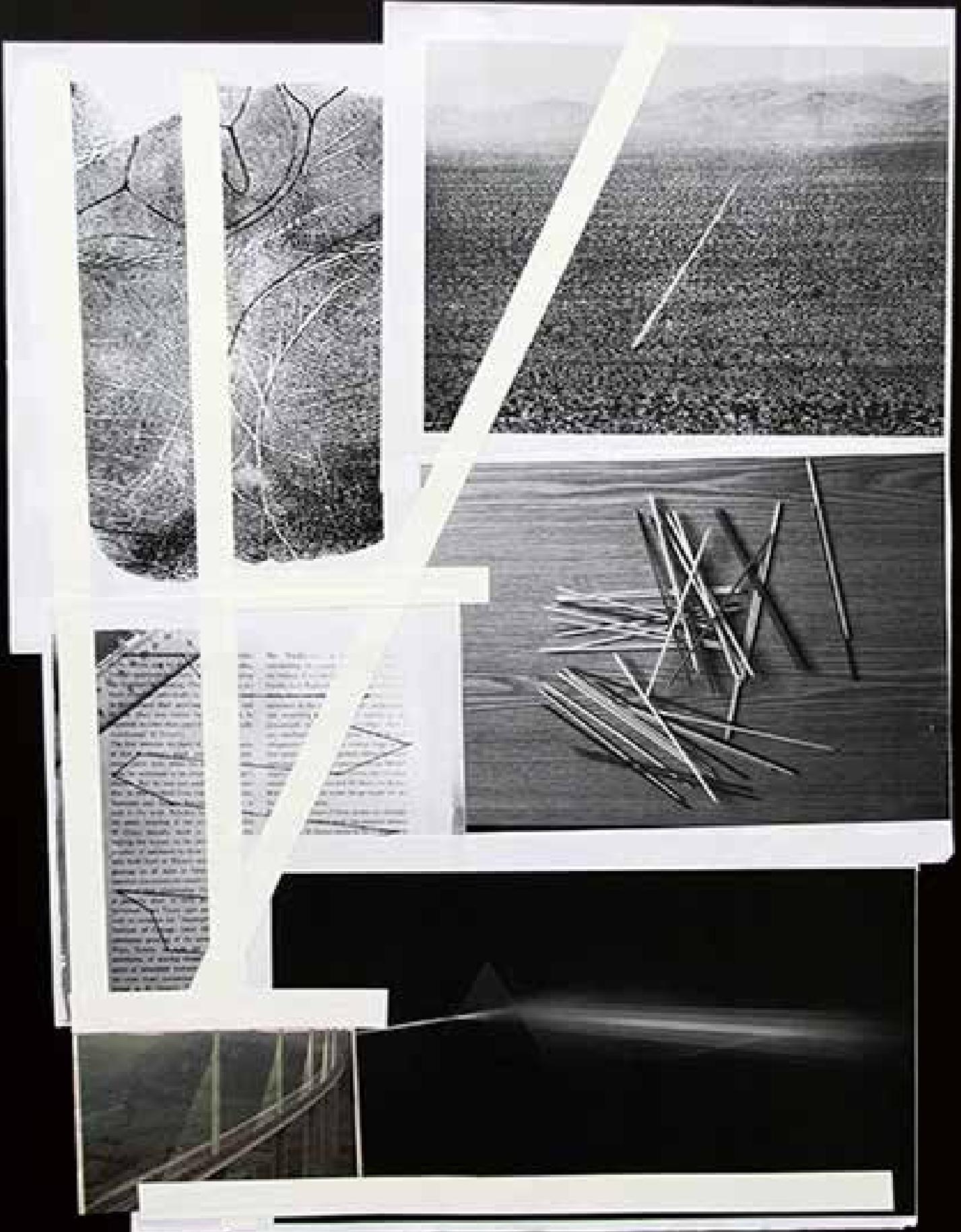


Walking

with



a

Line

WALKING WITH A LINE

“For there to be lines, do there have to be surfaces, or can line exist without any surfaces at all?” - Tim Ingold

In 1967 Maltese physician and psychologist Edward de Bono described the term lateral thinking as a contraposition to vertical thinking. These two ways of problem solving are also called linear (vertical) and non-linear (lateral) thinking. Vertical thinking consists of developing an existing pattern. It is extremely focused and concentrated and excludes everything that is irrelevant. It mostly works only with known theories, knowledge and experience. It is a way of thinking that selects a pathway and excludes the others in order to select the best approach. It is analytical, sequential and selective. Every step has to be correct and has to correspond to the research. Vertical thinking makes steps only when there is a clear argument to make them and assumes only one solution for each problem.

On the other hand lateral thinking is a generative way of thinking and tries to change the existing pattern. It is allowed to be free of any relevant information, makes jumps, and does not have to be always correct. It accepts multiple solutions for each problem and tries to explore new approaches. Lateral thinking moves for the sake of move to create an unexpected way, what can be as good as wrong. It is being considered as a much potential way in creative thinking and creativity in general.

“The power of a car is separate from the way the car is driven.” - Edward de Bono

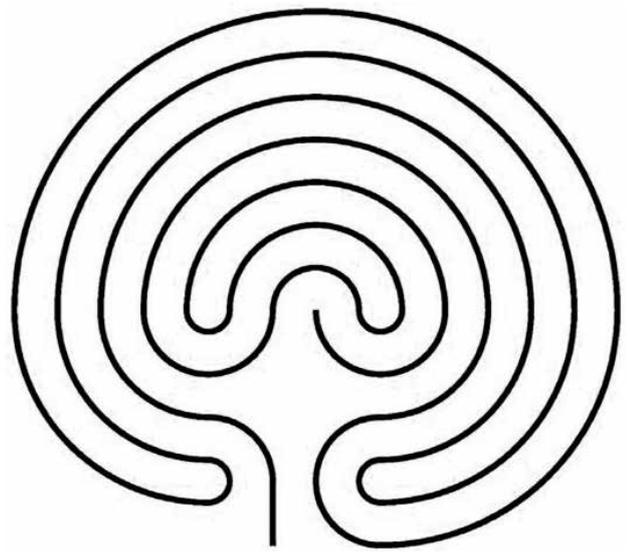
If we think about the answer to Tim Ingold's question in vertical way of thinking, the line could be Ariadne's thread, queue, traffic jam, river, wall, but it can not be everything together. It is necessary to make the decision what “the line” is and select the best solution matching the research. Looking at the line from broader perspective, show different angles, be more risky or even wrong, requires use of lateral thinking. Then, it is possible to say that the line is Ariadne's thread, queue, traffic jam, path, Silk Road, a river Styx or The Great Wall. It is all together and even more. It is a suggestion, kind of proposal what could be still considered as a line. How far you can go and what example is not relevant anymore.

Tim Ingold's question brings a line in a new light. Lines deserve to be thought of in a broader perspective. Making a line basically means connecting point A with point B but it doesn't matter whether the line is connecting two points in geometry or people waiting in a queue in front of supermarket. In my thesis, I am revealing more than 30 examples where the line always plays a certain role. They are drawn, walked, built, imaginary or just proposed. It is an overview of lines in diverse forms. Some of them are obvious and clear, Sona, A Line Made by Walking, Beziér curve, but what about 3D print or World Wide Web? How far can we go there? Are they all lines?

ARIADNE'S THREAD
THIS WAY
THE NETWORK
TRACE
SONA
ON THE ROAD
MEDUSA
BILBAO
NAKED
DIGITAL WEAVING
THE NEW LOOK
QUEUE
TRAFFIC JAM
SILK ROAD
TAURUS
TEN-THOUSAND-MILE-LONG WALL
THE WHITE LINE
BOATMAN OF THE STYX
MAN ON A WIRE
BANG
ONE-POINT PERSPECTIVE
POINT AND LINE
SPIRAL
TRIPAS DE GATO
THE METHOD
BEZIÉR'S CURVE
RULER
FORBIDDEN FRUIT
GLOBAL CHURCH
LEAVE NO TRACE
PLAN B
COMMUNAL SPIDER WEB
WORLD WIDE WEB

Many years ago, in deep Greek mythology, it was a red line that solved this problem. There was a beautiful girl who fell in love. The girl was called Ariadne and the boy she fell in love with was Theseus. As always, it was a bit complicated. Ariadne met, saw and fell in love with him just at the moment he was supposed to be one of the victims for terrific Minotaur. However, Theseus came to Crete with a clear intention. Already on his way to Crete he was decided to kill Minotaur and end this sacrificial tradition forever. According to the legend Minotaur was hidden in the complicated labyrinth and obviously it was hard to get out of it, but amorous Ariadne came up with an idea. She gave to Theseus not only the sword but also a red thread to help him find a way back from labyrinth. Ariadne's thread saved Theseus life and helped him to find the right way out of the labyrinth.

Until now the Ariadne's thread is a symbol for solving problems or complicated situations. It is also used in logic as a particular method that takes point by point of found truths and aims to reach a clear conclusion.



THIS WAY
1961/Amsterdam

p.2

Standing at a corner close to Dam square, Amsterdam, Netherlands. Middle tall, bald-headed black man in light coat with quite exotic look. It is Stanley Brouwn holding small-sized bits of paper and a pen and stopping random passer-by. Stanley is asking them to draw directions to a particular place on the small piece of paper. He looks like a lost tourist from remote country finding a right direction. To tell the truth, Stanley is just working on his project *This way Brouwn* that will lately become the best known project of him. He is encouraging random people to draw and show him the right way. Mostly it is a single line drawing, some of them are more precise or even more illustrative and some of them very crappy. Using a stamp that says *This way Brouwn* Stanley then imprints and appropriates each drawing with his hallmark and adds it into his own collection.

Stanley Brouwn originally come from Paramaribo, Surinam. He moved to Amsterdam when he was 22. Stanley was rumoured always to carry same-sized bits of paper in his pocket. What is nice about this particular project is that Stanley did not produce any objects or drawings himself. He just set the conditions of the game, he build the scene where the drawings could have been produced. Then he let others to produce them and archived the results afterwards.

NETWORK
27 BC-285/395 AD/Roman imperium

p.3

People travelling through land on horseback, in carts pulled by oxen, or by walking - we are back in Roman times. In the beginning there were no roads, road signs or pocket maps to help them to find the right direction. Everything was on their own, but this was going to change soon.

Roman engineers went extremely bold with their plans to interconnect each and every corner of Roman empire. They did not invent only the roads, but as in so many other fields they took the idea and pushed it as far as it was possible. They extended the plan so much that the empire become unconditionally dependent on the network of the roads.

All the roads they built were remarkably straight. They knew that the shortest distance from one place to another is a straight line. Roman engineers ignored geographical obstacles and drained the marshes, cut through forests, diverted creeks, channelled bedrock,



p.1 The symbol of Ariadne's thread.

p.2 Stanley Brouwn during the action *This Way Brouwn*.

crossed rivers with bridges, and built tunnels through mountains. They took advantages of every known engineering trick back then to achieve the shortest way from one point to another.

The network of roads then increased trade and cultural exchange, demonstrated Roman authority and indirectly helped unify whole empire. Roman roads become just bloodstream of the empire connecting communities, cities, and provinces. Without them the Roman empire could not control huge territories they did over so many centuries. Nowadays many of the roads are still existing and ground the hundreds of today's roads across Europe.

PATH
June 1967/England

p.4

In June 1967 an young student of St Martin's School of Art is waiting in a queue to buy his ticket for train. It is at London's Waterloo station and he is heading southeast. He is leaving the train after 20 miles. The student's name is Richard Long and he is about to find a right place for one of his very first works made by walking. Richard is simply walking around, observing fields and looking for the best place. He stopped in a field in Wiltshire. The grass is just ideal, not too long and not too short. Also the bush in a background is perfect. Richard started repeatedly to walk backwards and forwards in a grass until he reached a visible line. He smoothed the path only for himself and nobody saw it in real except him. He just took a picture and left. The line then disappeared as the grass grew up.

While still being a student, Richard Long has been considered as a forerunner of conceptual and land art in England. *A Line Made by Walking* became one the most known works of him and the act of walking became one of the most characteristic moments of his work.

SONA
Chokwe region/Africa

p.5

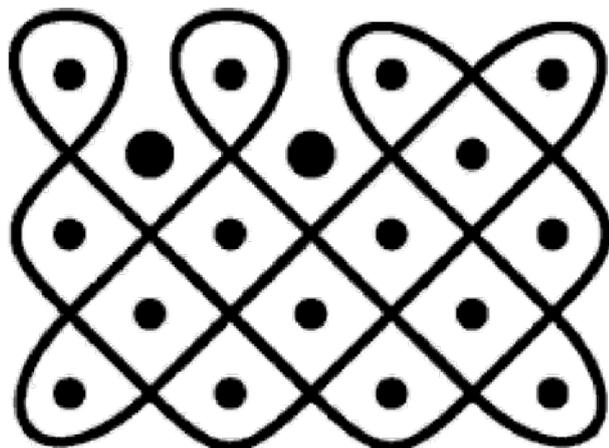
An index finger is going in the sand and drawing a line. It is a narrating line passing down a short story about hunter and his dog. *"A hunter Tshipinda borrowed a dog named Kawa from his neighbor, Calala and went on a hunt in which he caught a goat. When he returned to the village, Tshipinda shared the meat with Calala while Kawa was left with the bones. Some time later, Tshipinda again went to Calala and asked to borrow Kawa. However Kawa refused to go saying that Tshipinda should take Calala since that was whom he was used to sharing the meat with."* - Africafederation.net

The storytelling line plays an important role in an ancient culture coming from Chokwe region situated at the territory of Angola and Zambia. Originally it is called *lusona* (plural: *sona*). Sona drawings have been passed down from the old to the young through many generations of Chokwe people. They kept the most important stories and legends connected to the Chokwe culture and became the main source of their knowledge and history. Since the age of colonisation and slavery many drawings have disappeared and are no long made today. Many what we know about them comes from the records of missionaries, who draw and copied them on a paper.

ON THE ROAD
March 1951/New York

p.6

Right after leaving the hospital, Jack is heading to an alcohol shop and then home. At the moment when he is entering his house his wife Joan is waiting for him with a dinner. But there is no time for having a dinner. Jack is going directly to the garret of his house, ignoring his wife Joan. There is a stack of japanese drawing papers



p.3 A section of surviving Roman road near Cirauqui in Spain.

p.4 A Line Made by Walking, Richard Long, England, 1967.

p.5 The Hunter and the Dog, diagram of sona sand drawing.

laying on the floor that he is looking for. He is gluing them one after the other into one long strip of paper. He starts to write almost straight away.

It was 3 weeks of tireless writing. Jack Kerouac wrote his story in one breath, drank and under drugs. It was 30 metres long and uninterrupted line of the text. It emancipated him from old forms and restrictions of writing. Right after this exhausting writing Jack left his wife. Tired and over sensitive he moved to the house of his sister and devoted himself to the reading of classics. Jack Kerouac is considered as a one of the most influential persons of Beat generation. His novel *On the Road* is written in a specific way of writing, without any punctuation or paragraphs as one flow of thoughts.

MEDUSA
1818-1819/France

p.7

The line is appearing in the top left corner, on a crest of a coming wave. It is created by dramatic sunlight that flames the madness of the depicted scene. The raft carries 15 half dead starving men trying to draw an attention of a ship approaching from far as a last hope. The line tells a terrifying story of survivors from shipwrecked frigate *Méduse*. Running around a black man standing on an empty barrel and desperately waving his handkerchief line then continues to the background and is shaping the horizon. Almost in the middle of the painting under the temporary built shelter the line is revealing a profile of someone. It is a black person with a high coiffure and delicate facial features. Maybe it is the only woman on the raft.

This type of invisible line is officially called implied or suggested line. It is a physically absent line in an artwork which only suggests its self-presence. It is not necessary drawn on an image, but it is usually defined by values, colors, textures or shapes that guide the eye through the piece of artwork. Sometimes artists intentionally use this line to direct your eye and narrate the story of the pictured scene. It helps them to create a bigger impression of the artwork towards a viewer.

BILBAO
Spain

p.8

When the world famous american architect Philip Johnson first visited the Guggenheim Museum in Bilbao designed by Frank Gehry, he started to cry. Something about the museum's greatness moved him at an emotional level. He explained it in a way that architecture is not about words, but about tears. However, according to the research of neuroscientist at the University of Toronto at Scarborough, it was actually the curved lines of the museum what burst him into tears.

Basically this research was based on a topic how straight or curved lines affect our brain. Group of people was asked to label several pictures of rooms (some of them based on straight line, some of them on curved lines) as "beautiful" or "not beautiful". The result was clear, later on they reported that test participants were far more likely to consider a room beautiful when it was flush with curves rather than full of straight lines. Also looking at curved lines turns our brains into higher activity than on the straight lines. Referring to the research conclusion, Philip Johnson was not crying only because of the great architecture. It was also his subconsciousness that was unwittingly affected by curved lines.



p.6 Jack Kerouac holding the Manuscript of his novel *On the Road*.
p.7 *The Raft of the Medusa*, Théodore Géricault, oil painting, 1818-1819.
p.8 *The Guggenheim Museum Bilbao*, Frank Gehry, Bilbao, Spain, 1997.

Mr. Tugendhat objected to the idea of having all of the doors reach from the floor all the way up to the ceiling. So-called specialist told him that this kind of doors would wrap. Mies stoically answered, then I will not build it. It is the main principle of the structure and this is not a matter of discussion, said Mies to Mr.Tugendhat and closed the discussion.

The principle that Mies had on his mind was founded on the balance and connections of horizontal and vertical lines and the fluency of space. The most important lines intersect villa in form of twenty-nine steel columns of cross-shaped profile. These columns hold up the villa together with a huge supporting concrete wall at the site of the street. It was an unique idea to use a steel columns for this type of structure and the first time ever that it was used for a family house. The connection and the balance of all the lines whether in form of steel columns or very high doors was essential. The balance creates an overwhelming open space bathing in daylight flushed with expensive materials in forms of macassar wall lining or stunning onyx wall.

Villa Tugendhat is one of the most known examples of functionalistic architecture. This approach is based on straight lines, free of unneeded decoration, just following its form. As Ageeth Sluis says: "... *in functionalism the building itself became the ornament.*" No fancy dressing was needed any more. It was a "new barness" what characterized this revolutionary approach in architecture.



In 19th century Gottfried Semper, german architect and theoretician, wrote his theory *Bekleidungstheorie* ("theory of clothing"). In this essay he explained his point of view that the origin of architecture is in textile and weaving. In the Semper's theory, the weaving is closely connected with decorating and building walls what protects from outside and decorate at same time. The weaving is also considered as the very first full automatic industrial proces.

Nowadays, thanks to 3D printing technologies even a stone could be use as a thread. 3D printing became a promising technology of our time. It is almost a kind of revolutionary weaving machine what we can use to produce any type of 3D shape. Futurologist Jeremy Rifkin says that the advent of 3D printing could be considered as a beginning of third industrial revolution.

A group of Dutch architects (DUS Architects) decided to use the technology and print an entire canal house in Amsterdam. Officially the project began in March 2013, when the architects constructed a huge printer and tried out first prints. The plan is to print the house in smaller parts and compile them afterwards. DUS Architects assume that in 3 years since they started, the house will be done. The aim of the architect is to fulfill the need of a rapid building technique to keep up with the growth of cities. The house will also act as a public research space for architecture and construction.



At the beginning of the year 1947 Christian launched his first collection consisting of 90 models. In this collection were present two new lines called Corole and Huit that later became world-known as a "New Look". A tiny waist and a voluminous skirt falling below mid-calf length characterized his breaking collection. Then every

new line was an instant critical success. Christian's lines affected contemporary designers and a production of 'low-cost' clothing and rapidly changed the way of clothing. Thanks to this Christian Dior became crown prince of the age called The Golden Age of Couture.

Since the year 1954 the silhouette turned into more dramatic one. The autumn *H-Line* dropped the waist to the hip. The next season was introduced the *A-Line*, which suspended the dress from the shoulder and gently flaring down. In the autumn 1955 the *A-line* was reversed into the *Y-Line* what emphasized shoulders and tapered the silhouette into slim skirts. The last two lines in 1957 presented softer waists and were completely moving away from the "New Look". Christian's dresses had always a clear line, almost every collection what he created introduced a new silhouette and became a world sensation. Besides already mentioned lines it was also the *ZigZag line* (1948), the *Oblique and Vertical lines* (1950), the *Oval and Long lines* (1951), the *Sinuuous and Profile lines* (1952) and the *Libre and Spindle lines* (1957).

QUEUE
2003/Cologne

p.12

The participants are volunteers or actors hired by museum. There are no restriction for the dresses, but they are asked to dress as in usual situation to look like ordinary people. The minimum is seven and the maximum is twelve people for inside situation. Outside, it is maximum of fifteen people. While standing in a queue they are not allowed to speak with passer-by and reveal anything about the performance. They are more or less encouraged to improvise and act like in real life situation. It is an artificially created queue. A line of waiting people for something to happen. Always formed in front of a spot where it would make sense for a queue to form. Inspired by the artist's old memories of long lines in front of supermarkets in Slovakia during the communist era. Artist Roman Ondák sees the queue as something very unstable and strong at same time. For him the decision of standing in a queue shows a strong sense of participation. It is about feelings and your own desire to participate in a queue. There is also a big importance of time, because when you join a queue, you have to slow down and the time passes differently.

The performance *Good Feelings in Good Times* was first performed in front of the Kölnischer Kunstverein in Cologne in Germany, 2003. The queue was later re-enacted at the Frieze Art Fair in London, in 2004, where it was purchased by Tate Modern.

TRAFFIC JAM
April 1990/Berlin

p.13

The Berlin Wall definitely fell down and there was no barrier between the East and West anymore. Germans were finally free to visit their families on the other side of the fallen wall, wall that used to separate East Germany from West Germany for almost forty years. Many german families then decided to take a car and visit their relatives on the other side of the wall. During the first Easter holiday Berliners themselves created a traffic jam connecting two parts of Berlin in form of the 18-million-car long line. The traffic jam took almost 50 kilometres on a roadway that otherwise averages a half million vehicles a day. Running from the East to the West created a metaphor of a new connection. It was a German reunification what we can literally see in the traffic jam that happened on April 12, 1990.



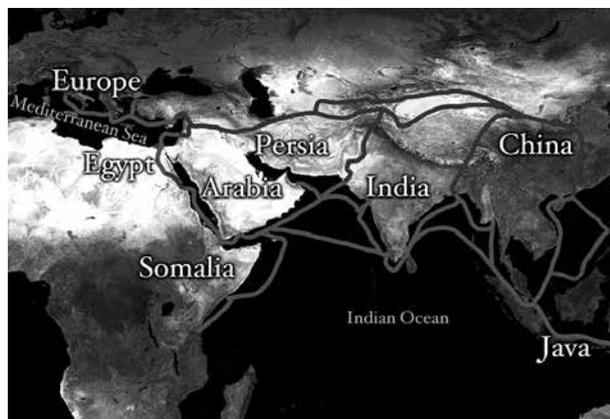
p.11 Bar suit, Christian Dior, Paris, 1947.

p.12 Good Feeling in Good Times, Roman Ondák, Cologne, 2003.

p.13 Traffic piles up at the Allied Checkpoint Charlie in Berlin.

The first contact between East and the West part of the world come around the year 200 BCE with so-called Silk Road. It starts in China running through India, Asia Minor, crossing Mesopotamia, to Egypt, the African continent, Greece, and ending as far as Rome or Great Britain. It embodied an important artery for the exchange of art, religion, philosophy, technology, language, science, architecture or any other valuable element of civilization. The Silk Road enjoyed a long-lasting history of about 1,600 years before it was definitely closed.

In the year 2011, Ross Ulbricht is bringing back the theme of Silk Road with his website, hosted on a hidden "dark web", a part of the internet that requires a special software to access. Ross's form of Silk Road consisted of online drug dealing accessible to buy via online currency Bitcoins. The website was only accessible with special system called Tor, that allows you to enter the web without revealing who you are or in which country you are in. Users of the website then could buy drugs such as heroin, cocaine or LSD. Nearly three years later, in 2013, Ross was arrested and found guilty of drug dealing, money laundering and computer hacking. He made a one slip-up what brought him in a jail. In a post seeking an IT expert with knowledge of Bitcoin, he asked people to contact him via rossulbricht@gmail.com.



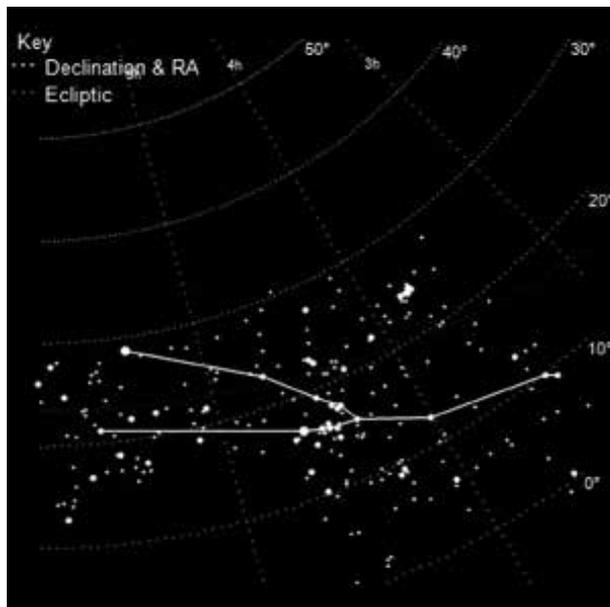
TAURUS

November-March/since Early Bronze Age

Fourteen interconnected stars create one of the largest and oldest constellations in the night sky. Already stone age man recognized the constellation as a taurus over 10,000 years ago.

Taurus is characterized by a V-line of stars that outlines the head and horns of taurus. The "eye" of the taurus is red Aldebaran, a big bright star standing at one point of the V. Aldebaran is the most prominent star in the constellation. It is a red-giant, an old, huge star much larger and much brighter than our own middle-aged Sun. The whole taurus constellation is made by 10 imaginary lines suggesting an image of taurus. Situated close to Orion, Perseus and Pleiades what makes it easy to find.

The night sky is more-or-less a random pattern of dots waiting to interconnect. Different civilisations created a diverse variations of star drawings based on their own cultures and meanings. The variations are usually recorded in a star maps in forms of simple linear drawings always connecting certain amount of stars. As the oldest star map is considered The Dunhuang Star Atlas, discovered in 1907 in a cave on the ancient Silk Road and it is dated between 500 and 1.000 AD.



TEN-THOUSAND-MILE LONG WALL
14th-17th century/Northern China

China, the end of the 14th century. Mongol tribes are invading the empire, devastating and robbing the land. There were already few fortification lines built up for guarding the land, but now, it was simply necessary to connect all of them in to the one line. It took around three hundred years to achieve the final greatness of 8,850 kilometres long wall but it paid off. The wall was built by soldiers, rebels and peasants. Many workers died and were included as a part of the great wall itself, but since the last stone was laid the Great Wall of China guarded the land for many upcoming centuries. Despite the fact that now the Great Wall of China is just a historical landmark the legend is still present. The wall also hold the privilege to be the only manmade line visible from space.



p.14 Main routes of the Silk Road.

p.15 Map of The Constellation of Taurus.

p.16 The Great Wall, China, 6,259 km.

In these days since 2014 in the South China Sea grows a parallel to this old fortification line. Media used to call it "Great Wall of Sand". It is based on turning reefs into new island by covering them with sand in an order to empower Chinese territorial claims to the region demarcated by the "nine-dotted line".

THE WHITE LINE
November 1986/Berlin

p.17

"All five of the line-painters had been born in the east, in Weimar, but had begun to rebel against the communist regime's social norms in their late teens. Frank Willmann read Nietzsche and Solzhenitsyn, his friend Frank Schuster wore sandals and string vests. Wolfram Hasch grew his hair long. Jürgen Oniseit played in a punk band called Creepers. Thomas, his younger brother, was arrested for spraying dadaesque slogans such as Macht aus dem Staat Gurkensalat("Turn the state into cucumber salad") on to walls around Weimar.

On Monday 3 November 1986, a group of five masked men drew a white line on the Berlin wall. The line started at Mariannenplatz in the capital's alternative Kreuzberg district, heading west via the Checkpoint Charlie border crossing in the city centre. At points, the line was so thick the paint dripped all the way to the bottom. Where police guarded the wall, it ran thinner, snaking down to the pavement and then back up.

After around 5km (three miles), just south of the Brandenburg Gate, opposite the square that now hosts architect Peter Eisenman's Holocaust memorial, the line suddenly stopped. At 11:30 on Tuesday morning, border guards from the eastern side of the wall had ambushed the line-painters and put an end to their project. The wall collapsed almost exactly three years later." - Theguardian.com



THE RIVER OF HATE
Mythology/Greece

p.18

It was a line full of danger, dividing two worlds, filled with hopeless lost people. The mythological border separating the world of the living from the world of the dead. It is a underworld river called Styx. The name comes from the Greek word *stugein*, what means hate, the river of hate. Styx was not the only line separating Earth from the Underworld. There were four more rivers, Acheron, the river of woe, Cocytus, the river of lamentation, Phlegethon, the river of fire and Lethe, the river of forgetfulness. However, Styx was still the most terrifying one. When your soul reached the River Styx, a boatman named Charon would take you across the river to the underworld. Charon was a nightmarish man, with eyes of fire and dirty cloak around his shoulders. He usually refused passage to anyone who could not pay. So if your family did not bury you with a coin under your tongue, you were stuck. Then these stuck souls were forced to wander the deserted shore of the river for eternity. For those souls who crossed the river, there was almost nothing to do on the other side except wait to be reborn into a new body.

In Greece mythology there is no special story focused only on the River Styx. The motive is appearing across many other stories what allowed you to imagine the entire story of the river itself.



MAN ON A WIRE
August 1974/New York

p.19

Philippe was 18 when he first read about the proposed construction of Twins Towers in New York. It was an article in magazine which he found while sitting in a waiting room of his dentist in 1968. Philippe was amazed. His desire to cross the distance in between the towers was

p.17 Painting A Line On The Berlin Wall, 1986.

p.18 Phlegyas ferries Dante and Virgil across swamp of Styx, 1890.

uncontrollable. It took six years of preparations and then forty-five minutes of performance.

All crew jumped in the truck. Fear was in the air. Alan was absolutely sombre. Philippe extremely tense and Annie petrified, very worried. He and his crew illegally sneaked into the building and rigged the wire, using the towers as anchor points. It was risk, but Phillippe just could not live anymore without at least to try to do it. His dream was there, tangible, high up in the sky in between the towers. When he step on the wire everybody was terrified, but in the end even policemen cheered him up to continue. It was breathtaking performance, filled with freedom and boldness. After this achievement Phillippe was arrested, but very soon released. He received only one punishment for his daring performance. Phillippe was then required to perform on high-wire walk for children for free in central Park. His performance went in the history as the “*artistic crime of the century*”.

BANG
2011/Tokyo

p.20

Countless number of 18mm wide polyester ribbons is hanging down from a ceiling. Aligned in one long line close to each other. The thin strips create an intriguing curtain seemingly changing its opacity depending how far or close are you standing. From the each point of the room you can enjoy different views on the installation. It is an extraordinary structure that plays with optical illusions, space and perspective. The porous wall was created specially for an exhibition space for the italian fashion brand 'CoSTUME NATIONAL' at the CNAC LAB in Tokyo. Behind the white fog of ribbons is hidden a line of mannequins presenting the clothes.

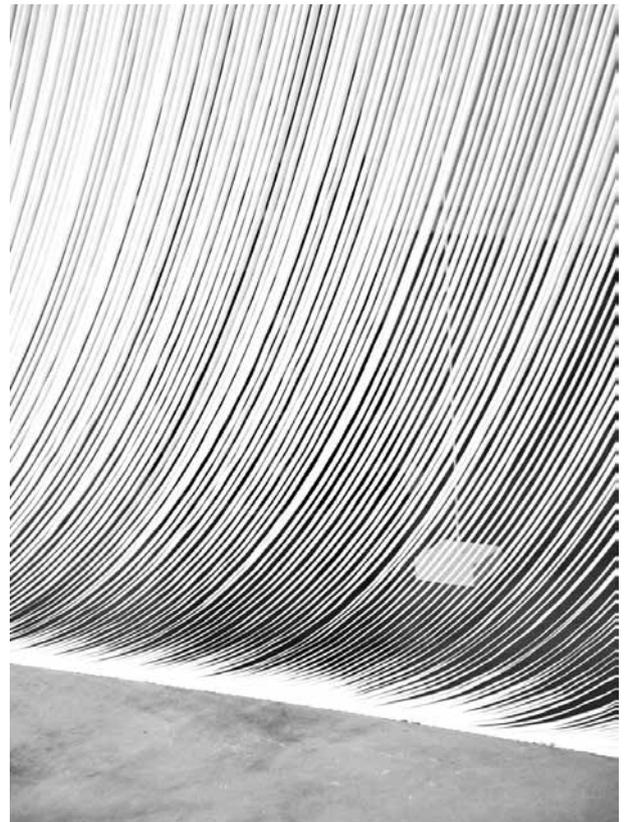
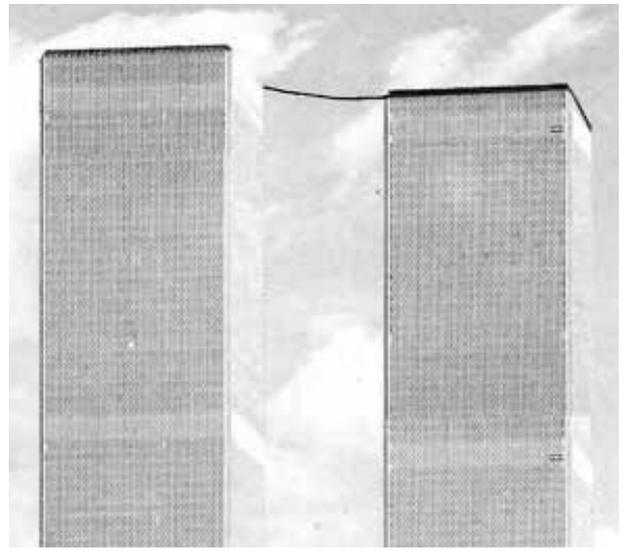
Author of the installation is an young japanese visual artist and architect Ryuji Nakamura. Ryuji is well known for his gentle and simple design forms. Each of his project is an example of attentive work with space and fragile structures. His installation are usually formed by structures of lines that play with scales and sometimes are almost disappearing. His japanese origin is visible in fact, that the material he works with the most is paper. In 2013, Ryuji published an interesting book about lines in architecture called *Controlled and Uncontrolled Lines*. The book is closely describing all his projects and approaches in his own words.

ONE-POINT PERSPECTIVE
1980

p.21

Twins are standing exactly on the vanishing point. Two girls, holding their hands and wearing baby blue dresses. Danny is placed in the foreground. We can only see back of his head and top of his shoulders. He is just driving his small children car when he suddenly sees the twins. Danny stops and looks looking at the girls who want to play. The scene is getting more and more dramatic and thrilling. Lines of the wall, ceiling and floor are all running towards these creepy twins. It is a very obvious one-point perspective which Stanley Kubrick used in this particular scene. The very strong use of the one-point perspective goes like a thread through all Kubrick's film production. Stanley leads the viewer's eye towards a central vanishing point. He creates a complex visual symmetry using parallel lines in a scene that all run to the vanishing point. It is making viewer being completely absorbed in the scene. Similar approach is also visible in other Stanley Kubrick's movies like *2001: A Space Odyssey*, *A Clockwork Orange*, *Full Metal Jacket*, *Barry Lyndon*, *Eyes Wide Shut*.

Nice overview of all Kubrick's one-point perspective scene is possible to see in work of Kogonada. He cut out all the scene and edited them into one single video of approximately 2 minutes length.



p.19 Philippe Petit in the movie *Man on a Wire*.

p.20 Bang, an exhibition space at the CNAC LAB, Ryuji Nakamura, Tokyo.

p.21 *The Shining*, Stanley Kubrick, 1980.

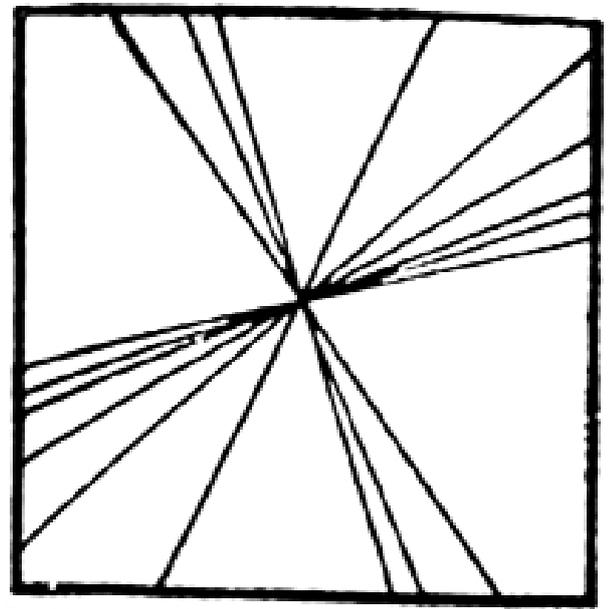
"The simplest form of the straight line is the horizontal. In the human imagination, this corresponds to the line or the plane upon which the human being stands or moves. The horizontal line is also a cold supporting base which can be extended on the level in various directions. Coldness and flatness are the basic sounds of this line, and it can be designated as the most concise form of the potentiality for endless cold movement.

In complete contrast to this line, in both an external and inner sense, is the vertical which stands at right angles to it, and in which flatness is supplanted by height, and coldness by warmth. Therefore, the vertical line is the most concise form of the potentiality for endless warm movement.

The third type of straight line is the diagonal which, in schematic form, diverges from both of the above at the same angle and, therefore, has the same inclination to both of them; a circumstance which determines its inner sound—equal union of coldness and warmth. Therefore, the diagonal line is the most concise form of the potentiality for endless cold-warm movement."

- Archive.org

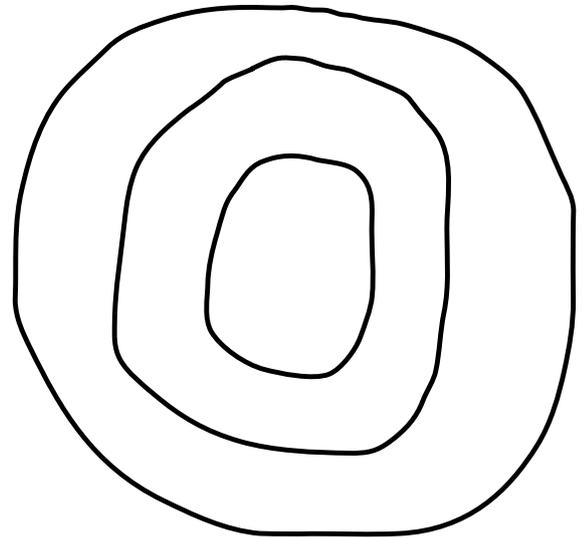
At the year of 1922 Wassily Kandinsky agreed to teach at Bauhaus. He taught three courses Analytical drawing, the Basic of artistic design and the most famous one Colour. The course was based on the analysis of individual elements - a point, a line, a plane, and discovering their relationship. That later on led to completing of his book Point and Line to Plane.



SPIRAL
1996/Polnička

I woke up around seven o'clock in the morning, my first morning of mandatory school attendance. The weather was just horrible and I had to go outside to school. I lived under a hill and the school was on the very top of the hill. It took me around 20 minutes to come there. So I was walking there, 6 years old child scared what this first day in school is going to be about.

After I took off my wet clothes and put them in a school cloak-room I entered the class. They told me to sit in the very first line. I was not sitting more than 5 minutes when teacher came and gave me a few simple tasks and one really hard - to draw a spiral. She assigned me these tasks to prove if I am smart enough to enter the primary school. At that moment I had no clue how to draw a spiral. I knew some stuff, how to draw a farm or even a tractor for instance, but spiral? So I ended up with three circles inside each other. No spiral at all. I was so scared that I didn't pass the exam, but at the end I did.



TRIPAS DE GATO
Mexico

Tripas de gato is a children's game primarily focused on training their motoric capabilities. The start of the game requires only a pencil and blank sheet of paper. In the original form, players take turns drawing lines in between pairs of number (1 to 1, 2 to 2, etc.). It is forbidden to cross or touch any other line what gets harder as the maze of lines grows. The game does not have to be played only with numbers. It is possible to use it for a variety of language activities. Many teachers use the principle of the game in their classes. They used to create a new variations based on the original and according to the subject of their class.

Tripas de gato is a traditional game coming from Mexico. It is well know in other Latin American countries and in Spain as well. In non-spanish speaking



p.22 An illustration from the book Point and Line to Plane.

p.23 An illustration of the output.

p.24 Example of the template for the game.

countries it is being called *Cat Guts Game* or just a *number maze*. The outputs of the game are usually complex linear drawings. The whole sheet of paper is covered by single lines running next to each other similar to tree-rings. Wavy and twisty lines become recordings of the game and winner gains the final drawing!

THE METHOD

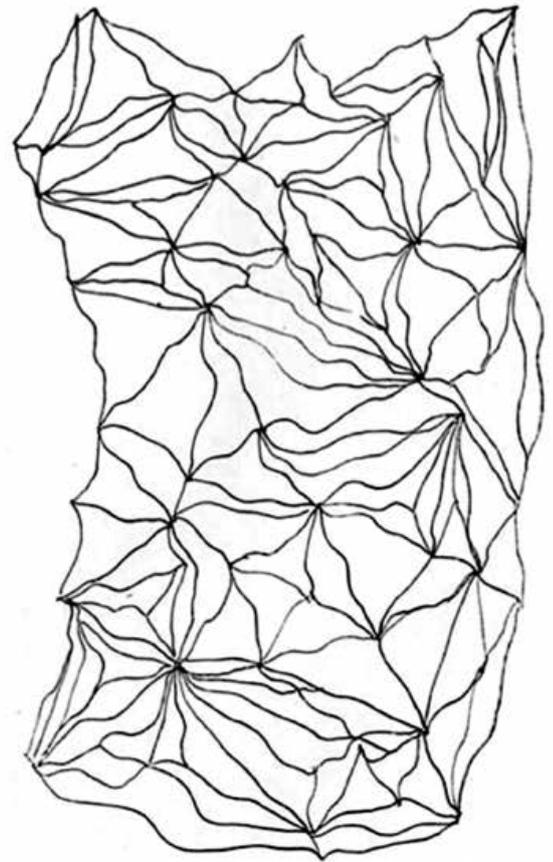
p.25

First half of 20th century/Bucharest

Dots are made on the impurities or colour differences of a blank sheet of paper, and then lines are drawn between the dots. The result is a net created by straight or curvy lines. As an option it is possible to use a book page instead of blank sheet. In the book page impurities are replaced by chosen letters (or words), and again the line connects the letters in one net.

It is a surrealist technique called *Entopic Graphomania* developed in the first half of 20th century as one of the many surrealist experiments with an automatism. The method was invented in Bucharest by Romanian surrealist poet, theorist and artist Dolfi Trost. In the year of 1945 Trost published a book *Vision dans le Cristal, Oniromancie obsessionnelle* with a nine illustrations of *Entropic Graphomania* drawings.

Patrick Haropp, professor at University of Manitoba, Winnipeg created a project loosely inspired by *Entopic Graphomania*. His work is called *Enphonic Graphomania* and it is an interactive drawing interface that connects sound and drawing. He created a device that behaves as a traditional drawing board and the drawing tools are also very classical: pencil, archival paper and an eraser. Like in the surrealist method, the points are placed on the board and the exercise consists of connecting these points. Haropp takes advantage of the conductive nature of graphite. As the drawing grows the graphite gives us an unstable set of voltage and interpreting it through the special software the drawing creates a sound.



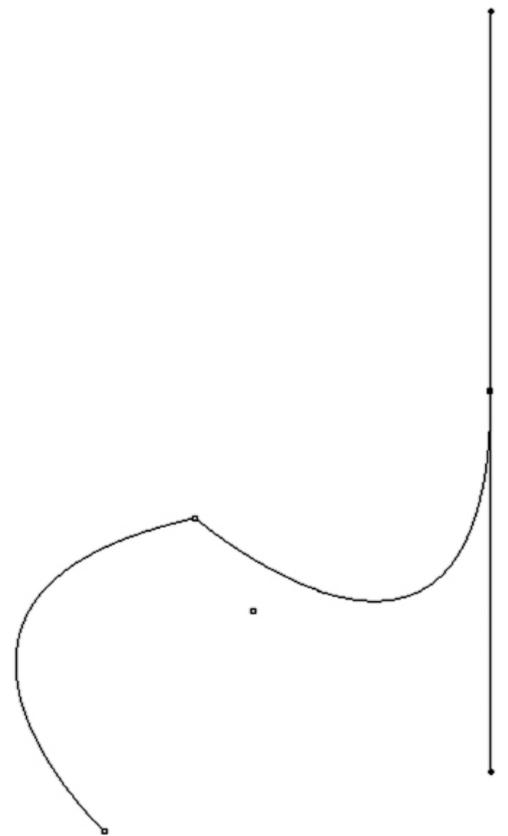
BEZIÉR'S CURVE

p.26

60's/France

It is a story of a line that unintentionally changed the everyday routine of any designer or architect since 60's up to now. Everything started in Renault with an engineer and mathematician Pierre Bézier. Pierre started as a tool maker, but when he moved on a higher position as a head of engineering department he started to work on a task how to simplify a production of cars (especially their body sturdiness). He brought in an idea to use computers for designing cars and in connection with this challenge started to work on mathematically defined, computer based curve. At the same time at the Citroen Paul de Casteljaou was researching almost the identical idea. Luckily for Pierre, he was the fastest one who published his research and that is why the curve got his name - *Beziér curve*.

It is a parametric curve that interconnects single anchor points. It is mostly used in vector graphic programs like Adobe Illustrator, FontLab, Glyphs, CorelDraw or in related fields and softwares. It is intended to model smooth curves that can be scaled indefinitely, because paths are not bound by the limits of rasterized image.



RULER

p.27

16th century/England

Within living memory there was a need to draw a straight line but not all the time there was a tool to help. As late as the 16th century William Bedwell invented the ruler as we know it now. He was an English priest and scholar, specializing in oriental languages and also

in mathematics. The first ruler was two sided measuring tool with inches on the top and centimetres on the opposite side.

Before William's invention there were already several ways how to get a straight line without need of a ruler. First straight line can be found in the nature in form of the surface of a still body of water. You can always fully rely on the water surface. It is straight as long as the water is calm. Next way how to reach a straight line is a tight string. Already Egyptians used the stretched string to approximate a straight line. Babylonians also used it for the construction of their irrigation systems. Another easy way is folding something that is flat like a sheet of paper, fabric, or even a large leaf. Then you will get a straight line at the crease.

Even though our world is already filled with modern measuring tools like lasers, the fundamental principles are still in use, for instance, as a builder's spirit level.

FORBIDDEN FRUIT
1953/Vienna

p.28

"In 1953 I realized that the straight line leads to the downfall of mankind. But the straight line has become an absolute tyranny. The straight line is something cowardly drawn with a rule, without thought or feeling; it is a line which does not exist in nature. And that line is the rotten foundation of our doomed civilization. Even if there are certain places where it is recognized that this line is rapidly leading to perdition, its course continues to be plotted. The straight line is atheistic and immoral. The straight line is the only sterile line, the only line which does not suit man as the image of God. The straight line is the forbidden fruit. The straight line is the curse of our civilization. Any design undertaken with the straight line will be stillborn." - Hundertwasser.com

Friedensreich Regentag Dunkelbunt Hundertwasser is the most well known hater of "a straight line". For him the straight line just leads to the ruins of humanity and even having a ruler in your pocket is forbidden! Hundertwasser loved spiral shapes, organic forms and bright colours. Curvy lines and intensive, radiant colours played a key part in all his works. He expressed his position on straight lines mostly in the field of architecture, for example in *Hundertwasserhaus* in Vienna or in the latest work *The Kuchlbauer Tower* in Abensberg.

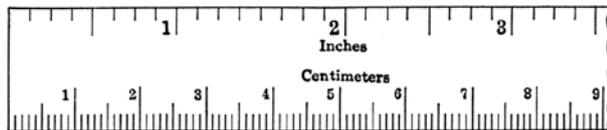
GLOBAL CHURCH
1977/New Mexico

p.29

It was a nice afternoon when Walter, Robert and Helen left the studio with an intention to buy a huge bunch of stainless steel poles. Walter was just thinking how many more years they have to spend working on this art piece before it will be done. Since yesterday evening they are at least sure about the place. It is gonna be in remote desert of western New Mexico. They scoured California, Nevada, Utah, Arizona and Texas by truck for over five years before they found the best place for *The Lightning Field* they were commissioned to do by Dia Art Foundation.

The grid is also prepared, it will take one mile by one kilometer and the poles will be set 220 feet apart from one another. For each pole there will be its own concrete footing so it could survive the wind up to 110 miles an hour!

The *Lightning Field* is situated in Carton County. It is a thundering art piece of land art made up of 400 standing steel lines designed as a frequent target for lightning strikes. In the middle of the year 2013 it was reopened after necessary restoration supported by Mr. Gagosian and Ms. Prada, who admired Walter De Maria's work and considered *The Lightning Field* as a some kind of ecumenical, global church, a monument for a new age.



p.27 Ruler in inches and cm.

p.28 *The Hamburg Line - The Growing Red Sea, Hamburg, 1959.*

p.29 *The Lightning Field, Walter De Maria, Carton County, 1977.*

1990/Black Rock Desert, Nevada

"I drawn a line on the ground and I said on the other side of this line everything will be different and everything has been different." - Spark: A Burning Man Story. One week of an utopic city. The plan is already determined since 1990. It is a C shape consisting from 16 lines running to the centre and 10 lines running around. The lines are usually named like: Imagine, Ridiculous, Absurd, Vision, Dogma and so on. The names are changing with each year but the principle of naming them stays the same. The large C plan interwoven with 26 lines creates a home of c. 50,000 people for one week. It is an annual festival called Burning Man which takes place in a remote desert in Nevada. Unusual gathering generate a temporary community. It is being described as an experiment in community and art. Also Burning Man as any other community has its own rules and principles. One of 10 main rules is called "Leave no trace". Basically the rule instruct participants not to leave any physical trace of their activities. You have to take everything you brought, bought or created with you at the end. *"Our community respects the environment. We are committed to leaving no physical trace of our activities wherever we gather. We clean up after ourselves and endeavor, whenever possible, to leave such places in a better state than when we found them."*



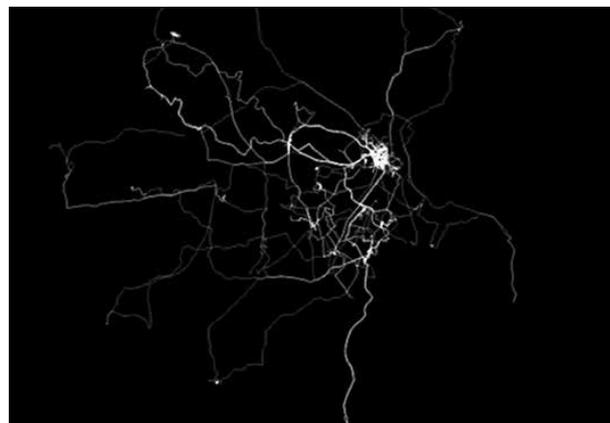
PLAN B

p.31

Since 2003

"Which is me, which is you? I am on this side. Oh, good. So 2007 and January 1st we were in Brussel, because we spent the New Year with... Jessy and Gine. No, wasn't it with Jolene and ehm... No, we have been with them at Christmas and then we go to Jessy and Gine and that was a walk what we did only this day. Oh, yeah, you are right. Now we are going back to London, aren't we?..."
- Transcription from the video Narrating our lines.

Daniel and Sophia have started their project Daily Data a long time ago. Daniel started at 2003 and Sophia joined him four years later. Since 2007 they have continually recorded every journey they have done with GPS. They are keeping all their traces in forms of linear drawings that embody their own physical movement webs. Usually they are printed by pen plotter or as a Giclée (Fine Art Ink-jet) prints. The linear drawings kind of keep their memories in. In the video called *Narrating our Lines* Sophia and Daniel are trying to remember the traces by looking at the GPS drawing. The project could be also considered as some kind of extender of the memory, as a tool revealing lost memories, that could have been forgotten.



COMMUNAL SPIDER WEB

p.32

July 2010/Pakistan

In the beginning of July 2010, unexpected monsoon came over Pakistan. It was one week rainfall swelling Pakistan's rivers. Water created huge pools of stagnant water across the land. Water displaced many people from their homes, but not only them. Millions of spiders were also forced to find a new home. They escaped to the trees and mostly became trapped by the water in treetop. Many of trees then turned into a spider web cocoon. Spiders started collaborate and build a great communal spider webs.

To start a new web, the spider has to anchor the silk on a branch and goes down. A line of the silk then falls down with a spider blown by breeze to the next point. If the spider likes where it lands, it anchors the silk and begins work on the web. In the Pakistan's case many spiders started to join their silks in purpose to build a



p.30 An aerial view of the Burning Man.

p.31 Printscreen of two-channel video Narrating our Lines.

p.32 Picture of a tree encased in spider webs after floods in Pakistan.

giant interconnected web. They created their homes in forms of ghostly trees and if you would stand under this tree tiny spiders would just be dropping down on top of your head.

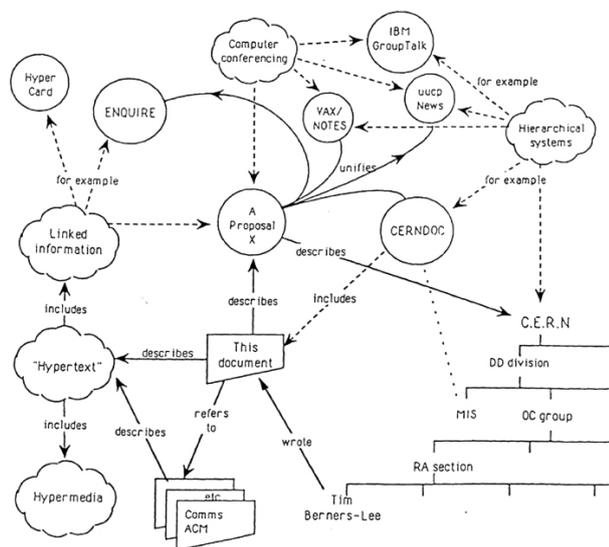
As a side-effect locals in south eastern Pakistan benefited from this weird phenomenon. They reported that there is less mosquitos than usually. Locals assumed that many mosquitos got caught in the giant spider webs what helped to reduce the risk of malaria.

WORLD WIDE WEB
March 1989/Switzerland

p.33

In March 1989 at CERN, Tim Berners-Lee came to his boss Mike Sendall with a vision in a document called *Information Management: A Proposal*. His proposal was not accepted at all, but his boss wrote on the cover of the document a note: "Vague but exciting". Tim's project, lately known as a Web, never became an official CERN project. However, Tim got his time to work on it in September 1990. He wrote the three fundamental elements that still remain basic parts of the Web up to this day. It was HTML (HyperText Markup Language), URI (Uniform Resource Identifier) and HTTP (Hypertext Transfer Protocol). He also wrote the first Web page browser (WorldWideWeb.app) and the first Web server (httpd). The historically first web page was launched on the open internet by the end of 1990. 6th of August, 1991, everybody outside of CERN was welcomed to join this new Web community. There was no great launch, it was just a post in a form of a short note from Tim on the alt.hypertext newsgroup (still archived on Google Groups).

The World Wide Web fundamentally changed the world as we knew it. It became a part of our daily lives. It creates a huge web of interconnections what allowed us to communicate and share informations around the globe.



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