one example, the extensive routine use of antibiotics in the meat and dairy industry to isolate animals rendered as "livestock" from their bacterial environment, one created by the filthy conditions of supposedly modern farming creates a condition in which bacteria evolve that are immune to those antibiotics. This evolution, in turn, primes such bacteria to defeat human immune systems, posing one of the existential crises we face today. The interplay between what is addressable as an autonomous fact through the conditions of autonomy granted to certain entities (in this case the private business interests of the meat and dairy industry), and its enmeshedness within a wider ecological system that in part evolves in and runs through it, creates part of the paradox of such conditions. Like many of the existential threats today, the problem is solvable, via changes in diet and agriculture, yet it may well not be solved, due to the perceived inviolability of certain political, cultural, technological and economic habits. In turn, this condition requires a further interplay between the conditions of enmeshedness and autonomy. While the political is always also cultural, economic, aesthetic, and composed of multiple forces, it is also a scale of articulation that has its own degree of autonomy. In such cases, the political must impose conditions on the economic and practical work of farming. This autonomy, in a further paradoxical turn, must be taken in such cases in order to sustain the lively – rather than entropic – enmeshedness of the wider ecology. This position is vastly complicated by the way in which the capacity for taking up such autonomy is unevenly distributed within the formation of different polities. The art of navigating and working such conditions is that of politics. Part of this art, like bacteria moving along a new vector, lies in recognising what has not been taken into account in the calculations of the different forces arrayed around it.

2. Keller Easterling, *Extrastatecraft*, *The Power of Infrastructure Space* (London: Verso, 2014). Brett Neilson, Ned Rossiter, Ranabir Samaddar, eds., *Logistical Asia, The Labour of Making a World Region* (London: Palgrave Macmillan, 2018).

This sensing and making sense of forces, resources, gaps and differentials is part of what makes this politics simultaneously aesthetic. Politics' increasing imbrication with aesthetics is perhaps a mark of its loss of coherence as an autonomous field, as emotions such as fear and shame and affects such as panic and the feeling of the capacity of domination become, in a medial environment, increasingly reliant on finger muscle twitch-response time rather than the variable speed of reflexive thought. But this also creates a vector for aesthetic practices, such as art, to start to reformulate things by means of the work of repair, reinvention, inquiry, and the making of inventive propositions. Again, as can be readily discerned, the uneven distribution of the capacity for meaningfully claiming autonomy will be a material fact in such developments.

The interaction of autonomy and enmeshedness thus implies multi-dimensional variations in perspectives, movement between the two conditions, and indeed a modulation of and breaks in these conditions as they move across and are embodied in distinct contexts. This fluxion of perspectives, and the production of means to enter into and create it is part of the work of art in an era that Rosi Braidotti calls the posthuman, one described by the interaction of the "sixth great extinction" and the "fourth industrial revolution".[3] It is rife with contradictions as well as uncanny connections, and the possibility to create formations that establish, amidst the turbulent entropy of these times, certain degrees of possibility for rethinking and reworking things.

3. Rosi Braidotti, *Posthuman Knowledge* (Cambridge: Polity, 2019).

4. Alfred North Whitehead, *Modes of Thought* (New York: The Free Press, 1966).

5. *Henri Lefebvre on the Situationist International*, Interview conducted and translated in 1983 by Kristin Ross, *October 79* (Winter 1997). See related texts, such as Constant Nieuwenhuis and Guy Debord, "Amsterdam Declaration", *Internationale Situationniste* #2 (December 1958). In relation to the Amsterdam of the late 1950s and early 1960s, there is a clear further line of development to the street-based happenings of the Provo movement.

Indeed, the enmeshed and autonomous, the hanging together and coming apart, don't "just happen", they require work, even if this work is the labour of contingency – the unfolding of the world – as much as, in the work of an artist, it might be the focusing of a lens or the turning of a screw. As Alfred North Whitehead puts it, the nature of every conjuncture, every "and", requires clarification.[4] It is the task of this essay to participate in some of the fluxions of perspective set in play by the work of artist, theatre-maker and technologist Marko Peljhan. In mapping some of the movements between the autonomous and the enmeshed that they establish, I hope to offer some clarification of the conjunctures that they set in play.

One of the ways to think about autonomy and enmeshedness is via the relation between space and communication, the reinvention of the experience of space by different perceptual procedures, and the uses of technology or navigational rule-sets as reorientation devices. Indeed, the early phases of the famous dérive technique of the early incarnations of the Situationist International, who built upon the Surrealist tradition of walking to instil inspiration from the landscapes of the city, involved novel uses of communications technology. Some of these experiments, made on the initiative of unitary urbanist Constant Nieuwenhuys, took place in Amsterdam and involved the use of walkie-talkies to make links between different people roaming the city. Mixing communications between different zones and between groups in various states and kinds of excitement led to a feeling of the unexpected, an over-layering of synchronicity and a re-experiencing of the times, paces and forces of the city via medial consubstantiation.[5]

In 1995, Peljhan and his collaborators in *Projekt Atol* revisited something akin to this approach with *Urban Colonisation and Orientation Gear 144 (UCOG-144)*. The city of Ljubljana was there to be re-discovered, but as with a human body in medical triage, technical media were needed to enable this to come into effect. Special rucksacks with an early Global Positioning System/GLONASS home built receiver, a VHF transceiver with a digital modem, audio and camera equipment, along with the cumbersome batteries needed to power all of them, were assembled. Today, something like a compacted version of such equipment is quite widespread, in the form of smartphones, so the sheer bulk of the gear, plus the then unlikely nature of their

being arranged together, is worth remarking.[6] Participants in *UCOG-144* roamed the streets, documenting, gathering geo-located sounds and imagery, making juxtapositions of themselves, their cyborg experience as relays in a media system, and the city as palimpsest to be re-inscribed with signals.

As with a subsequent work, *polar*, (2000), an installation set in a confined and specially constructed space, developed in collaboration with Carsten Nicolai, there is an understanding of the movement of people as a way of navigating informational spaces. In *polar*, people enter a small, brightly lit rectilinear space and navigate representations and actual elements of large-scale movements of data on computer networks. Such navigation is not carried out via the techniques and conventions that have now become standardised, but through a layered sonification, the manipulation of an idiom of slider bars on touch-sensitive screens, the use of a specially designed portable sensor array called pol, and the intervention of an intelligent agent. This agent, based on the idea of the sentient planet Solaris (from the novel by Stanislaw Lem, and film by Andrei Tarkovsky)[7] learns from the behaviour

— **6.** The project developed as one of the earliest instances of a current of work that would come to be called Locative Media. Artists involved in this current include Ieva Auzina, Esther Polak, Christian Nold, Rasa Smite, Raitis Smits, Wilfried Hou Je Bek, Marc Tuters, Pete Gomes, Jen Southern, Masaki Fujihata, Blast Theory, Electronic Disturbance Theatre, and Ben Russell, among others; labs such as: Ljudmila, Ljubljana; de Waag: Amsterdam, RIXC the Centre for Art and Science, Riga; V2_organisation for unstable media, Rotterdam; Backspace, London; Mama, Zagreb; and elsewhere became a crucial organisational context for such work. See, Marc Tuters and Rasa Smite, *Acoustic Space Journal* issue 5, *TRANS CULTURAL MAPPING. Locative Media, Tactical Cartography and Spectrum Ecology* , Riga, 2005. Drew Hemment, "Locative Arts", *Leonardo*, Vol. 39, No. 4 (2006), pp. 348–355.

7. Stanislew Lem, *Solaris*, trans. Joanna Kilmartin (London: Faber and Faber, 2016). Andrei Tarkovsky, *Solaris*, Mosfilm, Moscow, 1972.

of users of the installation, who enter in pairs, but also carries out its own actions, making links between large corpuses of data. The accumulation of data by the agent lends it greater autonomy, but also diagrams its reliance on the flow of users. Exhibited at the cusp of the first dot-com crash, this work stated the imperative of dealing with the "collective intelligence" of the Internet.

The navigation of data landscapes and the movement of both seclusion and immersion that they often require runs through much of Peljhan's work. One way of understanding this double movement is in the positioning of art to act as a broker between forms of knowledge, technology, practice, and aesthetics from different fields. Here, the broker acts within a wider set of conditions to arrange what might be brought together, what might form the condition of the conjunction. The position as broker is significant, because it is not reducible to an agency that simply establishes a meeting place or contact point; instead it is active, even cunning, on multiple levels. As a broker, Peljhan not only brings different fields of interest together, but also manipulates their interactions in ways that suggest a novel set of approaches to art, and to the way in which it articulates and shapes the concerns of the present century. The artist as broker can, in this case, arrange transfers of materiel, experience, ordering systems and technologies into other domains, transforming them in their being combined, that is to say, generating some additional, unexpected crackle of value in the process. That such value can be transmuted as art, technological innovation and social intervention suggests the complexity of the brokerage involved.

One of the values of Peljhan's work lies in its acuity to things that are normally not taken to be readily available to the senses due to their extremely long or short durations, their occurrence in physical conditions that are imperceptible, or, perhaps, in social operations that require specialist terminology, power or equipment to enter into. Such invisibilities include electromagnetic landscapes; legal frameworks governing the interception of communication; the migration patterns of birds; the experience of communications networks. Despite their imperceptibility, the trick is to bring such sub-visible entities and processes into some form of palpable manifestation by conjuring up an unlikely alliance, or interference pattern, between them. This process of re-enmeshing them then becomes a way of exploring their differential correspondences and variations. There are two approaches which seem germane here.

One such approach lies in a kind of art of the long wait (the decade plus-long span of the *Makrolab* project, for instance), which involves time spent in the accumulation, monitoring and sifting of data – large amounts of it. The question of what to do with and how to understand the contemporary amassing of data, how to turn this gathering into a process that is recognized as culturally valent is contemporarily highly potent. For such purposes, Peljhan draws on the practices of science, with its patient eyes and instruments, but also the formulations of the ornithologist-poet Velimir Khlebnikov. (As well as writing some of the most linguistically daring nature poetry and embracing a visionary attitude to technology, Khlebnikov took part in 1904-07, in naturalist research in Dagestan and the Northern Urals, identifying, amongst other things, a new species of cuckoo.)[8] The Futurist variant of the long wait is to bring the future forward into the now, and then to wait for its effects to unfold as a process of intensity, rather than that of extension; the measuring out of time. This involution of an intensity from the future makes time shudder, bring something new into being – that at least is the gambit.

— **8.** Velimir Khlebnikov, *The King of Time, poems, fictions, visions of the future*, trans. Paul Schmidt, ed. Charlotte Douglas (Cambridge: Harvard University Press, 1985). Khlebnikov's influence on the work of Peljhan, particularly via the poem *Ladomir*, is exemplified in *Makrolab*, but also in works such as *LADOMIR AB 7th SURFACE* first shown at Transmediale, Berlin in 2008. This project included an edition of the poem.

The art of the long wait may also involve another form of relation between autonomy and enmeshedness, that of the inter-relation of introspection and prospection that ties into this condition, but stretches it out in relation to time and the sense of duration in a different way, in the arrangement of a self's sense of moving into and out of its capacity to compose (itself) as a self. Here, there is the question of how a technical substance, a media ecology, a sociotechnical condition might itself undergo processes or movements of introspection and prospection. What minimal forms of sensing and pondering on sensing might come into being amidst the apparatus? One does not imagine that this would include an anthropomorphism, like a rheostat becoming mournful because voltage doesn't fluctuate like it did in the old days.

Perhaps one answer to this is to be found in the culture of what is presently termed big data, which, in part, involves working with sets of techniques of formalisation in sufficiently abstract terms, such that it can imbibe and work on data in both highly particular and highly general senses. But big data per se is not quite what is being done with *Makrolab*. In a sense it posits itself as something that comes prior to data, in the physical practices of siting oneself in space, and in the proceedings of everyday life, to make such an attunement possible, at the same time as this is worked and attuned in relation to the action grammars of technologies that require precision and the explication of instructions rather than intuition. This admixture of high degrees of formalism in the technical, and the theatrical production of a disposition of attentive waiting to the unfolding of events yields an aesthetics of observation, of the amassing of signals, readings, traces and noise in order to attune oneself over time to the subtleties of this world. It may be that all one finds is equivalent to seeing a shape in a cloud, something accidentally familiar, a confirmation bias in water vapour, if one is too fast to rush to conclusions. But there is also something in this waiting and watching that builds a new sensibility of attunement to data and its manifestation as flows that seems utterly necessary in the present. Recursively, this is an attentiveness to things beyond the scale of human perception - unenmeshed with instruments and recording devices. Peljhan provides us with an entry into such domains and the patience and rigour to elicit imaginings as to their meaning.

The second approach to rendering the invisible is equally compelling, but of a very different order. Building on work in the "tactical media"[9] current in theory and practice, Peljhan's process of brokerage acts to find invisible sweet spots between systems and to generate exploits between them. As with *Makrolab*, these systems can be ecological, political, legal, aesthetic, technical and so on. One example of such work is the "civil counter-reconnaissance" drone, *System-77*.[10] Acting well in advance of wider public knowledge of such systems, Peljhan cannily assembled a network of institutions, legal opinion, technical parts, networks of suppliers, project marketing, and a kind of bravura of attention to detail that compels us both to recognize the whole of the project and the intricacy of its assemblage. This in order to trigger the technical unfolding of an object of a new kind – a high-tech system that asks questions about its own genesis, its place in society, and the kinds of systems it holds together and upon which it relies.

A number of the projects generate works of this kind, carefully assembled ligatures between loopholes and opportunities that allow multiple domains to come into some kind of tangible mutual co-implication. Often such work is subtly provocative, suggesting not only that we reconsider the established kinds of technology and powers that take themselves for granted, but also making us question what is taken for the "good". An uneasiness at the composition of technological knowing, but yet a fascination with it, is core to Peljhan's virtuoso deployment of such systems. As well as finding such sweet spots, this art depends on knowing how to place oneself, or one's instruments, within them. It is perhaps here that Peljhan articulates some very old artistic virtue, a fine judgement in the placement of objects and information; one oriented to rendering palpable what in the present day passes as quasi-sublime, the ineffable enormity of informational processes. At the same time, it suggests that the old ruse of the sublime and the reflex-action of awed wonder it relies on, even in its digital form, is either a cop-out – since it emblazons experience with the warning note "here thought stops" – or a chance to push further, to become saturated with and recomposed amidst the conditions that pertain across the threshold of the surface tension that holds it back from perceptibility. Here, the particular composition of forms of enmeshedness and autonomy become consequential.

As mentioned, the *Makrolab* project exemplifies something of the value of the long wait. During its siting in various places, the *Makrolab* structure was set up remotely, a distance from the wider large events to which it was organisationally attached (at Lutterberg hill, 10 km outside Kassel, for Documenta X in 1997, and on the Isola di Campalto at the Venice Biennale in 2003), or placed in strategically remote conditions, such as the Scottish Highlands in 2002 or Rottnest Island off the coast of Australia in 2000. The physical isolation of the system allows it to attend to and to come into contact with other forces – with communications, migrations, weather and climate as the key foci.

Peljhan spent part of his youth hovering over the ham radio equipment that would give him access to signals from around the world. Gaining a clear signal from a remote location is a prized thing, and something that has ecological as well as technical dimensions – since

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9. For an archive documenting tactical media approaches, see http://www.tacticalmediafiles.net/

10. A brochure developed as part of the project is available online at: https://s-77ccr.org/ A text reflecting on some of the wider arguments of the initiative is Marko Peljhan's "On The S-77CCR Consortium", in Konrad Becker, Branka Ćurčić, Zoran Pantelić, *Public Natbase, Non-stop Future, new practices in art and media* (Frankfurt am Main; Vienna; Novi Sad: Revolver, archiv für actuelle Kunst; World Information.org; Kuda.org, 2008), pp.138-139.

the movement of shortwave radio over the surface of the planet relies on interaction with the atmosphere in complex ways. Isolating oneself from traffic becomes a way of also isolating the circuits of signals. During its sojourns at various sites, *Makrolab* operated in relative isolation to induce conditions of hyper-connectivity. Visiting researchers at *Makrolab*, such as Lisa Parks, the pre-eminent theorist of the geopolitics of satellite television, worked with this repertoire of isolation and saturation to probe the atmosphere for signals using the large satellite dish that formed a part of the project's inventory.[11] There is of course a theatre to all this, a theatre of operations of detachment and connection. The *Makrolab* is set up in isolated places, the better to connect to certain flows of information, media, natural phenomena, and to create specific ligatures to sources of funding, ideas, legal frameworks – what is or is not permissible to tap into in particular locations.

The ground of the *Makrolab*, its mobile foundation, is in the question of how to sanely and decently inhabit a society at war. How to maintain independence from a deranged rending and breaking of society. At the same time, how to learn from this condition, so that it will not go unmarked. *Projekt Atol*, the organisational vehicle/platform for realising the project, started through research into the technologies being sold into the territories that were newly deemed to be potentially profitable in the last decade of the twentieth century. Reading glossy brochures and white papers on weapons systems, tracking technologies, space technology became a basic form of research into preparations for the future. At the same time, the question of autonomy is also something that has been built into space systems research, such as the International Space Station, with its non-colonial, collaborative approach to space science and inhabitation. This formulation of autonomy became, in the face of such an extreme environment, a pivotal point of reference.

— 11. Lisa Parks, *Cultures in Orbit: Satellites and the Televisual* (Durham: Duke University Press, 2005).

12. Inke Arns, *Netzkulturen* (Hamburg: Europäische Verlagsanstalt, 2002).

13. See, *TRUST-SYSTEM 22 ANECHOIC II – Radio Phase*, World Information.org: http://world-information.org/wio/program/objects/1037132588/1037132631

One resulting strand of Peljhan's work appears in the development of prototype communications systems for crisis situations. One of these, *Insular Technologies*, proposes a form of encrypted high frequency radio network for civic, cultural and NGO organisations to be used as a type of back-up system for voice, text, and other encoded media. In development since 1999,[12] and shown at Ars Electronica in Linz in 2008, *Insular Technologies* is both a working system and a reminder of the ephemerality of established structures.

Also working with the condition of being contingent and entrenched is the series of projects, under the heading *TRUST System*, where TRUST stands for *Tactical Radio Unified System Transport*. Here, an Apache cruise missile system is repurposed as a civilian network broadcast system.[13] The idea is to develop the work in a couple of directions. Firstly, the system acts as a diagram of the trade in military hardware, showing how it is possible to assemble such a deadly object through the use of appropriate legal vehicles, such as private companies established for the purpose of brokering, and to assemble a missile that, particularly during the 1980s and 1990s, was emblematic of a certain kind of imperial technical prowess. Secondly, there is an exploration of the possibility of "conversion" – the conversion of military technologies for peaceful use. How well swords make ploughshares is an enduring question, and one fraught with ethical hazard amidst its multi-chambered grey areas. Nevertheless, since a great part of technological invention happens – as writers as diverse as Paul Virilio, Friedrich Kittler and Gilbert Simondon note – under conditions of low economic constraint, such as aviation and warfare, it is inevitable that they are foraged for useful elements. Making public such rummaging around in the military's treasure chests – and doing such rummaging while they remain the prized emblems of an avowedly global regime – seems appropriate, to say the least. More profoundly, the minutiae of technical detail of integrating separately-sourced components into a working system, and working this assembling of parts at a particular historical moment, again implies a process or movements of introspection and prospection that pulses in and out of scales from the technical figuration to the implied world order. What is the world that is being made in the imaginations of these systems, and what modes, as Peljhan puts it, of "conversion" might be adequate?

What is the world that it must be evacuated? This is a question we could well ask of Peljhan and the work he is showing at the Venice Biennale this year. One answer might be to say that this world has perhaps a dozen years to change its diet – to stop using carboniferous fuels, to work more thoughtfully in relation to materials and agricultural processes, and to arrange a more equal distribution of resources.[14] All of these things are entirely possible. No new technology is needed, but new societies may well be. The likelihood of this happening without a sustained movement across economies, lives and infrastructures is foreseeably low. The entrenched interests of a few tens of companies and the stupefying sense of entitlement to eat our fellow earthlings mitigate so extremely against the health of the planet that catastrophe actually seems more palatable.

Evacuate the planet. Squeeze yourself into an escape pod and enter the launch code. Select your final destination, that of the ever-increasing belt of space junk in random orbit around planet earth. Drift aloft, freed from the burdens of both life and the terrestrial difficulties in and with which it is presently bound up. The self-euthanizing strategy of the escape hatch from the turbulence of planet earth echoes and surgically enhances many of the fantasies that pass for the strategies of the various factions of the contemporary ruling classes. For better or worse, there is no escape hatch, no utterly remote place to run to, no nation that can isolate itself, and no body that is not woven in with others.

Enmeshed and autonomous in different modulations, with the technical imagination to rework such a condition, and the aesthetic capacities of introspection and prospection to dynamize and rework the terms of such modulation, the world is at a propitious and deadly moment. It is, paradoxically, the time for radical enmeshedness to carefully declare its autonomy.

MARKO PELJHAN

14. J. Poore and T. Nemecek, "Reducing food's environmental impacts through producers and consumers", *Science* no. 360 (1 June 2018): pp. 987–992. Intergovernmental Panel on Climate Change, Special Report, *Global Warming of 1.5 °C*, October 2018, online at: https://www.ipcc.ch/sr15/. Francisco Sánchez-Bayo, Kris A.G. Wyckhuys, "Worldwide decline of the entomofauna: A review of its drivers", *Biological Conservation*, vol. 232 (2019), pp. 8–27.

ARTIST'S BIOGRAPHY

Born in 1969, Šempeter pri Gorici

Marko Peljhan is a theater and radio director, researcher, conceptual artist and educator.

In the early 1990s he founded the arts and technology organization Projekt Atol, where he currently serves as artistic director and editor at large of the music label rx:tx. In 1995 he co-founded one of the first media labs in Eastern Europe, LJUDMILA. In the same year he established the technological arm of Projekt Atol called PACT Systems (Projekt Atol Communication Technologies) where he developed a Global Navigation Satellite System based participatory networked mapping project, the Urban Colonisation and Orientation Gear 144. In 1999 he founded the Projekt Atol Flight Operations branch to support art and cultural activities in the atmosphere, in orbit, and beyond. Projekt Atol serves as the institutional, financial and logistics support framework for several projects and initiatives to this day.

From 1994 on, he has been working on Makrolab, a project that focuses on telecommunications, migrations and weather systems research at an intersection of art and science. During the International Polar Year (project 417, 2007–2009), he worked together with Thomas Mulcaire, Adam Hyde and others on the Interpolar Transnational Art Science Constellation, I-TASC, a project that resulted in three Antarctic art/science/tactical media expeditions. Together with Matthew Biederman he is currently coordinating the Arctic Perspective Initiative art/science/tactical media project focused on the global significance of the Arctic geopolitical, natural and cultural spheres.

Peljhan worked as the flight director of ten parabolic experimental flights, the first three with Biomehanika Noordung flight campaign in 1999 and seven in collaboration with the Microgravity Interdisciplinary Research (MIR) initiative and the Yuri Gagarin Cosmonaut Training Centre, enabling artists to work in alternating gravity conditions.

During the series of World Information.org projects, he installed several communications mapping and interception systems and projects and his research led him to map the command and control communications networks and response during the Srebrenica genocide.

He has received many awards for his work, including the ZKM Medienkunstpreis (International Media Art Award, 2000), the Golden Nica together with Carsten Nicolai (Prix Ars Electronica, 2001), and the Prešeren Foundation Award (Slovenia's national award for the arts, 2007). In 2008, Peljhan was appointed as one of the European Union Ambassadors of Intercultural dialogue.

His work has been exhibited internationally at multiple biennales and festivals (Venice, Gwangju, Brussels, Manifesta, Johannesburg, Istanbul, Moscow), at the documenta X in Kassel, several ISEA exhibitions, multiple Ars Electronica presentations and presentations at major museums, such as the P.S.1 MOMA, New Museum of Contemporary Art, ICC NTT Tokyo, YCAM Yamaguchi, Van Abbemuseum, Asia Culture Centre, Generali Foundation, Garage, Sursock museum and others.

His works are included in the collections of the Van Abbemuseum in Eindhoven, Moderna galerija in Ljubljana, TBA21 foundation and several other art institutions.

In 2007 he co-founded C-Astral aerospace, a vertically integrated unmanned systems based company in Slovenia, which was formed after eight years of research into unmanned systems in the arts and tactical media contexts. He is also one of the initiators of the SPACE-SI space sciences and technologies center of excellence, where he coordinates international cooperation and the development and future utilization of a civilian, 2.5m GSD interactive remote sensing satellite, the first in the NEMO-HD series, to be launched aboard the European Space Agency Vega launcher in August 2019. He is a member of the International Astronautical Federation Technical Committee for the Cultural Utilization of Space ITACCUS and has served as co-chair of the European Space Agency Topical Team Arts and Science (ETTAS).

From 2008 to 2014 he served as co-director of the University of California system-wide Institute for Research in the Arts, as head of the art/science Integrative methodologies initiative. In 2013 he co-curated the Free Enterprise! – The Art of Citizen Space Exploration exhibition with Tyler Stallings at the Culver Center for the Arts Riverside and the Museum of Art and History in Lancaster, California.

He is the director of the MAT Systemics laboratory, where among other projects he is leading the development of agile and adaptable sensor networks. Together with Karl Yerkes and Daniel Bazo he was artist in residence at the SETI Institute from 2013 to 2016, where they developed the Somnium installation.

Peljhan holds joint appointments with the Department of Art and Media Arts and Technology and serves as chair of the Media Arts & Technology graduate program and director of the Systemics lab at the University of California, Santa Barbara. In the radio spectrum, he operates as S54MX.

EXHIBITIONS
_ AND BIBLIOGRAPHY
TEJA MERHAR

Documentary Film

Marko Peljhan's Invisible Territory.
TV Slovenija (Ljubljana), 2007
Directed by Zemira Alajbegović
http://www.ladomir.net/Marko-Peljhan-s-Invisible-Territory-2007, accessed:
4 March 2019

Selected Solo Exhibitions, Festival Presentations, and Performances with publications

2018

Em Horizons (2 situaciji): Marko Peljhan & Matthew Biederman: Zvezdna dolina (Ikar), Matthew Biederman: Generativna antagonistična mreža, Osmo/za, Ljubljana (25. – 29. 10. 2018)

Matthew Biederman & Marko Peljhan. Fragile Safari. A situation for an alert and knowledgeable citizenry, Paved Arts, Saskatoon (14. 9. – 20. 10. 2018)

2017

Ars Electronica. *Artificial Intelligence. Matthew Biederman, Marko Peljhan. We Should Take Nothing For Granted – On the Building of an Alert and Knowledgeable Citizenry*, PostCity, Linz
(7. – 11. 9. 2017)
exhibition catalogue

Zemlja brez ljudi II / Earth without Humans II. Danny Bazo, Marko Peljhan, Karl Yerkes: Somnium, Galerija Kapelica, Ljubljana (opening 8. 6. 2017)

2011

Play Van Abbe. Territory 1995 – Marko Peljhan, Van Abbemuseum, Eindhoven
(August 2011)

Marko Peljhan, Matthew Biederman in sodelavci. Kodirana utopija: od Makrolaba do Iniciative za arktično perspektivo / Marko Peljhan, Matthew Biederman, and collaborators. Coded Utopia: from Makrolab to the Arctic Perspective Initiative, Moderna galerija, Ljubljana
(29. 3. – 3. 7. 2011)
curated by Igor Španjol

2010

Marko Peljhan. Teritorija 1995, Salon Muzeja savremene umetnosti, Belgrade
(3. 12. 2010 – 16. 1. 2011)

Carsten Nicolai + Marko Peljhan. "polar ᵐ [mirrored]", Yamaguchi Center for Arts and Media, Yamaguchi
(13. 11. 2010 – 6. 2. 2011)
curated by Yukiko Shikata, Kazunao Abe
a version of the exhibition traveled to: Galerija dimenzija napredka, Solkan (2011)

Spektr!, Center urbane kulture Kino Šiška, Ljubljana (10. 9. 2010)
performance

Arctic Perspective, HMKV Phoenix Halle, Dortmund (18. 6. – 10. 10. 2010)
curated by Inke Arns, Matthew Biederman, Marko Peljhan
books: *Arctic Perspective, Cahier No. 1–4* (2010–2011)

Arctic Perspective, Canada House, Trafalgar Square, London (20. 5. – 30. 9. 2010)

2009

Interpolar / API 2006–2009, Kibela prostor za umetnost, Maribor (16. – 23. 11. 2009)

2008

Marko Peljhan. L'art interpolaire, Maison Européenne de la Photographie, Paris
(24. 9. – 12. 10. 2008)

Marko Peljhan. Ladomir ab 7ᵐᵃ površina, Gradnikova domačija, Medana
(opening 27. 8. 2008)
exhibition catalogue

2007

Ars Electronica. *Goodbye Privacy. Marko Peljhan. Situational Awareness*, Linz
(5. – 16. 9. 2007)
M. Peljhan also with *Spektr!*, performance

Marko Peljhan, Sašo Podgoršek. Ladomir Qikiqtaq, Mala galerija, Ljubljana
(21. 2. – 11. 3. 2007)

2006

Marko Peljhan. Spectral System – Civil Counter Reconnaissance, Natalie & James Thompson Art Gallery, San José State University, Department of Art & Art History, San José (7. – 13. 8. 2006 and 29. 8. – 22. 9. 2006)

2005

Marko Peljhan. Spectral-System MEMBX on-2005, Kibela – prostor za umetnost, Maribor
(opening 5. 11. 2005)

2004

The S-77CCR Unit. Sistem-77. Civil Counter-Reconnaissance, Karlsplatz, Vienna
(13. – 27. 5. 2004)
M. Peljhan also with opening performance
Signal_Sever! – Transignal 2

Signal – Sever! – Transignal, performance
Also at (selection):
Signal – Sever! – Transignal 1.
Futuresonic 04, Manchester (30. 4. 2004)
Signal – Sever! – Transignal 2.
Karlsplatz, Vienna (13. 5. 2004)
Signal – Sever! – Transignal 4.
La Bâtie, Geneva (8. 9. 2004)
Signal – Sever! – Transignal.
Nuit Blanche, Paris (2. 10. 2004)
Signal – Sever! – Transignal 5.
Art+Communication, RIXC Media Space, Riga (2. 10. 2004)
Signal – Sever! – Transignal 6. DEAF04, Rotterdam (12. 11. 2004)

2002

Makrolab mkII, Atholl Estates, Perthshire
(20. 5. – 30. 7. 2002)

Marko Peljhan, Institut Jožef Stefan, Ljubljana (19. – 22. 3. 2002)
M. Peljhan with Carsten Nicolai: *Polar*, documentation, 2000

2001

Signal – Sever!, Art+Communication, Riga
(8. 9. 2001), performance
Also at (selection): Gwangju Biennale, Gwangju (2002); Tramway, Glasgow (2002); Ljubljana (2002); Zagreb (2002)

2000

Polar – Carsten Nicolai and Marko Peljhan, Artlab10, Hillside Plaza, Tokyo
(28. 10. – 6. 11. 2000)
folder

Marko Peljhan. Makrolab Mark II. Komunikacijska konzola, Galerija Kapelica, Ljubljana (19. 4. – 5. 5. 2000)

1998

Marko Peljhan. Sistem-7, Mala galerija, Ljubljana (11. 6. – 30. 8. 1998)
guest curator: Hans Ulrich Obrist

1993

Marko Peljhan. Ritmično scenska struktura Atol / Rhythmical scenic structure Atol, Moderna galerija, Ljubljana (22. 2. 1993)

1992

Egoritem I, II, III. Projekt Atol / Egorhythm I, II, III. Project Atol, Moderna galerija, Ljubljana (14. – 16. 9. 1992)
with Aljoša Abrahamsberg, Nataša Matjašec

Selected Group Exhibitions with publications

2018

Radiophonic Spaces. Walk-in radio archive and platform for listening knowledge. Der Ohrenmensch, Haus der Kulturen der Welt, Berlin (1. – 3. 11. 2018)

Let's Talk About the Weather: Art and Ecology in a Time of Crisis, Times Museum, Guangzhou (23. 6. – 19. 8. 2018)
curated by Nataša Petrešin-Bachelez, Nora Razian
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative

Otherly Space / Knowledge, Asia Culture Center (ACC), Gwangju (2. – 25. 3. 2018)
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative

2017

Izbor del iz zbirke Arteast 2000+ in iz nacionalne zbirke Moderne galerije / Selection from the Arteast 2000+ and Moderna galerija National Collections, Muzej sodobne umetnosti Metelkova, Ljubljana (12. 9. 2017 – 28. 1. 2018)
M. Peljhan with *Makrolab – maketa / model*, 1997

2016

Pionirji računalniške umetnosti / Pioneers of Computer Art, Muzej sodobne umetnosti Metelkova, Ljubljana (25. 10. 2016 – 29. 1. 2017)
curated by Ida Hiršenfelder
exhibition traveled to: UGM Studio, Maribor (2017)
M. Peljhan with *Ladomir Фактура: prva površina-Mikrolab V1.0*, real-time computer video animation

Let's Talk About the Weather: Art and Ecology in a Time of Crisis, Sursock Museum, Beirut (14. 7. – 24. 10. 2016)
curated by Nataša Petrešin-Bachelez, Nora Razian
exhibition guide
M. Peljhan with *System 67 – Immaterial; a work of the resolution series*, 2016

Nizkoproračunske utopije. Dela večinoma iz zbirke Arteast 2000+ / Low-Budget Utopias. Works primarily from the Arteast 2000+ collection, Muzej sodobne umetnosti Metelkova, Ljubljana (26. 4. – 11. 9. 2016)
curated by Zdenka Badovinac, Bojana Piškur
also at restagings: *Reciklirano prvič / First Recycling* (+MSUM, 2016) and *Reciklirano drugič / Second Recycling* (+MSUM, 2017)
M. Peljhan with *Ladomir Фактура*, 1994, digital print, reconstruction, 2011; *System 7*, 1998

2015

Krize in novi začetki. Umetnost v Sloveniji 2005–2015 / Crises and New Beginnings. Art in Slovenia 2005–2015, Muzej sodobne umetnosti Metelkova, Ljubljana (22. 12. 2015 – 3. 4. 2016)
curated by Bojana Piškur, Igor Španjol, Vladimir Vidmar
exhibition catalogue
M. Peljhan & collaborators with *Phoenix Declaration*, 2014, installation

Grammar of Freedom / Five Lessons. Works from the Arteast 2000+ Collection. Moderna galerija, Ljubljana, Garage Museum of Contemporary Art, Moscow (6. 2. – 19. 4. 2015)
curated by Zdenka Badovinac, Snejana Krasteva, Bojana Piškur
exhibition catalogue
M. Peljhan with *UCOG-144*, 1996; *Trust-System 15*, 1999

2014

Abrahamsberg, Biederman, Peljhan & Springer. Ničesar ne smemo imeti za samoumevno: O vzpostavljanju čuječega in poučenega občestva, Galerija Kapelica, Ljubljana (27. – 28. 11. 2014)

Spektralni modulator. Edvard Zajec / Spectral Modulator. Edvard Zajec, Kulturno središče evropskih vesoljskih tehnologij, Vitanje (opening 21. 11. 2014)
exhibition catalogue

2nd Istanbul Design Biennial. *The Future Is Not What It Used To Be*, Istanbul (1. 11. – 14. 12. 2014)
curated by Zoe Ryan, Meredith Carruthers
exhibition catalogue
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative *Circumpolar-Phoenix*, 2014

La Biennale de Montréal BNLMTL 2014, *L'avenir (looking forward)*, Musée d'art contemporain de Montréal, Montreal (22. 10. 2014 – 4. 1. 2015)
artistic director: Sylvie Fortin
curated by Gregory Burke, Peggy Gale, Lesley Johnstone, Mark Lanctôt
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative

Pittsburgh Biennial 2014. *Love, Absurdity, Surveillance, Gaming and Identity*, Space, Pittsburgh (26. 9. – 10. 11. 2014)
curated by Murray Horne
M. Peljhan with Aljoša Abrahamsberg, Matthew Biederman, Brian Springer: *Systemic Tactical Environments*

Sapporo International Art Festival SIAF2014. *City and Nature*, Sapporo (19. 7. – 28. 9. 2014)
guest director: Ryuichi Sakamoto
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative: *Circumpolar-Phoenix*, 2014

Fields, ARSENĀLS Exhibition Hall, Riga (15. 5. – 3. 8. 2014)
curated by Rasa Smite, Raitis Smits, Armin Medosch
M. Peljhan with Aljoša Abrahamsberg, Matthew Biederman, Brian Springer: *We should take nothing for granted, on the building of an alert and knowledgeable citizenry*

Yebisu International Festival for Art & Alternative Visions. *True Colors*, Tokyo Photographic Art Museum, Tokyo (7. – 23. 2. 2014)
exhibition catalogue
M. Peljhan and Matthew Biederman: Arctic Perspective Initiative

5th Moscow Biennale of Contemporary
Art: Special project. *Ice Laboratory*,
Laboratoria Art & Science Space, Moscow
(12. 12. 2013 – 15. 2 . 2014)
exhibition catalogue
M. Peljhan and Matthew Biederman with
CDPDU-MOS1, portable research observation
station

Vmesna postaja 1 : 1 / Stopover 1 : 1,
Muzej sodobne umetnosti Metelkova,
Ljubljana (17. 10. 2013 – 12. 1. 2014)
curated by Zdenka Badovinac
exhibition catalogue
M. Peljhan with: *Makrolab – A Spectral
Work Station*

U3 – 7. trienale sodobne umetnosti v
Sloveniji. *Prožnost* / U3 – 7th Triennial of
Contemporary Art in Slovenia. *Resilience*,
Muzej sodobne umetnosti Metelkova,
Ljubljana (20. 6. – 29. 9. 2013)
curated by Nataša Petrešin-Bachelez
exhibition catalogue
M. Peljhan and others with *The Resilients*

2012

*Pixxelpoint 2012. 13. mednarodni festival
novomedijske umetnosti: 333.7 ms*, Mestna
galerija Nova Gorica, Nova Gorica
(7. – 14. 12. 2012)
curated by Aljoša Abrahamsberg, Marko
Peljhan
exhibition catalogue
M. Peljhan and Matthew Biederman: Arctic
Perspective Initiative

*True North: Contemporary Art of the
Circumpolar North*, Anchorage Museum,
Anchorage (18. 5. – 9. 9. 2012)
exhibition catalogue
M. Peljhan and Matthew Biederman: Arctic
Perspective Initiative

2011

*Sedanjost in prisotnost. Izbor del iz
zbirke Arteast 2000+ in nacionalne
zbirke Moderne galerije / The Present
and Presence. Selected works from the
Arteast 2000+ collection and the Moderna
galerija national collection,* Muzej sodobne
umetnosti Metelkova, Ljubljana (26. 11.
2011 – 29. 1. 2012)
curated by Zdenka Badovinac, Bojana Piškur,
Igor Španjol
also at: *Sedanjost in prisotnost –
ponovitev 1/The Present and Presence –
Repetition 1* (2012)
exhibition guide and exhibition catalogue
(2012)
M. Peljhan with: *Makrolab*, 1997–2006

11eme Biennale de Lyon. *A Terrible Beauty is
Born / Une Terrible Beauté est Née*,
MAC Musée d'art contemporain de Lyon, Lyon
(15. 9. – 31. 12. 2011)
artistic director: Thierry Raspail
curated by Victoria Noorthoorn
exhibition catalogue

1st Time Machine Biennial of Contemporary
Art. *"No Network!"*, D-0 ARK Underground,
Konjic (27. 5. – 27. 9. 2011)
exhibition catalogue
curated by Branislav Dimitrijević, Petar
Ćuković

Powered by Ljudmila, Mestna galerija,
Ljubljana (19. 5. – 26. 6. 2011)
exhibition catalogue

2010

Serbia – Frequently Asked Questions,
Austrian Cultural Forum New York, New York
(23. 9. 2010 – 11. 1. 2011)
curated by Branislav Dimitrijević, Andreas
Stadler
exhibition catalogue
M. Peljhan with *Teritorij 1995-Evidence*

2009

11th International Istanbul Biennial.
What Keeps Mankind Alive?, Antrepo No. 3,
Istanbul (12. 9. – 8. 11. 2009)
curated by What, How & for Whom, Zagreb
exhibition catalogue
M. Peljhan with *Teritorij 1995*

ISEA 2009. International Symposium on
Electronic Art, Mobile residency project
on the Irish Sea (23. 8. – 1. 9. 2009)
exhibition catalogue
M. Peljhan with Tapio Mäkelä and Matthew
Biederman: *M.A.R.I.N.*, 2009

*Open Space 2009. Mission G. Sensing the
Earth*, NTT InterCommunication Center
[ICC], Tokyo (16. 5. 2009 – 28. 2. 2010)
folder
M. Peljhan with *Common Data Processing
and Display Unit – Tokyo System Prototype
(CDPDU)*, 2009 – 2010

2008

Brussel Biennale 1 / Brussels Biennial 1.
Once is Nothing, Brussels (19. 10. 2008 –
4. 1. 2009)
exhibition curated by Maria Hlavajova,
Charles Esche
exhibition catalogue

Ars Electronica. *A New Cultural Economy.
Ecology of the Techno Mind*, Lentos
Kunstmuseum, Linz (4. 9. – 5. 10. 2008)
exhibition curated by Jurij Krpan
exhibition catalogue
Art projects selected by Galerija Kapelica
shown also at: LJUCosinusBRX, Brussels
(2009), European Parliament, Brussels
(2010); International Test Site Z-1,
Belgrade (2010); Galerija dimenzija
napredka, Solkan (2012).
M. Peljhan with *INSULAR Technologies*

ISEA 2008. International Symposium on
Electronic Art, Singapore
(25. 7. – 3. 8. 2008)
exhibition catalogue
M. Peljhan with *Spektr!*, performance
(28. 7. 2008)

*Waves. The Art of the Electromagnetic
Society*, HMKV Phoenix Halle, Dortmund
(10. 5. – 29. 6. 2008)
curated by Armin Medosch, Rasa Smite,
Raitis Smits, Inke Arns
exhibition catalogue

Transmediale 08. *Conspire…*, Haus der
Kulturen der Welt, Berlin
(29. 1. – 24. 2. 2008)
artistic director: Stephen Kovats
exhibition curated by Nataša
Petrešin-Bachelez
exhibition catalogue

2007

Ars Electronica. *Goodbye Privacy*, Linz
(5. – 11. 9. 2007)
exhibition catalogue
M. Peljhan as that year's Featured Artist,
also with *Spektr!*, performance

Free Radicals, The Israeli Center for
Digital Art, Holon (24. 2. – April 2007)
curated by Eyal Danon
folder
M. Peljhan with *Pact Systems-I-Task*,
project; *System-77 Civil Counter-
Reconnaissance*, project

2006

Dataesthetics, Galerija Nova, Zagreb
(1. 12. 2006 – 6. 1. 2007)
curated by Stephen Wright

Space is the Place, Cranbrook Art
Museum, Bloomfield Hills
(18. 11. 2006 – 14. 1. 2007)
curated by Alex Baker, Toby Kamps
exhibition traveled to: Bedford Gallery,
Walnut Creek (2007); Scottsdale Museum
of Contemporary Art, Scottsdale (2007);
Pennsylvania Academy of the Fine Arts,
Philadelphia; Contemporary Arts Center,
Cincinnati (2008); The Hudson River
Museum, Yonkers (2008)
exhibition catalogue

*Zbirka Arteast 2000+23 / Arteast
Collection 2000+23,* Moderna galerija,
Ljubljana (22. 9. – 22. 10. 2006)
curated by Zdenka Badovinac
M. Peljhan with *Makrolab 1997–2007*

2005

World-Information.Org, Lady Jehangir
Kothari Memorial Hall, Bengaluru
(14. – 20. 11. 2005)
M. Peljhan with *Electronic Media
Monitoring*, installation

Rückkehr ins all, Hamburger Kunsthalle,
Hamburg (29. 9. 2005 – 12. 2. 2006)
curated by Christoph Heinrich, Markus
Heinzelmann
exhibition catalogue

*Teritoriji, identitete, mreže. Slovenska
umetnost 1995–2005 / Territories,
Identities, Nets. Slovene Art 1995–2005*,
Moderna galerija, Ljubljana (9. 8. – 1. 11.
2005)
curated by Igor Španjol, Igor Zabel
exhibition catalogue

Open Nature, NTT InterCommunication Center
[ICC], Tokyo (29. 4. – 3. 7. 2005)
folder
M. Peljhan with *Spectral-System TYO on
2005*, 2005

Felons, Royal Hibernian Academy, Dublin
(10. 2. – 20. 3. 2005)
curated by Alan Phelan
exhibition catalogue
M. Peljhan with *S-77CCR project*, video
installation

Disobedience. An ongoing video library,
Play_gallery for still and motion pictures,
Berlin (13. 1. – 26. 2. 2005)
curated by Marco Scotini
M. Peljhan with *Makrolab*

2004

*7 grehov: Ljubljana–Moskva. Arteast
razstava / 7 Sins: Ljubljana–Moscow.
Arteast Exhibition*, Moderna galerija,
Ljubljana (20. 12. 2004 – 13. 3. 2005)
curated by Zdenka Badovinac, Viktor
Misiano, Igor Zabel
exhibition catalogue
M. Peljhan with *Trust-System 77*, 2004,
installation

ISEA 2004. International Symposium on
Electronic Art (14. – 22. 8. 2004)
exhibition catalogue
M. Peljhan with *Makrolab–UNTP (unmanned
network tactical phase)*, Tammakari Island &
Museum of Contemporary Art Kiasma, Helsinki

*Razširjeni prostori umetnosti. Slovenska
umetnost 1985–1995 / Art in Extended
Spaces. Slovene Art 1985–1995*, Moderna
galerija, Ljubljana (22. 6. – 10. 10. 2004)
curated by Igor Španjol, Igor Zabel
exhibition catalogue
M. Peljhan with *Egorhythm I, II, III.*

*Ohne Schnur. Kunst und drahtlose
Kommunikation,* Cuxhaven Kunstverein,
Cuxhaven (3. 4. – 2. 5. 2004)
curated by Katja Kwastek
exhibition catalogue
M. Peljhan with *Makrolab, 1997–2007,
Teritorij MIR-A CUX 01052004Z–000Z*, 2004,
project

2003

La Biennale di Venezia. 50a Esposizione
Internazionale d'arte. *Sogni e Conflitti –
La dittatura dello spettatore /
La Biennale di Venezia. 50th International
Art Exhibition. Dreams and Conflicts –
The Dictatorship of the Viewer*, Venice
(15. 6. – 2. 11. 2003)
artistic director: Francesco Bonami
exhibition catalogue
M. Peljhan part of the *Individual
Systems* exhibition curated by Igor Zabel.
M. Peljhan with *Makrolab Mark IIex
Communications Space*, communication console
in Arsenale. M. Peljhan's *Makrolab Mark
IIex* was also operating on Campalto Island.

*Form-specific. Arteast razstava /
Form-Specific. Arteast Exhibition*, New
museum premises at Metelkova – site under
construction (today +MSUM), Ljubljana
(31. 5. – 31. 7. 2003)
curated by Zdenka Badovinac
exhibition catalogue
M. Peljhan with *Precision Strike!,* 2003.

Living Inside the Grid, New Museum of
Contemporary Art, New York
(28. 2. – 15. 6. 2003)
curated by Dan Cameron
exhibition catalogue

*Geografie und die Politik der Mobilität /
Geography and the Politics of Mobility*,
Generali Foundation, Vienna
(16. 1. – 27. 4. 2003)
curated by Ursula Biemann
exhibition catalogue
M. Peljhan with *Makrolab*, 2003,
installation

2002

World-Information.Org, Oude Kerk,
Amsterdam (15. 11. – 15. 12. 2002)
M. Peljhan with *Trust-System 22*,
installation

*Auf der Suche nach Balkanien / In Search
of Balkania*, Neue Galerie Graz, Graz
(4. 10. – 1. 12. 2002)
curated by Roger Conover, Eda Čufer, Peter
Weibel
exhibition catalogue
M. Peljhan with *System-7*, 1998; *System-17*,
1991–1999

The Art of the Balkan Countries, State
Museum of Contemporary Art, Thessaloniki
(13. 4. – 31. 5. 2002)
selectors of Slovene artists: Zdenka
Badovinac, Igor Zabel
exhibition catalogue

Gwangju Biennale 2002. *P_A_U_S_E*, Gwangju
(29. 3. – 29. 6. 2002)
curated by Charles Esche, Hou Hanru,
Sung Wan Kyung
exhibition catalogue
M. Peljhan with *Signal-Sever!*, performance

*Projekt: Broadcasting, posvećen Nikoli
Tesli / Broadcasting Project, dedicated to
Nikola Tesla*, Tehnički muzej, Zagreb
(26. 1. – 3. 3. 2002)
curated by What, How & for Whom, Zagreb
exhibition catalogue

2001

*Arteast 2000+. The Art of Eastern
Europe. A Selection of Works from the
International and National Collections
of Moderna galerija Ljubljana*, Orangerie
Congress, Innsbruck (14. – 21. 11. 2001)
curated by Zdenka Badovinac, Peter Weibel
exhibition traveled to: Zentrum für
Kunst und Medientechnologie, Karlsruhe
(2002); Čifte Amam, Skopje (2002); Moderna
galerija, Ljubljana (2004)
exhibition catalogue
M. Peljhan with *Makrolab 1997–2007*

Laboratorium, Museum Boijmans Van
Beuningen, Rotterdam (October 2001)
curated by Hans Ulrich Obrist, Barbara
Vanderlinden
exhibition catalogue

Ars Electronica. *Takeover*, Linz
(1. – 6. 9. 2001)
exhibition catalogue
M. Peljhan and Carsten Nicolai:
Polar, 2000

Media Connection, Palazzo delle
Esposizioni, Rome (28. 6. – 15. 9. 2001)
curated by Gianni Romano
exhibition traveled to Palazzo della
Triennale Milano (2001)
exhibition catalogue

*Izbrana dela slovenskih avtorjev iz zbirk
Moderne galerije 1950–2000 / Selected
Works of Slovene Artists from the Museum
of Modern Art Collections 1950–2000*,
Moderna galerija, Ljubljana
(5. 6. 2001 – 29. 10. 2006)
curated by Zdenka Badovinac, Igor Zabel
et al.
exhibition guide
M. Peljhan with *Materials of Two Projects
from the "Resolution" Series*

*Milano Europa 2000. Fine Secolo. I semi
del futuro / Milano Europe. The end of the
century. The seeds of the future*, PAC,
La Triennale di Milano, Milan
(19. 5. – 16. 9. 2001)
exhibition catalogue
M. Peljhan with *Trust-System 22 Anechoic
II – radio phase*, 2001, installation

Oko in njegova resnica. Spektakel in resničnost v slovenski umetnosti 1984–2001 / The Eye and its Truth. Spectacle and Reality in Slovene Art 1984–2001, Moderna galerija, Ljubljana (26. 4. – 27. 5. 2001)
curated by Igor Zabel
folder, reprinted in: *Igor Zabel. Contemporary Art Theory*. Ed. Igor Španjol. Zürich: JRP | Ringier, 2012.

U3 – 3. trienale sodobne slovenske umetnosti. Vulgata / U3 – 3rd Triennale of Contemporary Slovene Art. Vulgata, Moderna galerija, Ljubljana (14. 12. 2000 – 18. 2. 2001)
curated by Gregor Podnar
part of the exhibition traveled to Neuer Berliner Kunstverein, Berlin (12. 5. – 24. 6. 2001)
exhibition catalogue
M. Peljhan with *Makrolab II (system 176)*, 1999

World-Information.Org, Technisches Museum Wien, Vienna (24. 11. – 24. 12. 2000)
M. Peljhan with *Electronic Media Monitoring*, installation

cITy – Daten zur Stadt unter den Bedingungen der Informationstechnologie / cITy – Data on the City under the Conditions of Information Technology, ZKM | Zentrum für Kunst und Medientechnologie, Karlsruhe (11. 11. 2000 – 4. 2. 2001)
exhibition catalogue

Media City Seoul. 1st Seoul International Media Art Biennale, Seoul (2. 9. – 31. 10. 2000)
director: Misook Song
curated by Barbara London, Jeremy Millar, Hans Ulrich Obrist, Byong Hak Ryu
exhibition catalogue

World-Information.Org, Centre Brussels, Brussels (30. 6. – 30. 7. 2000)
M. Peljhan with *Electronic Media Monitoring*, installation

Što, kako i za koga. Povodom 152. godišnjice Komunističkog manifesta / What, How & for Whom. On the occasion of the 152nd anniversary of the Communist Manifesto, Hrvatsko društvo likovnih umjetnika, Zagreb (16. 6. – 10. 7. 2000)
curated by Ana Dević, Nataša Ilić (What, How & for Whom, Zagreb)
exhibition traveled to Kunsthalle Exnergasse, Vienna (2001)

Home, Art Gallery of Western Australia, Perth (5. 2. – 25. 4. 2000)
exhibition catalogue
M. Peljhan with *Makrolab Mark II*, Rottnest Island

Ničvredno (neprecenljivo). Pojem vrednosti v sodobni umetnosti / Worthless (Invaluable). The Concept of Value in Contemporary Art, Moderna galerija, Ljubljana (4. 2. – 5. 3. 2000)
guest curator: Carlos Basualdo
curatorial advisors: Zdenka Badovinac, Ben Kinmont
magazine *M'ars* as exhibition catalogue: *M'ars* (Ljubljana), XII/3,4 (2000).
M. Peljhan with *Terminal 2000-System 27*, installation

Rewind to the Future, Neuer Berliner Kunstverein, Berlin (15. 1. – 20. 2. 2000)
curated by Annelie Pohlen, Petra Unnützer, Jo Eckhardt

Aspekte / Positionen. 50 Jahre Kunst aus Mitteleuropa 1949–1999 / 50 Years of Art in Central Europe 1949–1999, Palais Lichtenstein and 20er Haus, Vienna (18. 12. 1999 – 27. 2. 2000)
curated by Lóránd Hegyi, co-curators: Dunja Blažević et al.
exhibition catalogue (Vol. I-II)
exhibition traveled to Ludwig Museum, Budapest (2000); Fundació Miró, Barcelona (2000); Hansard Gallery, Southampton (2000); Millais Gallery, Southampton (2000); Southampton Institute, Southampton (2000); Southampton City Art Gallery, Southampton (2000); Aspex Gallery, Portsmouth (2000).
M. Peljhan with *System No. 17 (From the Resolution series)*, 1999, metal-plate, light-box

After the Wall. Art and Culture in Post-Communist Europe, Moderna Museet, Stockholm (16. 10. 1999 – 16. 1. 2000)
chief curator: Bojana Pejić
exhibition catalogue (Vol. I-II)
exhibition traveled to Ludwig Museum Budapest, Budapest (June 2000), Hamburger Bahnhof, Berlin (November 2000)
M. Peljhan with *System 17*

Connected Cities. Kunstprozesse im urbanen Netz / Processes of Art in the Urban Network, Wilhelm Lehmbruck Museum Dui., Duisburg am Rhein (20. 6. – 1. 8. 1999)
curated by Söke Dinkla
exhibition catalogue
M. Peljhan with *Sky Area*, 1999, installation

SIQ 1999, Kunsthalle Exnergasse, Vienna (16. 6. – 17. 7. 1999)
curated by Vanesa Cvahte
M. Peljhan with *The PPTU 1999 (Portable Programming and Transmitting Unit 1999)*, 1999

Plug In, Salon3, London (13. 5. – 26. 6. 1999)
curated by Rebecca Gordon Nesbitt, Hou Hanru, Maria Lind, Hans Ulrich Obrist

Generation Z, MoMA P.S.1, New York (18. 4. – 6. 6. 1999)
curated by Klaus Biesenbach, Alanna Heiss, Barbara Vanderlinden
M. Peljhan with *Trust-System 15*, installation

Ars Electronica. *Infowar – information. macht.krieg*, Linz (7. – 12. 9. 1998)
exhibition catalogue
M. Peljhan with *Raylab I.* (8. – 10. 1998), installation, and *Solar – A Wardenclyffe Project* (9. 9. 1998), performance

Body and the East. Od šestdesetih let do danes / From the 1960s to the Present, Moderna galerija, Ljubljana (7. 7. – 27. 9. 1998)
curated by Zdenka Badovinac
exhibition traveled to Exit Art, New York (20. 1. – 10. 3. 2001)
exhibition catalogue
M. Peljhan with *Ladomir Фактура: Second Surface – We Were Expecting You!*, 1995

Manifesta 2. Biennale européenne d'art contemporain / European Biennial of Contemporary Art, Luxembourg (28. 6. – 11. 10. 1998)
curated by Robert Fleck, Maria Lind, Barbara Vanderlinden
exhibition catalogue
M. Peljhan with *Operation Est Sundown*, 1998

Wiretap 4.04 – ParaSounds2, V2_, Rotterdam (19. 4. 1998)
M. Peljhan with *Wardenclyffe situation no. 4*, performance

U3 – 2. trienale sodobne slovenske umetnosti / U3. 2nd Triennial of Contemporary Slovene Art, Moderna galerija, Ljubljana (14. 11. 1997 – 11. 1. 1998)
curated by Peter Weibel
exhibition catalogue
M. Peljhan with *TRT–97SD*, 1997

Code Red, The Performance Space, Sydney (10. – 23. 11. 1997)
M. Peljhan with *178 ˚East – Another Ocean Region*, project

Ostranenie '97, Bauhaus, Dessau (5. – 9. 11. 1997)
exhibition catalogue
M. Peljhan with *Wardenclyffe Situation No. 2*

2nd Johannesburg Biennale 1997. *Trade Routes: History and Geography*, Johannesburg (12. 10. – 12. 12. 1997)
artistic director: Okwui Enwezor
exhibition catalogue
M. Peljhan with *Southern Communicator*

documenta X, documenta-Halle, Kassel
(21. 6. – 28. 9. 1997)
artistic director: Catherine David
Politics-Poetics, documenta X – the book,
1997, book
M. Peljhan with *Makrolab autonomous modular
solar and wind powered communication and
survival environment (a LADOMIR project
– insulation/isolation strategy), Projekt
Atol – Pact*, 1997 [Lutterberg hill near
Kassel]; *Makrolab – Console communication
unit for Makrolab contacts, Projekt Atol –
Pact*, 1997, and *Wardenclyffe Situation
No. 1.*

*Kartografi. Geo-gnostičke projekcije za
21. stoljeće / Cartographers. Geo-gnostic
projections for the 21st century*, Umjetnički
paviljon, Zagreb (8. 6. –27. 7. 1997)
curated by Želimir Koščević
exhibition catalogue
exhibition traveled to Warsaw (1998);
Budapest (1998); Maribor (1998)
M. Peljhan with *Terminal*, 1997

Občutek za red / The Sense of Order,
Moderna galerija, Ljubljana
(9. 5. – 23. 6. 1996)
curated by Zdenka Badovinac
exhibition catalogue
M. Peljhan with *Terminal*, 1996, situation

*Urbanaria II. UCOG-144 (Urbano
kolonizacijsko in orientacijsko orodje
144 / Urban Colonisation and Orientation
Gear 144)*, the city of Ljubljana
(28. 2. – September 1996)
exhibition catalogue

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Apparatus for Global Observation". In:
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Approaches to an Old Medium*. Eds. Golo
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The X-43A Hypersonic Experimental (Hyper-X)
    Vehicle hangs suspended in the cavernous
    Benefield Anechoic Facility at Edwards Air
    Force Base during radio frequency tests in
    January 2000.
    Photo: Tom Tschida

Appendix

comradeship

inspiration

friendship

landscape of signifiers

nostalgia

layers

communication

iteration

paranoia

sampling

materialisation

deployment

Architecture/Engineering/Articulation/Materialisation/Art
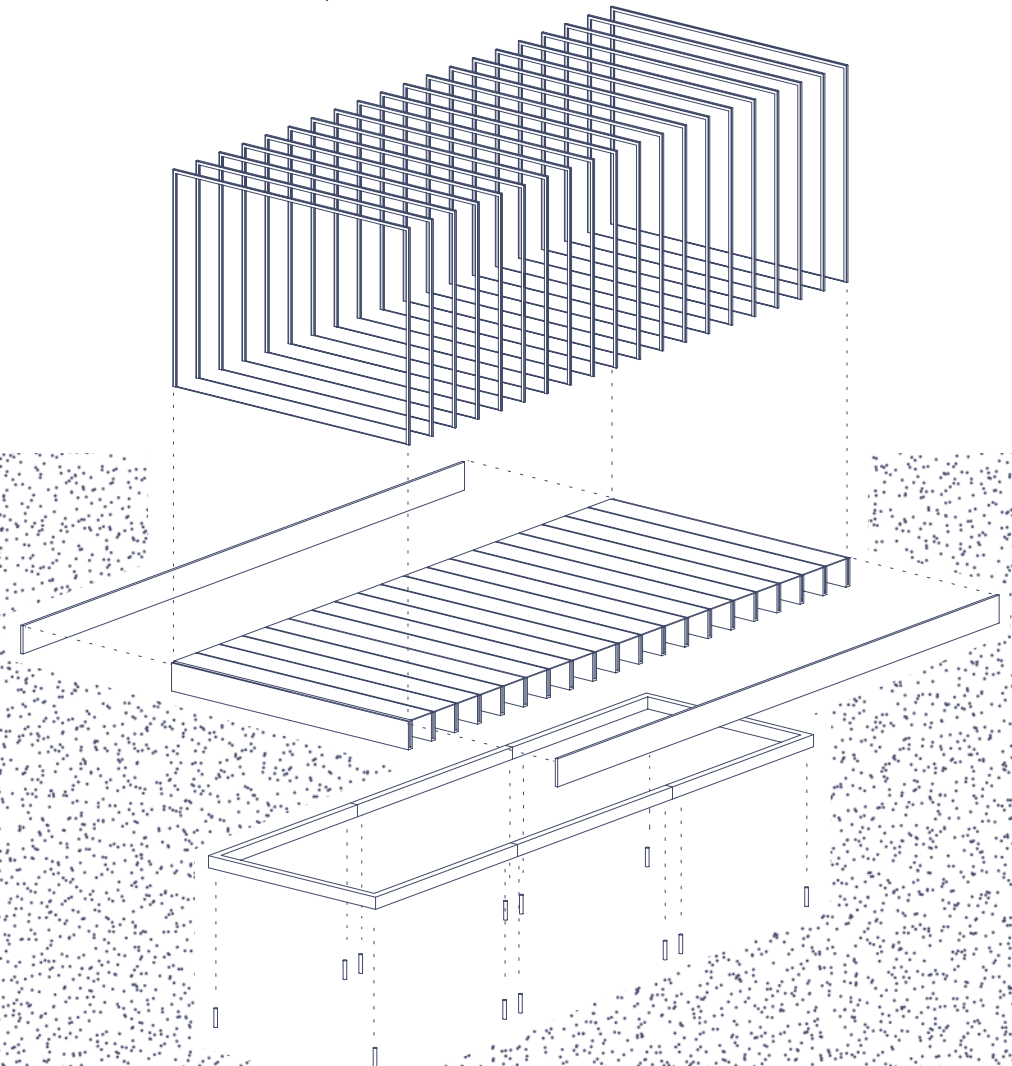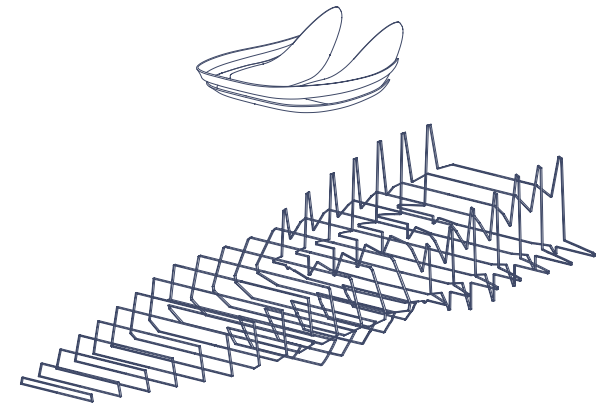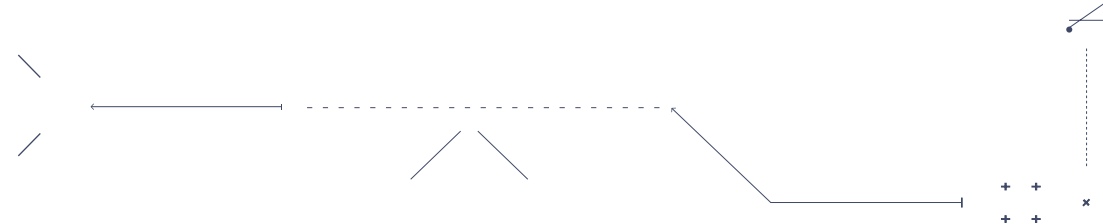
Scramjets (supersonic-combustion ramjets) are ramjet engines in which the airflow through the whole engine remains supersonic. Scramjet technology is challenging because only limited testing can be performed in ground facilities. Long duration, full-scale testing requires flight research.

Scramjet engines are air-breathing, capturing their oxygen from the atmosphere....Scramjet technology-based vehicles need to carry only fuel. By eliminating the need to carry oxygen, future hypersonic vehicles will be able to carry heavier payloads.

A unique aspect of the X-43A vehicle (the inspiration for the SYSTEM 317 vessel)is the airframe integration. The body of the vehicle itself forms critical elements of the engine. The forebody acts as part of the intake for airflow and the aft section serves as the nozzle.

On 16 November 2004, NASA's unmanned Hyper-X (X-43A) aircraft reached Mach 9.6. The X-43A was boosted to an altitude of 33,223 meters (109,000 feet) by a Pegasus rocket launched from beneath a B52-B jet aircraft. The revolutionary 'scramjet' aircraft then burned its engine for around 10 seconds during its flight over the Pacific Ocean.

BLACK SABBATH:
Planet Caravan

We sail...
Through endless skies
Stars shine like eyes
The black night sighs
The moon...
In silver dreams
Pours down in beams
Light of the night
The earth...
A purple blaze
Of sapphire haze
In orbit always

While down...
Below the trees
Bathed in cool breeze
Silver starlight
Breaks dawn from night
And so...
We pass on by
The crimson eye
Of great god Mars
As we travel
The universe

from the album PARANOID

Written By: Geezer Butler,
Tony Iommi, Ozzy Osbourne & Bill Ward
Lyrics: Geezer Butler
Drums: Bill Ward
Bass: Geezer Butler
Guitars: Tony Iommi
Vocals: Ozzy Osbourne
Release Date: August 1, 1970

EXHIBITION DRAWINGS:
Trost&Krapež Architecture
Jan Trošt, lead architect
Tamara Likon, architect

CAPITAL

WAR

INTELLIGENT

INCURSION

SURVEILLANCE

ARCTIC

EMERGENT

PHENOTYPE

ETERNAL

FUGITIVE

HYPERSONIC

HYPERSTITION

OBSERVATION

RECORDING DEVICE

LOOP HOLES

LOVE

LJUBLJANA

ENGAGEMENT

AESTHETICS

OVERLAYERING

AUTONOMOUS

THEATRE

ENMESHED

SYSTEM 317

MX

NETWORK

REPORT

EVENTS

OPERATION

MAKROLAB

RAMIFICATION

INTERPLAY

NAVIGATION

POLAR

U.F.O.

EARTH

CONNECTION

BECOMING

PARADOXICAL

REPAIR

SITUATIONIST
INTERNATIONAL

PERSPECTIVE

CROWD

WISDOM

DATA LANDSCAPE

U.G.O.

CELESTIAL

TECHNOLOGY

MOUSETRAP

SKY

SCRATCH

METAPHOR

Marko Peljhan

HERE WE GO AGAIN...*system 317*

a situation of the Resolution series

MG+MSUM
Moderna galerija
Museum of Modern Art, Ljubljana
plus Muzej sodobne umetnosti Metelkova
Museum of Contemporary Art Metelkova

zavod projekt atol

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