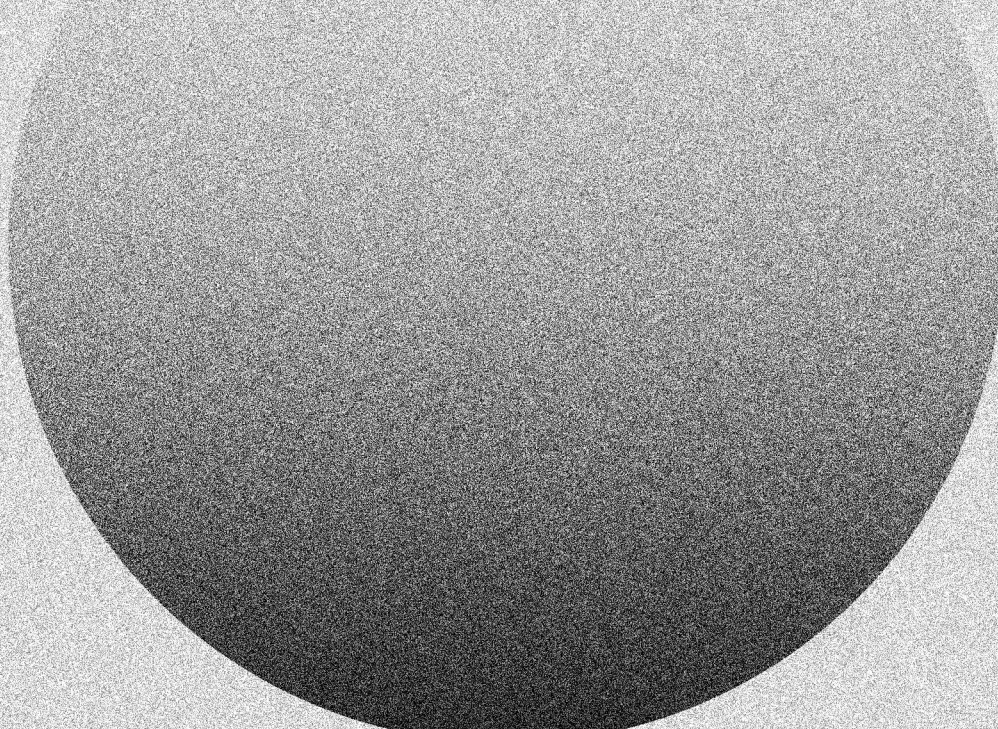


# DESIGN FOR THE FUTURE



MARTA FLISYKOWSKA



AKADEMIA  
SZTUK  
PIEKNYCH  
W GDANSKU















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W GDAŃSKU



Editor: Marta Flisykowska

Reviewers:

Dr Andrzej Kucner, University Warmińsko-Mazurski

Prof. Jerzy W. Rozenblit, University of Arizona

Translator: Piotr Łuba

Graphic design and layout: Eugenia Tynna

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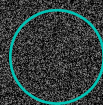
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# INTRO- DUCTION



# INTRODUCTION

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## THE NEED FOR VISUALISATION – THE NEED OF THE FUTURE

Absolutely no neck, a massive skull, concave face, thick hairy skin, chest covered with air sacks between the ribs – meet Graham – the only human that can survive a car crash. This is a concise description of the mutations that, according to his creators, human beings would have to undergo in order to face an automobile accident and live to tell the tale. The 2016 project was carried out for an Australian traffic safety campaign. The campaign focuses not only on safety, but also on visual communication. The project description says that Graham is the only human designed to survive a car crash (Meetgraham AU: 2017).

Does the design context appear here by chance? Can we speak of design in Graham's case too? The Australian project is intriguing in many ways. Graham is a silicone humanoid, made in a very realistic manner by a team of dedicated specialists: artist Patricia Piccinini, traumatologist Christian Kenfield and collision expert David Logan. It is worth noting how outside the box Graham's creators thought. They didn't design a safe car, they didn't need to use gory pictures of accidents but rather to visualise how a human being should change in order to survive a collision. This is speculation, hypothesis and experiment all rolled into one. With this interdisciplinary approach and reversal of the situation, we can better understand ourselves. This is also an important signal to designers about how they should think about the vehicles of the future. In most campaigns, education is about

showing the hazards, whereas this project goes far beyond that. It shows the incredible role of the imagination that future designers need. The ability to visualise an idea has always been hugely important. It is the very transformation of an idea into a visual representation that allows a better understanding of the subject at hand and often becomes a catalyst for further development.

Almost ever since it began, design has been divided into various areas. Certainly one of them is the ability to convert knowledge, technology and imagination into an image. Speculative design requires an open mind, aesthetic sensitivity, but most of all courage. Science needs to be inspired too, scientists need a fresh outlook on the results of their research. What still remains impossible in science is referred to as the "current state of knowledge." If we had not assumed development, our civilisation would not have moved from encoding information on cave walls to fibre optics. Even though we remain a Type I civilisation on the Kardashev Scale, out of three stages, we the human race assume and are working on further breakthrough discoveries. In doing so, we make mistakes and then we tenderly and incredulously look back to the time when it was thought that the Earth was flat.

Bold visions would often be called science fiction, with its father often considered to be Jules Verne, the French writer and social activist, the author of such novels as *From the Earth to*

the Moon of 1865. Let us focus on a few facts about the race between vision and reality: when science fiction becomes reality or a discipline of science, and also when the need for a visual interpretation of a problem leads to scientific discovery (Butcher 2006: 3).

One of the breakthroughs in visualisation capability was the evolution of the photo camera into the cinematograph. This was an invention that had an enormous impact on culture and science alike. The Lumière Brothers, whose name means “light” in French, are considered to be the creators of film. This went hand in hand with the two inventors’ historical PR. They conceded that they could be called the fathers of French cinema but also stressed that with his palaeograph patented in 1894, Polish inventor Kazimierz Prószyński had been considerably ahead of them in terms of technology.

In 1902, less than 7 years after the release of *Workers Leaving the Lumière Factory* by the Lumière Brothers, came the film *A Trip to the Moon* by professional illusionist Georges Méliès.

This was the first science fiction movie, with a running time of only 14 minutes, telling a story of a group of scientists travelling to the Moon, based on the novel by Jules Verne and H.G. Wells’ 1901 novel *The First Men in the Moon*. Even though the plot had a science-related storyline, it seemed obvious that it was only fiction. It is important to realise that this vision preceded the moment when humans first took to the air. The Wright Brothers made their first twelve-second flight only in 1903.

Would it be difficult for us to imagine the sceptics of the time who said that landing on the Moon was the stuff of fairy tales? Less than 70 years after the screening of this silent film, on 21 July 1969, came Neil Armstrong’s words from the Moon: “That’s one small step for a man, one giant leap for mankind.” (Kronika PL 2017).

Seventy years is a long span in the scale of a human lifetime, but little in the context of development and history. The year 2087 does not seem within everyone’s reach, in spite of the continuous efforts to extend human longevity. There are those who, lured by the vision of development, have decided to invest in the future, cheat biology

and live long enough until medicine can make meaningful headway in life extension. 147 bodies and brains frozen in liquid nitrogen wait to be reborn at the edge of the Sonora Desert in Arizona. Established in 1972, the Alcor Company offers cryogenic freezing for dead bodies in order to thaw them out in the future. This is not some group of anonymous fanatics, and the price is also quite high. 200,000 dollars for the whole body, 80,000 for the head alone is how much one has to pay in the hope that the body can be grown from stem cells (Alcor 2017). Only 30 years later, the University of Western Australia in Perth began research on in vitro meat. In August 2013, the presentation of the first burger created this way took place at a London conference (Fountain 2013). The tissue was grown in May 2013, with the project funded from an anonymous private source. Only after some time was it disclosed that the sponsor was Sergey Brin, co-founder of Google, the internet search engine. It is worth mentioning that the American programmer’s parents were a mathematics lecturer from the University of Maryland and a NASA climatologist.

Given such a background, can anyone doubt that Mars will be colonised in the future? Right after the Moon, this is the perfect destination for space travel. It would be difficult to name all the films and screen adaptations of books related to this mission. One of the most recent movies is Ridley Scott’s *The Martian*, based on the self-published novel by engineer Andy Weir. The film, directed by the science fiction cinema legend, was released in October 2015 and was reviewed as good, but not great. Perhaps it was too realistic? Problematic sandstorms, NASA-tested habitats, vegetables grown on the ISS and Martian rovers are all a reality. Weir wanted the book to be as realistic as possible. He began writing in 2009, and in 2013 sold the film rights. The film, directed by the science fiction cinema legend, was released in October 2015 starring Matt Damon. It was reviewed as good, but not great. Perhaps it was too realistic? Problematic sandstorms, NASA-tested habitats, vegetables grown on the ISS and Martian rovers are all a reality. It took 57 years between Méliès’ silent film and the establishing



of NASA. In this case, reality overtook fiction. Elon Musk, the creator of PayPal, decided to invest in space technologies and established SpaceX in 2002. By November 2005, it had a staff of 160; in 2015 the number of its employees reached 5000! (Vance 2016). At the International Astronautical Congress in Mexico, Musk presented an incredibly ambitious plan to create a colony and then an entire civilisation on Mars. He is of the opinion that the first such colony could be set up after 2020. His company intends to send a payload capsule to Mars as soon as in 2018. Elon Musk feels that creating a self-sufficient civilisation on Mars would take humankind anywhere between 40 and 100 years from the moment the first capsule full of colonists lands on the planet's surface. Lunatic? Enthusiast? That very well may be the case but, being intelligent and rich, he also has influential acquaintances who will gladly invest in such ideas.

The Breakthrough Starshot program was announced in April 2016. It is to build the world's fastest engine which will make it possible to reach the Alpha Centauri star system. This new generation engine will be able to reach a speed of ca. 25% of the speed of light, which will enable the trip to take "only" 20 years. For comparison's sake, a journey to Pluto, the furthest planet of the Solar System (now considered a dwarf planet) would take only a couple of minutes. The project has an impressive list of sponsors and enthusiasts: Russian physicist and entrepreneur Yuri Milner offered a 100 million dollars. Other participants include not only the famous scientist Stephen Hawking and Facebook CEO Mark Zuckerberg, but also astronaut Mae Jamison, physicist Freeman Dyson, astronomer Avi Loeb and former NASA Director Pete Worden

With such plans, a humble journey to Mars and its colonisation seems to be a realistic proposition, so perhaps Musk is just an enthusiast with a good business case? Admittedly, his achievements so far are impressive—from PayPal, the payment service bought by eBay for 1.5 billion dollars, to SpaceX, whose goal is to reduce the cost by 100 times. Moreover, Elon Musk is the founder of Tesla Motors, the main architect of its products and has been the company's CEO since 2008. This is not

all he does, but it is enough to take the plans of the almost 50-year-old entrepreneur seriously (Breakthroughinitiatives 2017).

Although a year older than *The Martian*, Christopher Nolan's film *Interstellar* is definitely more visionary, notwithstanding its scientific slip-ups. Film productions, together with audiences' expectations have been progressing from the beginning of the previous century. The race between imagination and science continues. However, more and more often we can see collaboration between scientists and the art world. It is no secret that economic aspects play a role here. Nolan's *Interstellar* had a budget of USD 165,000,000 and grossed USD 672,720,017 (Stanisławski 2014). A team of 30 people led by astrophysicist Kip Thorne worked an entire year to create the most plausible visualisation and simulation of a black hole. The work to create such a model began with Thorne's mathematical models. The team attempted to use them with existing software which forecasts the trajectory of light rays and based on this theoretically creates a real image. As we can find in a scientific review of the film by Piotr Stanisławski: since the available software does not take into account the influence of gravity, it was necessary to write a new software programme. When Kip's equations were entered into the programme, this led to a scientific discovery. It had been assumed that the black hole would be visualised as a glowing ring, but surprisingly it turned out to be crown-shaped, with some of the matter above the black hole, some below. First it was thought to be a mistake, but when all misgivings had been ruled out, it became apparent that this was indeed the way matter must behave when falling toward a black hole. Although the film is described as a see-saw of science and fantasy, scientists themselves wonder if anyone would watch anything that would be just scientific fact. *Interstellar* is an example of how science works together with speculative art and shows the need to visualise scientific theory in practice.

A good way to summarise this science fiction thread is to mention another filmmaker, James Cameron, known for such movies as *Terminator* (1984), *Aliens* (1986), *Titanic* (1997) and

Avatar (2009). His productions are known for exceeding deadlines and budgets, and Cameron himself is a technophile, which is evident from the subject matter of his films. He is also an amateur oceanographer. During the production of the Titanic, he went down to the shipwreck several dozen times (The Biography.com 2014). On 26 March 2012, he made the second descent to the bottom of the Marian Trench in history. Fifty years after the previous manned attempt, in a solo bathyscaphe, he went down to a depth of 10,898 metres! The icing on the cake of his activity, and a good summary of the space issues raised here, it's the fact that James Cameron also works for NASA on the construction of devices to help colonise Mars (Deepseachallenge 2017).

History displays unexpected twists in the field of discoveries and research. Who better than designers to deal with the visualisation of hypotheses? Passively waiting for new technologies means that we often take the role of a safe imitator of the world around us. This is also a role of design, often lucrative, but inevitably heading for extinction. The future has always been a part of the designer's profession. Therefore, the designer's role and work has to be ahead of the present. Otherwise they stop being a designer.

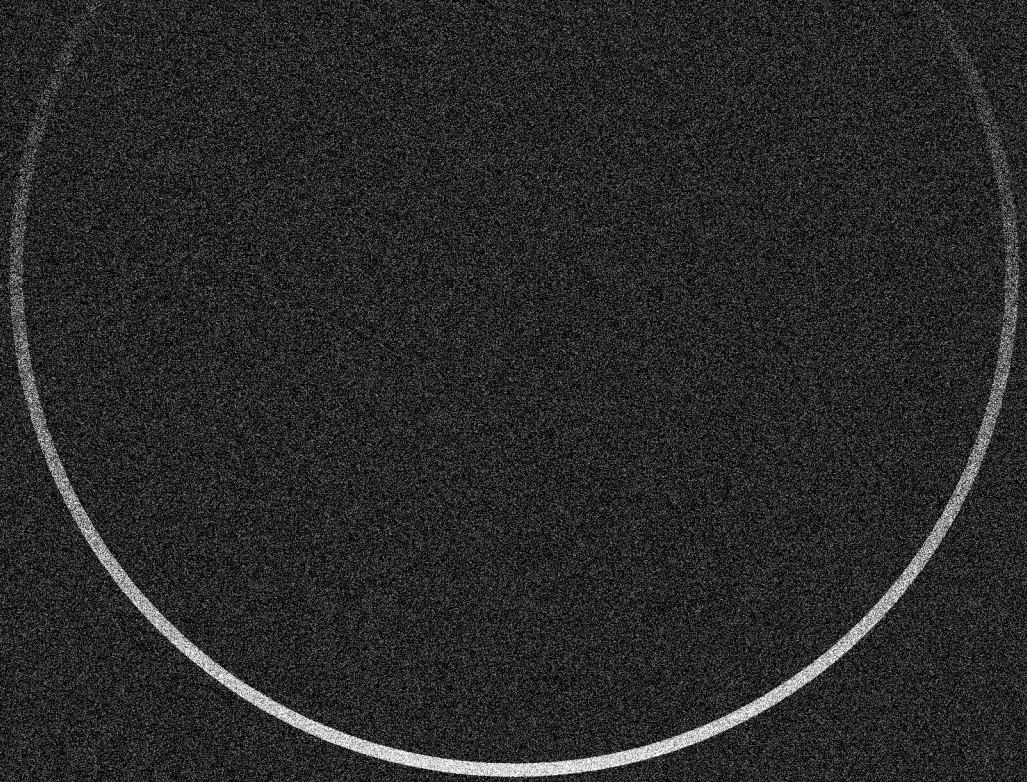
It would seem that focusing only on pop culture visions presented in science fiction movies should not be a basis for scientific thought. Here, I would like to mention *Into the Unknown*, an exhibition and catalogue by historian and writer Patrick Gyger. At the beginning of the 21st century Gyger (together with Arthur Woods) was a co-manager

of the European Space Agency programme that dealt with searching for inspirations for astronautics engineers within the realm of science fiction. The *Into the Unknown: A Journey through Science Fiction* exhibition was produced by the Barbican Centre, London. In an interview he gave to Natalia Hatalaska for the report *Far Future. History of Tomorrow*, (Infuture 2018). Gyger noted that science-fiction is not written in the future, but in the present. As a historian commenting pop culture, he has an opportunity to look at the past 200 years and see where ideas came from. Gyger himself calls this research on something like the history of the future (Infuture 2018). In the interview, he clearly notes the relationship and impact of science-fiction on reality.

"If we want to create the future, we need a picture, an image of it. If you want to get somewhere, you need an image of where you want to go. Otherwise you will never get there. And science fiction is a powerful tool that serves to discover and summon of the possible future. Science fiction is a game that shows people various kinds of future."

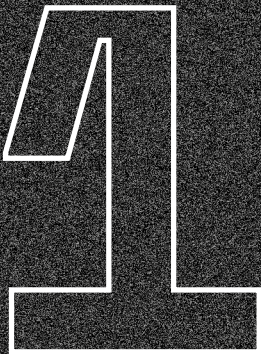
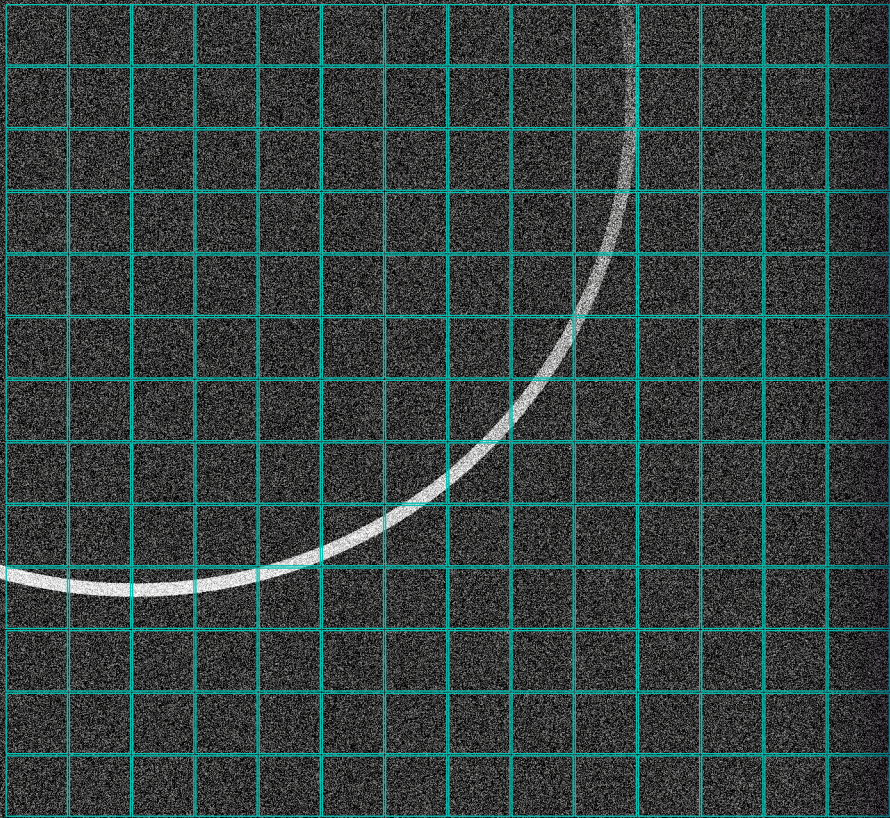
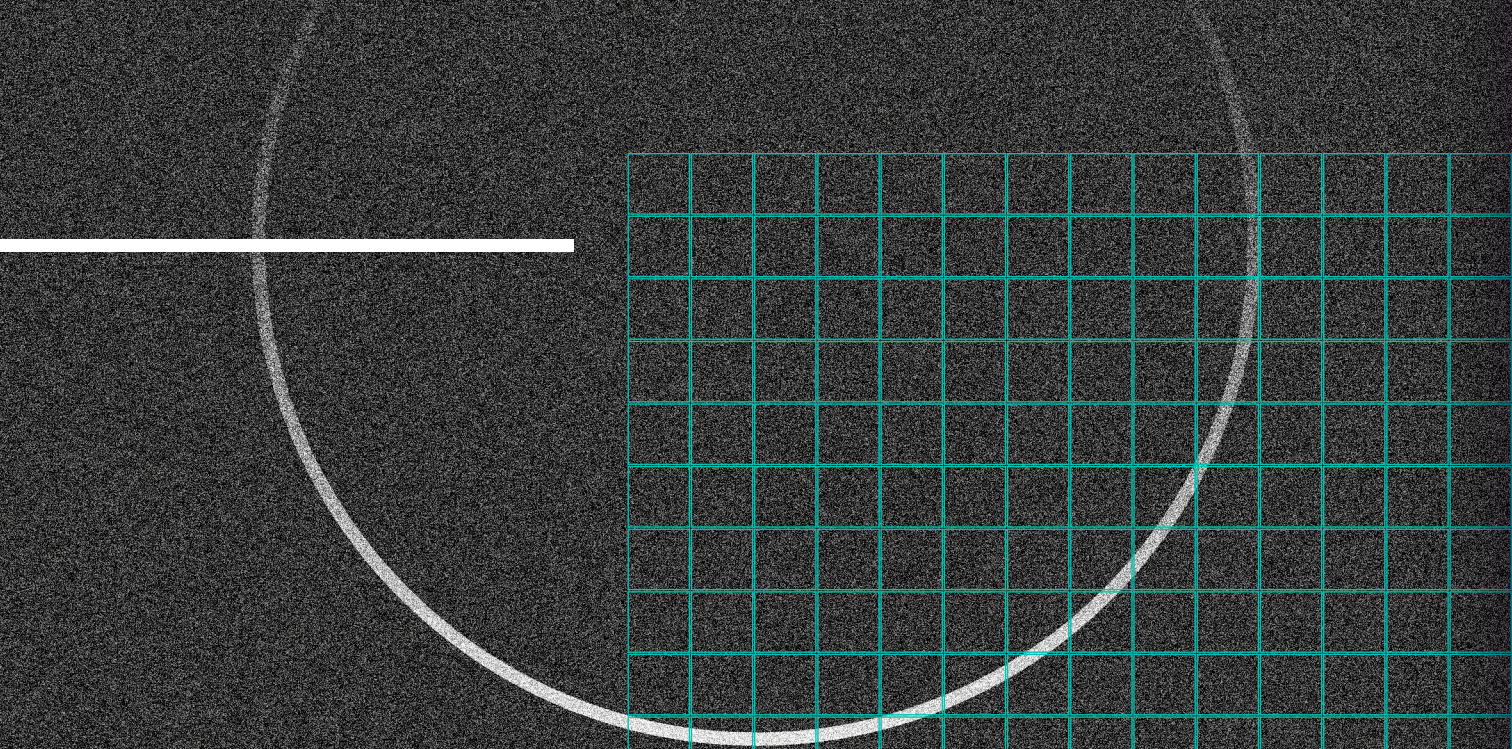
This following study presents selected productions related to a visualisation of the future. The first part concerns the basis, that is the human being and the culture they create, based on the *Futurology in Design Practice* project. The second part is a case study of exhibitions where the context of the future, going outside the box and a further perspective is visible in various partners from the worlds of business and science and explains their need for materialising and visualising future scenarios.







# PARALLEL REALITY





# PARALLEL REALITY

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## CULTURE AND ANTHROPOLOGY

This section is dedicated to cultural space and the importance of objects in that space. It is no coincidence that the proxemic nature of the observations refer to Edward Hall's notion of space. I would like to focus on the context of the appearance of an object that is a carrier of cultural information. In *The Silent Language* and *The Hidden Dimension*, Edward Hall dealt with the problems of the structure of experience developed by culture, i.e. all the in-depth common experiences in which members of a given culture participate and communicate to each other, often unconsciously (Hall 1966). In my work as a designer and an educator, I often encounter the omission of this aspect in the design process which I see as key from the point of view of the communication between man and his environment. The failure to set a design/object in a context results in a misunderstanding of its function and essence.

Proxemics is an interdisciplinary field that combines psychology and anthropology, and deals with the study of the mutual impact of spatial relationships between individuals, e.g. distance or personal space, and between individuals and the material environment on psychological relationships and ways of communication. The latter

aspect is also called territoriality and concerns human behaviour relevant to the space where the individual functions. This results from the fact that people, like animals, atavistically and instinctively captured their territory and then protected it from others. The space we take over may be open or closed to others. Such factors cannot be ignored when designing. Cultural aspects and differences are also hard to ignore here, especially in such a dynamically developing world where access to different cultures and the coexistence of different values is as common as never before. (Rogers 2019). One of the important notions of proxemics is that of communication distance zones. Edward T. Hall proved that distance is culturally determined. For example: during a conversation, English and Germans stand further away from each other than Americans, whereas people from southern Europe prefer closer contact. Proxemics provides us with information about the partners who interact with us on the basis of the distance that occurs between us and the way microspace is used and structured. There are objects that are carriers of cultural information that appear between the individual and their environment.

In light of these factors, I would also like to refer to *Transnational Connections* by Ulf Hannerz, a pioneer of transnational anthropology studies. In his collection of essays, Hannerz presents a disquisition on the complexities of local reactions to the developing global system (Hannerz 2002). Hannerz, focuses on the need to study the globalisation of culture and has adapted network analysis as a tool. He studies culture that transcends territory by examining the links between the local and the global. Hannerz emphasises the essence of anthropological studies on globalisation not only on the micro scale but also on the macro scale. Hannerz's basic notions of the concept of the globalisation of culture are global ecumene, transnational connections and the Creolization of the world. Especially this last notion makes one sensitive to cultural differences and similarities. Creolization, also known as cultural hybridization, describes the processes in which stronger cultures mix with weaker ones, with neither of them remaining the same and pure. These issues are interdependent, between the information encoded in the genes and effective functioning in a social environment there is an "information gap that we fill in with culture" (Hannerz 2006: 20–21). Design is, among other things, about giving life to new entities that are a materialisation of culture. The factor of change and innovation is essential to design which is the reason why considering what may be a generator of change and how to interpret these changes and translate them for a given environment and/or community is so important. When drawing up future scenarios, the cultural context can be of key importance because of its very dissimilarity in the perception of basic

human issues and spheres of life. This is the reason for the introduction of the notion of parallel reality referring to its potential impact on the material environment. Parallel reality is something that gives not only physicists and cosmologists sleepless nights.

The search for parallel worlds also concerns NASA. The ISS International Space Station has a device called the Alpha Magnetic Spectrometer-2 which is to record data that may prove that other universes exist. There are 16 countries involved in the project, including EU Member States, Taiwan, China, Russia and the United States (NASA. org 2019). Quantum mechanics' model of parallel universes assumes that parallel worlds are the realisation of all possible alternatives that may occur in the past and in the future. We can only imagine the events that take place in the other parallel universes. Based on this capability of imagining parallel worlds, I juxtapose two cultures as an anthropological experiment to observe material culture and its diversity versus culture itself.

Parallel reality is to point to an alternative scenario for the current world we know. This does not always have to be a pessimistic dystopian vision. Many future studies and scenarios exhibit a general vision of an over-technologization of the world around us or a complete blackout and a need to go back to the basics of the development of civilisation and society. Certain event or simply an escalation of modern problems results in the dehumanisation of high technology and the retrogress of the civilisation. In both cases it is important to draw a line that connects the symptoms from the past that appear in the present and their evaluation in the future (Mosher 2011).



## 1.1. DYSTOPIA

*"We do not live in good times for realistic prose. Humanity needs dystopia, warnings, attempts to forecast by speculative prose." (interview 2015).*

*Margaret Atwood, Canadian writer*

Referring to sci-fi literature and pop culture icons. The coexistence of the high-tech world with a primitive and often barren desert landscape of contemporary places is a way that we can see the escalation of the existing division of the world where the rich don't know and don't want to know about the problems of the poor and the phony image of reality becomes the only one that is valid.

Dystopias describe the future or an alternative history of the present. Pessimistic visions of the world have their kernel in the present and their escalation has a global impact on the world's future. These dark scenarios are usually based on a critical observation of the social, political, religious, economic, technological and environmental situation. Dystopias are usually post-apocalyptic visions of the world (films like *Mad Max*, *Matrix*); however, they may also be a result of a rapid process of the degeneration of the world as we know it. It may not always be a case of some spectacular global catastrophe. Sometimes, the effect of scale and time is enough to show the effects of growing political tension, religious fanaticism or the impact of international corporations on human lives. Existing and deepening social inequality, lack of control over developing technology and the destruction of the natural environment are widespread and have been a source of anxiety for many years. Examples of environmental disasters and their consequences, economic crises are where dystopian works become a critique and a warning to society. In order to illustrate both demographic and climatic forecasts one also needs a long-term perspective. It is no coincidence that we have world climate, economic and other summits, whose decisions have far-reaching global consequences. It is in reference to dystopia and alternative reality that I would like to present two

case studies: the *We Will Sea* exhibition and *Parallel Reality* (Harvey 2018).

In the first case I focus on objects that were designed intentionally to illustrate the problem. The 2014 assignment for design students was meant to focus on the future of the Baltic Sea. The underlying rationale here was that year's Łódź Design Festival's leitmotif: *Brave New World*, based on the futuristic novel by Aldous Huxley. The students' assignment was entitled *Archaeology of the Future*. During the work with the students it became apparent that the problem with imagining the future was also related to the understanding of the consequences of contemporary relationships and the impacts of technology on material culture. The exercise was carried out in 2014; however, this problem repeated itself also with other assignments and other classes. It was necessary to carry out several discussions and a number of smaller closed introductory assignments. In 2014, the prospect of 2035 meant that the scale of changes could be proportional to what the students themselves had experienced and noticed in their lifetimes. For a young designer this means that they are dealing with a timeframe equal from that of their birth to the present day times two. (At about 20 years old, another 20 years is roughly all their lives so far). The assignment's intention was for them to be able to observe the stylistic and qualitative changes in everyday objects resulting from technological progress over their lifetimes, i.e. 20–23 years, and put forward styles for well-known objects for the next 20 years based on their inferences. I will return to these perspectives while discussing speculative design. In the *Archaeology of the Future* the idea was that when designing an object of the distant future, they should add a timestamp of +250 years. This is why the assignment had a working title of "excavation" and its location was the Baltic Sea basin. The assignment was inspired by a lecture by Dr Anna Strobin, an archaeologist from the University of Gdańsk and that at the time there was a discussion of regional development in terms of smart



specialisation introduced by the European Union in its 2014–2020 financial perspective for Member States. In her lecture on the archaeologist's work, Dr Anna Strobin used the following metaphor: "Imagine, if you will, that work is underway to make a theatre production. The sets, script, costumes, emotions, stories and props are all being prepared. Unfortunately, a fire breaks out on opening night that almost completely destroys the theatre and sets; the actors and the audience trample the rest when they flee from the burning building in panic. When the ruins burn out, archaeologists come to find out what the play was about on the basis of those ruins." (Strobin 2013).

This rather dramatic, although very evocative, illustration of an archaeologist's work inclines one toward deeper reflection. Over the centuries, material culture is a carrier of heritage. That which surrounds us preserves the memory and knowledge of a certain time and place. As persons who are responsible for material goods and their appearance, designers should be aware that what we make becomes a non-verbal message that is not only immediate but also something that has a long-term reception. The determining of the new EU financial perspectives also indicated the way development and investment would go, which is something that designers should also take note of.

In the case of the Parallel Reality exhibition, the project had more of an ethnographic meaning so it naturally referred more broadly to anthropology.

In my doctoral dissertation on *The Idea of Glocality in the Design of Original Products*, I noted

a relationship between the local and global context and the communication of material culture objects. In the case of the Futurology in Practical Design project, I collaborated with the Kathmandu University School of Arts. I went there to deliver a lecture and carry out student workshops, also with a view to collect research material for further study. Because of its culture and its exoticism from the European point of view, Nepal seemed the perfect place to observe proxemics and Hall's theory of the hidden dimension. Learning and studying both European and Eastern material culture led me to present it in the form of parallels to existing and local references.

We can see many things more clearly by observing them by comparing them with what we know. From the point of view of the other, a person from outside a cultural circle, my eye and sensitivity to material culture perceived the reality I saw differently than the locals did. Looking at what is around us with the eye of a tourist already wearing a filter of a cultural translator and European guide, we are forced to accept someone's interpretation. The Kathmandu University School of Arts students were assigned to indicate and describe phenomena, objects or rituals that they felt would stand the test of time and those that they felt would not survive, and to justify their opinion. This way I could learn what 20-year-olds from a different culture feel is important and what they neglect or downgrade in spite of its presence in the textbooks. Below is the result in summaries and reports.



### 1.1.1. We Will Sea exhibition

Exhibition of works by the students of the Faculty of Architecture and Design of the Academy of Fine Arts in Gdańsk at the Łódź Design Festival.

**Curators:** Marta Flisykowska, Marta Kołacz

collaboration: DESK Design Kolektyw.

Łódź Design Festival 2014

#### **Curators' invitation to the exhibition:**

The challenge put out by the curators of the Łódź Design Festival this year is the question of a Brave New World, which puts both the Festival's viewers and participants before a need to take a stand as to the role of design on the way to build such a world. Should design solve social problems? Or, conversely, should designers remain dreamers creating art projects? And what is the role of the Academy in all this? The Academy that develops designers at the beginning of their professional career by showing them the paths, making them aware of a potential where only the sky is the limit, and teaches them the experience of previous generations of designers. Therefore, the exhibition is a voice of the young generation of the Gdańsk Academy, which will attempt to speak out in the discussion by putting forward to the public a title that is also a challenge: "We Will Sea"

When they cross the threshold of the Academy, the young learner is confronted with many, often contradictory, opinions of what the role of design should be. On the one hand, design faculties are supposed to be places that develop unbridled imagination, on the other hand we often demand expert practical knowledge from our graduates. We stop and look upon beautiful, but often impractical and unnecessary, objects while marching under the banners of sustainable development. The students' imagination is kindled by catchy slogans about how form should follow function and design should be responsible. This idea of easy-to-reproduce recipes for a better life is also one of the takeaways from the novel by Aldous Huxley which gave this year's edition of

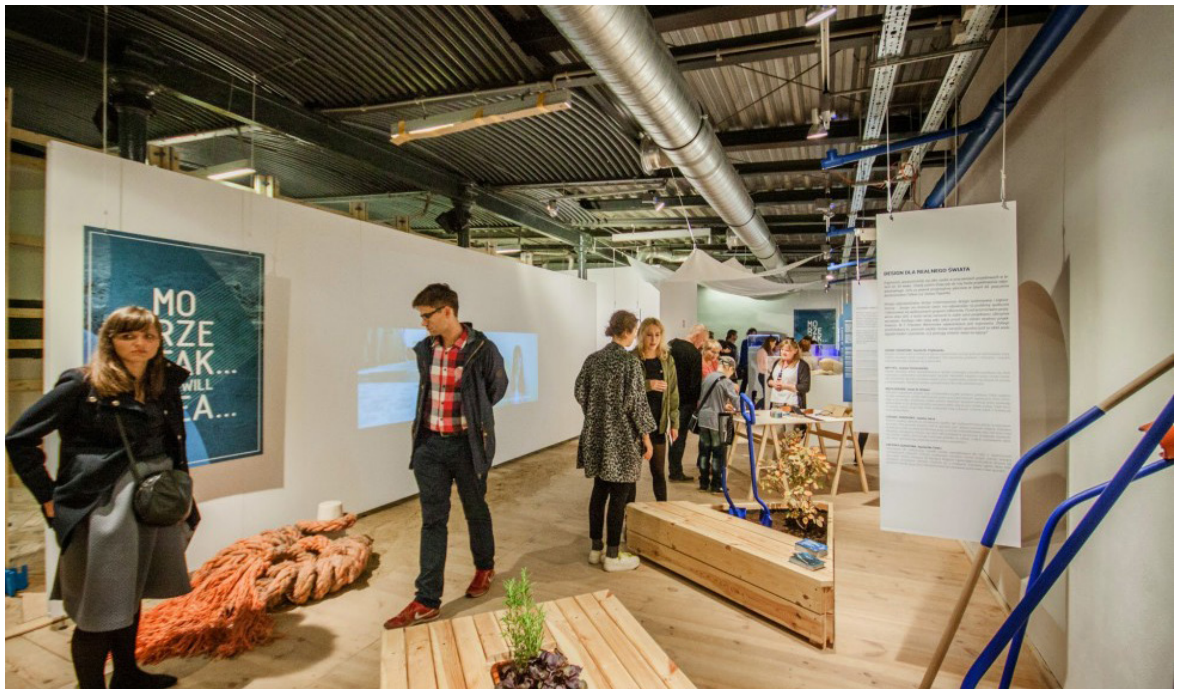
the Łódź Design Festival its title. Jofferey Keedy also provided important input to the debate. In his text "Dumb Ideas", Keedy has a perfect take on the situation: "Reading design theories from past, you can't help but be struck by how many times the same issues are discussed. It is as though every generation has to have essentially the same conversation but in a new way". (Keedy 2009)

So, the We Will Sea exhibition is an attempt to move forward and take a step back sideways, as it were. On the one hand we will see installations that are a certain archaeology of the future that consist of objects that are remnants of the world of the future that we are designing today. Through their work, the young designers will invite us to go on a trip to the future of design, where the exhibits, not unlike science-fiction props, concern a world we have yet to know. The second part of the exhibition consist of objects dedicated to the present day, which are a showcase of the attitudes towards design represented by Gdańsk design students. This is a step to the side, as it were. An attempt to have a look at the objects that take shape in the studios from the point of view of the expectations that stand before the discipline and designers today. The university is a melting pot, a place where there is a mix of the personalities who run the studios, where the students become imbued with design practice, but also with design theory. It is a place that is the beginning of the road for successive generations of designers. In the face of the challenges presented at Łódź Design Festival 2014, it is well worth asking today – who will they grow up to be?





Exhibition "Morze tak // we will sea". "viruses", by: Joanna Radziuk, Amal Al-Shahari, Klaudia Szalecka, Kamila Gąbka, Agnieszka Sokolowska, Sylwia Karwowska, Katarzyna Rzędzian, photo: Joanna Radziuk, Łódź Design Festival 2014

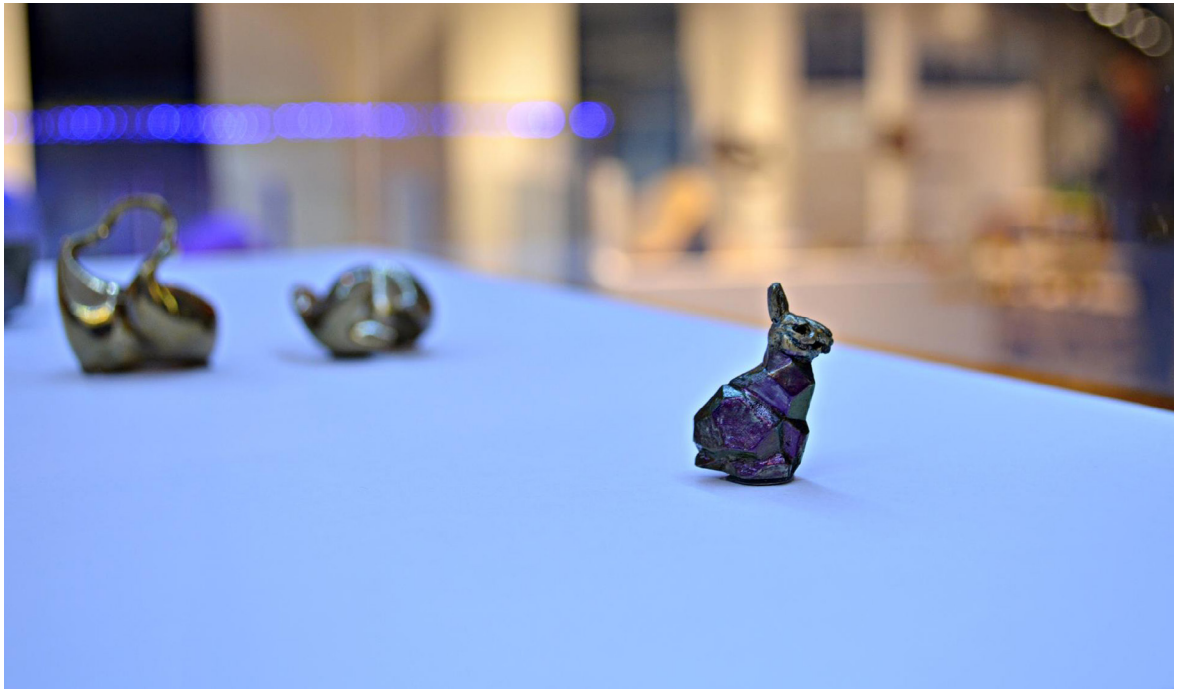


Exhibition "Morze tak // we will sea", Łódź Design Festival 2014





Exhibition "Morze tak // we will sea". "viruses", by: Joanna Radziuk, Amal Al-Shahari, Klaudia Szalecka, Kamila Gąbka, Agnieszka Sokółowska, Sylwia Karwowska, Katarzyna Rzędzian, photo: Joanna Radziuk, Łódź Design Festival 2014



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## Archaeology of the Future

*It is the 23rd century, a trove of something that looks like objects of everyday use was discovered on the Baltic coast. The salt water and time had worn away their shapes and it is difficult to unambiguously say what they were. Based on such finds, archaeologists and anthropologists determine how people lived. They examine whether the objects were haptic, the way they were decorated and what tools were used to make them. We have learned much from ancient Greek vases and tomb furnishings. This find is dated at the turn of the 21st century. What did people use these objects for? How did they use them? The objects designed by the students of the Experimental Design Studio were to determine the past in the future. Human history has shown that it is objects that are the main medium for conveying cultural information. How will we be interpreted and what will we leave behind us? A reverse view of design—the past in the future – is an attempt to transcend the typically academic design for the present without looking into the future.*

Nature has always been a mighty inspiration for designers. If the environment around us changes, this will impact our designs. Slow change is imperceptible day to day; we hardly even notice it year to year. However, we can see more on a generational scale. Some of the plants and animals that our grandparents remember from the days of their youth are no longer there in our sea. Making designers sensitive to certain things cannot be done in isolation. Ecology has become yet another populist slogan, so that the notion of sustainable design has appeared. BALTIC LAB is

a statement about how the present can impact the future. Most of us associate the Baltic Sea with a delicious fried flounder eaten on a summer beach. Is that all there is to it though? Tourists, industry, marketing, new technologies, sea dredging – A section of the flora and fauna of the future Baltic Sea floor is to be a certain manifesto, a student's observation of a maritime environment. How will this brave new world be from the marine perspective? What will change?

Today's venoms and poisons are complex organic molecules without a cellular structure, built of proteins and nucleic acids. They contain genetic material in the form of RNA (RNA viruses) or DNA. However, they exhibit the features of both living cellular organisms and inanimate matter. The word virus is one of the scariest words today. We call HIV the plague of the 21st century, we're terrified by the EBOLA virus epidemic, the media report on newer and newer flu mutations. Attack, terror and a permanent state of siege do not only concern the bio world. Sometimes it can be harder to deal with a computer virus, a thoroughly thought out infection by a hacker from a different continent. Small but deadly, we usually see only the tragic outcome of their effect. The fear of them is immense which means that they can often become a weapon that becomes an insignia of power. What are we afraid of? What illnesses await us? Perhaps new viruses that attack ones we already know? What will the viruses of the future be?





Archaeology of the Future, Seat, by Agnieszka Krzyżanowska



Archaeology of the Future, Seat, by Agnieszka Krzyżanowska

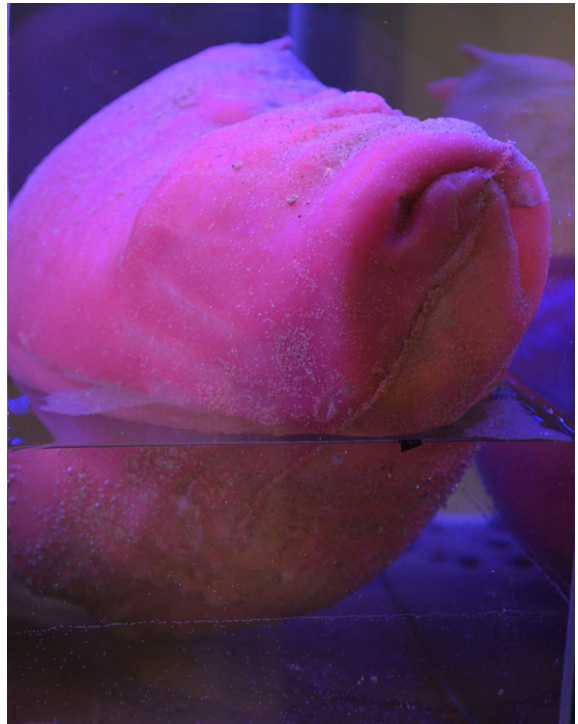




Archaeology of the Future, Toy Cars, autor Bartosz Jaroszek



Baltic Lab, Primordial Cod, by Kamila Gąbka, photo Joanna Radziuk



Sea Monster, by Amal Al-Shahari





Baltic Lab, by Philipp Hainke, photo Philipp Hainke



## 1.2. PARALLEL REALITY

*individual exhibition*

### **Partners:**

Gdynia City Museum, Faculty of Architecture and Design of the Academy of Fine Arts in Gdańsk, Kathmandu University School Of Arts Center for Art and Design, Marshal of the Pomorskie Voivodship

### **Dates:**

9.06–5.07.2017 Gdynia City Museum

### **Curators' invitation to the exhibition:**

Multimedia exhibition presenting the everyday life and material culture of Nepal.

The place where we are born and live, our environment and the reality that surrounds us are the starting point. Every new experience will be compared to the first ones. Geographic conditions, history, access to knowledge are all factors that determine cultural differences. We've got the same needs, we're built of the same matter; we differ locally and in our details.

Knowing only our environment, we automatically assume it as a model and an interpretation.

"Parallel" does not mean "the same." A distant culture has different traditions, rituals, language and way of thinking. Things may matter there that we don't notice at all.

How can we learn something new about ourselves? How are we to develop civilisation? By changing our viewpoint, we notice, and therefore understand, more. The Parallel Reality exhibition is a summary of a certain stage of work under the Futurology in Design Practice research project realised at the Faculty of Architecture and Design by Dr Marta Flisykowska.

Project partner: Kathmandu University School of Arts Center for Art and Design. The exhibition is supported by the Marshal of the Pomorskie Voivodship.

The Parallel Reality exhibition consists of three sections. Installation made up of documenting photography, material culture multimedia presentation.





Exhibition "Równoległa rzeczywistość / Parallel reality", Gdynia City Museum 2017, photo Wiktor Orłowski



Exhibition "Równoległa rzeczywistość / Parallel reality", Gdynia City Museum 2017, photo Wiktor Orłowski



### 1.2.1. Presentation and description of photographs

The language and culture are different, but the people and needs are similar; they help us find our way, decipher and decode.

A selection of photographs that tell us about culture and its parallel reflections in a European and very narrow Polish (local) version.

#### Mirror Image – Photojournalist picture installation.

Objects and situations we know from everyday life are markers of our native reality, with which we infirm a context. However, this context is different than the one we are used to. I present here the photographs taken during my stay in Nepal in 2016. Some of them are accompanied by additional commentary that explains and labels what we see in the exotic picture for it is often the details that give the full flavour. Some of them have only visual commentary through the juxtaposition of the pictures.

In terms of material culture I chose to focus on a selection of cultural icons and contemporary behaviour that show a parallel world. References to chaos theory and the butterfly effect are not coincidental. Each of the photographs matters and refers to well-known culture-forming and universal human needs such as food, transport, family, symbols and keeping track of time. However, each of them can be a separate iteration and development depending on the cultural foundation.





## Swastika

For many Europeans the sight of swastikas painted on rocks in the Himalayas brings to mind unpleasant associations. They needn't feel this way. In fact the swastikas symbolise a cosmic energy that are to bring good fortune to the climbers. The word swastika comes from Sanskrit and means "good

fortune." The locals eagerly wear jewellery with swastikas, treating it as a good omen. One should remember that, in order for their power to work, the swastika should be placed horizontally, not diagonally.



Swastika, Report from Nepal 2016, photo Marta Flisykowska



Białystok, Poland, 2007, Mosque at Hetmańska Street (Grzegorz Dąbrowski), photo Agencja Gazeta



## National symbols in everyday life

Today there are several brands specialising in so-called patriotic wear (that refers to nationalist values, traditions and /or symbols) in Poland. The fashion industry, including the clothing sector, in Poland is still developing and consolidation its position in the EU market, as demonstrated by such developments as the presence of such companies on the Warsaw Stock Exchange. Patriotic clothing is also a source of controversy in Poland because is associated with nationalist movements. It is not tied to joy and pride but can also represent hostility and xenophobia. Expressing these social

feelings attitudes or values can be boiled down to what sociology refers to as fashion as a universe of discourse. We should examine the awareness and attitudes of people who wear such clothing. Are all of them aware of the meaning of the symbols they wear?(Mróz-Gorgoń, 2016) Polish patriotic symbols are warlike in nature, which also stems from culture and maintained tradition. Nepal has been historically free of civil war and even fights with e.g. Maoists does not demonstrate hostility. It is happy with its ancestry, takes pride in it and coexists as a Hinduist and Buddhist melting pot.



National symbols,  
report from Nepal 2016, photo Marta Flisykowska



National symbols,  
baseball cap TRUCKER, from [duszapolaka.cupsell.pl](http://duszapolaka.cupsell.pl)



## Momo – pierogies

Momo is a type of dumpling with a meat filling, a Tibetan cuisine dish that is also popular in Nepal and India. The dough is made of white flour and water, sometimes also yeast and baking soda. The filling is traditionally meat, with yak, water buffalo,

goat, pork and poultry meat used. In India goat meat and poultry are the most common fillings, with vegetarian versions with cheese or potatoes also popular. They can be steamed or fried.



Momo dumplings, report from Nepal 2016, photo Marta Flisykowska



Pierogies, Kaszebe tableware set, design and photo by Marta Flisykowska

## Religion in everyday life



Religion in everyday life, Marcin Czaplinski, chapel in the Kashubia Region, Poland, 2011



Religion in everyday life, report from Nepal 2016, photo Marta Flisykowska



## Nirvana

Nirvana (literally blown out, as in an oil lamp), the extinction of suffering, a term used in dharmic religions to call the highest state of liberation.

Nirvana, the American grunge band, founded by vocalist-guitarist Kurt Cobain and bass guitarist

Krist Novoselic in Aberdeen, WA (USA) in 1987 became one of the pioneers of grunge, a rock music sub-genre. Other bands from Seattle also played a big role on the rock scene of the 1980s and 90s.



Pat Pat's Autumn 2014 Nirvana T-shirt, fot. coisasdoesdavida.com



Nirvana, report from Nepal, photo Marta Flisykowska

**Time**

Nepal has a peculiar and interesting calendar. It is called Bikram Sambat. The New Year begins in mid-April and thus each month also begins more or less in the middle of “our” month. They now have the year 2063. If you need to specify

a certain date when talking to the locals, it is better to use terms like “five days ago” or “in two weeks” etc. Our “20 March” or “1 July” would not communicate much. In the Muslim world it is the year 1432 and among Buddhists it is 2555.



Time, a manhole cover with a date that for us is in the future, report from Nepal 2016, photo Marta Flisykowska



2016 calendar with Bikram Sambat and the Gregorian calendar



## Religion in a landscape

Stone cairns may be found on practically every Himalayan path. They function somewhat like stupas, i.e. the simplest sacred structures. Everyone who passes them should circle them clockwise once or pass them so that they are on one's

right. Then one should add one stone of one's own. Such an act is treated as equal to chanting one mantra and giving thanks to the gods. Prayer flags are often hung and animal horns laid nearby. All this to scare away evil spirits.



Religion in a landscape, doubeng stones, Report from Nepal 2016, photo Marta Flisykowska



Religion in a landscape, Mt. Gerlach, photo Martin Kryc ([www.martinkryc.sk](http://www.martinkryc.sk))



## Carriers/junk collectors

Nepalese carriers can carry enormous weights. A 50 kg sack of rice plus several crates of beer is nothing unusual.

With their basket (doko), secured with a forehead strap (naamlo), the carriers can often march for hours, resting sometimes when going uphill.

A group of 113 randomly selected people was studied. Their average load was equal to 89% of their overall body weight (BW). There were a number of incredible cases such as a 50kg carrier carrying a load of 100kg up Namche Hill



Carriers / scrap collectors, Report from Nepal 2016, photo Marta Flisykowska



Carriers / scrap collectors, article by Jacek Bombor 3.02.2015, "Dziennik Zachodni" Jastrzębie-Zdrój: Jak złomiarz mógł pociąg wykołocić..." ["Jastrzębie-Zdrój: How a junk collector could derail a train"]



Drivers' subculture



Drivers' subculture, Nepalese truck driver, Report from Nepal 2016, photo Marta Flisykowska



Drivers' subculture, LED plates for drivers, [www.tir-market.otwarte24.pl](http://www.tir-market.otwarte24.pl)

## Holy animal

Tihar – The Festival of Lights the first day of the festival is dedicated to the raven (kag): "the messenger of Death. The second day is dedicated to the dog. The third day, called Laxmi Puja, is the most important day of the festival. In the morning,

cows are venerated, just like dogs the day before. On this day they are garlanded and fed. The cow, like the goddess Laxmi, is associated by the Nepalese with wealth, and most of all is a holy animal for Hindus.



Holy animal, Report from Nepal 2016, photo Marta Flisykowska



Holy animal, miniature Yorkshire terrier puppy, [tapeciarnia.pl](http://tapeciarnia.pl) Szczeniak, [tapeciarnia.pl](http://tapeciarnia.pl)

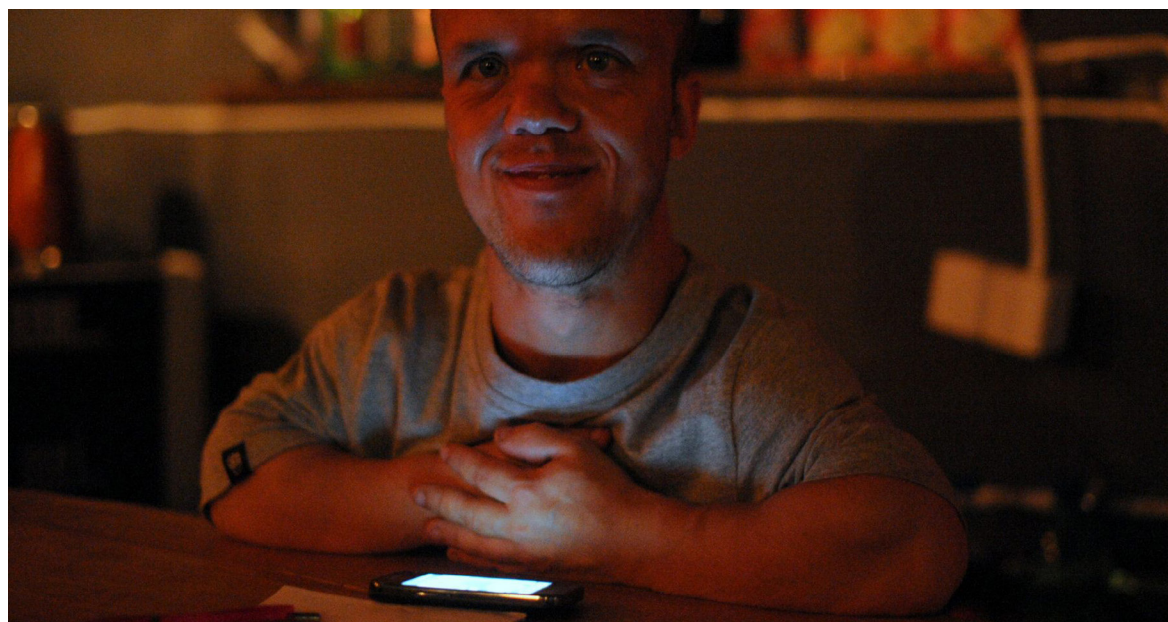


## Communication

Buddhist Monk and Sopot Bartender.



Communication, buddhist monk in a temple, Report from Nepal 2016, photo Marta Flisykowska



Communication, Krystian, bartender in Sopot, Club Wtedy, photo by Tomasz Jurgielewicz

## Brand

The international community of mountain climbing tourists have spread the word about fake brand-name tourist equipment in Kathmandu. It seems that there are hundreds of the Kathmandu's Thamel commercial district alone. There can be over a dozen of them on a single street. Next to them are countless tailor's shops where one

can see how logos and ornaments of well-known brands are sewn into the clothing. In Nepal tailoring is a man's business, women do not do it, whereas in Poland it is difficult to find a male tailor and the profession is culturally and socially considered to be a female one.



Gender profession, Nepalese tailor, Report from Nepal 2016, photo Marta Flisykowska



Gender profession, photograph from the series Craftswomen, part of a project by Katarzyna Gębarowska and Dominika Kiss-Orska, source: Gazeta Wyborcza



### 1.2.2. Student workshop in Nepal: Reference to culture

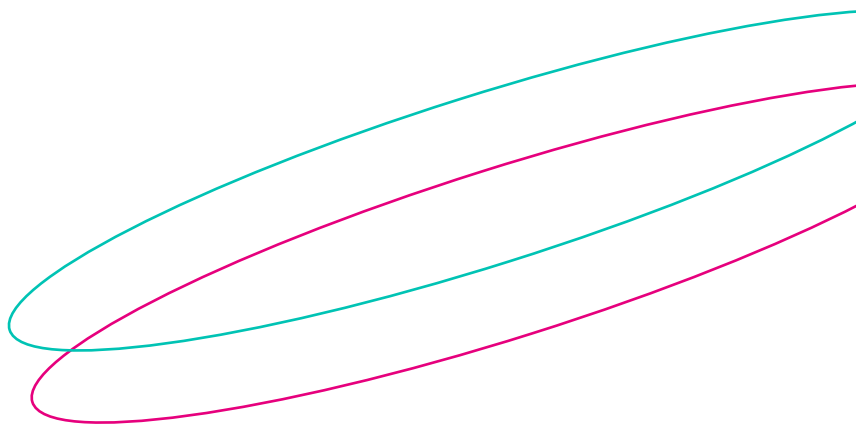


The project was carried out with the students of the Kathmandu University School Of Arts Center for Art and Design.

The students present Nepalese objects, and material and non-material culture rituals of Nepal and explain why some of them will stand the test of time. They also show others that they feel will soon be forgotten.

The students of the Kathmandu University School Of Arts Center for Art and Design were to reply to two questions:

What do you think is so strong and so rooted in your culture that it will stand the test of time?



**Barsat J. Karki**

Dal-Bhat – “Dal-Bhat is the most common form of meal in Nepal. It is basically rice and lentils that people like to eat for brunch and dinner.

Dal-Bhat has been the corner stone of every meal in Nepali culture for so many years. Rice is grown in almost every part of the Nepal and so are lentils.

People keep a huge stock of rice they can eat for the whole year. Importing other food items seems irrational so this meal will survive for many years to come.”



Dal-Bhat, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Kanchan Tamang

Jantar – “Jantar is a square shaped mala which has various designs and patterns such as a flower, a leaf or other basic shapes with a muga mala or any other pote mala.

It is compulsorily used by the bride in Tamang society and is gifted to the bride by her family.

It is mostly used by women of the Tamang, Rai and Gurung people but now it is used by

everyone. Today it is very popular among all women and used for any occasion: festivals, marriages or any other events. It is now modified with unlimited designs and shapes.

Jantar is not just a decorative piece of jewellery but also it has got its own meaning and traditional use, so it is important to preserve and document it.”



Jantar, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

## Nilam Bhurtel

Sarangi – “A Nepalese folk bowed string musical instrument of cultural and traditional importance. Traditionally, it used to be played only by the people of the Gaine caste to sing narrative tales and folk songs. Today, it is played in many genres of Nepali music.

The sound of the sarangi is so pleasing and carries so many emotions as it used to be played to narrate the stories about the heroism of Nepali soldiers in battle. A very famous composition by Jhalak Man Gandharbha ‘Aaama le sodhlin ki’ is one of them. This genre of music is very nostalgic

to me as well. It somehow reminds us about our Nepali culture and that is the reason due to which I think it will survive.

Traditionally, Nepali sarangi are made of a single piece of wood (khiro:a very light wood), have a neck and hollowed-out double chambered body, the lower opening is covered with dried sheepskin upon which the bridge rests, while the upper chamber is left open. The original strings were made out of sheep intestine. I find the way it is made and the final music it produces both very interesting.”



Sarangi, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Nirajan Maharjan

“Sukul is a type of mat which is popular among the Newar culture in Nepal. It is made of hay and it can have circular shape but is mostly found having a rectangular shape (it is long enough to seat almost 15 people in a single line).

It is usually used in “bhoj” where a huge number of people are assembled and food is distributed by cooks to all the people at the party. It is made

with hay locally and it is cheap, effective and biodegradable as well. It is also said that walking on sukul’ also increases blood circulation to our legs and feet.

It is important in our culture because it is a very old traditional mat which is made with hay and is all handmade.”



Sukul, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

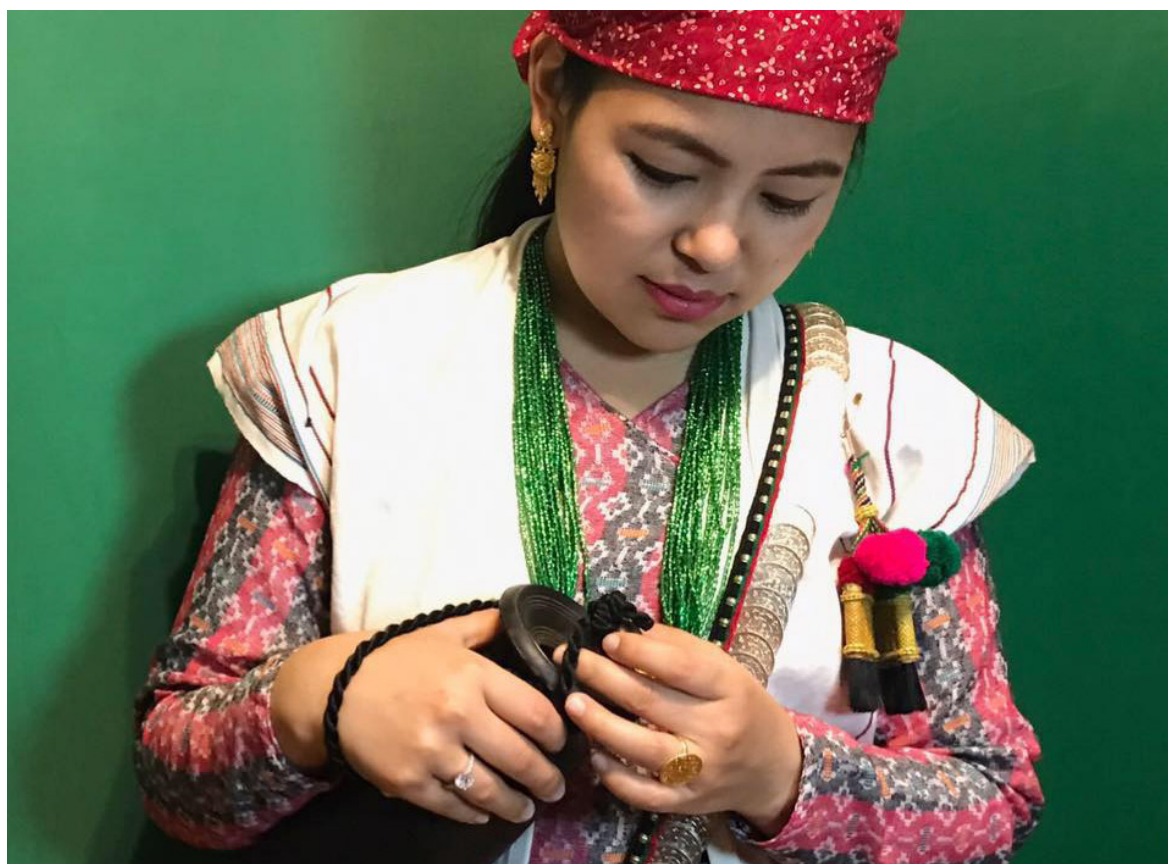
## Raj Kumar Rai

“The Bhangra/Fyanga is traditional and cultural dress of Khaling Rai society. It is made from an organic thread which is produced from a plant named “Allo” or “rakshiki”. It is prepared in “Taan.” Traditionally, it was used in everyday life by both men and women. But now, people wear it at festivals and occasions. Even though people from Khaling society are aware of its importance and its use.

It is one of the unique dresses of the Khaling Rai community. It is comfortable to wear and looks

good too. These days, it is an important element of the Khaling Rai culture and tradition and people are wearing it as a fashion statement too.

The Bhangra/Fyanga is part of the identity of Khaling society. It is proof of a Khaling Rai civilization. The traditional skills of Khaling women can be seen in this traditional cloth so it should be preserved and documented properly. Local people as well as the government should be responsible in preserving such traditional and cultural dress.”



Bhangra/Fyanga, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Raja Maharjan

“The Newari Samay Baji is considered one of the best dishes and one of the main attractions of Nepal. Samay Baji is a typical Newari food set which consists beaten rice, chwelaa (barbequed and marinated buffalo meat), fried boiled egg, black soybeans, spicy potato salad, finely cut ginger, boiled beans mixed with spices, green leaves, goat meat and an alcohol beverage called “Ayla”.

This dish has been passed down for many generations and is still much appreciated by the

people. Samay Baji is eaten as starter at every festival, every religious activity and at pujas.

Personally, it is the best dish I've ever tried and I can't imagine any festival in Nepal without feeling the taste of this food in my mouth. Samay Baji is the pride of Nepal and its culture. We appreciate it not only for being a part of Nepali culture but also because this dish has its own tasty qualities which make it the favourite dish of the Nepalese and many other people as well.”



Newari Samay Baji, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

## Sarala Manandhar

“Inter-caste marriage is the marriage in between different castes. Nepal has a lot of castes and sub-castes. And in marriage, there is a custom to marry certain castes only. These castes are usually equal to the other caste. Due to the old and adamant principles of our ancestors, inter-caste marriages are still frowned upon. The rules sometimes can be really strict so it is hard to be a rebel. Going against the family is not considered a good idea either. So, modern people are fearful of the orthodox society we live in and its obligations.

Parents are afraid to hear gossip from the community. They don't want their children to be a topic of gossip. The cultural differences between castes might create difficulties in settling down in the future too.

I think the society we live in feels it hard to accept inter-caste marriage because, first of all, the people grew up in a society where they learned to live according to certain norms and rituals of the society which does not accept the cravings of the heart. They follow all those things because of the fear of gossip in their community. Also, these things are strongly rooted. So, because of their cultural values and with their own prestige in mind, parents do not accept young people who enter inter-caste marriage.

Couples who dare bring change have to have the motivation and can find rewarded in doing so. So, I think inter-caste marriage will continue.”



Inter-caste wedding, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Yunisha Shrestha

“The anti is a brass vessel with a long narrow spout. It is a traditional wine pouring vessel which was used in everyday life. Today, due to globalization and the import of wine, vodka and beer, glass bottles have replaced this traditional vessel.

Nepal is a country rich in culture, rituals and tradition. Therefore, such traditional vessels are used in popular Newari hotels.

So the best option can be to buy local anti, if not for daily use then for decoration purposes.”



Anti, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

Far less people answered this question:

What sort of objects, rituals or habits will not stand the test of time and are close to being forgotten?





**Barsat J. Karki**

Dhido, in my opinion, will not survive in the future.

Dhido is a form of meal that is brownish yellow in colour and is made from wheat. It is mostly found in hilly areas and is less eaten overall in Nepal.

Dhido used to be a common meal in hilly areas, but now it is being supplanted by Dal Bhat because shipping rice is now easy to many parts

of Nepal. People can easily buy a sack of rice but they cannot easily buy a sack of dhido.

Dhido is somewhat less tasty compared to rice but many people still do enjoy eating it. We do not have a clear idea of the health benefits of Dhido but we may assume people didn't eat it for health purposes but instead consumed it because it was the only thing available."



Dhido, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

## Nirajan Maharjan

“Tuki (oil lamp). Tuki is an object used to produce light continuously for a long period of time using an oil based fuel source. This is technology from thousands of years ago.

After the invention of electricity we use electric lamp bulbs and tubes that replaced the ancient sources of light in everyday life.

Time changes everything. Tuki (oil lamp) is a remnant of a very old culture, it has its own uniqueness and burns longer than candles, but nowadays times have changed and it is not used in daily life because we have electricity.”



Tuki, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Pushpa Parajuli

“The dhikki is a traditional object made from wood to grind. Since using a dhikki requires a lot of manual labour and is time consuming, it has been replaced by electric grinders.

Although difficult to work with, it had its own health benefits. Foods cooked in electrical appliances are not good for health as they can cause cancer.”



Dhikki, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

## Raj Kumar Rai

“Kathuwa/Waas Kyafyam is traditional pot of Khaling Rai people. It is made from a wood called “bosu.” It is mainly used to store alcohol for many festivals and occasions. The Kathuwa is importantly used in the main festival of the Khaling Rai called Waas.” It has got its own traditional and cultural value and importance.

Plastic bottles of Coke, Pepsi, Sprite, Mountain Dew and other cold drink bottles are replacing it these days. Since young people from the Khaling society are not continuing the skill to making such pot and wood is not available, it is hard to find

such pot. Similarly, plastic bottles are not as heavy as “Kathuwa” and are more safe and easy to carry than wooden pot, plastic bottles are replacing it these days.

Kathuwa/Waas Kyafyam is one of the important vessels of the Khaling society. It has got its own identity, meanings and importance. But now, it is about to go extinct soon. Due to the availability of plastic bottles, people do not care about these vessels. But, the kathuwa should be protected, documented and identified by new generations.”



Kathuwa/Waas Kyafyam, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016



## Sarala Manandhar

Bahra tayegu – “Bahra is a tradition of the Newari people in Nepal. ‘Bahra’ means cave and ‘tayegu’ means put. Girls about the age of 7 to 13 years old take part in this ritual in this culture. It takes place before the first menstruation starts. Girls are married to the sun god. It’s a 12 day-long ceremony and is a second marriage of Newari girls.

Girls are kept in a dark room for 12 days. They put bahra khya in a corner of the room. In that dark room put lots of toys for the girls like marbles and doll, friends and relatives come and enjoy the time with her. A girl can’t see any man. If she needs to bath it can take place only before the sunrise. For 5 days she cannot eat salted food. After the 6th day, relatives visit her with delicious food and put on koo to make her beautiful. On

the 12th day, girls wake up before sunrise, take a bath and get ready like bride to a wedding. The perform the puja prayer ritual with a priest and are married with the reflection of the sun on water.

Somehow, this is changing with time. In enjoyed my bahra a lot. I was put at the age of 6: playing, meeting with friends and eating so many things. Over 12 days we were given special treats from our mother. I liked that part. Most difficult part was having a bath: we had to wake up at 2 am, we had to wait to go to the toilet etc.

Our is culture precious. So we should look further and we leave the bad parts of this culture and go forward with the good part.”



Bahra tayegu, photographs provided by the students of the Kathmandu University School of Arts, workshop 2016

### 1.2.3. Hologram: a generative interpretation of the mandala

The Digital Mandala project which was prepared especially for the Shapes of Logic conference that took place in Wrocław in May 2017. The project was accompanied by a paper that was delivered there and subsequently published: "Mandala as the example of visual code based on culture. Case study of fractal geometry in practice."

In the spirit of the Shapes of Logic conference, I wanted to take up the shapes that result from logic, but which do not lack a cultural context. It is the latter that becomes the true code, the geolocalizer, clear and understood in a given area. The cultural context nonverbally conveys complex information that is often abridged when translated into another language.

I feel that combining humanist and technical values is the greatest virtue of being a designer. The ability to create a visual message using new tools is becoming a new language: the visual code. I focus in my deliberations on social and anthropological aspects, using to this end a visual language obtained with parametric and generative tools. I look for contact points and boundaries, the human and software, and the differences and similarities that come from culture and with which we achieve greater social awareness and develop our civilization. Cultural and anthropological observation translated into the language of generative design can become a basis for AI researchers. This is already taking place because the original inspiration for the structure of neural networks was the structure of natural neurons, the synapses that link them together and the nervous systems, especially the brain. (Kurzweil, 2005)

Based on a mandala-inspired design I will present both the symbolic and visual context, as well as the context related to parametric and generative design. This original interpretation of the mandala is the materialisation of the premises of the Futurology in Design Practice research project. A strong symbol of culture, known in its two-dimensional form, the mandala is an ideal rationale for experiments on the borderline of parametric and generative design. The result is

a hologram which, because of its lack of physicality in a strict material form, represents what constitutes an undeniably communicated piece of cultural information that is not recorded in the form of a traditional code/message.

According to Clotaire Rapaille a culture code is the meaning we subconsciously attribute to a given thing. How a given phenomenon or object is perceived in a given culture. In his book, Clotaire Rapaille lists examples such as: in America a car signifies IDENTITY, whereas in Germany ENGINEERING. For Americans, health means MOVEMENT, for the Chinese BEING IN HARMONY WITH NATURE.

Culture codes are incredibly important because they are superimposed on the target's personal experience and determine the personal meaning of, for instance, a product (Rapaille, 2007). The example of the KitKat candy bar that is a good illustration of when local cultural habits impact a global product. I described this in my monograph Design in Glocal Culture.

In 1988 Nestlé took over the Rowntree company, the originator of KitKat candy bars. KitKats are available all over the world, but the contents of the package may differ. The product on sale was researched and developed by teams of market analysts in order to suit the product to the needs of the target consumer. Depending on the market where the candy bar is sold, local flavours, habits and cultural differences are utilized in its production. This way the candy bars become a mass project with a local touch. This is one of the faces of glocality (G. Ritzer, 2014).

The use of such data in marketing and social engineering is by now common practice and nothing new. However, the scale and diversity of information and the ability to process it will only begin to yield results in the future.

The mandala is an ideal rationale for experiments on the borderline of parametric and generative design. In the broadest sense mandalas are diagrams that show how chaos takes on a harmonious form. People try to tame chaos with geometric division. Mandalas can also be called



a kind of binary system, because they are built of two simple shapes: the circle and the square. The Buddhist mandala is a harmonious combination of these shapes, where the circle is the symbol of the heavens, transcendence, externality and infinity, while the square represents the sphere of the internal, that which relates to humankind and the Earth. Both shapes share a central point, which is both the beginning and the end of the entire pattern (J. Tresidder, 2000).

Just as with coding, where we get a line, a sentence, but not construed as a poem but as a command, so in making a mandala, apart from its construction and shape, the entire dimension of creation as well as the final result have a symbolic meaning.

Interpreting the mandala as a hologram was also to involve the use of digital tools. The equivalent of the mandala's fleeting nature is its graphic representation as a projection, which is to set it free from the material world but remain a materialized three-dimensional result.

In this case the interpretation of the digital language went a step further. Instead of using a circle and square as in a traditional Buddhist mandala structure, I focused on combining a "Mobius"

solid with a "Voronoy" surface, which I feel are the ABC of generative style in objects.

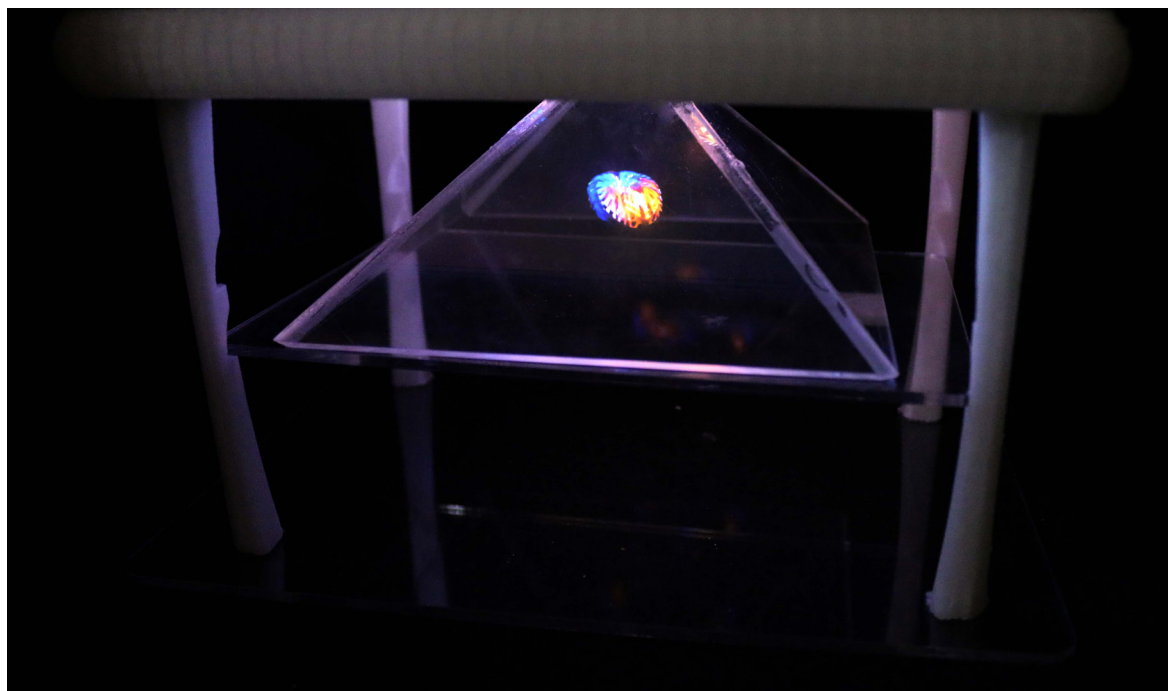
I will explain these notions in a very laconic and simplified manner: a "Mobius" solid, based on the strip discovered by German mathematician August Mobius, is presented in a three-dimensional rather than two-dimensional version. We obtain the features of a Mobius strip when we connect two ends of a strip where one is turned to the other by 180 degrees. Variations on the theme form a complex geometry. Similarly, a Voronoy Diagram forms a surface which we can illustrate by comparing it to the structure of cellular tissue. The Voronoy Diagram concerns the division of a surface into a visually organic systematized way.

The hologram was also presented in the designed structure printed in PLA in pearl colour. The small print was made up of four supports and a field to project it; the entirety was also part of the exhibition at the City of Gdynia Museum. The visitors interpreted it as "temples for the hologram." Even though this was not my aim, the instilled context in the form of the mandala said the rest. This is yet another example of encoding information via cultural context.

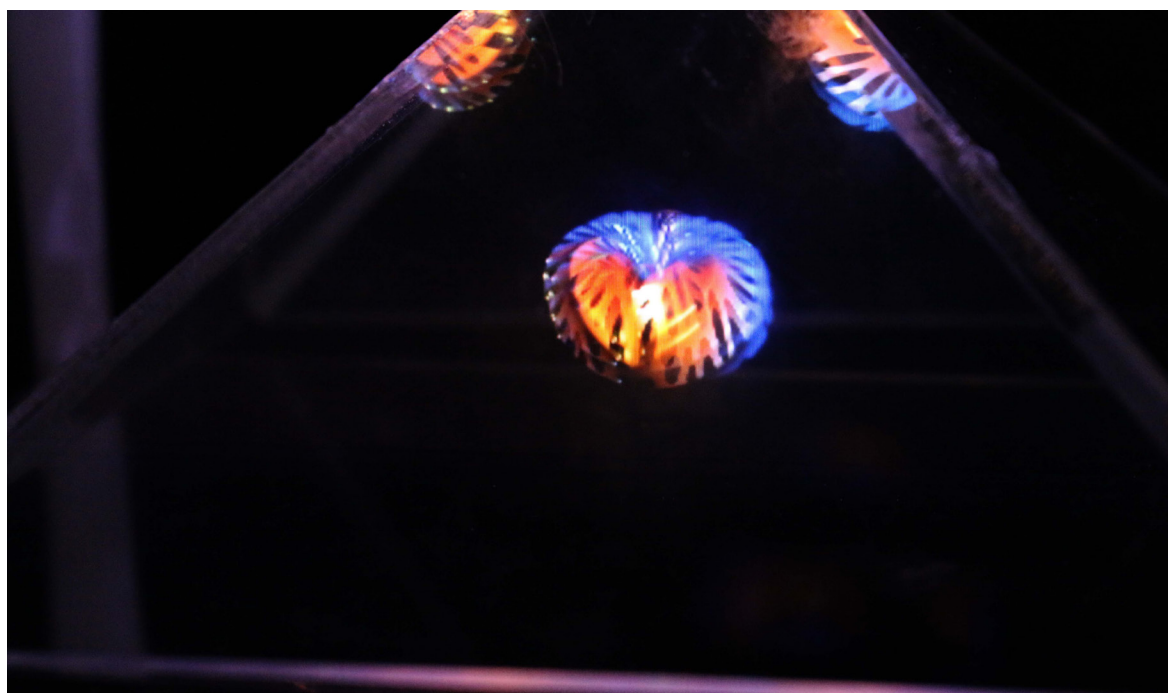


Wasabi-coated Kit Kat, source: 2ser.com

#### 1.2.4. Digital mandala – photographs



Hologram, digital mandala 2017, photo Marta Flisykowska



Hologram, digital mandala 2017, photo Marta Flisykowska









SPECU-  
LATIVE  
DESIGN

2



# 2. SPECULATIVE DESIGN

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## STRATEGY AND BUSINESS TOOL OR FORTUNE-TELLING

Forecasting the future and the desire for knowledge that no one else has is something that has been part of human nature since ancient times. It is no coincidence that shamen played an important role in tribal society, the Celts would cast spells and interpret runes, Native Americans would smoke their ceremonial pipes and witches, whose name derives from the word “to know,” who were burnt at the stake because of their knowledge. Looking for records and decoding signs that foretell future events can impact our fortune, as in health, crops or heirs. Knowledge which no one had could be more valuable than gold because it could determine spectacular victories or failures. From a certain point of view, nothing has changed, only become somewhat more civilised: the future is partially taxed.

Speaking of fortune telling today, we do not mean crystal balls, tarot cards or any other esoteric accessories, even though mystical fairs and shows are doing just fine and attract an incredible number of people. At least partially, knowledge of the future has become rationed through paid access. As we can read on the website of the

Academy of Fine Arts in Łódź, which was one of the first colleges in Poland to gain access to London’s WGSN World Global Style Network trend analytics platform, WGSN is the most influential such site in the world. WGSN employs some 250 people from the design and education sectors, trendsetters and trendwatchers, and covers every continent. Its clients include the world’s leading companies, not only from the fashion and clothing industries, such as Armani, Prada and the Index group (owner of Zara, Bershka and Massimmo Dutti), but also Nokia, Swatch, Disney and other concerns in the business of making creative objects. Over 12 years of work have produced a rich archive, the site also features news from the world of design (detailed reports from trade shows) and art (including new media).” (ASP Łódź 2018) For most consumers, it is these fashion and style activities that are the most prominent. Each year Pantone announces a colour, fashion concerns prepare their collections a year in advance. However, this still isn’t the future as construed by industry or the economy.

Publishing paid trend books and developing business strategies is a step further from stylistic trends. Polska trend analyst Natalia Hatalaska, with whom I had the opportunity to collaborate, defines the most important trends and reveals their consequences for the economy, market categories or specific brands through her infuture hatalaska foresight institute, established in 2016. Natlia Hatalaska is a trend analyst, blogger at hatalaska.com and author of the bestselling book "Cząstki przyciągania" ("Particles of Attraction"). She acquired professional experience at Young Digital Planet, NIVEA Polska (as PR manager) and at Wirtualna Polska, where she was head of the communications department in 2005–2008. Hatalaska's professional experience also reflects her method of communication, attitude towards disseminating information and the nature of the message itself (Hatalaska 2018). She speaks in the language of business and communicates in a contemporary blogger's way that sheds light in an issue and quickly "links" (sends) one to the relevant sources and authorities. The collaboration with Infuture concerned the visualisation of the trends they prepared for such brands as Tesco Polska and IKEA Polska. Zuzanna Skalska works in a different, although no less interesting way. She is also a trend analyst in design, innovation and business. From 2001, she worked for over 13 years for VanBerlo w Eindhoven, the Netherlands' largest design studio, where she was responsible for the ongoing monitoring of trends in various industries. Since 2007, Zuzanna has worked under her own brand: 360 Inspiration. As she states on her website, her clients include big global corporations, mid-size and small companies alike. She is the author of 360° Trend Reports, a series of trend books, award winner at Red Dot Design Awards 2009, and runs the 360inspiration.nl blog. (Skalaska 2018). Skalska's point of view is closer to mine insofar as she is also a design graduate. However, like Hatalaska, she has ties to business, sifts through information from trade events, finds inspirations and processes them based on the information she collects. Designers who use such studies interpret their guidelines, but more often

themselves are a source of inspiration for people such as the two above trend analysts.

A designer who is involved in research and development projects is close to science and developing technologies. These are often projects conditioned on confidentiality agreements, so what is exhibited at trade shows is already the result of the long work of researchers. We may therefore ask, what came first, the chicken or the egg? Who inspired who first? In this case we have an intertwined process. The trend analyst is supposed to track what is going on and draw conclusions from it. What if he or she is wrong? If a successful launch of a new product or service depends on their work then there are incredible sums at stake. There are famous cases of businesses that failed to notice or underestimated growing trends and went under as a result. Kodak is a prime example here. The company dates back to the 19th century, 1881 to be exact, when the Eastman Dry Plate Company was established. Its founders were George Eastman and Henry Strong. Initially the company produced negative paper, because Eastman was an inventor who popularised the use of photographic film (Gorzycki 2018). For years, Kodak was at the cutting edge of photography. It introduced 35 mm film, 8 mm cassettes, their technology and film was used to record the journey of American astronaut John Glenn, who orbited our planet at 17,400 miles an hour. How could it be then that a company that was one of the pioneers of the digital revolution in photography, with such a storied history, capital, patents, scores of skilled staff and an experience management corps had to file for Chapter 11 at a New York Bankruptcy Court on 19 January 2012? One of the key reasons why Kodak went under was its consistent underestimating of the technological revolution they had in fact contributed to: the gradual moving from traditional to digital photography. Here it is worthwhile to mention "The Tipping Point. How Little Things Can Make a Big Difference," a book by Malcolm Gladwell. The book shows that a breakthrough can come unnoticed; that change depends on a certain breakthrough tipping point that is often seemingly unimportant.



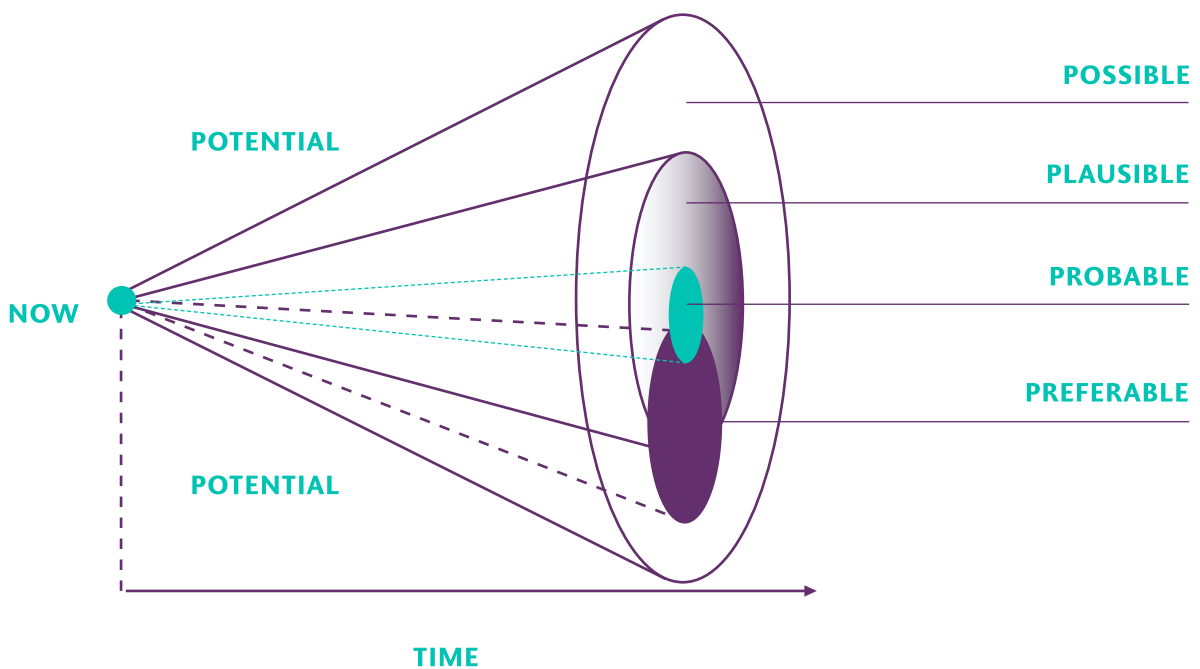
Gladwell gives a detailed account of the life cycle and essence of a trend that can be a market trend or a flu epidemic (Gladwell 2005). The story of Kodak is also treated as a parable among large concerns where there are investments and plans at stake not for the next year or five years, but on a scale of 15 or 20 years. Is it reasonable for construction companies that employ thousands of workers to underestimate the fact that in 2016 the MAX3D company printed the first fully operational bridge almost without any human intervention? (MX3D 2018) Doesn't the fact that Amazon has been already working on delivering parcels by drone for some time and is focusing in its research on bird avoidance not tell us a lot about the strategy of the logistics giant and the area of their investigation? In my design work I always emphasise how much I value the humanist aspect in the observation of changes and trends and how important I consider it. In the book "Anatomy of a Trend" by Henrik Vejlgard, the author methodically, in fact technically, strives to pinpoint and explain the mechanism of how a trend appears and develops (Vejlgarda 2007). Based on a number of case studies, the Danish sociologist clearly describes how a trend works from its beginning stages, as if it was a diagnosis manual. Upon reading this book one gets the sense that this is simpler than it would seem. Is that really so? It is largely based on forecasts, observation of change, the ability to notice tipping points and most of all on access to knowledge. Just like with the weather. I once asked a weather forecaster friend of mine who works at Lech Wałęsa Airport in Gdańsk about their exam. He told me that they get maps with data and are told to infer what is going to happen based on this information. When I asked how long they had to wait for the exam results (until the first rainstorm?), he replied that these forecasts concerned events that had already taken place: the exams were taken using old maps. When you go in this direction, you can confidently look for the reasons for the break in the weather and elaborate why we observed certain outcomes. Of course, this method is warranted in the case of Gladwell, Vejlgard, the weather forecaster

I mentioned or historian Patrick Gyger alike. By analysing the past and factors that affect the present, we describe the mechanisms we notice and refer to well-known cases that confirm the legitimacy of our theses. Forecasting and predicting change largely depends on history and the present. However, as with the weather, each of the above observers of change clearly emphasises that there always can appear something unexpected which changes and disrupts the planned process. For we should not treat these scenarios as exclusive and closed. In order to meet our strategic goal, it is necessary to continuously update our information and knowledge about changing circumstances. It is worth mentioning that, in order for a broader and fuller context, one should look at such technological and economic trends also from the point of view of culture and philosophy. This was undertaken by the Institute of Philosophy at the University of Warmia and Mazury in Olsztyn which for several years has had a successful Trend Analysis and Setting major. In 2018 the Institute released a publication devoted in its entirety to trends from the point of view of humanist sciences. The Polish market sorely lacked such a publication, which also leads us through the context of informatology, philosophy and the use of the term "trend" in communication. One of the definitions at the very beginning of the book "Trendy – interpretacje i konfrontacje" [Trends. Interpretations and Confrontations] is: "A trend is most commonly defined as a tendency, channelled changes related to phenomena which lead to transformations of part or all of the world around us. A trend is identified with a change in the way of thinking or acting of individuals or entire communities. Certainly, a trend means a qualitative change between what was and what will be, a change that affects a certain segment of the population and changes its existing way of perception." (Kucner et al. 2018).

Following is a case study of speculative designs. They are related to the interpretation of trends as construed by the Infuture Institute, a desire for development as acted upon by the BOWIL Tech company. Besides the humanistic pillars of

knowledge, collected and described by the University of Warmia and Mazury collective, there are also tools that allow us to develop future scenarios. One of these tools are foresight studies, technological foresight in particular. This is a set of research tools and methods that combine present activity (e.g. in science, business, society)

with an uncertain but possible and often desirable future (Voros, 2003). The Voros Cone explains how it works. There is no single ending, there are many probable and possible scenarios. This is how speculative design works as it becomes a tool in macrotrend forecasting strategies.

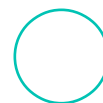


Voros cone



## CASE STUDY

Following are designs where it was necessary for the designers to visualise the future. Food Lab, Bionanoceluloza-design lab are exhibitions where as curator I was responsible for the subject matter, advising on the designs and for the exhibition concept itself. The designs were made at the Experimental Design Studio at the Gdańsk Academy of Fine Arts' Faculty of Architecture and Design. The Experimental Design Studio is the brainchild of Prof Sławomir Fijałkowski and myself. The Bedroom of the Future project also took place at the Faculty. However, it was an elective workshop project so the designs are more sketchy. From the Academy of Fine Arts' side, I had the honour of leading the Bedroom of the Future project with doctoral student Joanna Jurga.



## 2.1. FOOD LAB

The Future of Food project is an example of a interdisciplinary collaboration between business and two different R&D centres. The project was initiated by Natalia Hatalaska, founder of the Infuture Foresight Institute, who, in collaboration with the Gdańsk Academy of Fine Arts' Faculty of Architecture and Design, organised a speculative design competition.

Based on the food, cultural, social and environment trends drawn up by the Infuture Institute, the Gdańsk Academy of Fine Arts students undertook designing the food of the future. The competition's premise was to have each design substantially realistic and for the visionary concept be based in science. The result: the Infuture Food Lab exhibition of the competition entries" and the Future of Food report.

The project was led by the Experimental Design Studio in consultation with microbiologist Adam Ossowicki of the Netherlands Institute of Ecology (NIOO-KNAW). The designs created at the Gdańsk Academy of Fine Arts are part of the substantial content of the Future of Food report by the infuture hatalaska foresight institute whose strategic partner is the Tesco company.

The exhibition's curator is Dr Marta Flisykowska (Faculty of Architecture and Design of the Academy of Fine Arts in Gdańsk). It premiered at Gdynia Design Days 2017 and was also featured at the Łódź Design Festival.

In the opinion of Adam Ossendowski:

*"We realise how rapidly world we live in is changing not only by looking into the past, but also into the future. It turns out that solutions which might seem futuristic and far off at first glance are already practically at our fingertips. The design students from the Gdańsk Academy of Fine Arts squared up to a difficult question: "what will we eat in the future," and approached the subject in a very comprehensive and diverse way. Working on the Future of Food project was a big challenge for me even though my research is directly related to this subject. It required me to step outside the rigorous confines of scientific projects and open myself up to fresh, unconventional and most of interdisciplinary thinking. I think that we will see some of these designs in the near or more distant future."*







photographs from the Infuture Food Lab exhibition at Gdynia Design Days 2017, photo: Bogna Kuciumbas, Gdynia Design Days press materials



photographs from the Infuture Food Lab exhibition at Gdynia Design Days 2017, photo: Bogna Kuciumbas, Gdynia Design Days press materials





photographs from the Infuture Food Lab exhibition at Gdynia Design Days 2017, photo: Bogna Kuciumbas, Gdynia Design Days press materials



photographs from the Infuture Food Lab exhibition at Gdynia Design Days 2017, photo: Bogna Kuciumbas, Gdynia Design Days press materials



### 2.1.1. Project presentation

Experimental Design Studio  
at the Gdańsk Academy of Fine Arts'  
Faculty of Architecture and Design

#### Color foods

*Monika Delik*

People are visualisers, so the food they eat has to be visually enticing. It colours stimulate certain centres of the brain, e.g. red whets the appetite and yellow is associated with sour flavours. Colours can totally change the way we experience taste. The Color Foods project intends to take advantage of colour psychology, 100% plant-based

food and 3D printing. The user chooses the dish and the printer's computer will process the flavour data and select the perfect colours to stimulate particular receptors; the shape of the meal would be designed in such a way as to make it possible to eat with one hand.



**Artefact**  
*Emilia Gizowska*

Scientists have predicted that in 2050 the average intake per person will be as much as 3130 calories. This will be caused by the rising consumption of two ingredients: meat and sugar. The reason for this is not any real need of the human body but

psychological needs for interaction with food, the need to experience it. The project is an attempt to create a new ritual, a substitute for addictive substances. Not only healthier, but also providing a stronger sensory experience.





## Future Chef Vitri

*Anna Niewińska*

Today we obtain nutrients from plants and animals in a complex production process. The food industry takes up huge areas of land and requires large amounts of water, electric power, chemicals and fuel. Given the present pace of resource consumption and growing environmental pollution, we may run out of them soon.

Future Chef is a totally new way of food production. Instead of processing complex plant and animal structures into simple nutrients, we will synthesise them from simple chemical compounds or

individual stem cells. The cook of the future will have the knowledge and tools to carry out chemical reactions to produce carbohydrates, proteins, vitamins and any other macro- and micro-ingredients. They will be capable of freely choosing the taste, look and nutritional value of a meal. Food produced this way will also be safe and pure, free of allergens and pathogens, and possible to make in places with unfavourable climates or barren land.



## Printsnack – Microtargeting for Food

Jarosław Hamryszczak

Today more and more of our data and statistics are collected by our growing number of personal devices. I have attempted to look for a benefit from the accumulation and analysis of this data based on the idea of microtargeting. Using it may help people get better and more personalised nutrition. How much sport we go in for, how much in shape we are, how are daily schedule looks like and what we like has a real impact on what we eat, so it is important that our meals be wholesome and tailored to the needs of a given individual. I have decided to take advantage of 3D

printing technology to make the meal preparation process more efficient.

The Printsnack system analyses our everyday activities and uses them to provide us with full information about what nutrients our body needs at a given moment. An algorithm selects superfood products which fulfil these requirements and then processes them into a filament that is delivered to our home where we can print a personalised nutritious meal. The system allows us to regulate the meal's size and eventual taste.





## Bread of the Future

Agata Janiszewska

The advancing continuous devastation of the Earth and the search for alternative sources of food, especially protein, remains a problem. Bread, an iconic food and a basic product, a fixture, in various forms, of cultures throughout the world, is an example here. Today, bread is full of harmful substances that are bad for our health. Today's wheat is quite unlike the wheat that was grown in ancient times because of genetic modifications that take place already at the seed stage.

Therefore, the main premise of this project is a return to tradition.

The proposed bread of the future is to consist of 100% of natural ingredients, i.e. flour, water, salt and yeast, just like bread from hundreds of years ago. The only change is in the flour of the future which would be obtained from crickets which are an ideal source of protein and other nutrients. These insects would make bread a rich source of healthiness that would not require anything else.



## Entobites

Magdalena Setzke

Edible insects are a good alternative animal protein. However, getting Europeans to overcome their revulsion to eat something that is still associated with an exotic delicacy popular in Asia, remains an obstacle. In spite of a faster and faster lifestyle, people are attaching more and more

significance to what they eat, checking its ingredients and origin. By eating Entobites, local insects encased in small water bubbles, in combination with local superfoods, they will be able to quickly meet their nutrient requirements while eating small portions of food.





## Aerofood

Aneta Pankowska

Aerofood is a concept of a food of the future which will fully satisfy the need for food and drink. It is a nutritious foam whose structure is not unlike today's aerogel. It is 90% air and the rest is a nutrient-rich porous material. When it absorbs water into its porous structure, it increases tenfold in size and is ready to eat. Its

elastic skeleton made of nutrients retains water in its porous structure. This makes aerofood very juicy and refreshing, therefore reminiscent of fruit with a big water content: citrus, watermelon etc. Its small size and tiny weight make it cheap to transport



## KUSGOS – Looking for the Tastes of the Future

*Martyna Wojciechowska*

This is a project that refers to primary needs and the desire to return to basic values.

KUSGOS are the six flavours that are produced and affect every meal, fruit or vegetable: Kwaśny, Umami, Słodki, Gorzki, Ostry i Słony [English: Sour, Umami, Sweet, Bitter, Spicy and Salty]. Saved as data on servers, users can use them as

a cutting-edge palette of tastes. Used in appropriate proportions in combination with a medium made of ground soybeans, it can perfectly recreate what was considered tasty in the past. It will provide an opportunity to remind oneself of the sensations their taste buds used to feel when eating the food of the past and offer a brand-new experience for someone who was born at a time of new tasteless meals.





## Food of the Future – Food as a Substance

*Adam Zawiślak*

The assignment was to show an alternative or parallel way to visualise the food of the future in the most popular way. This visualisation is food in the form of pills which are to provide all the nutrients one needs. However, such an idea does not allow for the pleasure we get from eating and the ensuing results. This design presents that

are different from our culture's stereotypical vision of the food of the future in terms of shape and properties. These forms not only provide the necessary nutrients, but also provide different experience and effects depending on their shape and ingredients.



## Nutriflower

*Izabela Włodarczak*

In the future we will all have blood tests to determine what nutrients we need. Scientists will create a nutritious plant that will meet our needs. The Nutriflower we have designed will keep our bodies in good shape. We can grow the vegetable at home with aerial roots of orchids so it

does not need soil. The plant does not require peeling and if necessary we can cut off part of it as with a cauliflower. With its celery-like regenerative properties, ever new flowers can sprout from the same root.





## Get a Taste for Algae

*Daria Przybyłowska*

In the face of the coming climatic changes on Earth a problem has appeared concerning the cultivation of land plants because of dry soil, climate change, global warming and less freshwater. Therefore, we must find an alternative to cultivating land plants. Oceans take up 70.8% of the Earth's area, have huge potential for the food industry

and are a natural habitat for algae, which is why they should be used to produce food. Algae are the fastest growing plants in all of nature and an excellent alternative source of vitamins, protein and minerals. The project assumes an industrial-scale production of algae using a modular construction for ocean-based plantations.



## 2.2. BEDROOM OF THE FUTURE

*Project under the auspices of IKEA Poland*

In collaboration with the Faculty of Architecture and Design of the Academy of Fine Arts in Gdańsk, the Infuture Institute held a speculative design competition.

Based on cultural, social and environmental trends examined by the foresight infuture hatalska institute, the students of the Academy of Fine Arts in Gdańsk undertook the design of the bedroom of the future. Their concepts present various future scenarios and touch upon various aspects of everyday life which the authors feel can evolve an influence the future of the bedroom perceived as something more than just a room. The projects are examples of spaces or just products. In their

projects, the young designers touched upon issues concerning electric power, nomadism and the minimisation of space; they were not afraid to talk about intimacy and sex.

The infuture hatalska foresight institute carried out quantitative (an internet survey with over 1000 respondents) and qualitative research (interviews with experts and residents) and ethnographic research (photographs and recordings of Polish bedrooms) The project coordinators from the Academy of Fine Arts were Dr Marta Flisykowska and Joanna Jurga MA, Faculty of Architecture and Design of the Academy of Fine Arts in Gdańsk.



MOSS – the Living Mattress, Barbara Zięba, photo Marta Flisykowska



6m<sup>2</sup>, Jarosław Hamryszczak, Emilia Gizowska and Aleksandra Kalinowska, , photo Marta Flisykowska

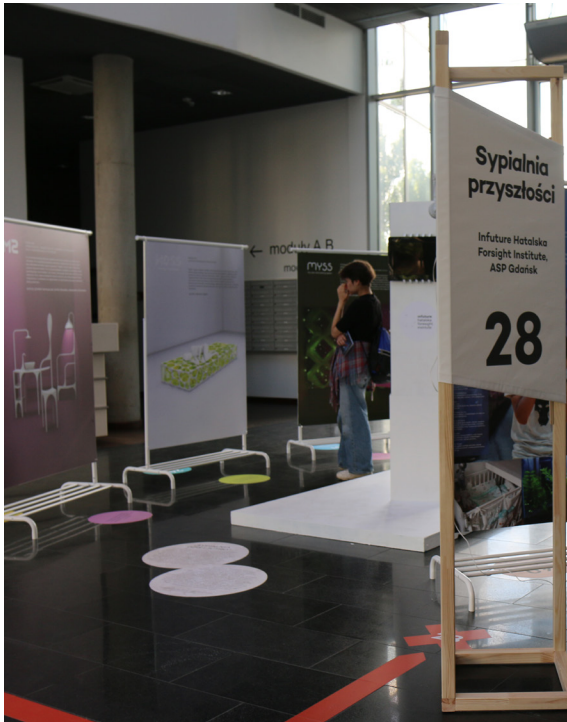


Sleep like me, Adam Zmysłowski and Martyna Aniserowicz, photo Marta Flisykowska





Bedroom of the Future: workshop and project, premiere, Studio Tęcza, internal IKEA Poland conference



Bedroom of the Future at Gdynia Design Days 2017



Bedroom of the Future, assembly at Studio Tęcza, Warsaw 2018

### 2.2.1. Project presentation

#### Together

*Julia Rajs and Saskia Wojtalewicz*

What do we associate the bedroom with? Relaxation? Sleep? Staying up late and working in bed? What about sex? Does it still belong in the bedroom?

The future of the bedroom is also the future of sex. We were inspired by the sociological changes that impact change in people's sex lives. Our design solution is a gravity-less bedroom chamber. Let's imagine that in 50 years every one of

us, besides a bathroom for physical hygiene, has a room for psychological hygiene at home: a bedroom of the future. A gravity-less chamber would help to cut oneself off from stimuli overload, quiet down, relieve the spine and not restrict movement. We wanted people to sleep, relax and make love in a weightless environment so that our "external layer" would not restrict our minds.



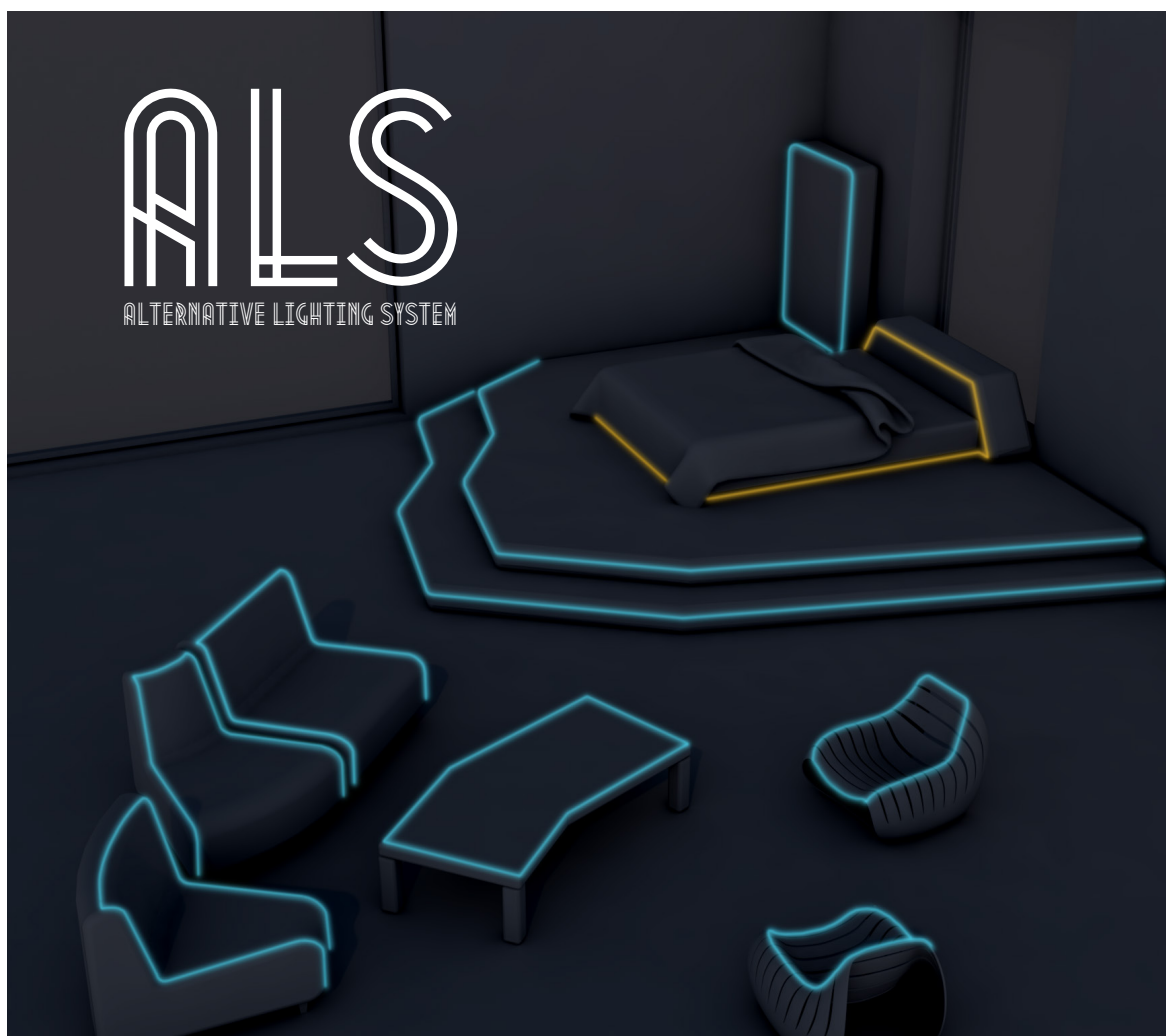


## ALS – Alternative Lighting System

*Adrianna Żukowska and Pola Budzyńska*

Our project is an answer to the problem of temporary power failures: blackouts. The Alternative Lighting System (ALS?) is to delineate the bedroom space. The ALS would use alternative charging sources such as solar batteries. The bedroom furniture would be equipped with a set of OLED diodes located at the edges or corners. These places would be rounded in order to additionally

minimise bumping into them in the dark. With motion detectors the lighting would turn itself on when someone approaches an object, lighting the area where the user is moving. After a short standby the light would turn itself off e.g. after one goes to bed. Depending on its placement, the emitted light could be warm (relaxing, helps fall asleep) or cold (to stimulate brain activity).



## Sleep like me

*Adam Zmysłowski and Martyna Aniserowicz*

The growing need for mobility and contemporary nomadism often make us someone's guest where we have to share space. We want this space sharing to become an obvious and unpretentious practice without any unnecessary embarrassment. In order to enhance sleeping comfort in a nomadic mobile future, we have designed

a system of sleeping mats which can be joined in myriad ways. The mats make it possible to adapt the sleeping area to various needs; you can fasten them together and stack them. This symbolic sharing of bedclothes will make us feel well in any environment.





## 6m<sup>2</sup>

*Jarosław Hamryszczak, Emilia Gizowska  
and Aleksandra Kalinowska*

Our project explores and answers the problem of increasingly shrinking living space which, in our estimation, will be 6m<sup>2</sup> in the future. In this minimal space the bedroom will become the focal point of human life. It is here that other everyday activities, which have so far been separated from the typical bedroom area, will move. The functions of other parts of the apartment will

be combined into one. This is reflected in the design of an original piece of furniture that has the features of each of these rooms. Keeping the bed as the central point of the assumed 6m<sup>2</sup>, our solution is a substitute for reduced residential functions and in principle is to answer the individual needs of the resident of a given area.



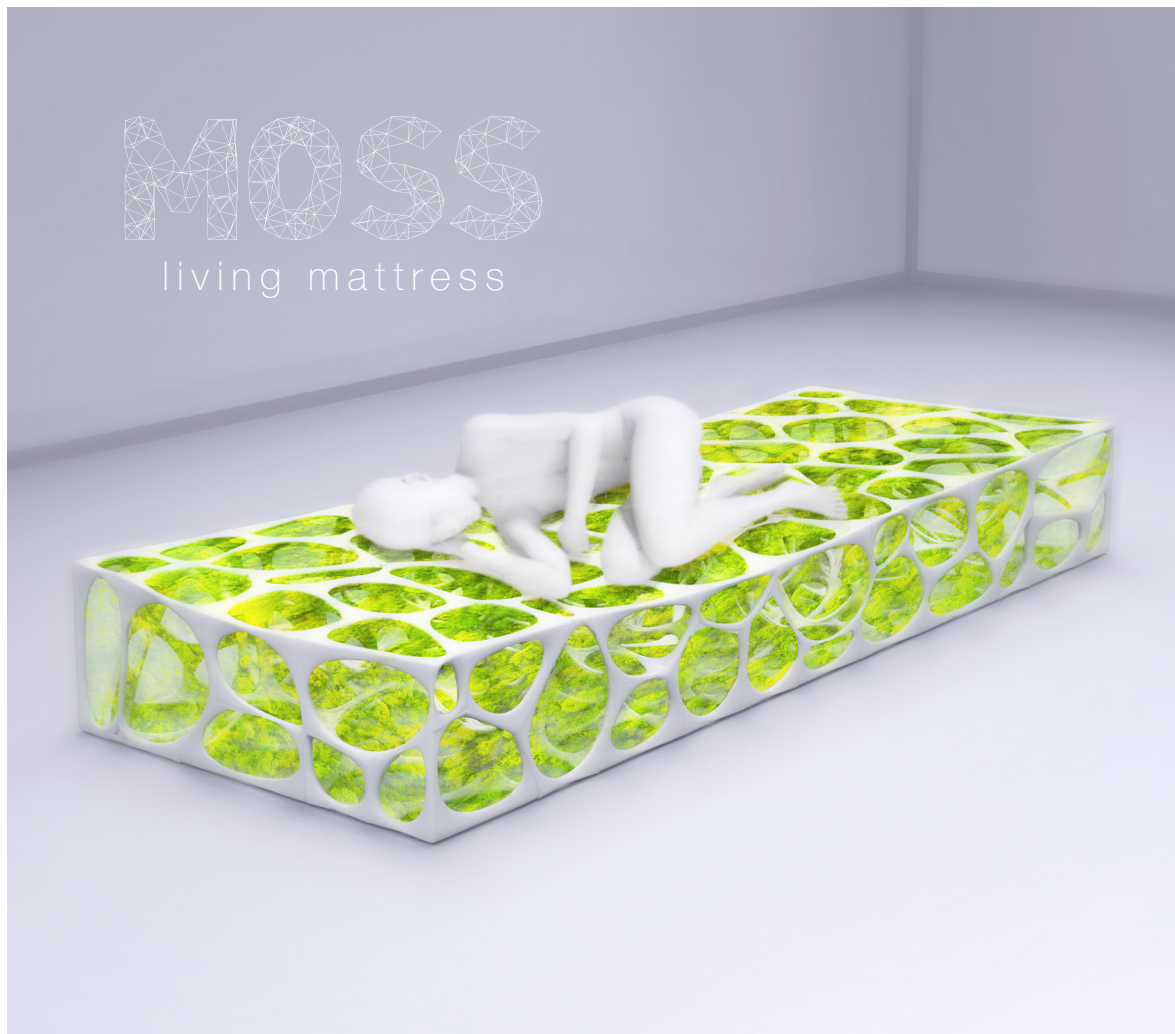
## MOSS – the living mattress

Barbara Zięba

MOSS: a living mattress that opens a new perspective on the essence of the hygiene of sleep. We spend about one-third of our lives asleep. It is a time when our bodies and minds regenerate. In order for this process to be efficient we should see to it to provide the best quality of air that we breathe when we are sleeping. Today this is done e.g. with potted plants that clean the air of some toxins and replenish oxygen levels.

Will this be the ultimate solution, even when the problem of the quality of the air we breathe escalates even further?

MOSS: the Living mattress consists of a flexible mesh that provides a structure for the plants that grow on it. Their growth may be stimulated with aeroponic growing methods. The elasticity of the structure's material provides comfortable rest and also makes it possible to place the plants in a way that they won't get accidentally crushed.





## My own stimulating space / MYSS

Michał Jarzębowski

The project's development was based on phenomena related to the development and growth of the share of our online identity in everyday life and how this changes our behaviour. Among young people who have had access to the internet all their lives there is a growing feeling that dependency on being online has a negative influence on the quality of relationships. That it leads to shifts

in how partnership is perceived and deprives us of privacy. The myss project is a kind of space that helps rebuild intimacy, reduces anxiety and aids maintaining focus. The bedroom area could become not only a place to sleep, but also for direct contact with another person. Its role would be to provide a sense of security in order to fully focus on the "here and now."



### 2.3. BIONANOCELLULOSE – DESIGN LAB

#### *Curator exhibition*

Exhibition at Gdynia Design Days 5–15.07.2018

Partners: BOWIL Biotech, Gdynia Design Centre

The exhibition was a result of a collaboration between Experimental Design Studio at the Academy of Fine Arts in Gdańsk BOWIL Biotech, an innovative biotechnology company from Pomerania that manufactures bionanocellulose. The material is the product of the fermentation that takes place through the agency of *Gluconacetobacter xylinus* E 25 bacteria. It is cross-linked into a three-dimensional structure built of interconnected cellulose fibres with a diameter of no more than 100 nm, which allows it to be classified as a nanomaterial. BNC is a soft and elastic material with great mechanical durability. Design Lab is an exhibition where you will be able to learn what bionanocellulose is and how it can be used both in the imminent and distant future—from futuristic visions to visions that are both likely and soon to be available.

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All the designs were consulted with scientists from the BOWIL laboratory.

Bionanocellulose is a non-toxic, natural biomaterial with excellent properties, such as: biocompatibility, porousness, ultra-purity and modifiability. Due to its unique properties, bionanocellulose can be used in medicine, biotechnology, pharmaceuticals, dentistry, cosmetics, the food industry and much more. BOWIL Biotech has in-house laboratories. It also carries out multidisciplinary research and participates in R&D projects aiming to use bacterial cellulose in medicine: bioimplants in heart and vascular surgery.(Siondalski et al. 2019)

Every design has its exhibition model and an example of bionanocellulose use. The material used is a 100% natural biopolymer, built of ultra-pure nanocellulose fibres with a diameter no larger than 100 nanometres.



Exhibition at Gdynia Design Days 5–15.07.2018, photo Marta Flisykowska





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### 2.3.1. Project presentation

#### SAD – phototherapy device

*Julia Dosiak*

Every tenth person in Poland suffers from Seasonal Affective Disorder. Incidents of seasonal depression are closely correlated to the amount of sunlight and the temperature. Based on this a therapy was devised using artificial light (phototherapy).

Our brain is photosensitive and exposing it to a stream of ca. 10 000 lx for 6–12 minutes a day

allows us to supplement sunlight deficiency so we can expect a better mood and vitality. An SAD device placed in the oral cavity illuminates the brain through the places in the skull where the bone is the thinnest i.e. at the hard palate.

The device is mobile, supports SAD therapy and its streamlined shape makes it safe to use.





## AIR – anti-smog mask

*Monika Grzywa*

My anti-smog mask is designed specially for our health. It is an answer to the growing problem of smog in cities. Today products are available which do not guarantee full protection against harmful particles. AIR is based on the latest technologies so the mask is personalised and perfectly fits any face. Moreover, it takes advantage of the mouth's natural anatomic shape so that it remains

in place. The replaceable dry biocellulose filter provides 100% protection: with its closely woven three-dimensional cross-linked structure, it captures even the smallest harmful particles. What is more, with its specially designed holes, the product ensures a free flow of air, to make sure the wearer breathes properly.



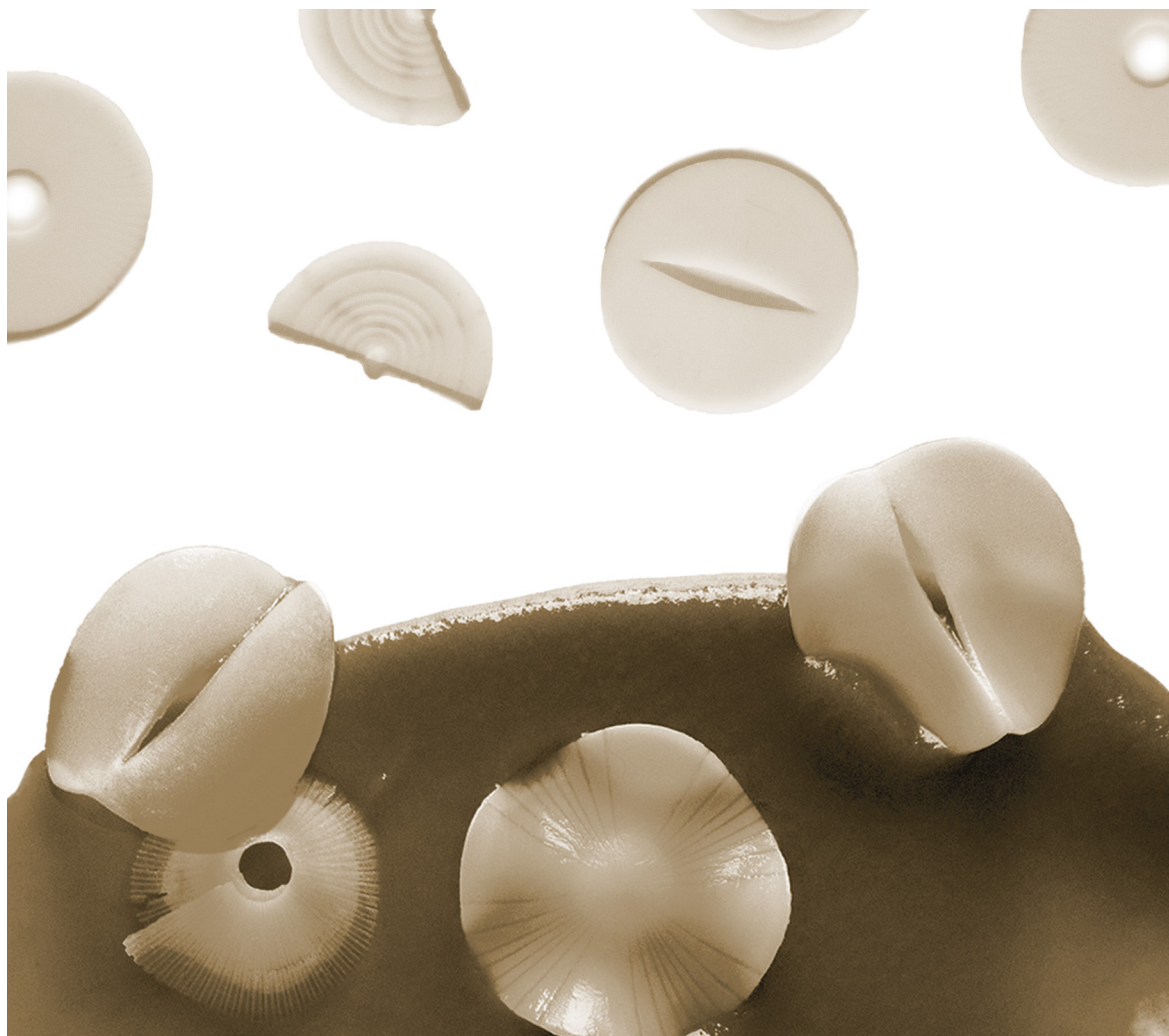
## Zero food

*Justyna Jaguszevska*

Zero food is a set of bionanocellulose diet food. Taking advantage of how the material is created, we obtain flat forms that expand when wet and become three-dimensional. When added to ready meals they take on the colour and flavour of sauce.

Nanocellulose is used in the food industry as an additive, but not as a product itself. Zero food uses the material to create food to aid in the

fight against obesity by tricking the brain with the amount of food eaten and maintaining the pleasure of eating, which is important for cultural and social reasons too; it is at meals that we have meetings and important conversations. However, the ubiquitous fixation on food does not help us keep the slim figure pushed by the media. Zero food will solve this problem, letting you eat and maintain your dream figure.





## Red Tulip

*Paweł Lewandowski*

Red Tulip is a new solution for a woman's period. The products available today all have their drawbacks. Tampons can be dangerous when used improperly and also often contain pesticides. Menstrual cups are difficult to insert and must be cleaned.

This design combines the advantages of the tampon and the menstrual cup. Red Tulip is disposable so there is no need to clean it. Bionanocellulose

is the external layer which isolates the body from the product's "frame" made of elastic PLA. During menstruation, the blood can flow inside through the openings. The bionanocellulose mantle in these openings acts like cardiac valves, allowing blood to flow inside and preventing it from flowing out. Red Tulip is 100% biodegradable.

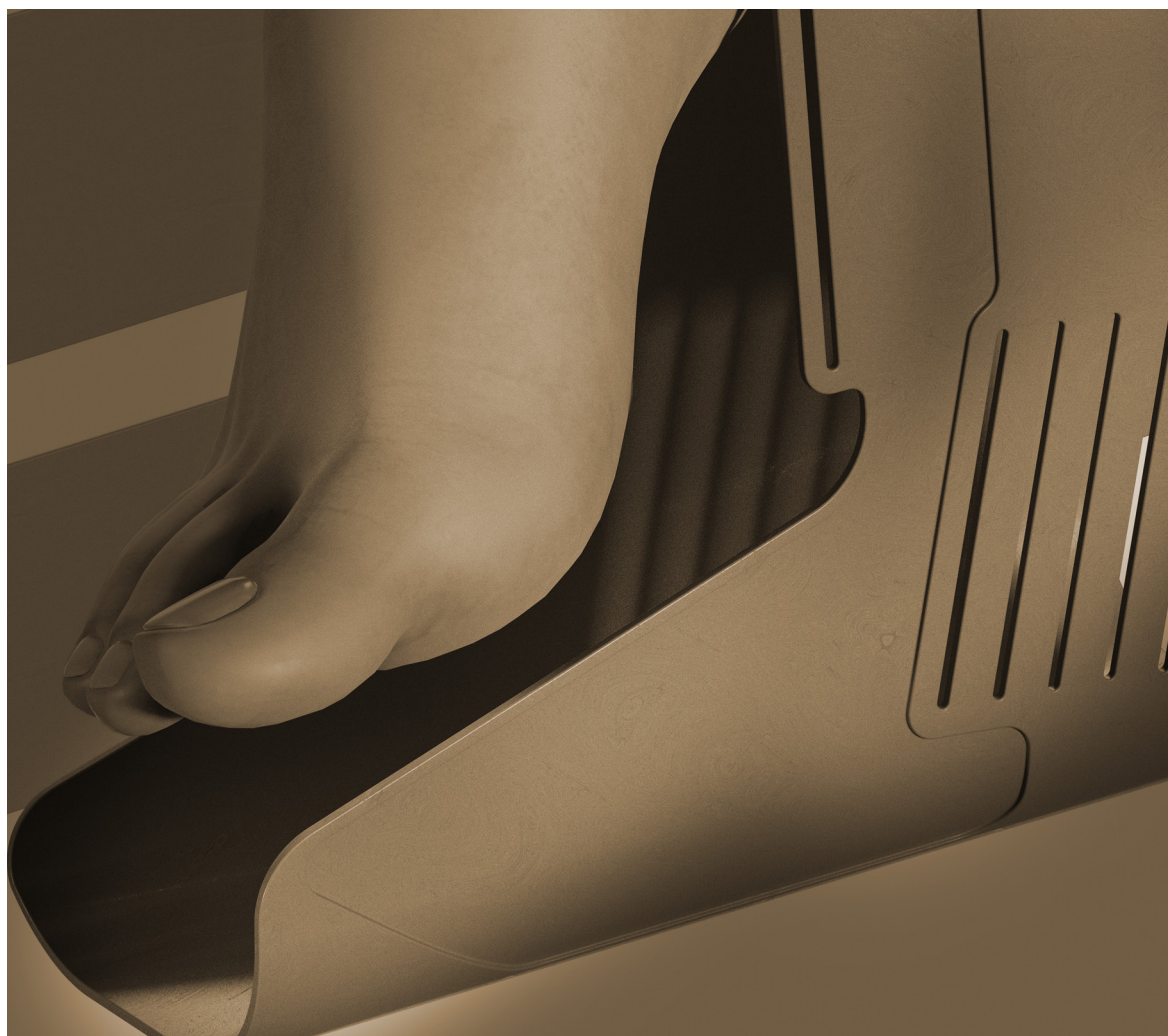


## Biorbrace 2.5D

Mateusz Macoch

Today's products consist of many components. Milled steel components, cut and sewed textiles, plastic laminates, glued things. The aim of the product is to explore the potential possibilities offered by the biocellulose growing process in

an industrial product. The result of this process is a homogenous object with variable parameters of its cross section whose mechanical properties match the requirements of the design at the early stage of the design process.





## More perfect

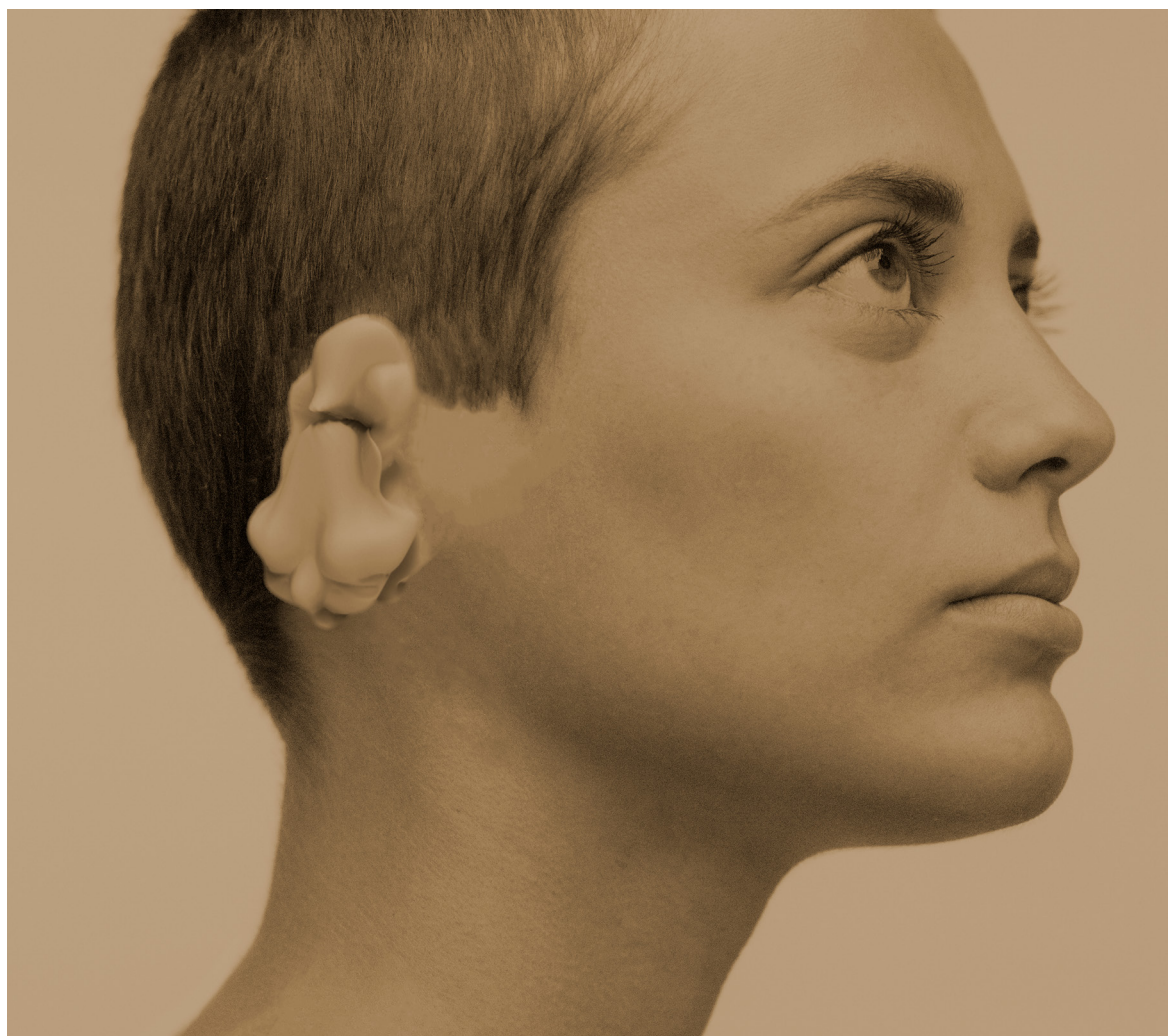
*Julia Rajs*

This is a design for implants whose purpose is not the usual imitation of a lost body part, but to broaden the function or enhance the appearance of the replaced organ.

Our technological potential shows that this is not just a pipe dream, but the future that is happening here and now. We can design implants that will help eliminate defects or disabilities and even introduce improvements to our body. The idea for the design came from the human fascination with

body modification, both real and virtual. Organs become a “tailor-made” product whose selection depends on lifestyle, taste and profession.

My project takes the ears as an example to show a world where city-dwellers get ears that insulate against noise, elderly people would get ears like a hearing aid, and fashion mavens would get new body modification possibilities to keep up with the latest trends.



## Wrinkles

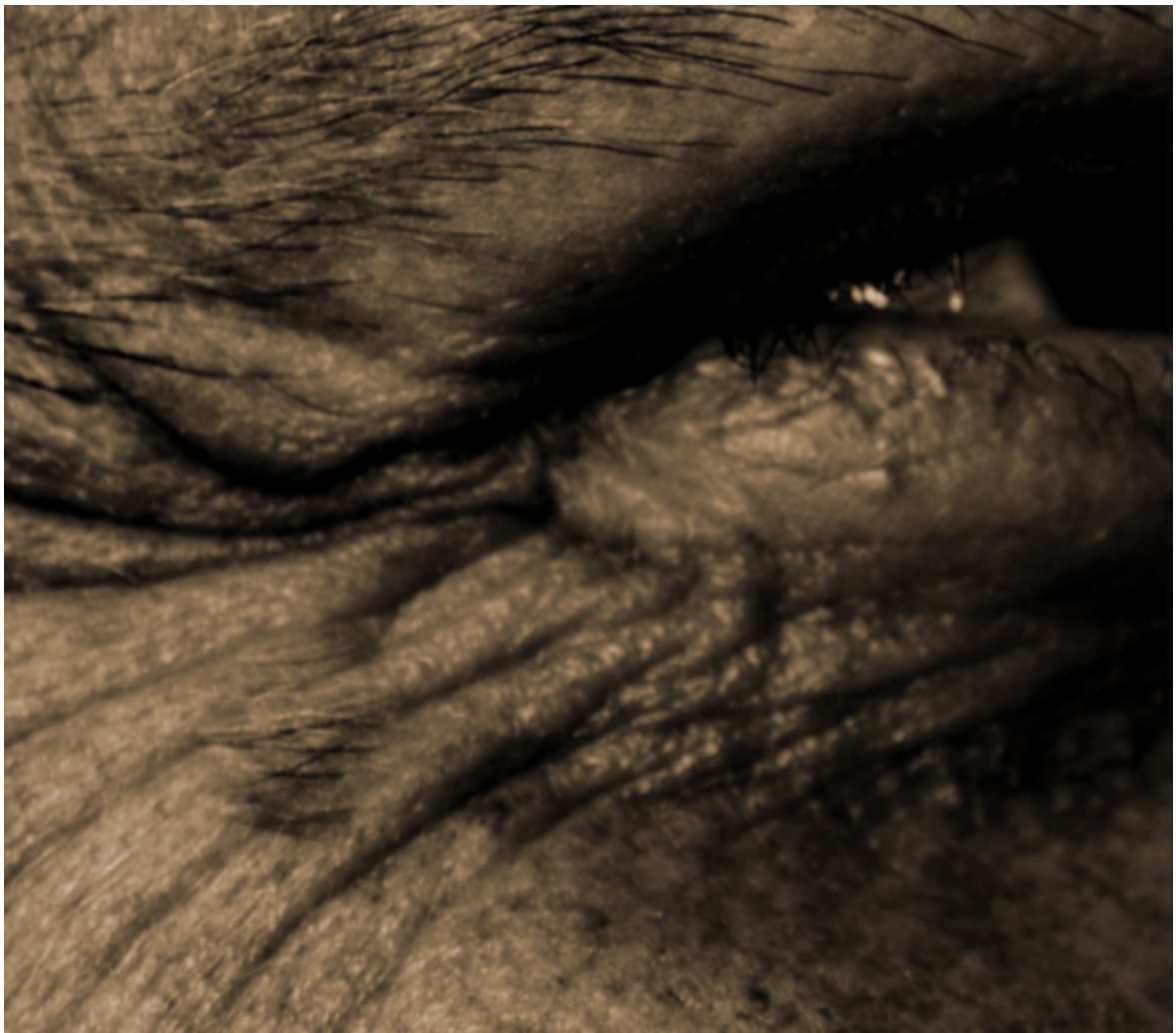
*Aleksandra Stawicka*

My project is an attempt to go against the unnatural media-driven pursuit of youth.

It is to draw attention to the growing popularity of plastic surgery that makes our faces look like an expressionless mask. Wrinkle not only make us look older, but also gives our face character. They make us more dignified, inspire trust, are a testament to what we lived through, make us authentic. Even though we don't always grow old

the way we'd want to and our lives sometimes gives us unwanted wrinkles.

My answer to this conundrum are bionanocellulose wrinkle implants. Bionanocellulose is a cutting edge material that is completely harmless to the human body. With implants we can build our appearance ourselves leaving nothing to chance choosing wrinkles that carry positive values.

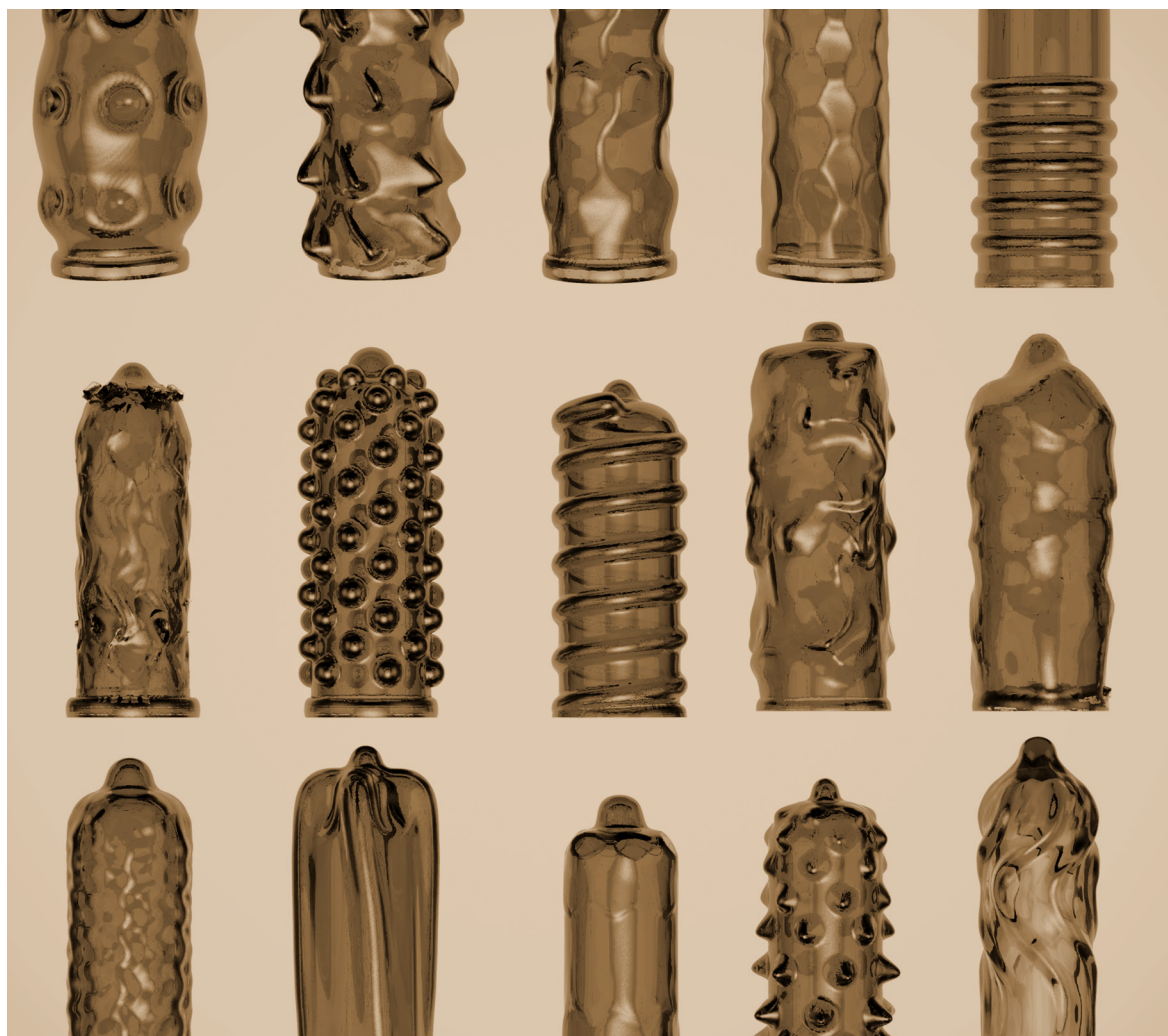




**Biondom**  
*Eryk Szczygiel*

Bionanocellulose condom design. In spite of their popularity, latex condoms have very many shortcomings. From an easily-torn surface, through common allergies to latex, to problems with their primary feature, i.e. contraception and protection against viruses. Used correctly, latex condoms provide only 85% protection against unwanted pregnancy and only 50% against HPV. Switching

from latex to bionanocellulose solves practically all these problems and also offers new possibilities. Most of all, bionanocellulose provides extraordinary mechanical durability, while 100% anti-septic and hypoallergenic. It also enables any kind of modification of its structure which considerably enhances the role of the condom during sex.



## SCENT

*Barbara Zięba*

A Bionanocellulose SCENT implant which gives off a scent from under the outer layer of the skin. Traditionally, scents are placed on the skin and their particles slowly come off the skin's surface and evaporate over the ensuing hours. The SCENT implant plays the role of the perfume bottle. The unique properties of bionanocellulose, such as its harmlessness to the body and its capability to absorb liquids, are fully utilised. The shapes of the implants have been designed for tissue of

various tissues depending on where they will be placed on the body and the individual thickness of the skin tissue. Every implant has projections that reach the external layer of the epidermis. It is they that exude the essence of the fragrance. The appearance of the slightly visible projections on the skin would be consistent with the shape of the implant. A single application of the implant liquid would be enough to release a fragrance for a month.





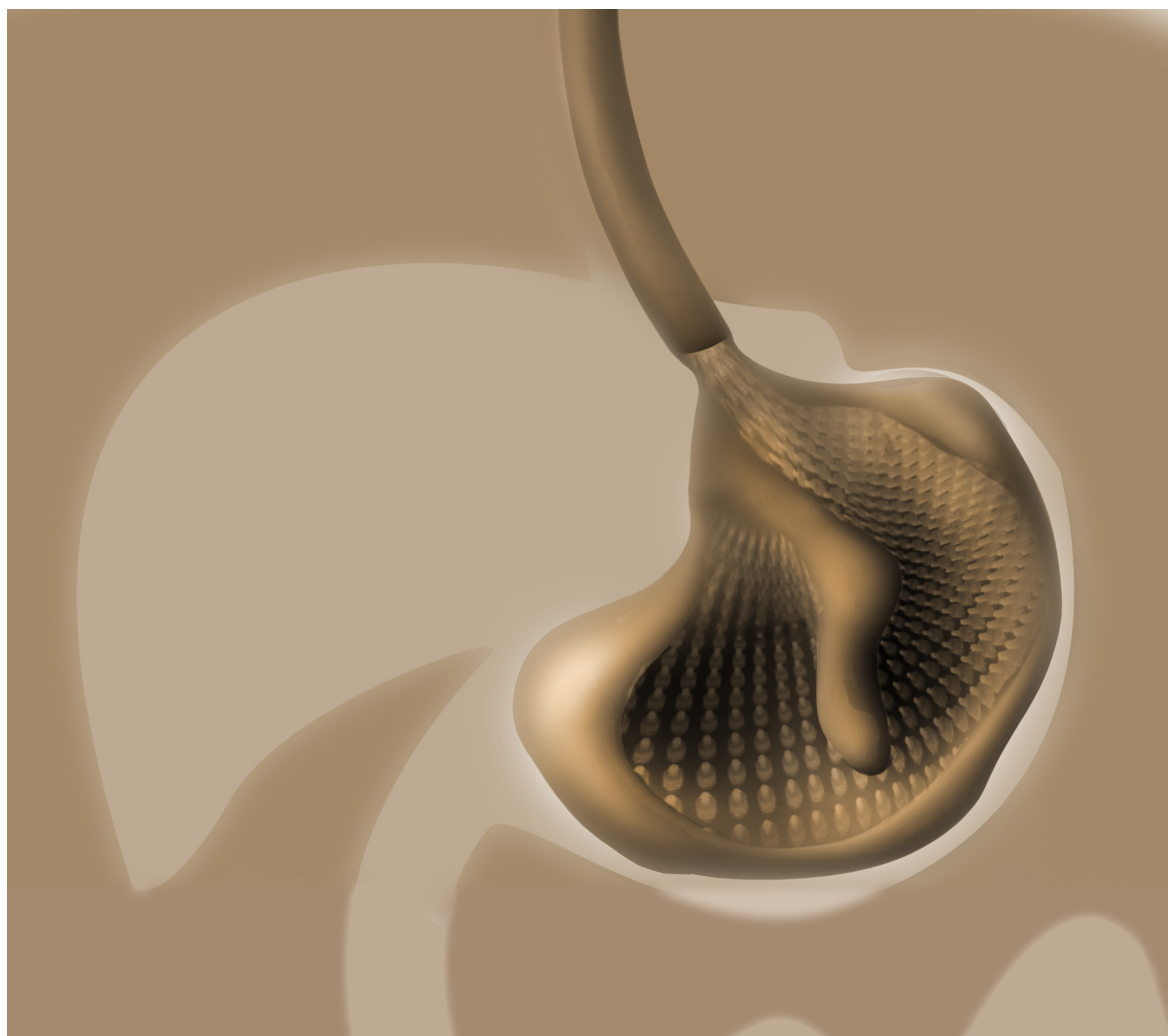
## Internal filter

Saskia Wojtalewicz

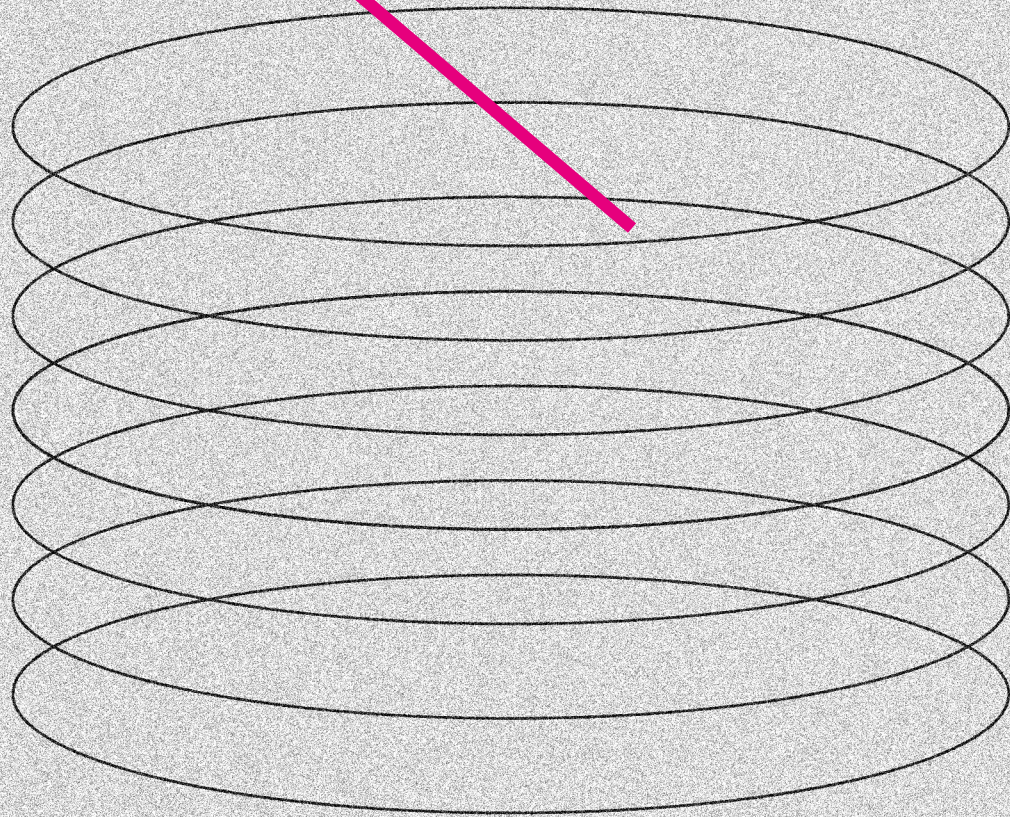
A bionanocellulose filter fitted directly in the digestive tract to purify drinking water within the body. It changes the shape of the stomach and puts the necessary bacteria into it, adapting it to the algae that is becoming a growing share of our diet.

As a result of climate and social change, over the next 30 years 56% of the population will not have regular access to clean drinking water; this problem will affect not only so-called third world

countries and the tourists who go there, but also the populations of developed countries. There will also be big changes in what we eat: algae cultivation is one of the fastest growing branches of the food industry. With a minor operation a filter is placed in the digestive tract, With the filter's intestinal villus-like structure and the active silver, carbon and microbicidal bdellovibrio bacteria, it filters and neutralises water impurities without the need for external filters.







# SUMMARY



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This publication is both a catalogue and a monograph of exhibitions and projects for designs for the future. Imaginings of the future quickly become dated and do not always age gracefully, as we can see with retrofuturism. Old visions of the future can be disenchanting. However, they can also be surprisingly accurate, although with a number of alterations. We don't have flying cars yet, but they do have onboard computers. James Bond's watch had a number of incarnations. The electronic watch with the TV set from *The World Is Not Enough*. Q's version of the Seiko H357 5040 electronic watch could receive short text messages and be used as a walkie-talkie, even if we could not dream of such functions in the original watch. The greatly modified Seiko G757 Sports 100 from 1983's *Octopussy* had a colour screen, which homes in on the Mountainside hideaway. Is this so far removed from the Smartwatch?? (Newport-Foster 2017) It can't be, because the watches were inspired by Agent 007. Generative algorithms and machine learning that can reproduce a poor-quality photo, as in the *CSI* TV series have also become a reality. It is also worth recalling the prose by Polish writer Stanisław Lem, which often turned out to be prophetic. His science

fiction was so advanced that American sci-fi legend Philip K. Dick questioned Lem's very existence unless as a figurehead. As reported by the culture.pl website: "In September 1974, the Federal Bureau of Investigation received a letter. It contained shocking accusations of a communist plot to rule American hearts and minds using propaganda slipped through in science fiction. American sci-fi publishers and fan clubs were supposedly infiltrated by communist agents. All this was to be orchestrated by a communist committee under the code name Stanisław Lem [sic!]." (Davies 2015) We fear what we do not know. Such an attitude also prevailed in the Middle Ages, where such fears led to the creation of the bestiary. What could not be explained was imagined, which is why there are so many gargoyles in Medieval architecture. When in the Middle Ages the Western World broke off with the traditions of Antiquity and the scientific approach to perceiving and understanding the world that surrounds us had disappeared, imagination largely replace logical discovery. Where there was no empirical data to build a clear image of nature and the laws of physics, human fancy came in to build dark fictitious beings that were sometimes compilations of existing animals. The

projects presented here are educational, promotional or discursive. ( Haurash 2018). They are a visual message, a vehicle for certain ideas and information.

In my professional work as a designer I use the same operational and analytical tools to create commercial designs or their pre-implementation prototypes. Most of them are subject to confidentiality clauses so I cannot show or even describe not only the results, but also the research subject. I consider speculative design to be a worthwhile form of communication and a co-existence of technologies and appearing trends, and their social impact. The designs here were made with contemporary and cutting-edge digital tools with the use of the latest technologies or at least dedicated to them and ready for use with them. Personally, I now mostly deal with additive technologies which is why there is so much of them in this publication. With work with the space sector and consultation for the medical industry in my portfolio, I see how important the ability to take the human being into account in all these processes. Both as users of a solution and as participants in its creation, because this aspect

can often disappear in the engineering world. To summarise what the impact of speculative design may have on the world around us, let me mention my own story which I still don't know the end of. From the beginning, work on the "Who Nose" project was to be firmly planted in technology, in additive technology (3D printing) to be exact. I was keen to show the design possibilities and potential of the printing itself. Because of my passion for space, the idea of transhumanist aspects in space travel automatically came to mind. I attempted to get doctors' opinions about my project. However, the medical sector turned out to be rather hermetical and did not see the use of dealing with budding technologies that still seem like sci-fi. That said, I concur that this may be a specific attitude of Polish institutions. That is, until a heart surgeon called me about the project. He saw the technological potential and possibilities, and offered to collaborate on a heart stimulator for cardiac surgery. It is difficult to say at this stage whether the project will be successful, let alone implemented. However, I've got a feeling that the goal of the presentation of these speculative designs has been achieved.





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