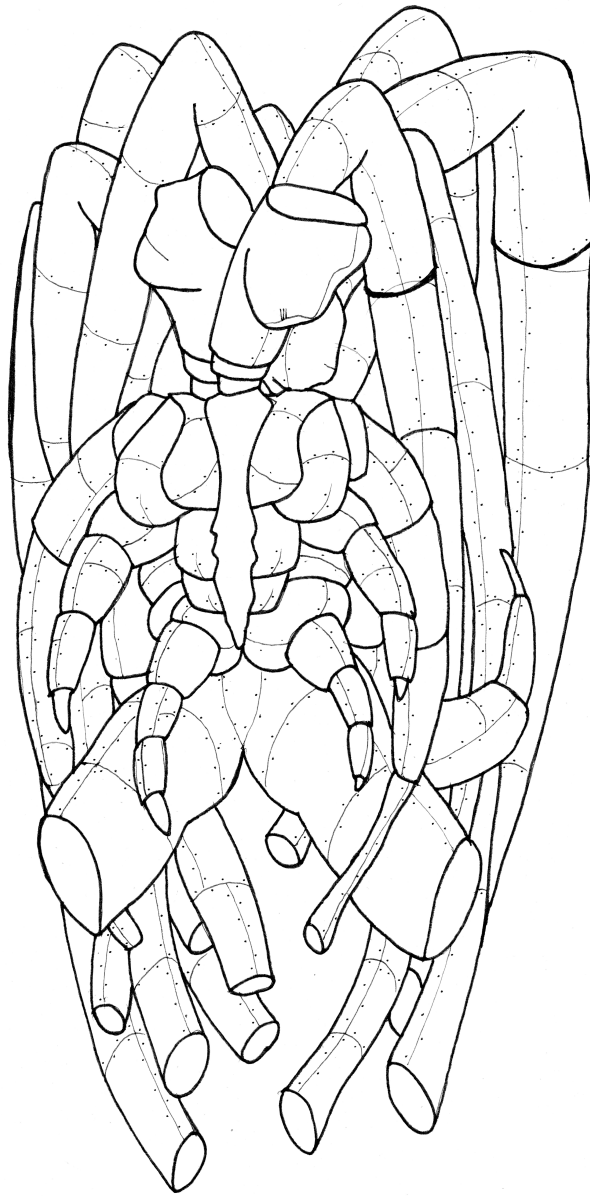


# TRANSENVIRONMENTALS

## FUTURE BODIES

Dariusz Wojdyga  
Metal- and Jewellery Art  
Bachelor text  
KHiO 2022



*„The best way to predict the future is to invent it.”<sup>1</sup>*

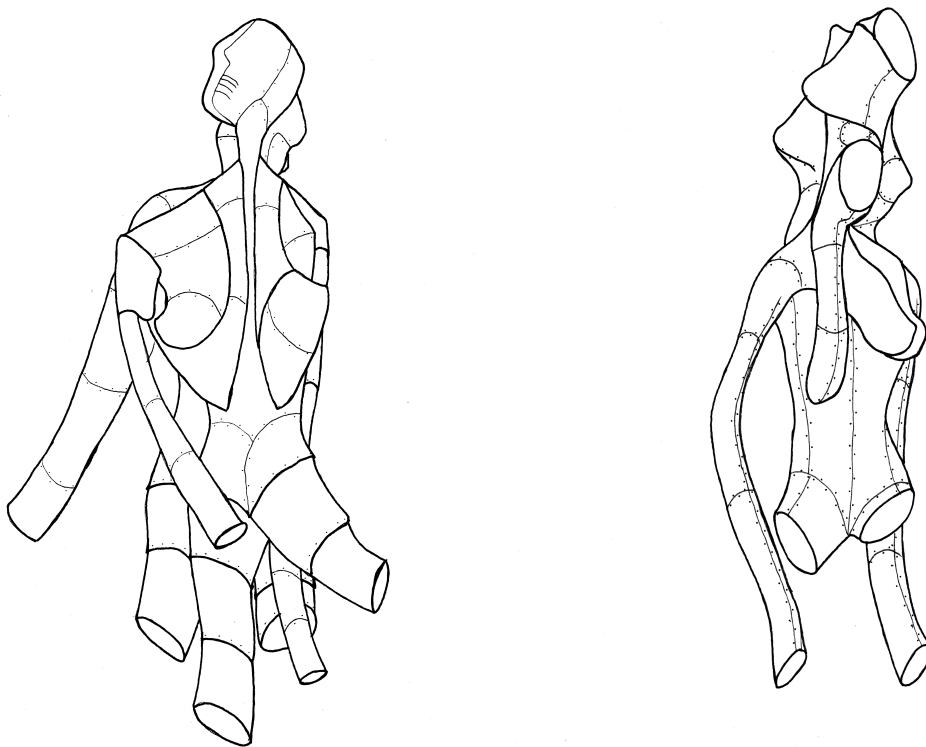
Dennis Gabor

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<sup>1</sup> Gabor, *Inventing the future* (London: Secker and Warburg, 1963), 184-185.

## HUMANS

The body of any living organism is shaped and conditioned by evolutionary sequences of adaptive changes. Every living creature adapts to given environment based on the key life functions: movement, breathing, growth, nutrition and reproduction. But one of the essential factors that influenced the evolutionary formation of the human body and consciousness is technology. With use of external tools - a developmental trait that belongs almost exclusively to the human species - through thousands years of inventions and improvements, we have reached the stage of virtual avatars, AI managing the algorithms and era of private space flights. Unfortunately, however, our biological conditions, the structure of our body and its life functions still dominate relationships in the real world. If it weren't for the need of food supplies, resources and territory - all so centred around the form of human existence as we know it - we could have avoided conflicts, wars, explorations and exploitations. Therefore, we need not only changes in ways of thinking about



Examples of the future embodiments. Dariusz Wojdyga. Ink pen on paper. 21cm x 29,5cm

ourselves, but also changes in the structure of our body, so that it can become its own supply factory of all needs.

My project: *Transenvironmentals. Future bodies* is an imaginary idea of post human re-embodiment, based on a futuristic vision of biotechnological redefinition of the body shape through modification, extension and implementation. Made of aluminium, shaped with the technique of corpus and cold joining - riveting, it is a large art jewellery object that stands as a necklace, with the possibility of dismantling some elements and transferring to other parts of the body, functioning as earrings, brooch, pendant or armlet. In appearance, it refers to the organic shapes of plant root systems, mycelium or corals, but structurally refers to the network of industrial ventilation systems or water supply. The bio-technological look resembles external organs, sensory apparatuses, or even another species of living organisms implanted on human body (hybridised bodies) suggesting preliminary changes to the structure and appearance of the future human body.

## **TRANSENVIRONMENTALS**

I remember my high school fascination with biology lessons. A fascination with learning the basics of the structure and functioning of living organisms, from the simplest single-cell forms to complex beings consisting of specialised for specific functions tissues, organs, apparatuses and systems. I was amazed at the variety of living forms, their shapes, structures, organ functions, and a whole range of environmental adaptive characteristics. My special attention was paid to unique forms of adaptation, such as the ability to restore a lost organ or limb, bisexual reproduction ways, nourishment through the absorption of solar energy, the ability to breathe underwater or fly in the air. The ability to see in an unimaginable spectrum of light or to hear in a spectrum of waves that human ear cannot achieve. Incredible adaptations to life in extreme conditions - like extremophiles, symbiosis of different species and entire interdependent ecosystems - such as human body.

These few examples show what a fantastic world we live in. We humans are part of this world. The shapes, structures and functions of our bodies are, of course, admirable evolutionary achievements. But what would we look like today if we chose a different evolutionary path? If we had, going back thousands of years, to abandon the great idea of using tools and instead chose a longer and more complicated trail of natural development. By adapting our bodies and organs to live in extreme, changeable and unpredictable environments, we could now be happy organisms having a non-invasive way of living in harmony with nature.





Extremophile: *Nereis sanders*, deep ocean worm.  
Image credit: Philippe Crassous. Source: Science Photo Library  
<https://www.sciencephoto.com/media/447725/view>

My high-school fascination with biology awakened a dream of a perfect organisms, capable of living in all possible environments, self-sufficient in terms of reproduction and nutrition, with a highly developed intellect and personality aware of universal unity in multiplicity. Transenvironmentals.

## **HOMO DEUS**

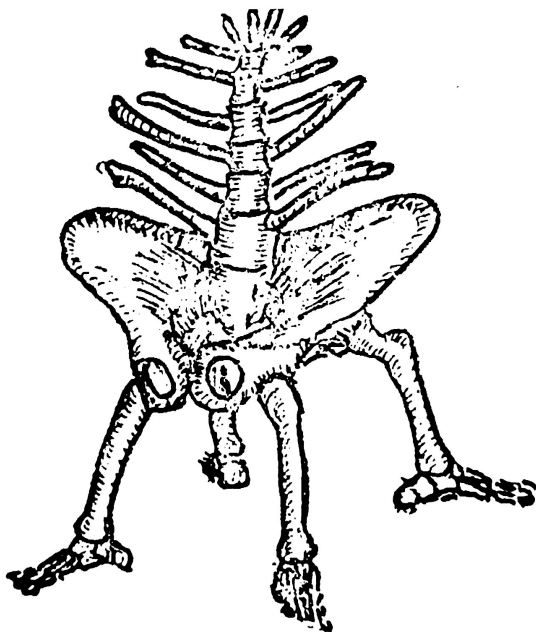
I would risk a statement that it was an irreversible mistake of our ancestors - the turn to technology. The first use of a stone tool completely changed the course of evolution. Subsequent discoveries and the use of external objects caused a slowdown or regression in the natural mode of evolution. The human body and intellect have since followed the development of technology that, on the one hand, helped in surviving and, on the other hand, made the body itself very vulnerable to external conditions. Today, in the age of science, technology and data, we stand at the threshold of new possibilities, in which the artificial world combines with biology, shapes the appearance of the body, and formulates the functioning of the mind.

According to historian Yuval Noah Harari, homo sapiens has reached the limit of its natural development possibilities and now the improvement of physical and mental abilities depends on

technology. It is techno-humanism that will create superheroes, if not gods<sup>2</sup>. The pursuit of eliminating pain, avoiding old age, trying to overcome death, and finding a way to be constantly happy depends on reaching the mystery of human biology. It is through the manipulation of the functioning of our organs and controlling of the way the nervous system functions that the further development towards a new form of human - homo deus, will depend<sup>3</sup>. Technologies are already influencing the change of human embodiment - prostheses, pacemakers, chips, avatars - thus changing the perception of „self” as conscious and as the physical body. The way of sensing the outside world and the ways of being in this world are transformed.

## HOMO AUTOFAC

My great inspiration for the future body visions comes from the book *The star diaries* by Stanislaw Lem. In the chapter *Trip 21*, the main character lands on an Earth-like planet inhabited by human-like creatures. It is a distant future in a far away galaxy, so trying to set an exact date in relation to Earth time is not important here. In the first part of the story, the main character shares the following



Future embodiment. Stanisław Lem.  
From: Lem, Stanisław. *Dzienniki gwiazdowe*. Kraków: Wydawnictwo Literackie, 2012, p.173.

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<sup>2</sup> Harari, *Homo Deus*, (London: Vintage, 2017), 410.

<sup>3</sup> Harari, *Homo Deus*,(London: Vintage, 2017), 49-50.

thought: "*The nightmarish visions that futurologists sometimes have of a world of the future poisoned by exhaust gases, smoky, stuck in an energy and thermal barrier, etc., are nonsense: in the post-industrial phase of development, biotic engineering is being created, eliminating problems of this type*"<sup>4</sup>. It is a world in which visions of ecological disasters resulting from industrial activities have been mastered thanks to biotechnological solutions. Later in the book, the author also addresses the above-mentioned issues - health, limited life time and body shape: "*I learned that in the year 2401 Bym Brogar, Dyrr Daagar, and Merr Darr opened the gates to the vast world of self-evolutionary freedom; These scholars fervently believed that their creation the Homo Autofac Sapiens, or Rational Self-Mankind, would achieve full harmony and happiness, giving themselves such body forms and qualities of the soul as they considered the most perfect, that they would break the Mortality Barrier, if they so decided (...)*"<sup>5</sup>. So it is a great vision where everyone - thanks to the mastery of the secrets of biotechnology - will decide for body shape in a most spectacular image and life expectancy, with the possibility of immortality.

Already today re-embodiment provides with the technology and robotics that interfere with the body by improving it, replacing organs, limbs, and sensory apparatuses, supporting functions and prolonging life. Another option for re-embodiment speaks of a more natural, biological remodelling. We know that the human body is an environment for many microorganisms that live in symbiosis with our body and organs, without which the functioning of our body systems would be completely impossible. Thus, the future may look like we will implement living organisms in our body or on its surface, becoming hybrid organisms in numerous species, colonies, and interdependent environments.

## **BODY EXTENDED**

The appearance of my work refers to the descriptions contained above and can imply the outlook and functioning of organs or organisms of other species. Its organic shapes resemble the growing mycelium, the root system or the blood veins system of a bigger mammal. Technological inventions often take their inspirations from nature and copy from a wide variety of shapes and functions. Such examples are water supply systems, sewage or ventilation systems - hence my piece have the shape

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<sup>4</sup> Lem, *Dzienniki gwiazdowe*, trans. Dariusz Wojdyga (Kraków: Wydawnictwo Literackies, 2012), 138.

<sup>5</sup> Lem, *Dzienniki gwiazdowe*, trans. Dariusz Wojdyga (Kraków: Wydawnictwo Literackies, 2012), 152.

of segmentally connected pipes, of different length and diameters, separating and growing in different directions. My intention was to transfer this mix of naturalistic and technological inspirations to the field of art jewellery.



*Madrepora oculata*. From: Cabinet of Natural Curiosities. The complete plates in colour from 1734-1765. Köln: Taschen 2017. Page 593.



Fragment of ventilation system at KHiO.  
Photo credit: Dariusz Wojdyga

I understand wearing jewellery the same way as an Italian jewellery maker Bruno Martinazzi does: *“If a human being wears jewellery, he is expressing symbolically his need for transforming himself; not merely superficially transforming his skin and profile but profoundly transforming himself and his life”*<sup>6</sup>. Making and wearing jewellery is one of the oldest cultural significants for human beings. During 2014-2018 archaeological excavations in a cave in desert in Morocco, 33 snail shell bits dating to about 150,000 years ago were discovered. The holes in the shells and the arrangement indicate that they were part of the necklace<sup>7</sup>. What a great impact on the consciousness of our distant ancestors had the act of integrating an external, non-functional (in a terms of daily survival) object with the body. This slight change in appearance was of great importance in understanding one's own

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<sup>6</sup> Falk and more, *Bruno Martinazzi: Schmuck, Gioielli, Jewellery 1958-1997*, (Stuttgart; Arnoldsche, 1997), 52.

<sup>7</sup> Cascone, *Archaeologists Just Discovered the World's Oldest Jewellery*, Artnet, 12.01.2022, <https://news.artnet.com/art-world/worlds-oldest-jewelry-morocco-2037635>



Body extending jewellery. Dariusz Wojdyga.  
*Cicindela Argenti III*, galvanized steel,  
 aluminium rivets, 2021. 73cm x 39cm x 34cm.  
 Photo credit: Beata Kubecka.



Body extending jewellery. Dariusz Wojdyga.  
*Cicindela Argenti VII*, galvanized steel,  
 aluminium rivets, 2021. 133cm x 99cm x 74cm.  
 Photo credit: Beata Kubecka.

body as a subject and intuitive understanding of its status. Art historian Liesbeth den Besten contests: *"The shells, with holes bored in them to make beads for wearing (...) are seen as examples of the ability to think symbolically, an ability which separates Homo sapiens from animals. Symbols that are used to give meaning to who we are, are thus symbols that presuppose the awareness of "the self"<sup>8</sup>.*

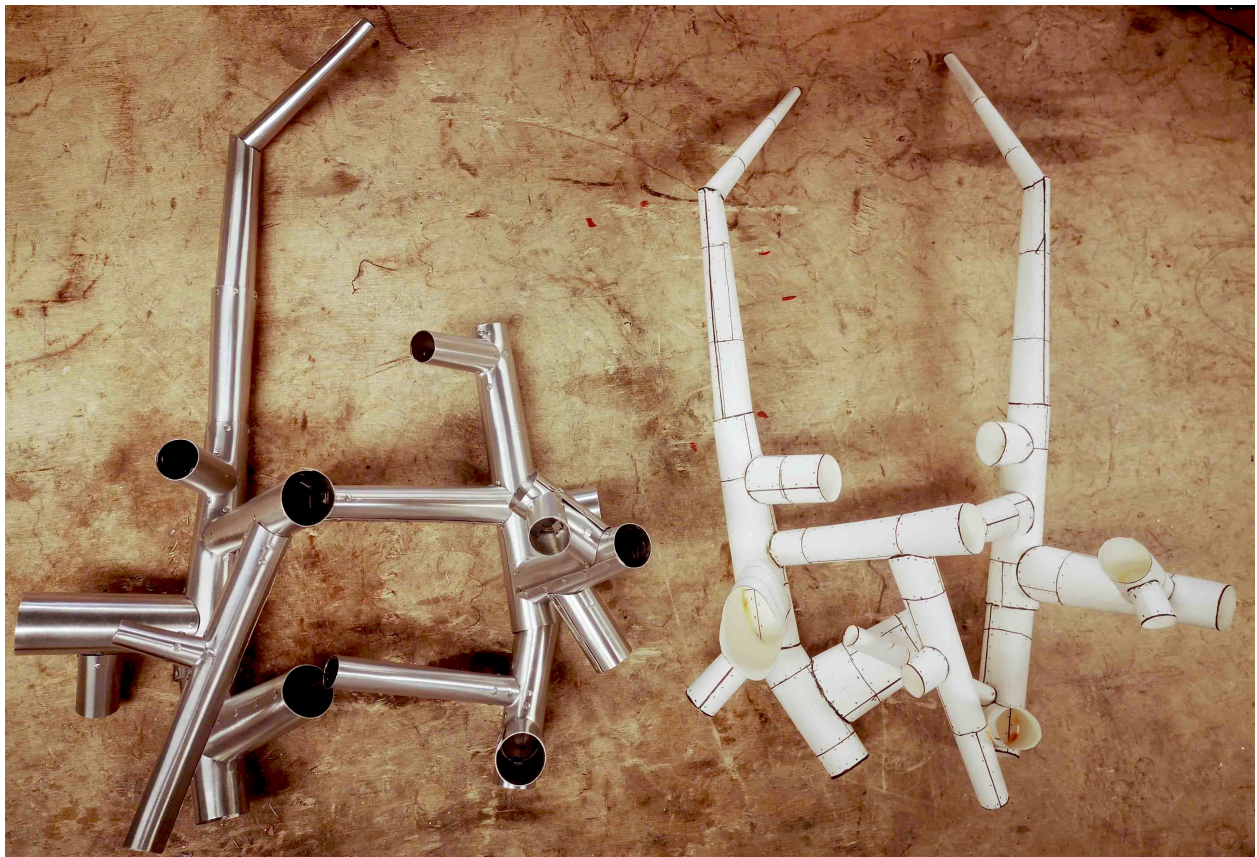
The relation between body and external materiality opens up new visual perspectives and ways of interpretation of the body and the wearer as conscious being. In our imagination, the shape of human body is clearly defined and the smallest modifications cannot pass unnoticed. That is why - for me - art jewellery gives the opportunity to re-define this image and discover a new, wider imaginary spectrum of the potentials. Change in silhouette and size, prolonging and spreading into space transforms the status of the object, the body and self-awareness. It converts the ways of exploring the space, and ways of getting around, changes the ways of being. Challenges the identity of the wearer

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<sup>8</sup> den Besten, *On Jewellery. A compendium of international contemporary art jewellery*, (Stuttgart: Arnoldsche Art Publishers, 2012), 125.



and the form of communication with the outer world. Body becomes a playground for investigation of the borders between inner and outer world and cross-lines of materiality. „*The notion of „outward appearance” emphasises that the human body is not a static given, but a complex form that is potentially subject to being shaped quite a bit*”<sup>9</sup> - writes Dutch art historian Marjan Unger in her studies on jewellery. So besides the decorative (adornment) and symbolical function that jewellery has, I would add the transformative.



*Transenvironmentals. Future bodies. Necklace. Translation from the paper model to aluminum.*  
Photo credit: Dariusz Wojdyga

My project consist of sculptural structure that might be attach to the body altering a person's body architecture. Inspired by american jewellery maker Marjorie Schick's large wearable sculptures and an idea of upsizing and expanding the scale of jewellery<sup>10</sup>, I investigate borders of wearability. Usually thinking about jewellery is limited to smal objects set on body (like rings, earrings, necklace), the presence of which is unnoticed and overseen. For me, adding an external object

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<sup>9</sup> Unger, *Jewellery in context*, (Arnoldsche Art Publishers, 2019), 19.

<sup>10</sup> den Besten, *On Jewellery. A compendium of international contemporary art jewellery*, (Stuttgart: Arnoldsche Art Publishers, 2012), 132.



Materials investigation.  
Photo credit: Dariusz Wojdyga



Handmade aluminium rivets.  
Photo credit: Dariusz Wojdyga

to the body is a matter of awareness and a kind of statement. Larger dimensions activate my perception and vigilance towards the environment. It makes me reconsider how I move in space, how I direct the ability to perform a particular task or movement. Oversized jewellery develops not only my body but also my personality. It causes a change in the way I think about myself, how others see me and how my conscious stands it.

Through oversizing I ask myself how much is too much? How heavy, how big the wearable object might get til it loses the context of jewellery? Like Swiss artist Pierre Degen who made life size constructions that one has to step into for wearing, considered oversized jewellery as a structure of personal environment defining the boundaries of space, obstructing viewers' access to close surrounding of the wearer. Due to their size, his works were not considered jewellery pieces<sup>11</sup>. So is the author's intention alone enough? Or is it rather a matter of an established communication code between creator, wearer and viewer?

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<sup>11</sup> den Besten, *On Jewellery. A compendium of international contemporary art jewellery*, (Stuttgart: Arnoldsche Art Publishers, 2012), 131.



## MATTER

Large objects have also their weight. This adds another dimension to awareness and movement and interesting aspect of body memory after removing such an object. It is a kind of invisible, ephemeral jewellery experienced only by the wearer. However for this project, I wanted to use a material that would prevent unnecessary overloads, while allowing me to build a larger structure, significantly altering the body shape. Another characteristics of the material I assumed to use were also: 1. availability - preferably recycled and cheap; 2. easy to process - preferably a material processing of which does not require or minimises use of external energy, such as electricity, gas, flames, etc; 3. plasticity - to form the desired shapes, I needed a material that was easy to shape, but which would be able to maintain this shape, even when constructing a larger complex structure.

After many trials with materials of different origins - steel, silver, plastic, paper, leather, plant stems - to name a few, I decided to use aluminum.



*Transenvironmentals. Future bodies. Ear piece. Paper model and aluminum object in progress.*

Photo credit: Dariusz Wojdyga



Corpus and riveting work on specially formed anvil.

Photo credit: Dariusz Wojdyga



Since its invention in 1853, aluminum has been regarded as „the metal of a miraculous future”<sup>12</sup>. Beside plastic and despite the invention of new materials (titanium, graphite etc.) aluminum revolutionised the world in the last and present centuries. Its price initially equaled the price of gold and silver<sup>13</sup>. Although today this material has a relatively low economic value, it still has a high



*Transenvironmentals. Future bodies. Necklace. Work in progress.*  
Photo credit: Dariusz Wojdyga

cultural value - we use it everywhere. In form of alloys with various materials such as iron, magnesium or copper, it is still main material in design, building constructions, food industry, sports, automotive, aviation and space industries. Aluminum, as a „miraculous” material, is a sign of "our times” indicating industrial innovations, space travels and no less ecological disasters. Although still

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<sup>12</sup> Nichols, *Aluminium by design*, (Carnegie Museum of Art, 2000), 13.

<sup>13</sup> Nichols, *Aluminium by design*, (Carnegie Museum of Art, 2000), 17-18.

widely used, it is slowly becoming a symbol of the passing times in the era of new technologies, inventions of transmaterials<sup>14</sup> astonishing in production processes and the range of applications. I use aluminum for the lightness and the durability of this metal. It is ductile and solid at the same time. Consistent but soft and fragile simultaneously. It does not need much external energy for processing and is easy to reshape by hand without the need for a previous preparing, like heating. Its important advantage is also the fact that it is fully recyclable, allowing for possible reuse of waste. In addition, polished aluminum perfectly imitates silver. In early 1960s the Dutch artists Emmy van Leersum and Gijs Bakker began to use aluminum extensively in creating large abstract jewellery forms. The use of this material, apart from the values mentioned above, was for them a physical and intellectual confrontation with the jewellery tradition and manifested „their criticism of the use of precious materials as a safe-seeming investment that corrupted the freedom of creation...”<sup>15</sup>. I pursue the same mindset asking myself about the real value of artificially created materialistic standards and their impact on socio-political relations based on stimulation of market profitability. Thinking about overconsumption and sustainability I usually choose - in my way of working - to minimise the use of external energy: electricity, flames, gas, etc. Metal processing is often associated with the need to use machines and electric tools that allow cutting, forming or joining (welding) elements together. Usually, also the use of high temperatures is inevitable for the purpose of annealing - heating treatment of materials allowing to change their internal structure, their hardness and plasticity. In my project, the use of energy is almost exclusively limited to micromotor drilling and quick grinding on a polishing machine. For the shaping of tubular forms, I used the corpus technique consisting in obtaining the desired shapes by hammering of metal sheets with various types of hammers - rubber, plastic, steel on anvils of chosen shape and size. To assemble the shapes and connect individual sections, I used the technique of cold joining materials - riveting. Before the invention of welding, joining metal structures with rivets was the basis for the industry. Although today it is not the most popular technique, it still seems to be irreplaceable in building constructions, shipbuilding, automotive, aerospace and space industries<sup>16</sup>.

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<sup>14</sup> Brownell, *Transmaterial next*, (New York: Princeton Architectural Press, 2017), cover.

<sup>15</sup> Skinner, *Contemporary Jewelry in Perspective*, (Art Jewelry Forum, 2013), 103.

<sup>16</sup> Peng, *The ultimate guide to rivets*, DEK, 26.02.2022, <https://www.dekmake.com/the-ultimate-guide-to-rivet/>

The use of this technique in my project has also a metaphorical dimension - riveting symbolises the industrial revolution and the continuing attempt of technological conquest of the natural world by humans and improving the comfort of our existence while devastating our natural environment simultaneously. An attempt that - which I predict - is doomed to failure, as ultimately man will also have to turn back to nature for his own good.

## **FUTURE IS NOW**

Future human body - it is a mutant, multi-species organism, shape of which is unique, unrepeatable and it no longer looks like the bipod we are so used to. It is a self-sufficient body, fully independent of external factors, capable of physically, biologically and mentally surviving in any conditions. Thanks to that, the body and its owner does not need to fight for ground, for food supplies, for its gender, skin colour or nationality. It is an highly intelligent being living in harmony with all the nature. Future science along with the entire cultural heritage of civilisation, will enable this transformation. Art allows us to open the door of perception and create the impossible. My jewellery piece is a shy visionary prelude, tuning the strings of consciousness and imagination to this fulfilment. It is a beginning for a long-term project in which I intend to research materials and processing techniques, as well as to study the aesthetic qualities of objects and forms in relation with human body and its future feature. Every change begins with small moves. The future starts today. In the essence of the project there is a hidden wish and genuine hope for a change of human behaviour and thus change of the world as we know it, dominated today by violence, extremism and all kinds of structural injustices. I still choose to believe in enlightenment of humanity thou understood in a completely different way. Transformed.



*Transenvironmentals.Future bodies.* Necklace. Paper model. 45cm x 36cm x 12cm.  
Photo credit: Dariusz Wojdyga  
Model: Beata Kubecka

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