
UNIVERSITÀ DI PISA

# Grammars of creation

PhD Plus, 25 February 2016

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# Unlearning

The innovation process starts with a negative phase- unlearning.

It is impossible for a man to begin to learn
that which he thinks he knows
Epictetus, stoic philosopher, ca. 55-135 aC

Knowing must therefore be accompanied by an equal capacity to forget knowing. Not-knowing is not a form of ignorance but a difficult transcendence of knowledge.
Gaston Bachelard, French philosopher, 1884-1962

Preconceptions hinder creativity.
Readiness to have no idea, true tabula rasa, a genuin blank state.

**Uncertainty is necessary for creativity.**

Theater stage, or «*the Empty Space*» (Peter Brook, 1968).

# Unlearning/2

If you want to do something new, you have to stop doing something old.

Peter Drucker, management scholar

People have a tendency to stop looking for alternative right answers after the first answer has been found.

Roger van Oech, inventor of the *Creative Wack Pack*

Ask the why questions: *Why? What if? What else?*

**In this presentation I assume you are the kind of people who asks Why**

# Innovation as a storm

Is there some method in madness (= in the storm)?

Though this be madness, yet there is method in ’t.
Shakespeare, *Hamlet*, Act 2, Scene 2

What we know about creativity and innovation is a blend between detailed case histories, anecdotical evidence, some economic/mathematical modelling, lot of experimental psychology and cognitive science

Although we are still far from a «science of innovation», some element of method in the madness can be found.

Yet, be prepared to stay in the storm.

# Outline

Patterns of creation

- Recombination
- Negation
- Analogy
- Abstraction

Resistance to innovation

How to manage (your own) innovation

What about humanities?

# Recombination

Recombination involves the use and re-use of existing components for the creation of a new solution.

e-Bay combines algorithms for electronic auctions, recommendation system, payment system with cybersecurity, and graphic interface.

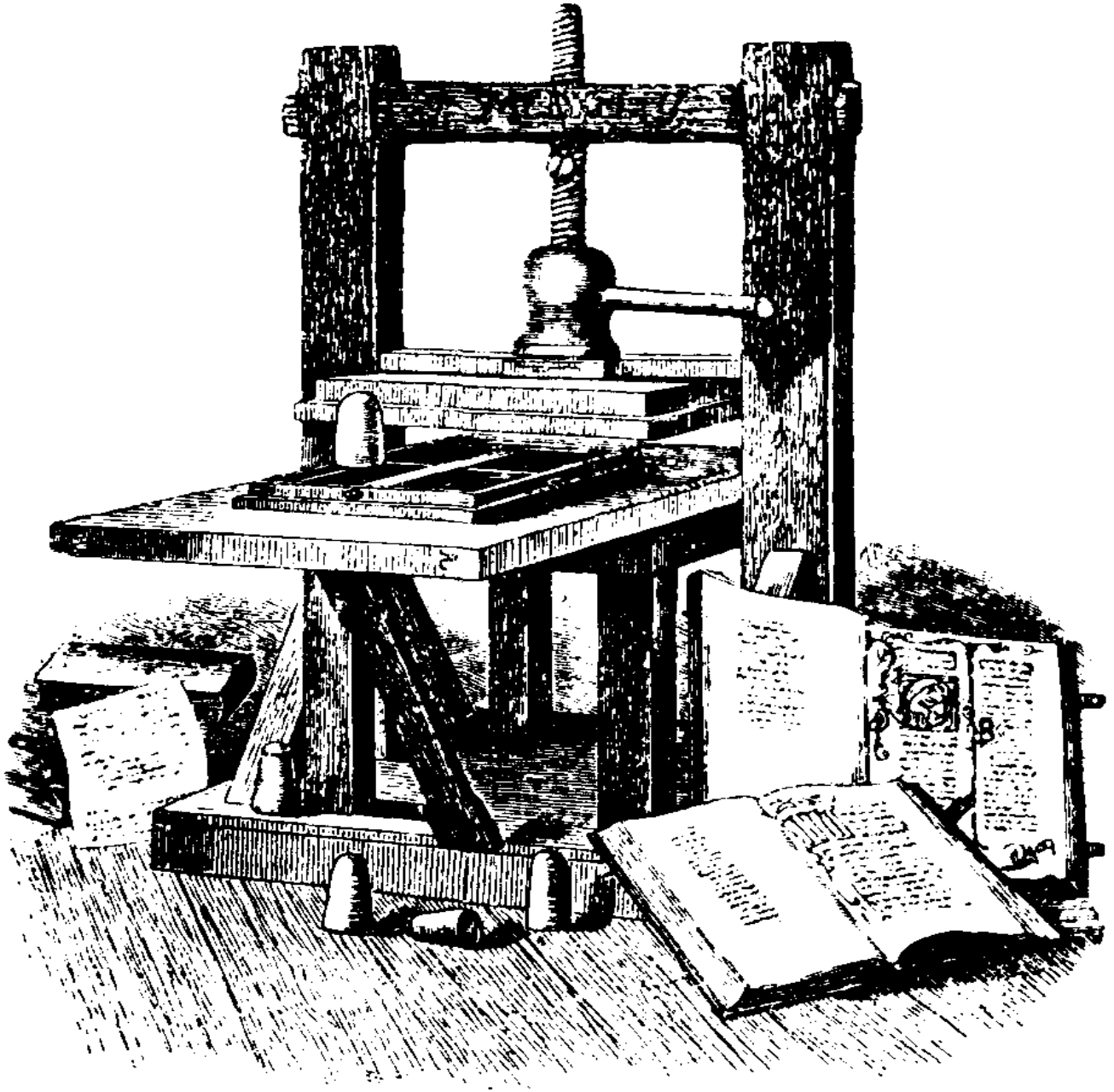
Existing components are often available to everybody.
Yet only the innovator is able to identify the  potential for their novel recombination.

Innovators watch what everybody else watches, but see what nobody sees.

**Johannes Gutenberg**
Printing press (1436-1450)

Gutenberg was a goldsmith familiar with techniques of cutting punches for making coins from moulds.

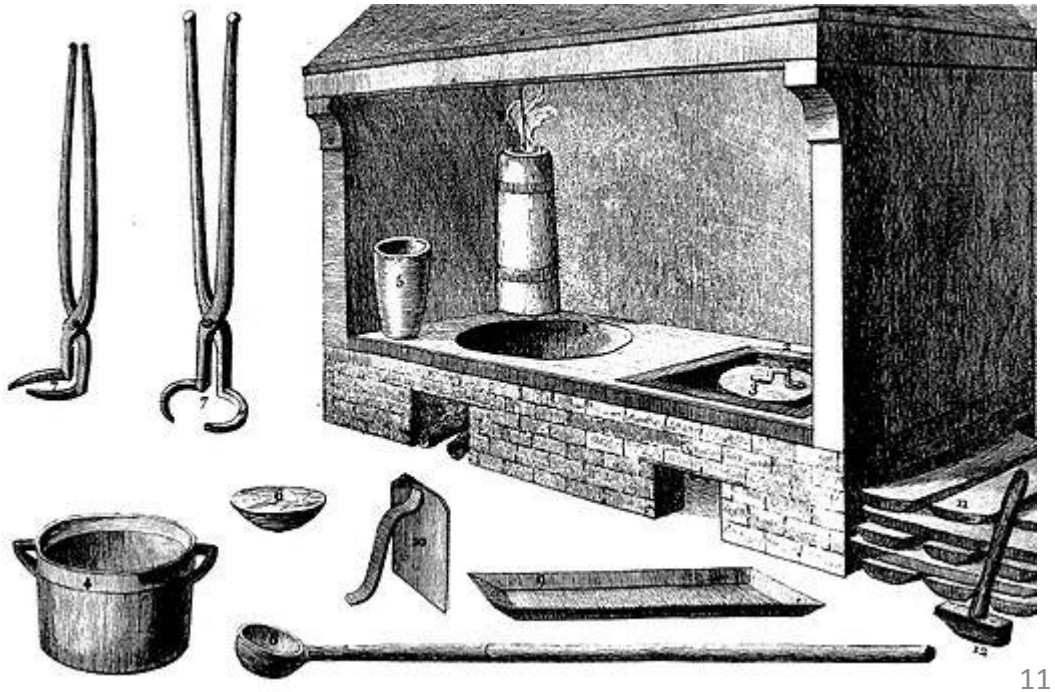
He then invented a way to cast letters from matrices. With this technique he opened the way to movable type printing.



# Hand mould

A technique to cast letters from a matrix, in order to obtain single letters to be placed in a movable type press.

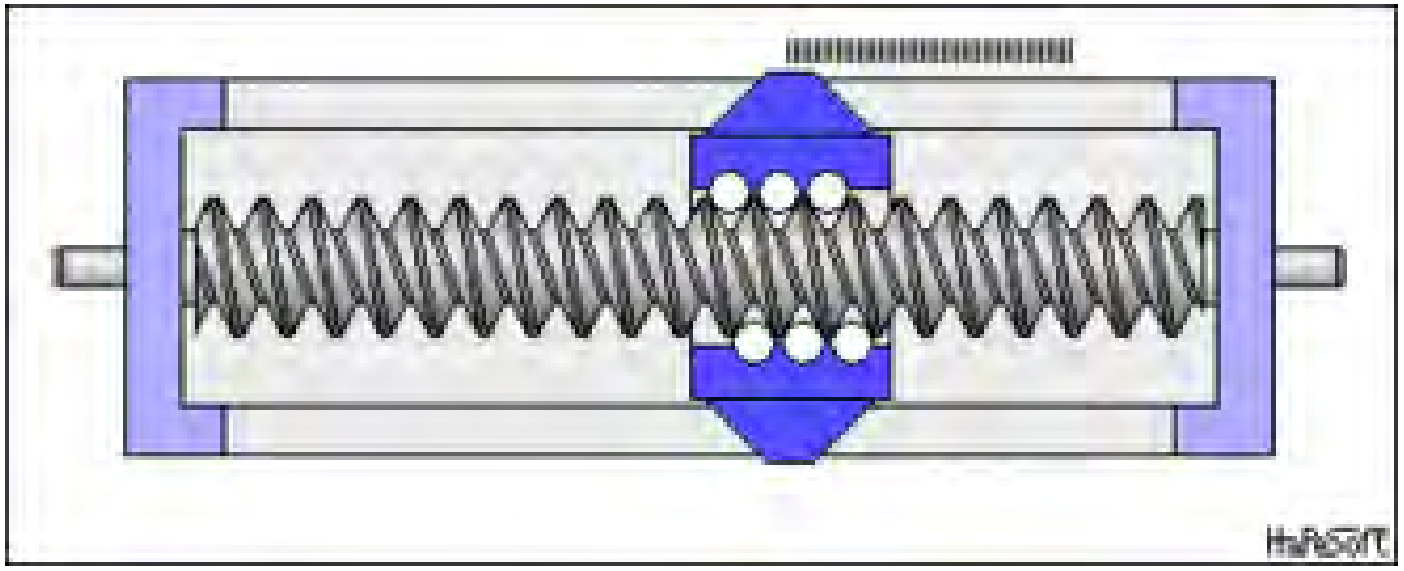
Types were created out of lead, tin and antimony.

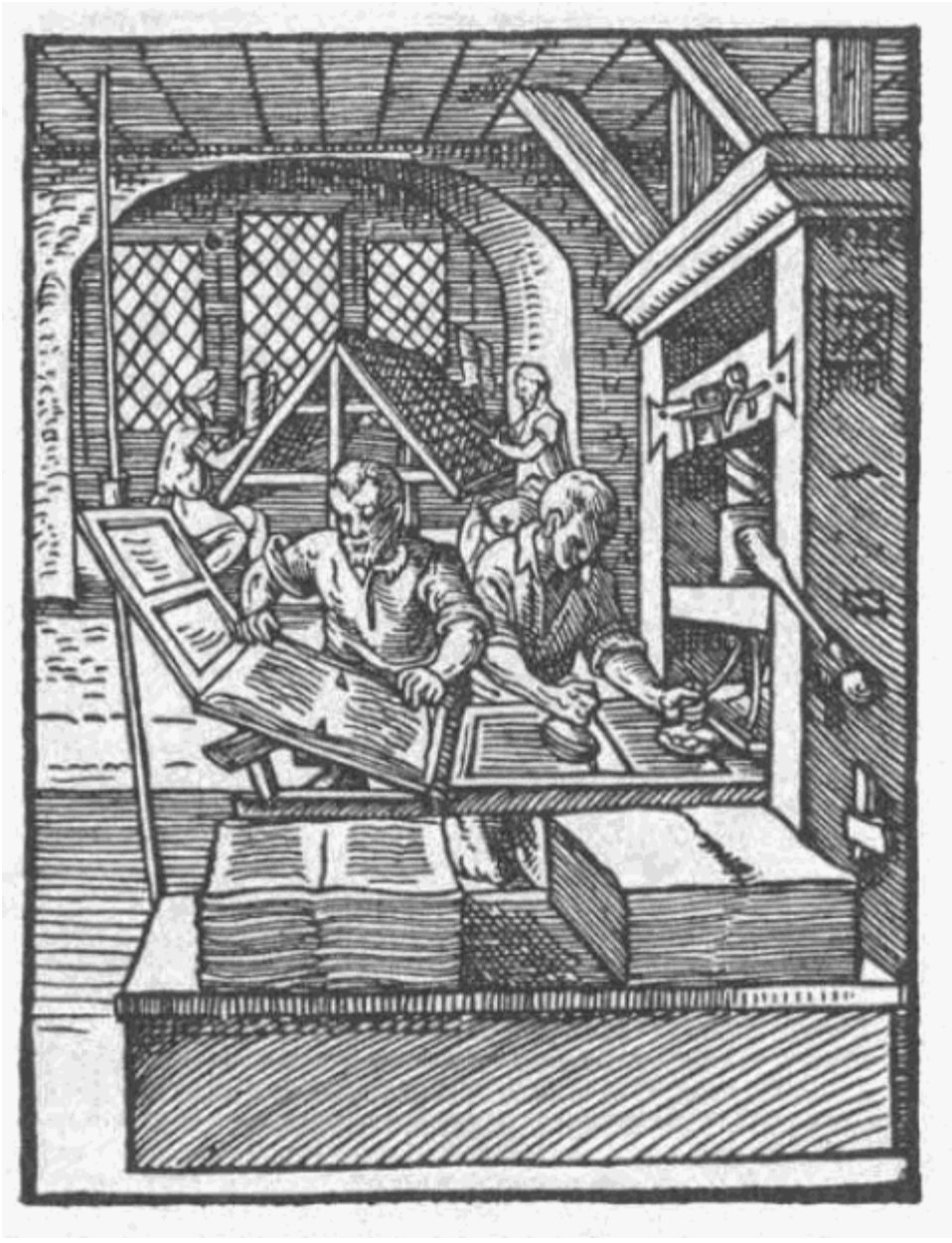


# Screw press

Gutenberg adapted a screw press machine in order to place pressure on the sheets of paper in a homogeneous way.

The screw press process was largely used in agriculture, e.e. winepress.

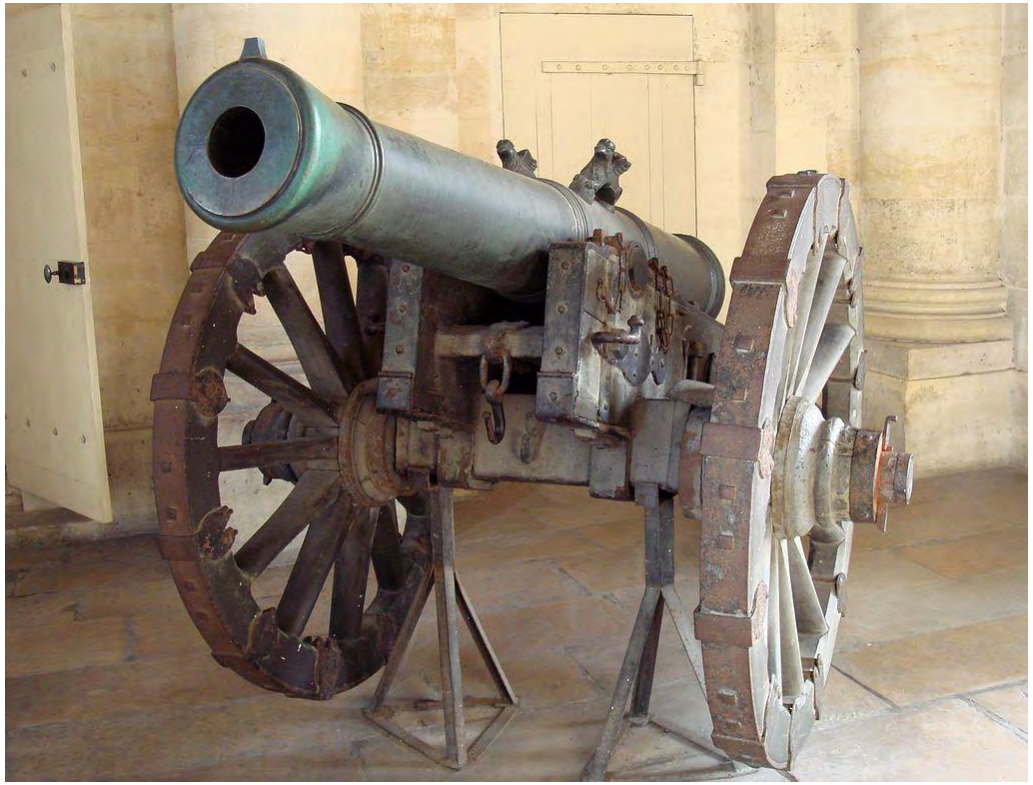




The reform of French artillery in the Napoleon period was based on the concept of inter-operability among four classes of guns, which were previously separated.

Components were standardized up to a size of 2,28 mm. Inventories were enormously reduced and rationalized.

This reform is considered by historians crucial for the Industrial Revolution.




**Jean Baptiste de Gribeauva**l, famous French Artillery General of the 18th century

# Is recombination a random process?

All this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience.

When we think of a golden mountain, we only join two consistent ideas, *gold*, and *mountain*, with which we were formerly acquainted.

David Hume
*An enquiry concerning human understanding*

# Is recombination a random process?/2

A natural experiment- **imaginary animals**

- existing in mythology since antiquity
- no constraints on imagination
- large diffusion in Middle Age («*Bestiario*»)
- topics of contemporary art (e.g. Picasso- Mynotaure) and literature (Borges)

Yet

- the list of *all* imaginary animals is relatively *short*
- most imaginary animals combine the features of *only two*, maximum three, existing animals

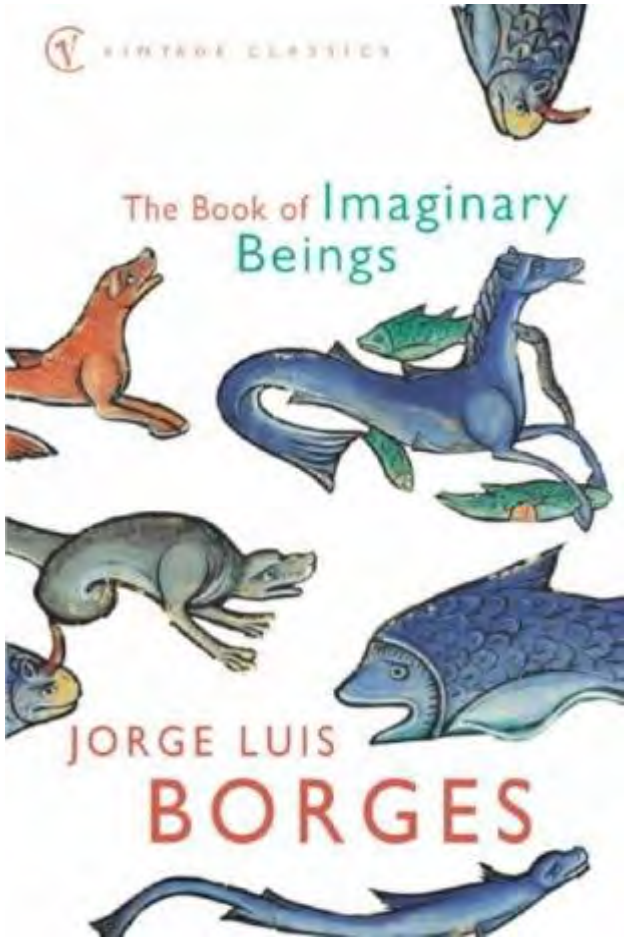
If recombination were based on random matching of components of animals we would see a much larger collection of imaginary entities.

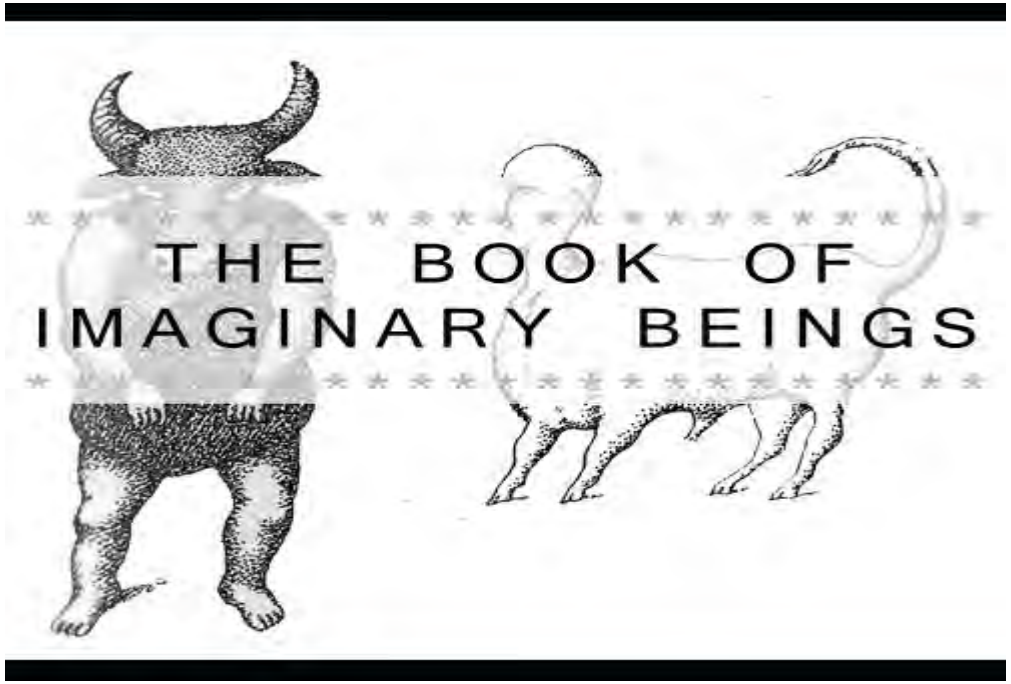
Mynotaure

Chimera

Syrens

Even in Middle Age the variety of phantastic animals was not so great




1. those that belong to the Emperor,
2. embalmed ones,
3. those that are trained,
4. suckling pigs,
5. mermaids,
6. fabulous ones,
7. stray dogs,
8. those included in the present classification,
9. those that tremble as if they were mad,
10. innumerable ones,
11. those drawn with a very fine camelhair brush,
12. others,
13. those that have just broken a flower vase,
14. those that from a long way off look like flies.

# Recombination is *not* a random process

Recombination does *not* involve a process of random assembly of single pieces- this would take a computational time exceeding the life of innovator (in some cases, exceeding the life of the universe…).

It is based on a **mental model** that allows the identification and selection of those elements of the problem that offer the greatest potential for recombination.

«Creative masters learn to find, evaluate, and explore more combinations than other people. They get better at guessing which combinations will be more interesting, so their odds improve. They also learn there are reusable combinations, or patterns, that can be used again and again to develop new ideas or modify existing ones».

Scott Berkun, *The myths of innovation*

Giacomo Tachis died on February 6, 2016
He was hired as junior enologist by Niccolò Antinori in 1961

He created a number of worldwide famous wine labels

- Sassicaia
- Solaia
- Tignanello

In Tuscany

- Terre Brune
- Turriga

In Sardinia.

Among his recombinant innovations

- Break with the Chianti traditional disciplinare (Cabernet)
- Malolactic fermentation
- Barriques

Marchese Mario Incisa della Rocchetta, from an old family tradition in wine production, started to grow French vines in Piedmont.

His dream was to achieve the levels of quality of the French Bordeaux wines.

After marrying Clarice della Gherardesca he became the owner of land in San Guido, Bolgheri, in Tuscany.

He then realized that the stony land was similar to the one in Graves, in the Bordeaux regions. He then started to plant Cabernet Sauvignon in Tuscany.

The Sassicaia wine was born.

# The Sassicaia story

Initially the results were modest. He started to sell the wine in the late 1960s.
Among the obstacles

- In Tuscany there was a long tradition of autoctone vines (Sangiovese) a French type was considered unreliable
- The Bolgheri area had no tradition in wine production
- The French ones were small plants, which required a complete change in the grape growing process
- Workers were reluctant to change the mode of grape harvesting
- The wine was fermented in barriques (metal vat), which required a completely different process than wooden barrels.

Incisa della Rocchetta was supported by Giacomo Tachis, from the Antinory company.
They started to organize closed-door meetings with friends, who could comment and give suggestions, and also criticize. Year after year, there were small improvements, until something big happened.

In 1978, the British expert Hugh Johnson organized a blind test with the top 33
Cabernet of the world for the leading magazine *Decanter*. Sassicaia was number one.

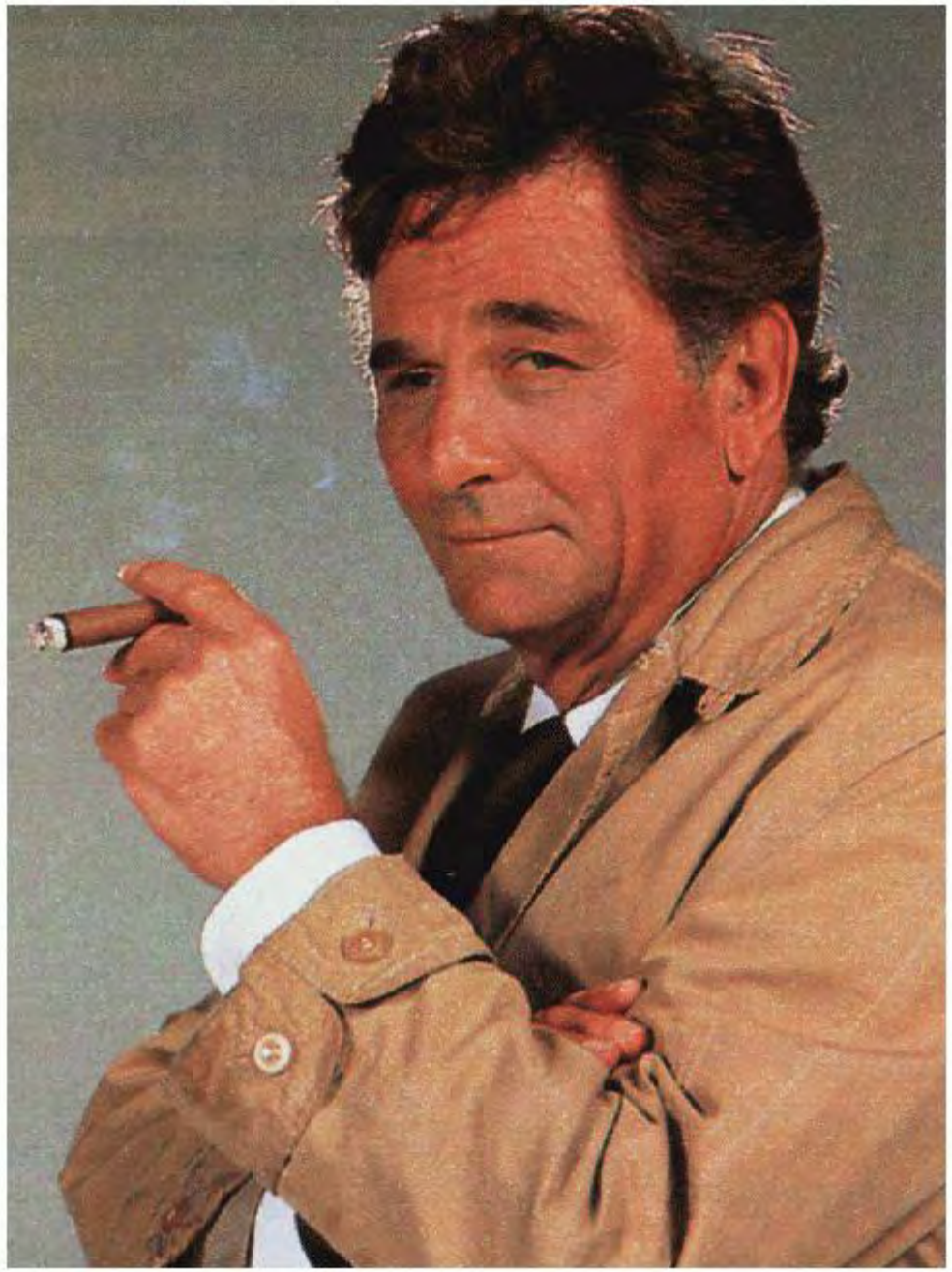
From that date it became one of the world's most celebrated wine.

# Negation

Negation is an innovation pattern in which a crucial component of a solution is reversed or suppressed. In this way the novel solution is distant from the existing ones.

Facing the dramatic crisis of the circus show, the Cirque du Soleil eliminated the single most important asset of circus companies- living animals.
Cirque du Soleil is a circus without the circus.

Not all negations are innovations.
The successful innovator is able to identify exactly those dimensions of the existing solutions whose negation is the most productive.
The identification of this dimension turns out to be extremely difficult.



**Detective Colombo**

- He enters the scene of the movie quite late (in some cases 20 minutes after the start)
- The murder is shown at the very beginning
- The murderer is immediately evident to the public, since the scene in which he/she is acting is place at the beginning

- The suspense of the movie is entirely shifted on the intellectual ability of Colombo to place the murderer in contradiction

- Colombo looks shabby, absent-minded
- He wears an old raincoat and drives an old European car
- He speaks of his wife, but she never appears
- He takes notes in a creased notebook

Negation has been a powerful pattern of innovation in contemporary art.

Starting with the Impressionist revolution in France, and with the fin-de-siécle creative environment of Wien,
artists have explored the consequences of *negating* some of the most entrenched conventions of art.

Albrecht Dürer
*Leprotto* (1502)
Wien, Albertina Museum

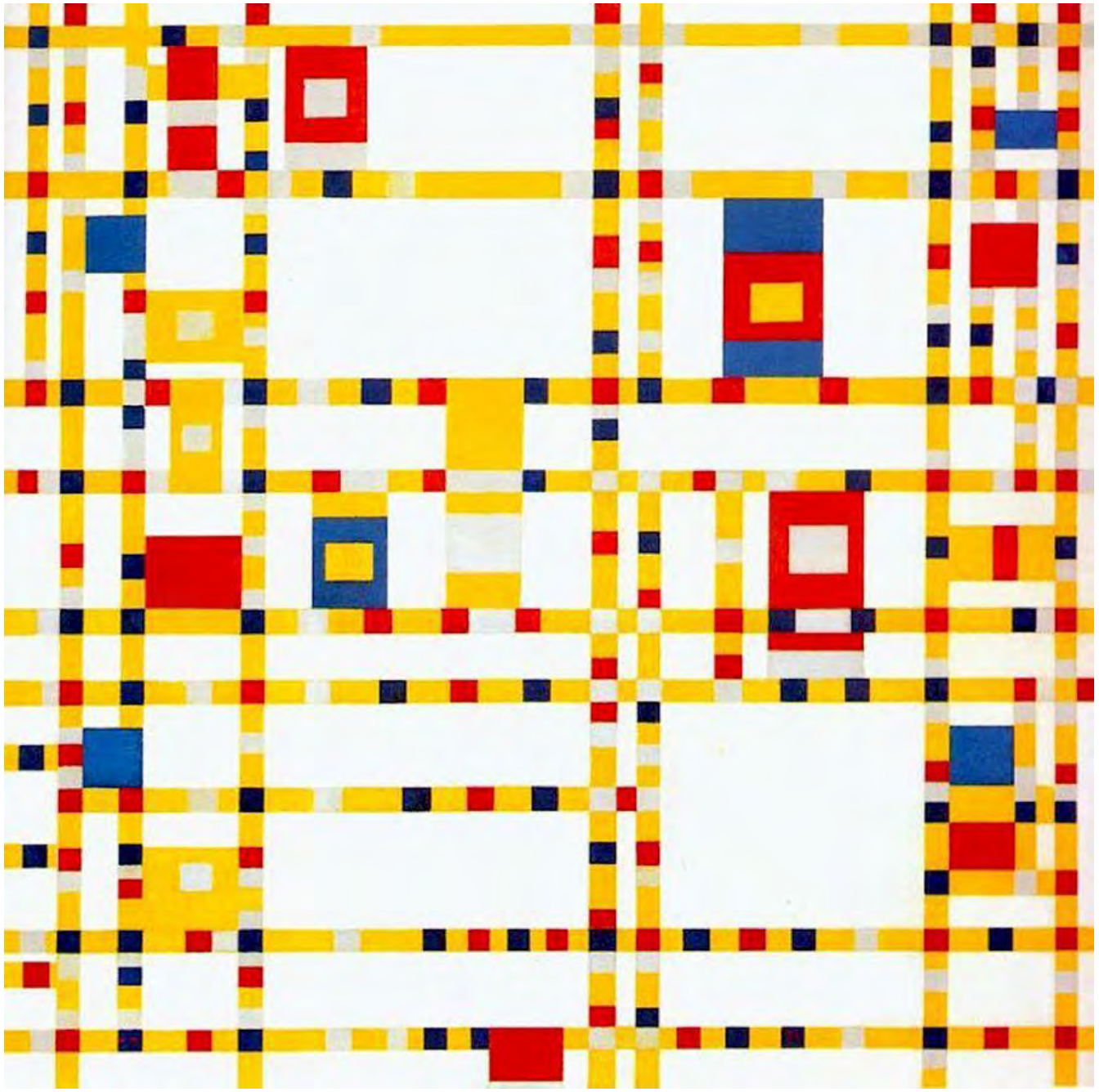
# Realism of the image

I asked myself… whether one might not simply reduce or ‘distort’ objects, but do away with them altogether.

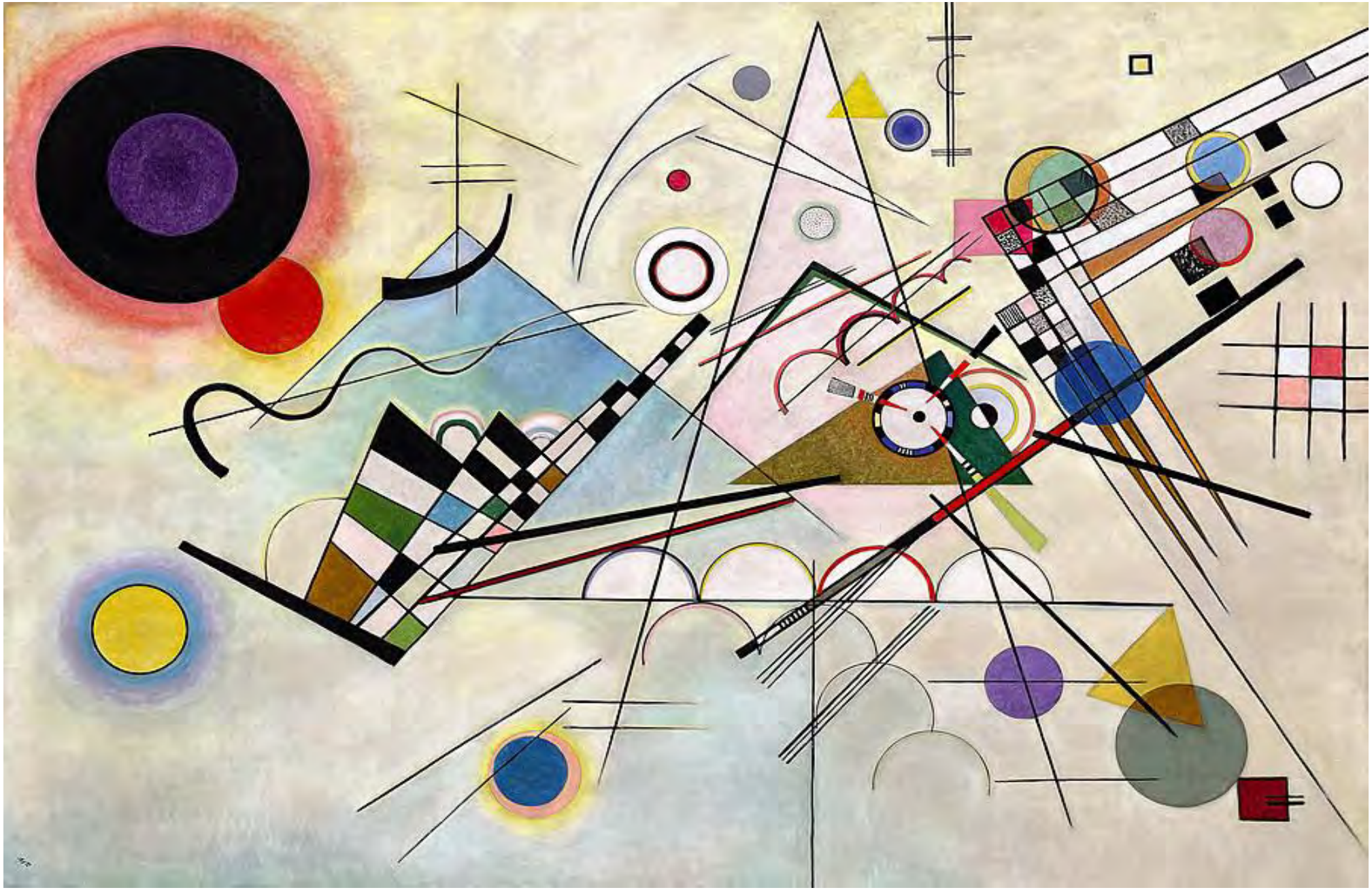
Vassily Kandinsky

Suprematism would create symbols directly from abstract elements, «the formation of signs instead of the repetition of nature, flowing from our creative brain».

Kazimir Malevich



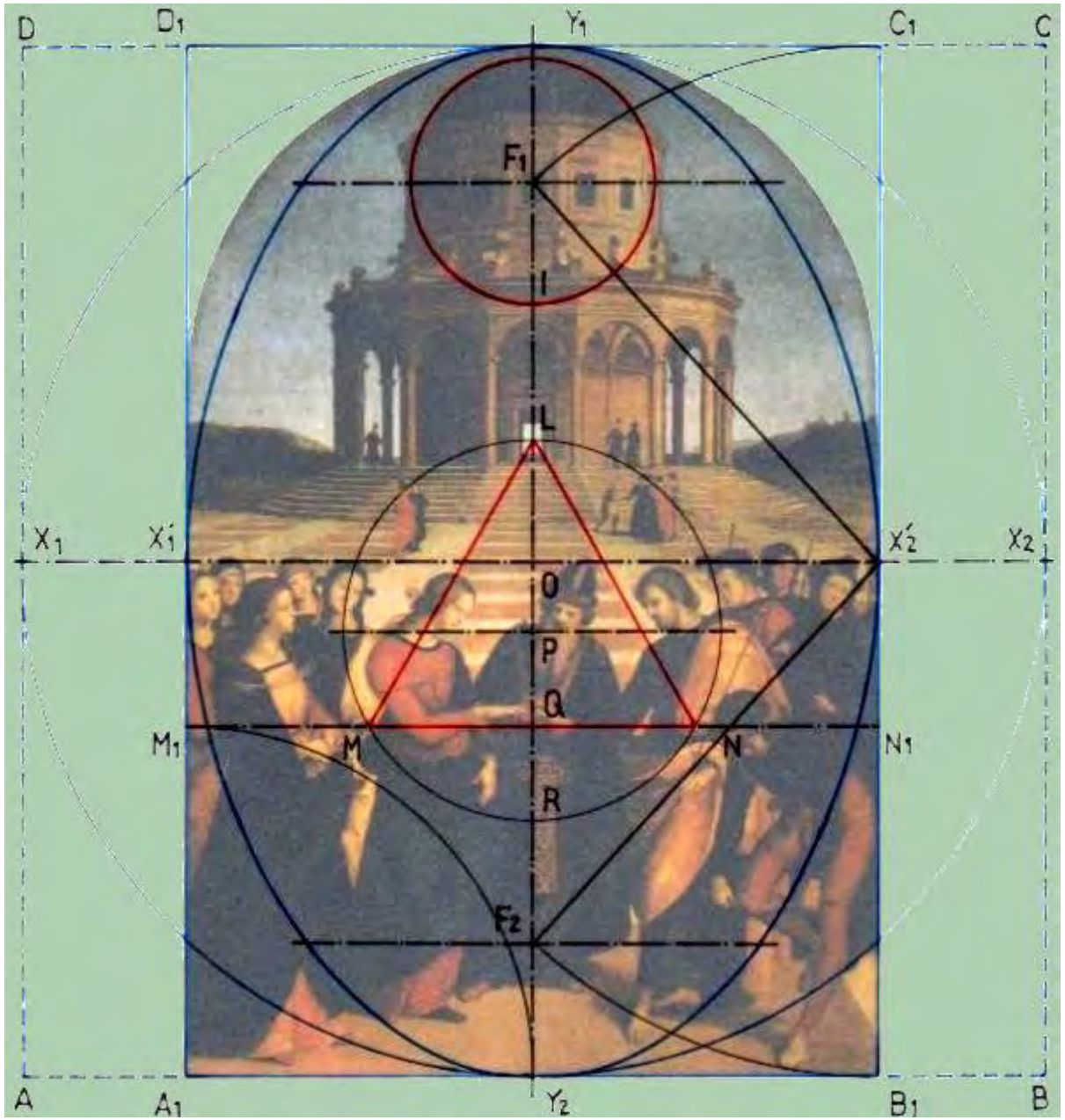
Pietr Mondrian
*Broadway Boogie-Woogie* (1942-1943)
New York, Museum of Modern Art



Vassily Kandinsky
*Composition VIII*
(1923)
New York,
Guggenheim
Museum

Anonymous. *Perspective on a city* (1475-1480). Urbino, Galleria Nazionale delle Marche.

Raffaello Sanzio
*Lo sposalizio della Vergine* (1504)
Milano, Pinacoteca di Brera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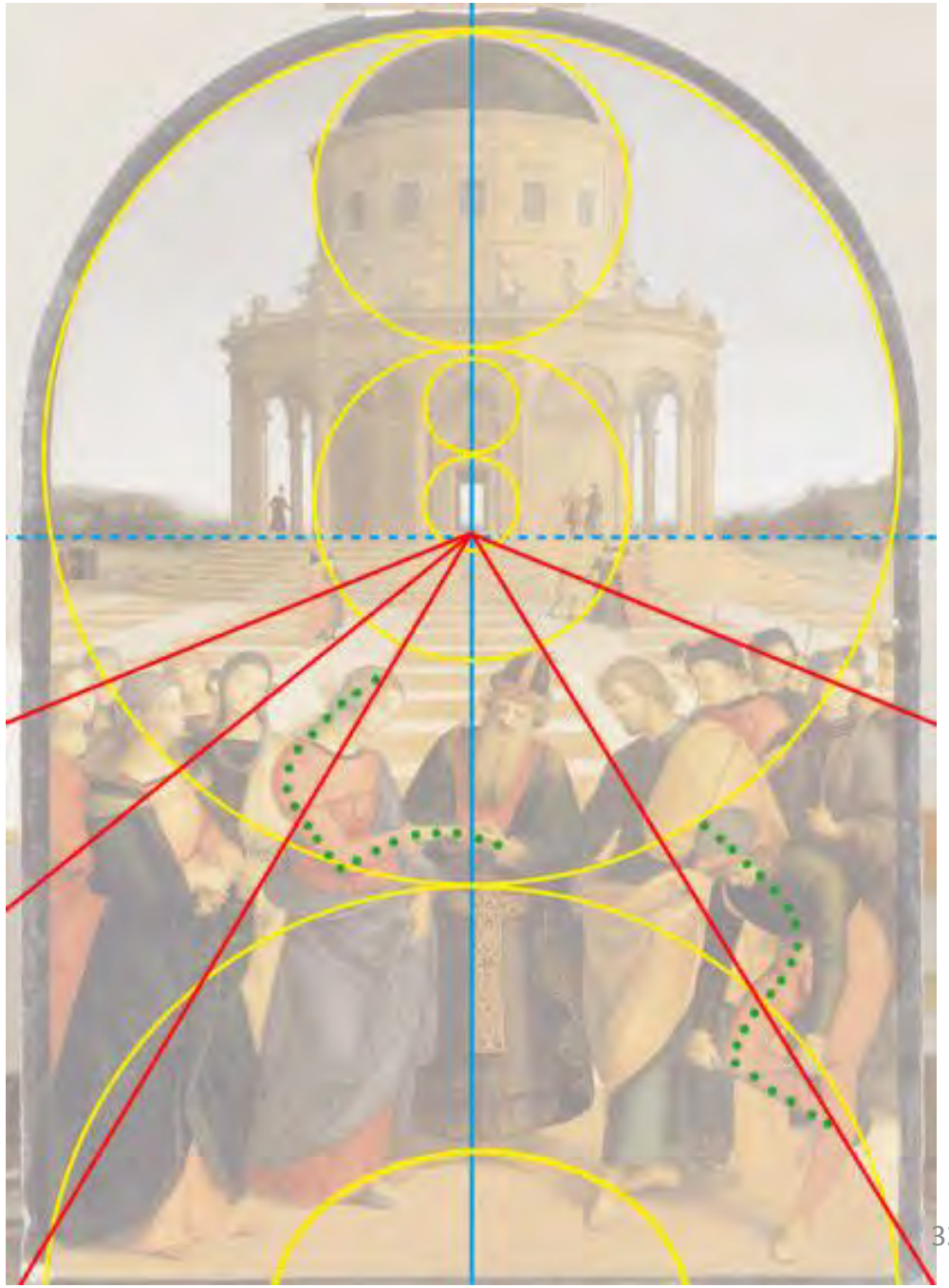
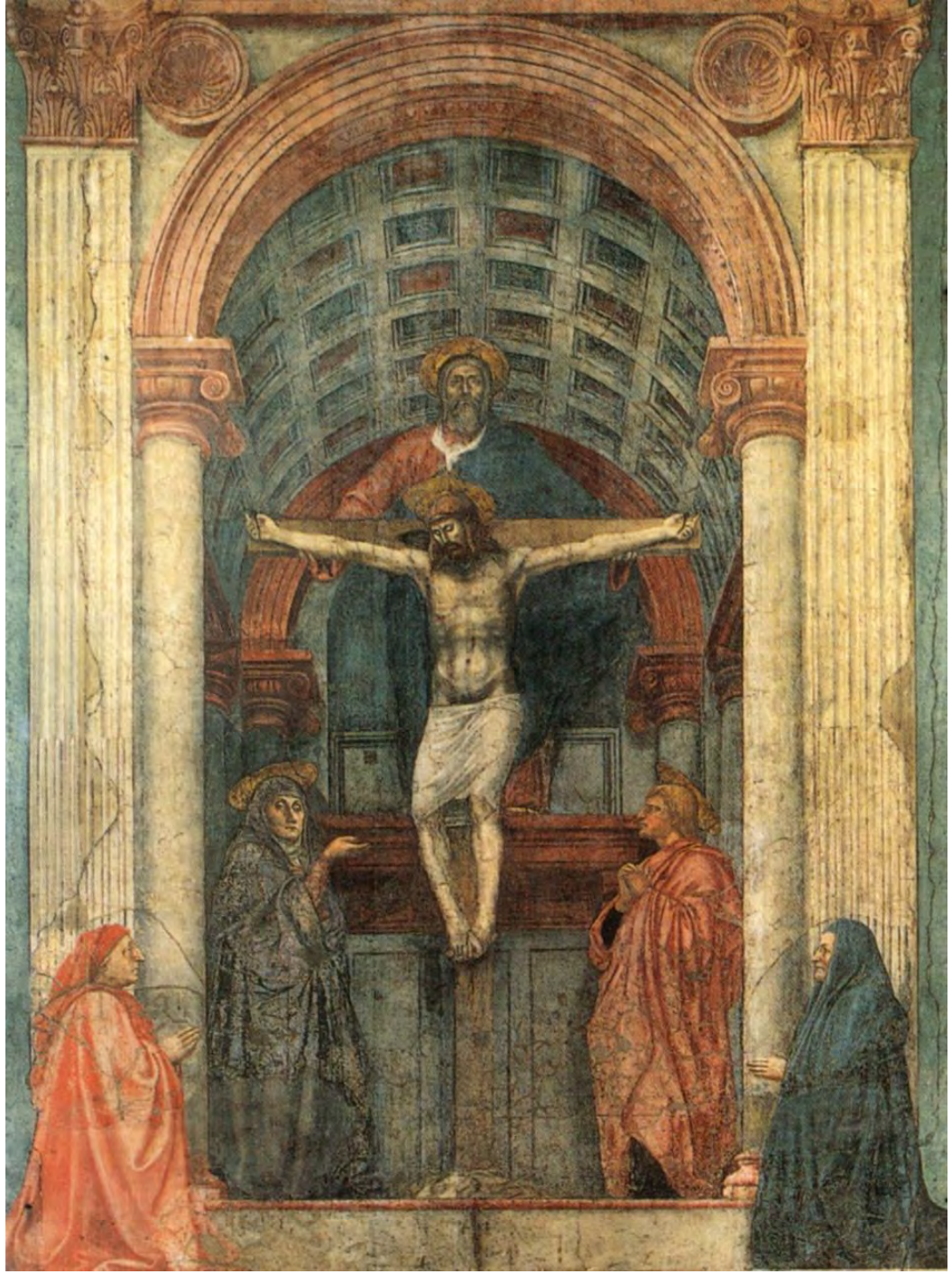
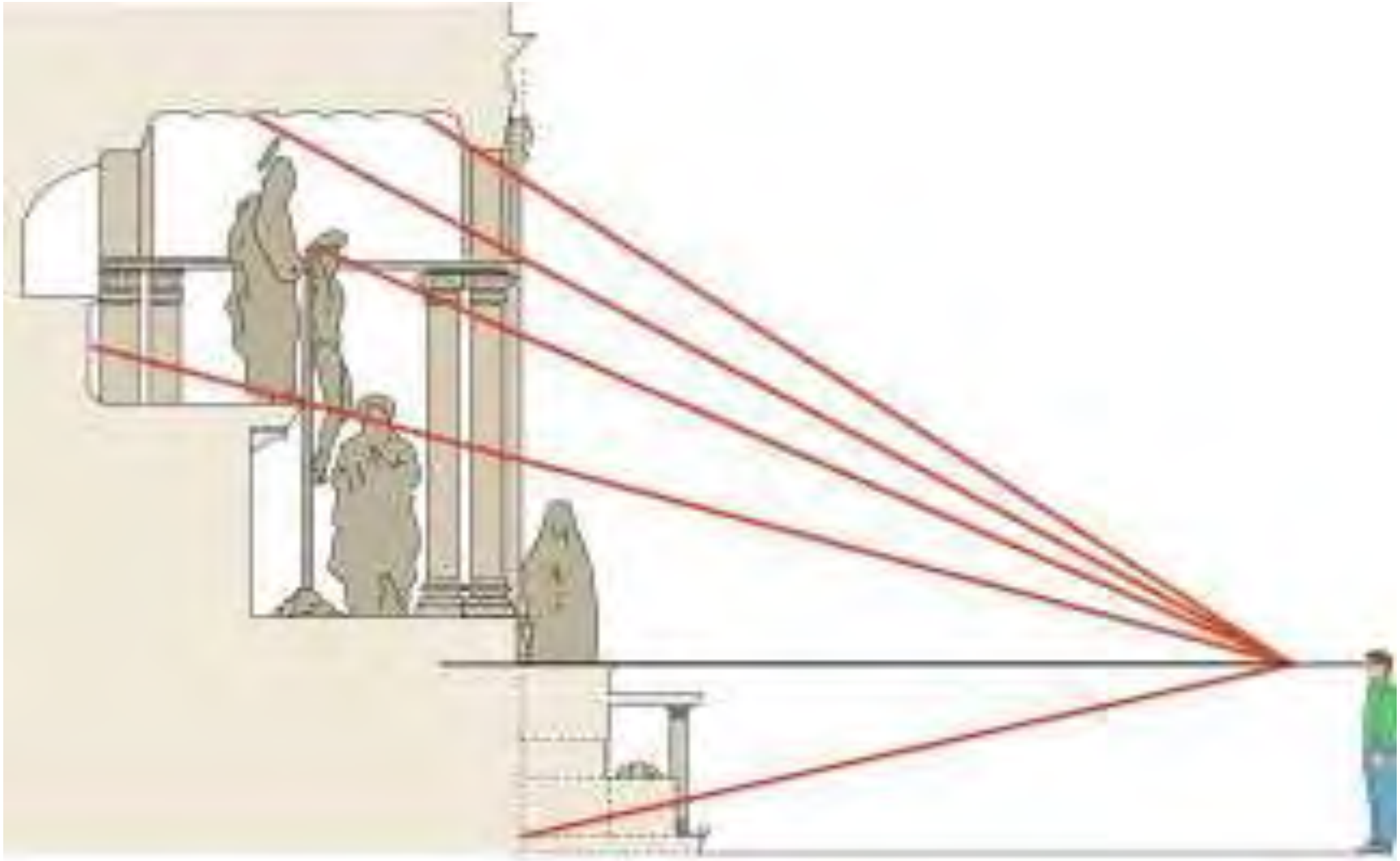




Masaccio
*Trinità* (1427-1428)
Firenze, Santa Maria Novella



# Central perspective

It is as if someone spent his life drawing profiles and believed that man was one-eyed.

George Braque

George Braque
*Violino e candela (1910)*
New York, Museum of Modern Art

Picasso
*Les demoiselles d'Avignon*
(1907)
New York, Museum of Modern Art

Giotto*, Ascensione al cielo* (particolare) (1303-1304). Padova, Cappella degli Scrovegni

# Representational nature of color

Here are the ideas of that time: Construction by colored surfaces.
Search for intensity of color, subject matter being unimportant.
Reaction against the diffusion of local tone in light. Light is not suppressed, but is expressed by a harmony of intensely colored surfaces.

By removing oneself from the literal representation of movement one attains greater beauty and grandeur.

Henri Matisse

Matisse realized «that one could work with expressive colors that are not necessarily descriptice colors» (Jack Flam)

Henri Matisse, *Icaro (Figure VIII da «Jazz»)* (1946). Paris, Centre Pompidou

Henri Matisse, *La Gerbe* (1953). Los Angeles, Hemmer Museum.

Michelangelo
*Schiavo barbuto (Prigione)*
(1523-1534)
Firenze, Galleria dell'Accademia

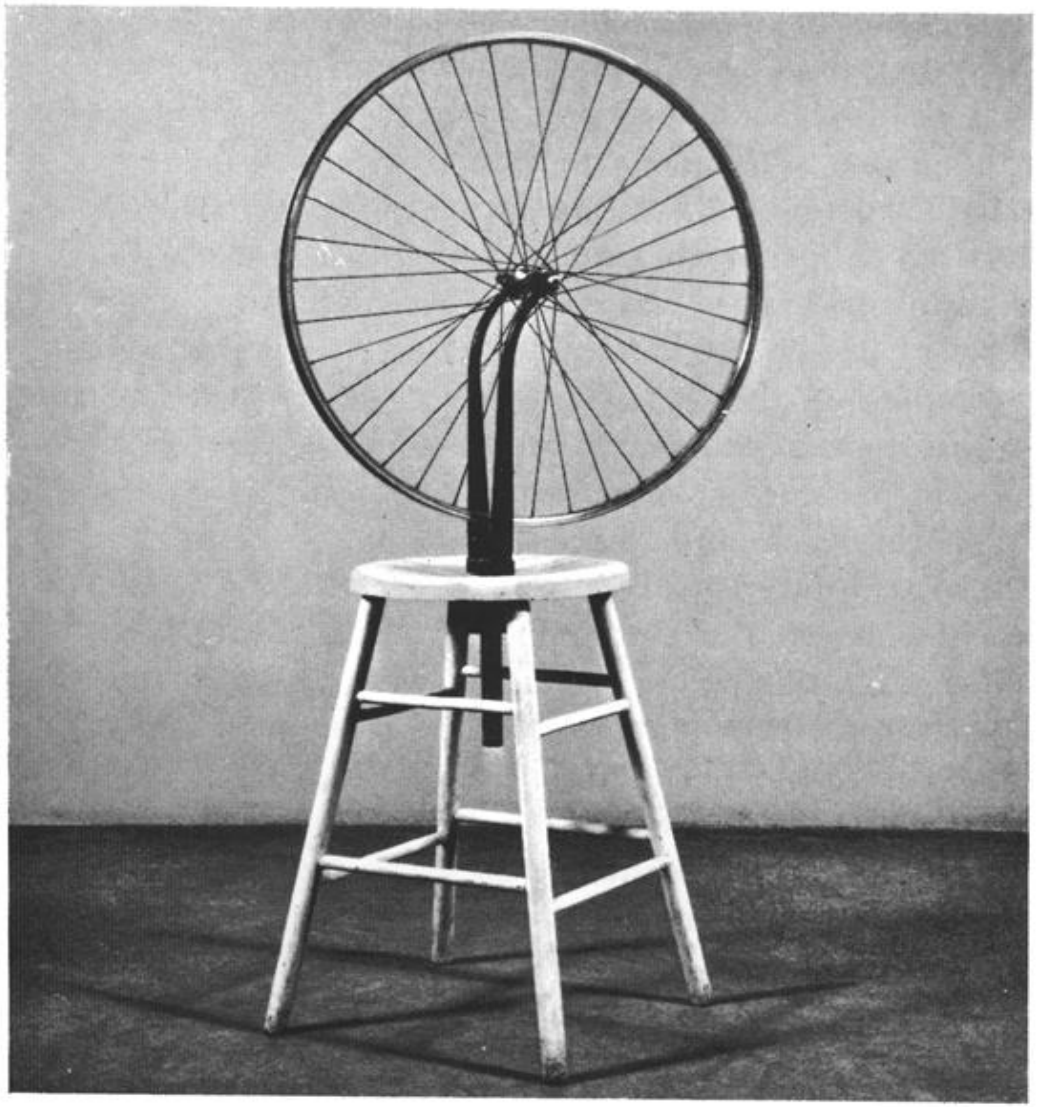
Michelangelo
*Atlante (Prigione)* (1523-1534). Firenze, Galleria dell'Accademia

# Work of art

Can one make works which are not works of ‘art’?

The readymade can be seen as a sort of irony, because it says here it is, a thing that I call art, I didn’t even make it myself. As we know art etymologically speaking means to ‘make’, ‘hand make’, and there, instead of making, I take it readymade. So it was a form of denying the possibility of defining art.

Marcel Duchamp



Georges Duchamp, *Roue de bicyclette* (1913). New York, The Museum of Modern Art

Man Ray
*Cadeau* (1921)
The Vera and Arturo Schwarz Collection of Dada and Surrealist Art


George Duchamp
*Fountain* (1917)
The Vera and Arturo Schwarz Collection
of Dada and Surrealist Art

Piero della Francesca
*Federico da Montefeltro* (1465*)*
Firenze, Uffizi

# Shape of the painting and orientation in space

My paintings do not have a center.

When I am in my painting, I am not aware of what I'm doing.

The easel picture is a dying form, and the tendency of modern feeling is towards the wall picture or mural.

Jackson Pollock

Jackson Pollock, *Convergence* (1952). New York, The Pollock-Krasner Foundation/Artists Rights Society (ARS).

Jackson Pollock and the dripping technique

Sandro Botticelli
*Nascita di Venere* (particolare) (1484)
Firenze, Uffizi

# Reproduction

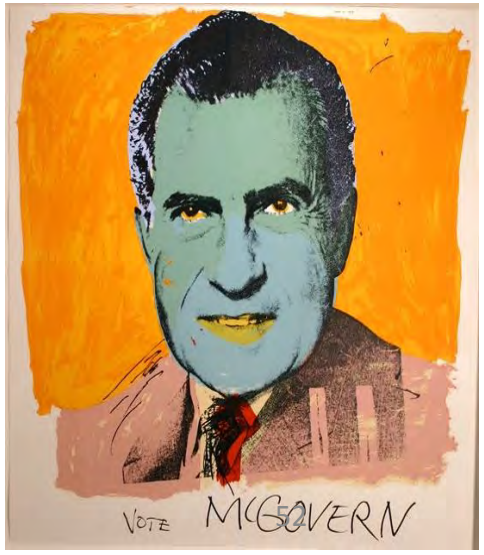
The reason I am painting this way is that I want to be a machine.

I think somebody should be able to do all my paintings for me.

Why do people think artists are special? It’s just another job.

Andy Warhol

Andy Warhol
*Marilyn* (1967)
New York, The Andy Warhol Foundation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# Negation heuristics in XX century art

| | | |
|---|---|---|
| **Image** | Realism | Abstraction |
| **Perspective** | Central | Multiple |
| **Colour** | Descriptive | Expressive |
| **Work of art** | Manual work of the artist | Ready-made |
| **Shape** | Table | Mural<br>Dripping |
| **Reproduction** | Original or unique work | Mechanical reproduction |

**Other examples of negation heuristics in contemporary art**

**Theater**

- Unity of action, of time and space (Aristotle, *Poetics*)
- After the translation of *Poetics* in latin in XVI century,

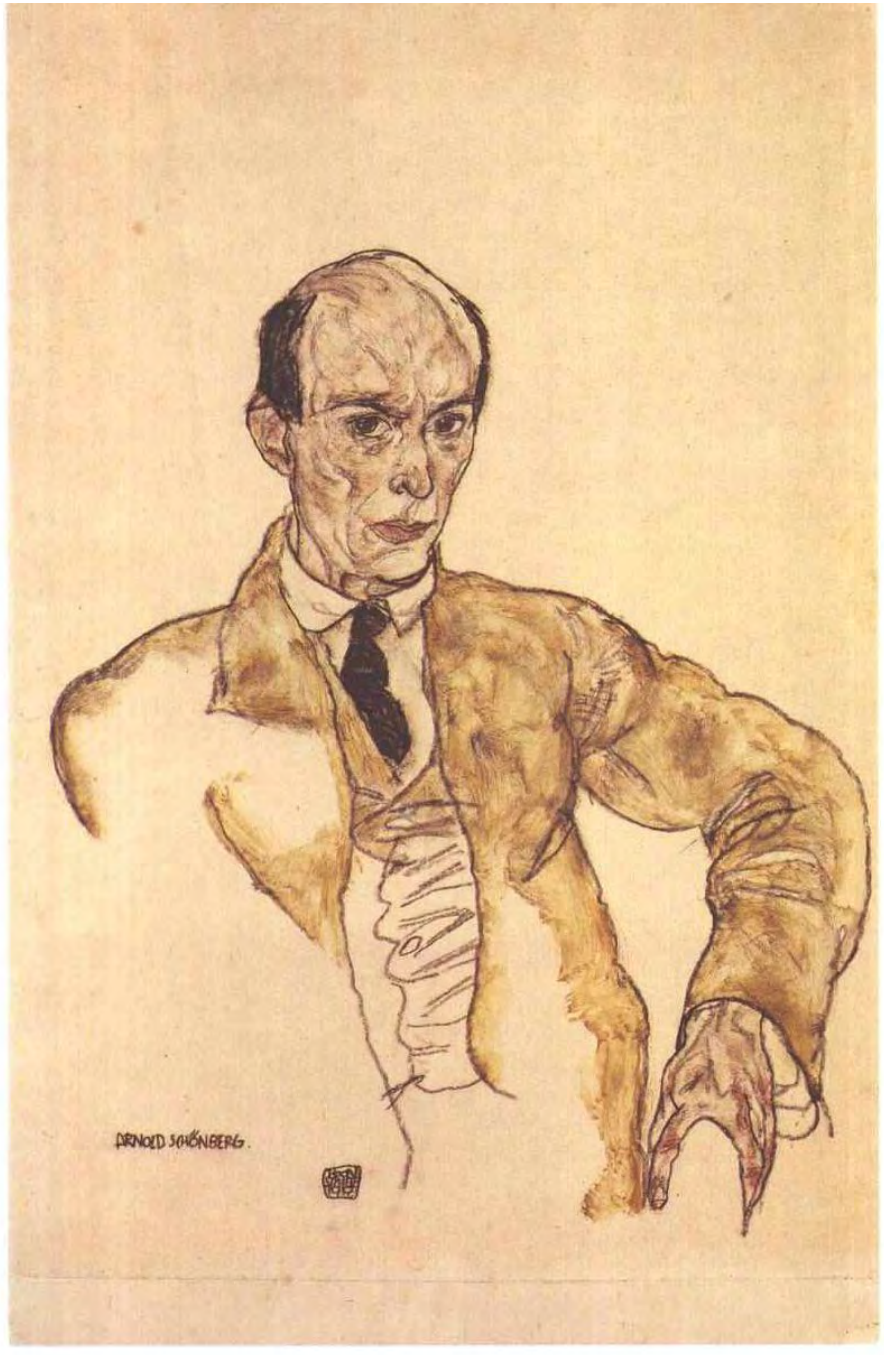
the three aristotelian units were assumed as a canon of beauty

- Ibsen (*Peer Gynt*)
- Beckett (*Waiting for Godot*), Ionescu (*La cantatrice chauve*)

*La cantatrice chauve* (1950)

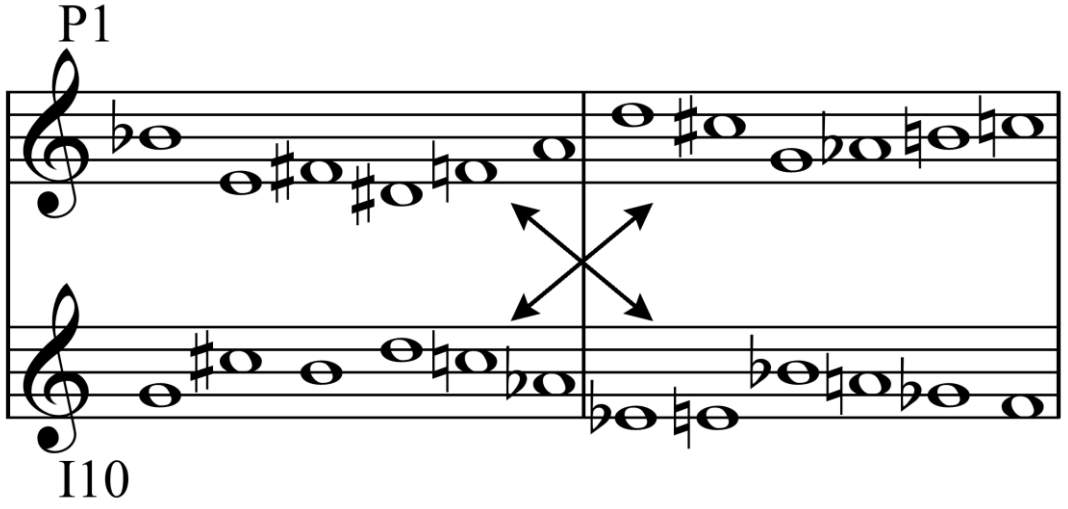

*En attendant Godot* (1952)

*Peer Gynt* (1867)




"I have made a discovery which will ensure the supremacy of German music for the next hundred years“ (Arnold Schönberg)

A-tonality
Twelve tone composition:
“the twelve pitches of the octave are regarded as equal, and no one note or tonality is given the emphasis it occupied in classical harmony”.




Egon Schiele, *Arnold Schönberg* (1917)

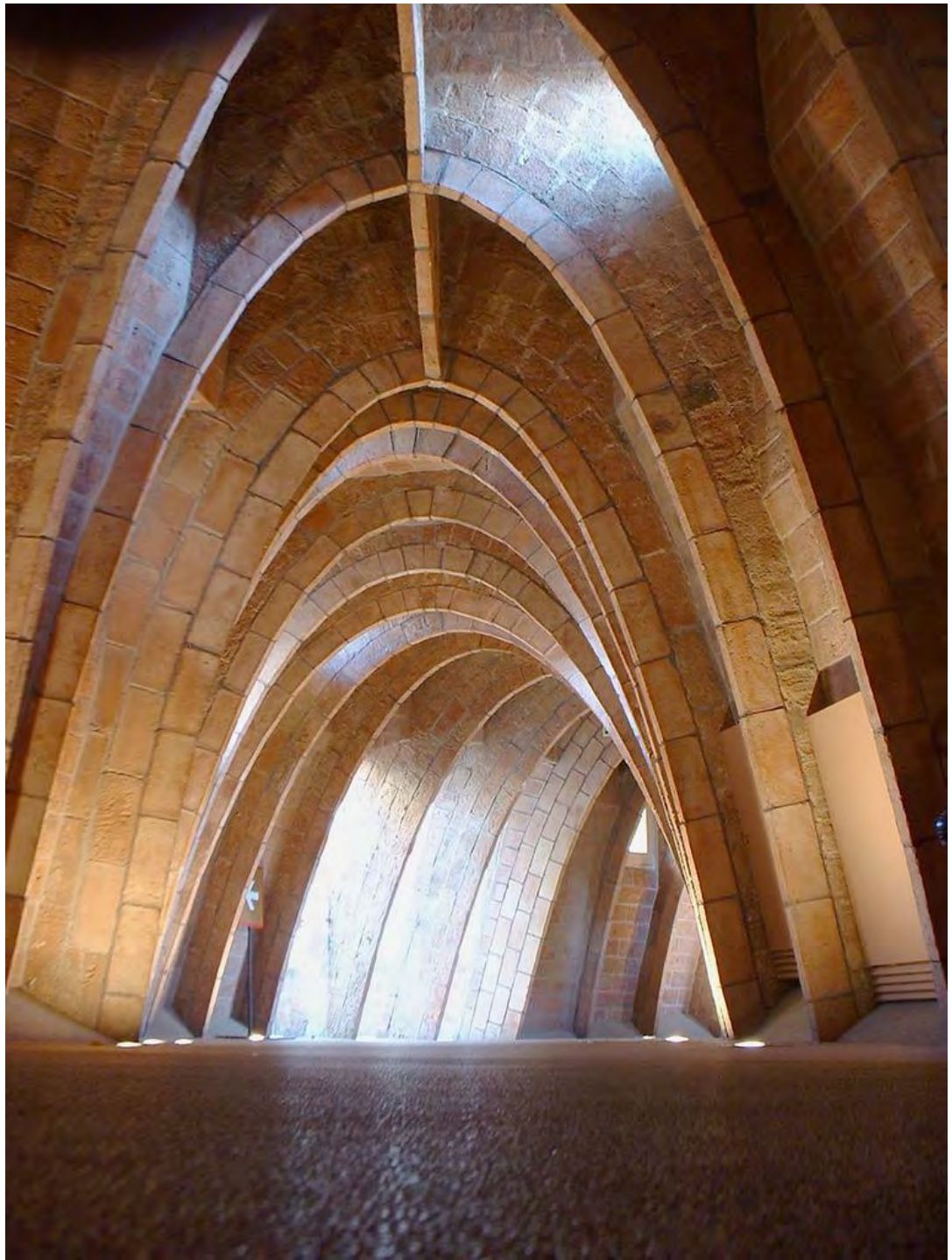
# Analogy

With the analogy we bring a solution found in a given context into a completely different one. In the new context the solution will be original, often radically new.

The arrival of patients in the surgery room in a hospital may be seen as the arrival of containers in a harbour-
then principles from logistics can be applied to reduce waiting times and to increase the utilization rate of the infrastructure.

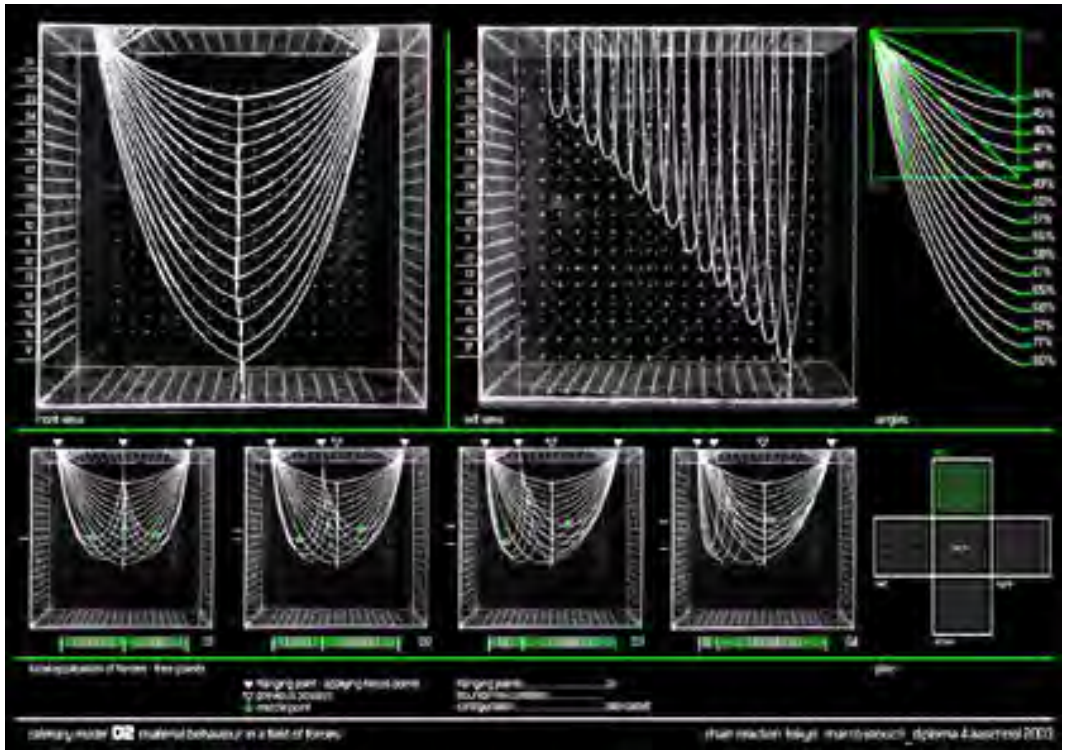
Analogical thinking requires the identification of a deep pattern underlying the surface differences.

Finding a right analogy is a surprisingly difficult cognitive task.



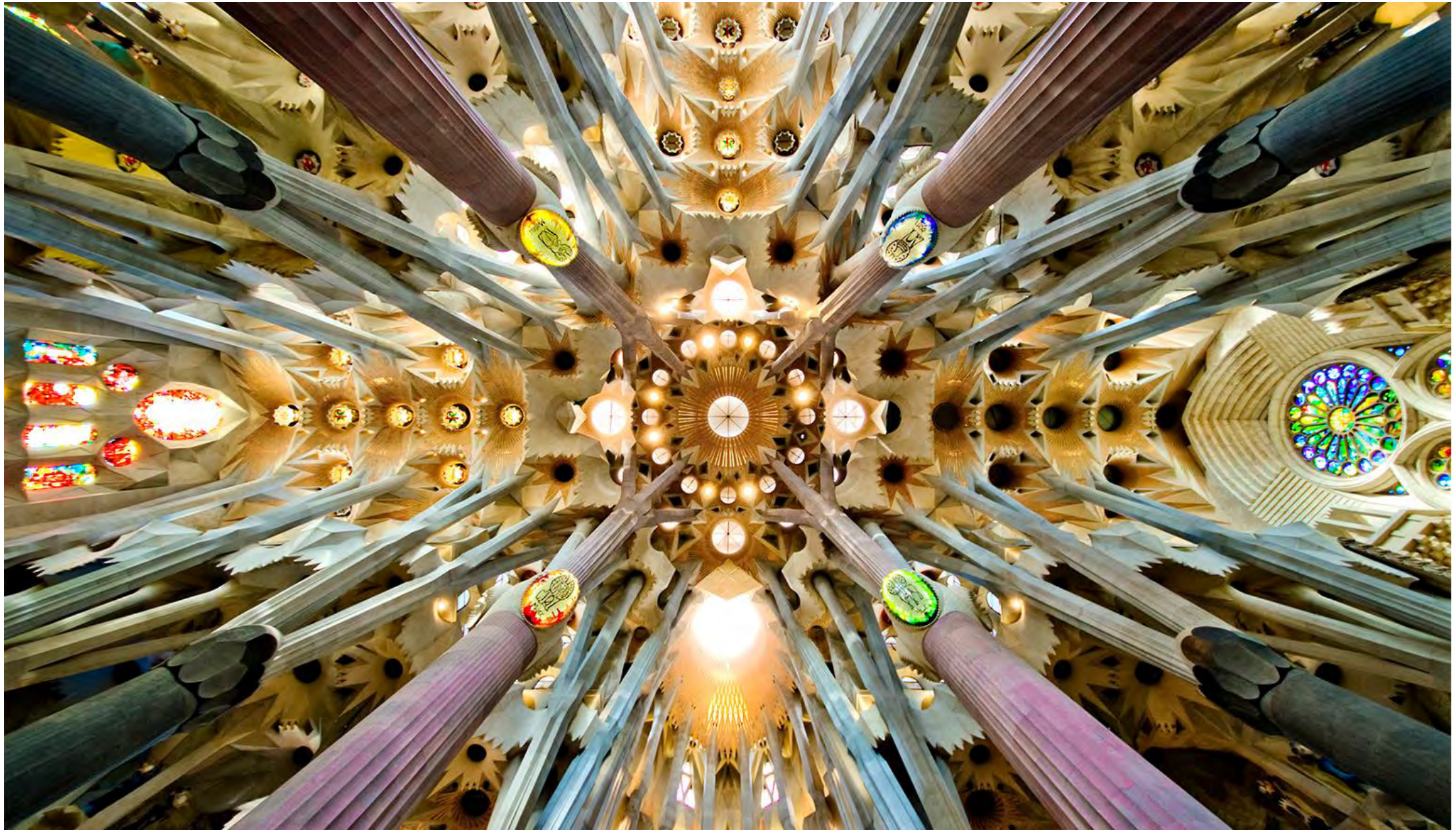
Antoni Gaudì, *Casa Mila (La Pedrera),*
Barcelona

Geometric properties of the catenaria arch



Source: Architettura.it

La Pedrera, Espai Gaudì



Antoni Gaudì, Archivault of the *Sagrada Familia*, Barcelona.

What do they have in common?

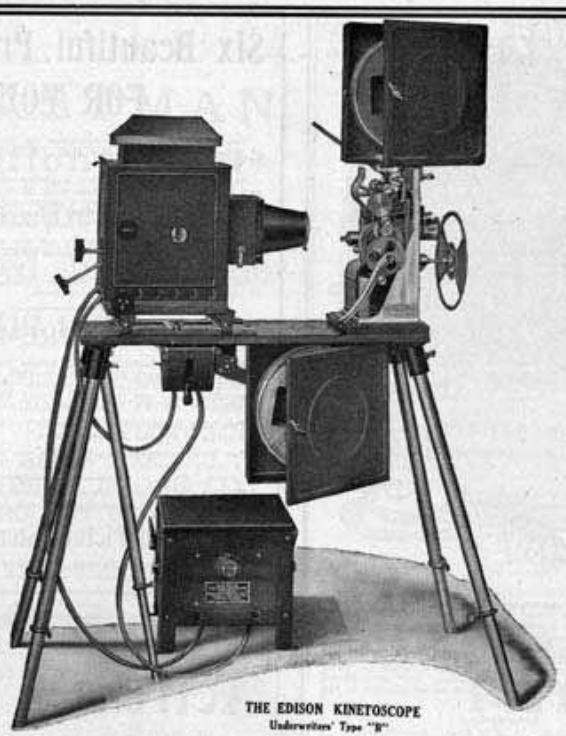

The Japanese engineer Eiji Nakatsu had to study in the 1990s how to reduce the acoustic pollution produced by high speed trains.

In entering the narrow tunnels between Osaka and Hakata the trains produced vibrations and noise.
He realized the noise was produced by a sudden change in the resistance of the air.

Nakatsu had previously studied the aerodynamics of birds. He asked whether there were birds that experienced a sudden change in the resistance.

It turned out that the kingfisher moved from low resistance (air) to high resistance (water) without producing a splash.

The Shinkansen trains were equipped with a 15mt beak, which reduced air pression by 30%.



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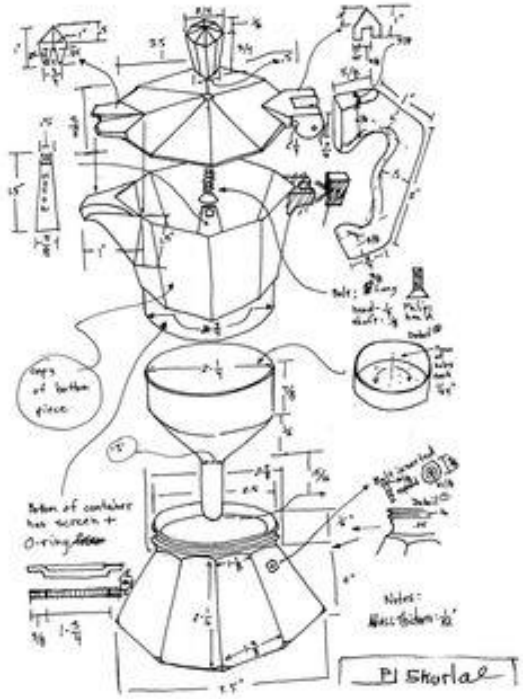
- Risk of burning the skin in the turning of the machine upside down

- Excess consumption of coffee powder



# Alfonso Bialetti

Owner of a foundry in Piedmont, after a worker experience in France.

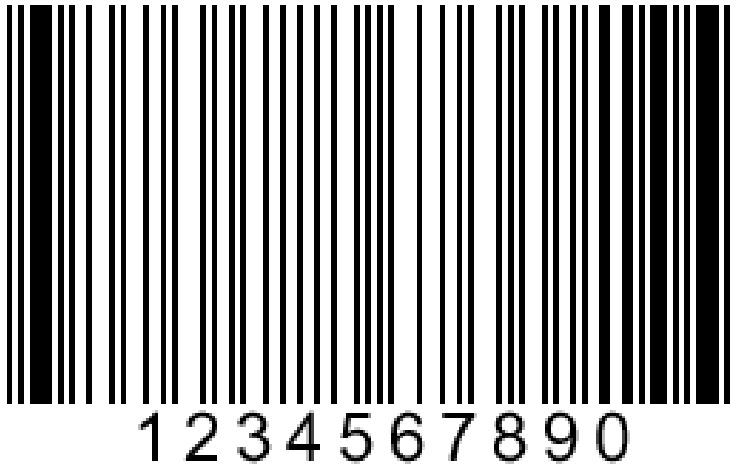
He observed women washing the clothes in the Orta Lake, using a washhtub with a hole in the bottom. Below the washtub a container included ash and soap.

After the contact with water, the mix of ash and soap boiled, producing foam and moving upward in the washtub.

Bialetti asked whether the same principle could be applied to the percolation of coffee.

He adopted an aluminium casting, with an appearance close to silver.

Aluminium porosity allowed the machine to absorb the flavour of the coffee powder.




Issues in product coding
- Lack of standards
- Errors in manual coding of products
- Huge volumes

1952
Patent registered by two students, Norma Woodland and Bernard Silver


Main idea
- Identification of products via a unique mapping of a sequence of vertical white and black lines
- Similar to a Morse code

Alan Huberman, head of a chain of department store, persuaded a coalition of department stores to create a standardization commission

UPC, Universal Product Code
Improvement of 1952 patent by IBM.

1974 first purchase using the bar code (Wrigley chewing-gum).

Maltese Falcon

Sailing Yacht by Perini Navi (2006)

… where did sailings disappear?

Before entering the yacht production, Fabio Perini was a world leader in paper converting equipment.
Fast and reliable rolling is a crucial performance of equipment.

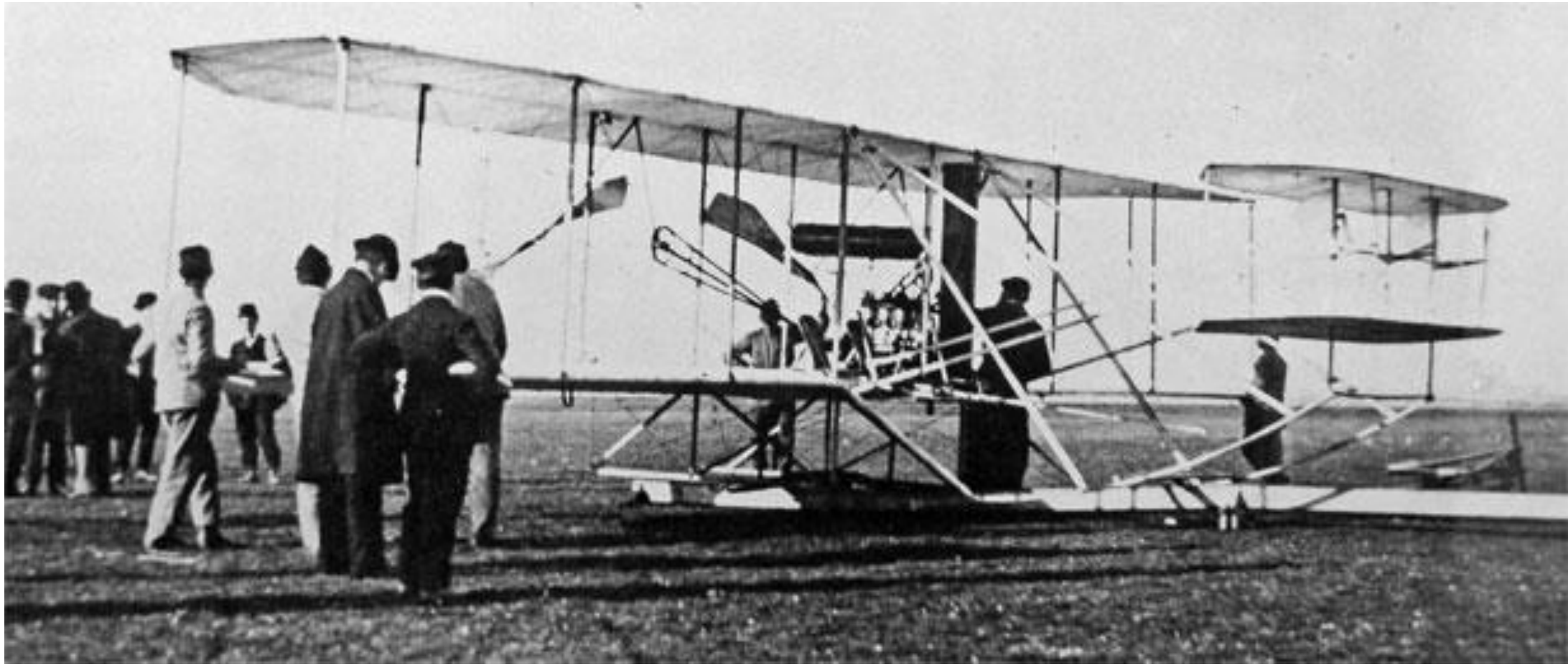
From rolling paper coils to rolling sailings.

# Abstraction

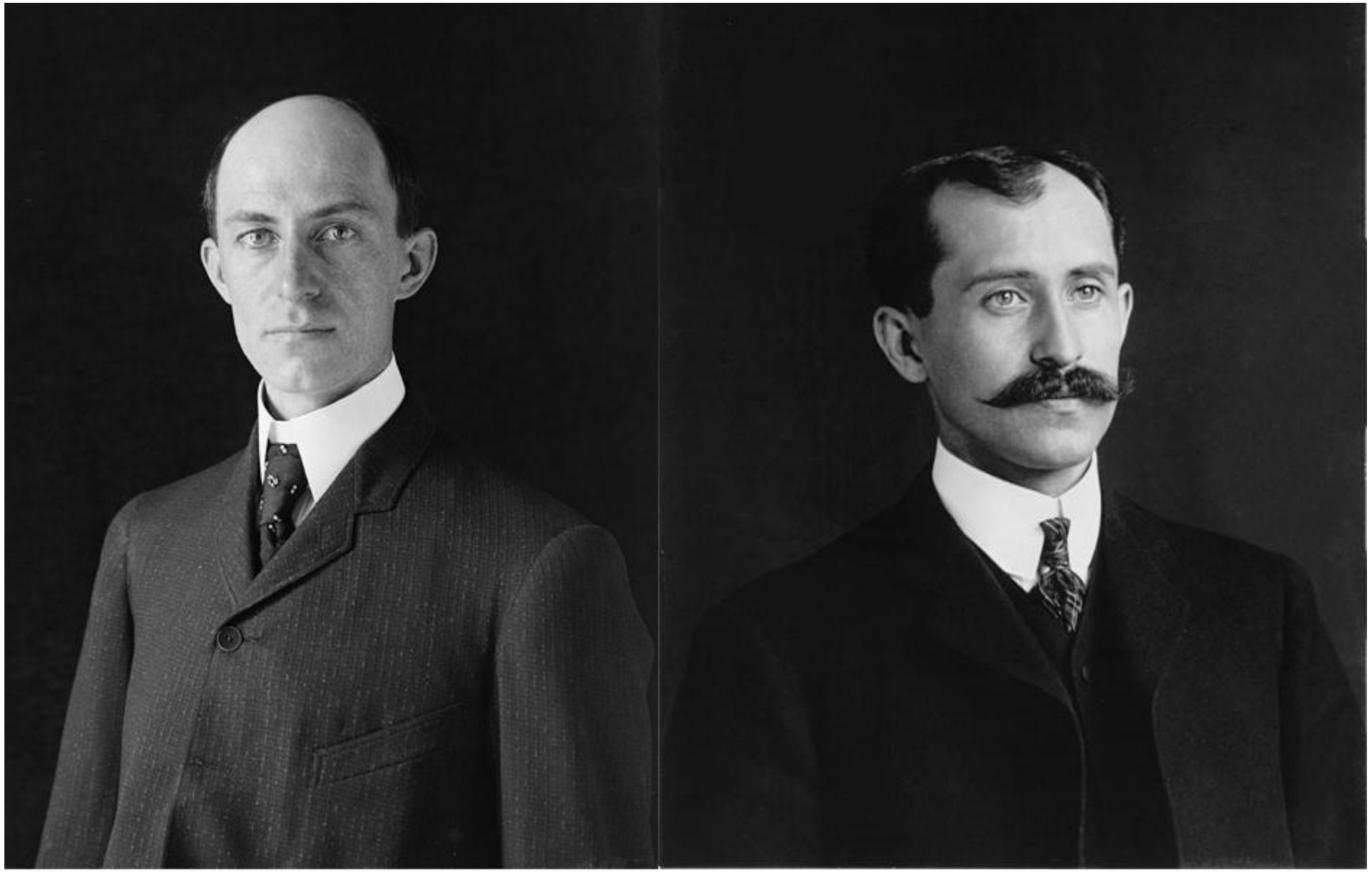
Abstraction involves the search for the general conditions for a solution to take place

It does not search solutions close to existing ones.

It forces the innovator to build up a general and abstract representation of the problem, investigating the conditions for any possible solution to come to life.



First flight of Wright Brothers, Kitty Hawk, North Carolina, 17 December 1903



Wilbur and Orville Wright

The glider produced in 1902.
The shape of the wings was modified repeatedly after tests in a newly created small widn tunnel.
In this year the Wright Brothers carried out between 700 and 1000 flights.

The Flyer was a modified glider

The modifications were
- a petrol engine for the propulsion
- a system to control the flight by manoeuvering a tail

The Wright Brothers were the first to build up an abstract representation of the conditions for controled flight, by decomposing the problem into
- structure
- propulsion
- control

F-117 Nighthawk (1981-2008)

# Stealth aircraft

- Reduce reflection/emission of radio, infrared, visible light, radio-frequency spectrum and audio
- Minimal Radar Cross Section (RCS)
- This makes the aircraft intrinsically unstable along all three axes, which requires constant flight correction through fly-by-wire systems

How was the design of stealth aircraft possible?

Denys Overholser, a mathematician, was working in the Skunk Works team of Lockeed during the 1970s.
He decided to adopt a mathematical model developed by a Russian scientist, Petr Ufimtsev, which in origin had no relation to aerodynamic design.
The mathematical model predicted that the radar waves could have been radiated away from the aircraft if the geometry were based on flat panels (facets), similar to the faces of diamonds.
However, this design would have made the aircraft unstable.

The Skunk Works team designed a model called “the Hopeless Diamond”.
It turned out to be invisible to radar.

Rich and Janos, *Skunk works*, Little Brown & Co., 1994

# Putting several patterns together


This is the product that will satisfy those young people who want to listen to music all day.
They'll take it everywhere with them, and then they won't care about record functions.

Akio Morita, 1979

**Abstraction-** what is the abstract configuration of a product that will allow «to listen to music all day»?

**Negation-** no recording function

**Recombination-** a playback function (disc player) to be combined with a portability function (battery) and to a hearing function (headphone)

## What do artists and innovators have in common?
## Are there common bases for creativity in art, science, and technology?

My answer is as follows.
Artists and innovators are similar in that they «see» something others do not see

- Artists see in the multidimensional space of **forms**
- Innovators see in the multidimensional space of **functions**

The function space describes
- **possibility conditions** (what cannot be done)
- **design principles** (what can be done)
- **system of use** (why it should be done)

# Resistance to innovation

1. Existing reality has a privilege- it has not to justify itself

2. People think by categories

3. (…)

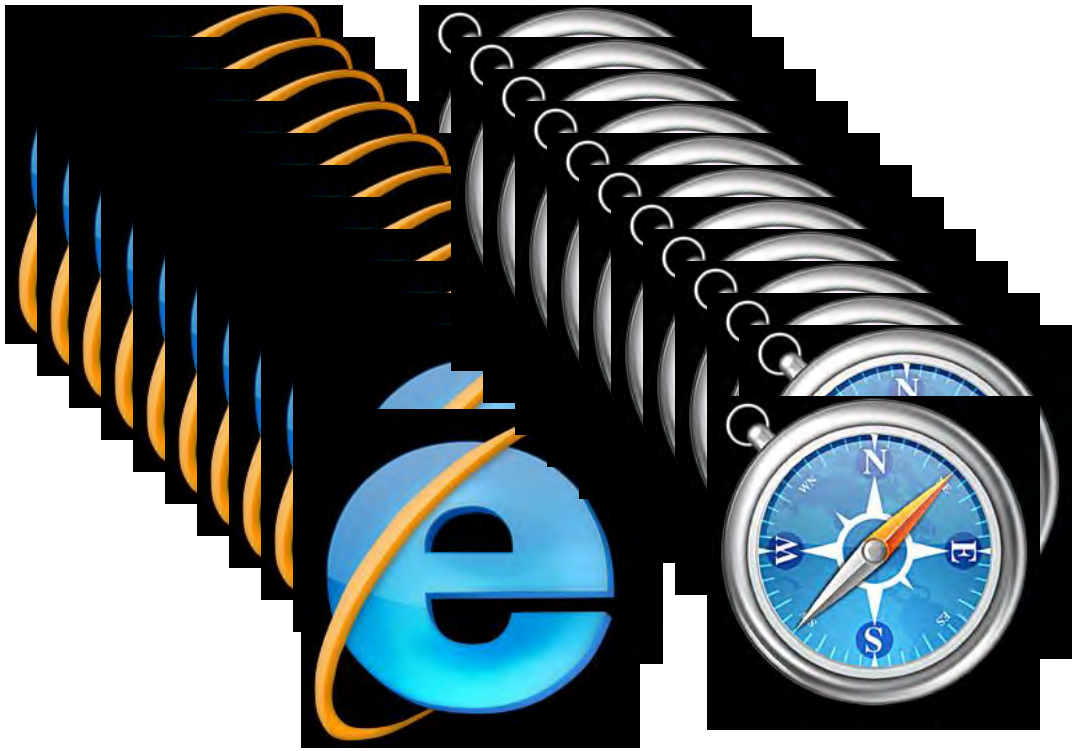

Is there a fundamental difference between these four browsers?

Not really.

Yet substantive research (>30,000 cases) showed that customer service agents using Firefox and Chrome (right) performed significantly better than those using Internet Explorer and Safari (left):

- higher sales
- customers happier
- call times shorter
- less likely to miss the work

Why?



Internet Explorer is built into Windows for PC users.

Safari is pre-installed in the Mac.

Almost 2/3 of the customer service agents used the default browser, without asking whether a better browser was available.

In order to use Firefox or Chrome you have to take some initiative and search for a better solution.
These people approached the work in the same way, looking for novel ways of addressing the problems of their customers.

They were able to overcome the «system of justification».


# The Swiffer story

Procter & Gamble asked a market research company to study a way to eliminate the thin layer of dust that remains over the floor of houses.

When Continuum came up with the idea of Swiffer, it was initially rejected.

The committee that was overseeing the project was formed mainly by people from the detergent businesses.

P&G had asked a new detergent, at the end of the day.

Luckily enough (for P&G) the project was eventually approved. The Swiffer product lines account for more than 2bn $.


Swiffer
360°
DUSTERS


NEW
Swiffer
Dusters
5
Improved

# How to manage (your own) innovation

- Produce many (many) ideas
- Enjoy collaborative circles and Great Groups
- Look for feedback soon
- Transform constraints into opportunities
- Be flexible, adaptive and resilient
- Manage the risk portfolio
- Wait the right time
- Communicate effectively

# Produce many many ideas

If you want to be original, the most important possible thing you could do, is to do a lot of work. Do a huge volume of work.
**Ira Glass, producer of *This American Life***

The odds of producing an influential or successful idea are a positive function of the total number of ideas generated.
**Dean Simonton, professor of Psychology**

Original thinkers will come up with many ideas that are strange mutations, dead ends, and utter failures. The cost is worthwhile because they also generate a larger pool of ideas- especially novel ideas.
**Robert Sutton, professor of Strategy**

Nothing is more dangerous than an idea when it is the only one you have.
**Emile Chartier,** journalist, 1868-1951

Your first idea is wrong.
So, as quickly as possible, implement a careful plan to learn which of your assumptions are flawed.
**Rita McGrath**, professor of Entrepreneurship

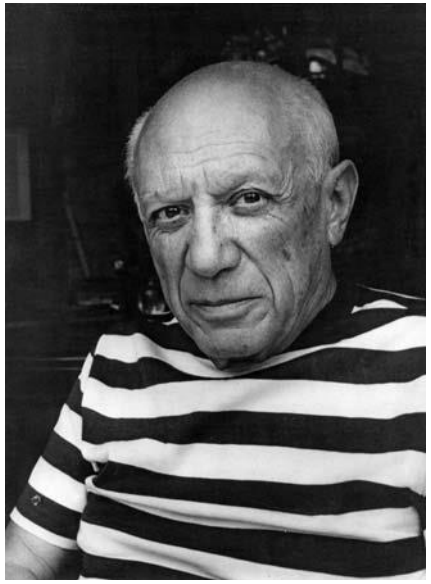
The only way to have good ideas is to have many.
**Albert Enstein**

**Shakespeare**
37 plays
154 sonnets

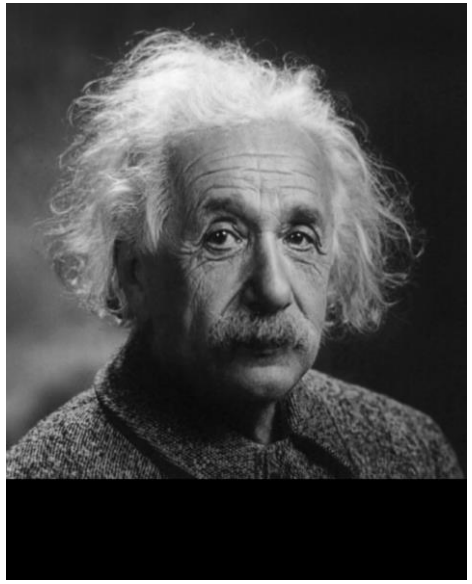
**Beethoven**
650 pieces

**Mozart**
600 pieces

**Bach**
- 1,000 pieces



**Picasso**
1,800 paintings
1,200 sculptures
2,800 ceramics
12,000 drawings



**Einstein**
248 publications

You gotta kissa lot of frogs before you find a prince
Dean Kamen

# Enjoy collaborative circles and Great Groups

Innovation greatly benefits from the experience of friendship

Innovation is a team enterprise, not a Lone Ranger business

# Collaborative circles

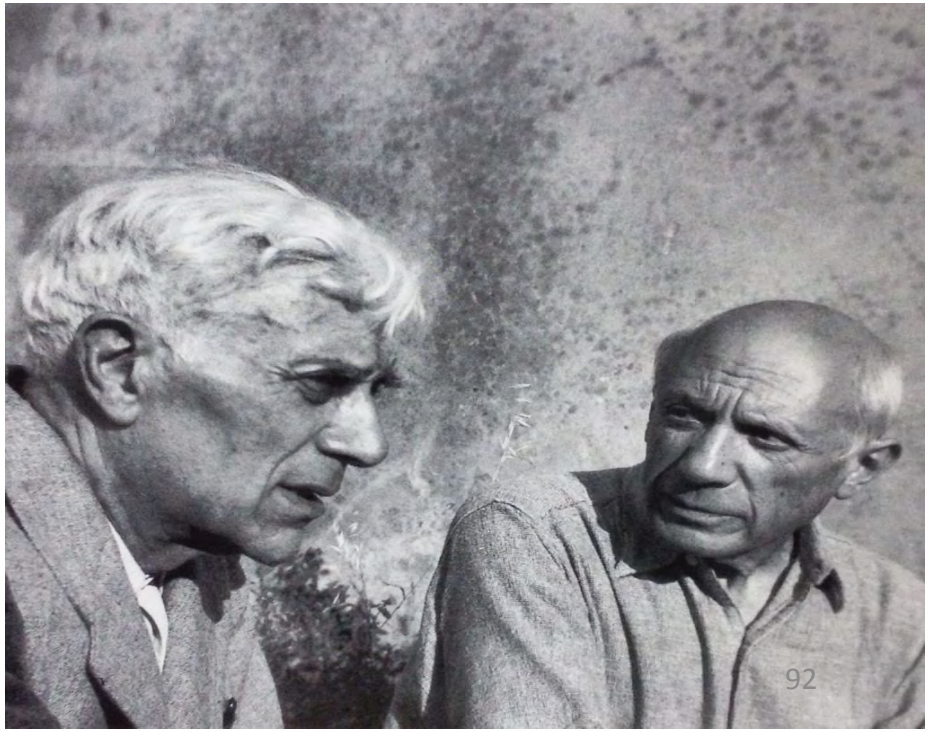
Innovation often flourishes from a personal friendship between the innovators.

Monet, Manet, Degas and Renoir
Freud and his friends
Social reformers Elizabeth Cady Stanton and Susan B. Anthony
Lewis, Tolkien and the Inklings
The Fugitive poets
Conrad and Maddox Ford

Picasso and Braque (1909-1914)

Almost every evening, either I went to Braque's studio or Braque came to mine. Each of us had to see what th other had done during the day. We criticized each other's work.
A canvas wasn't finished unless both of us felt it was.

Pablo Picasso

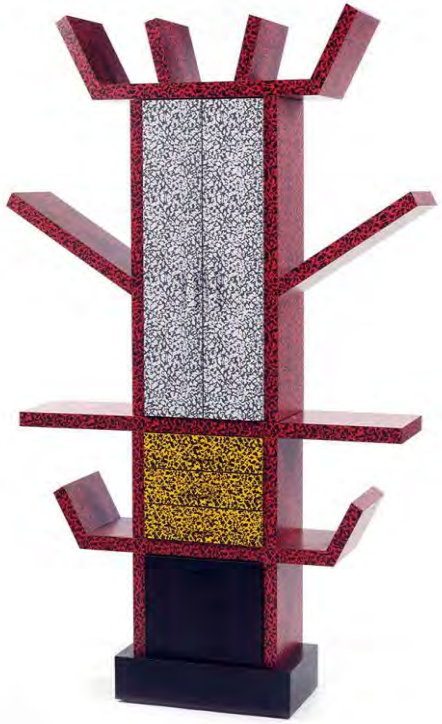


# Collaborative circles/2

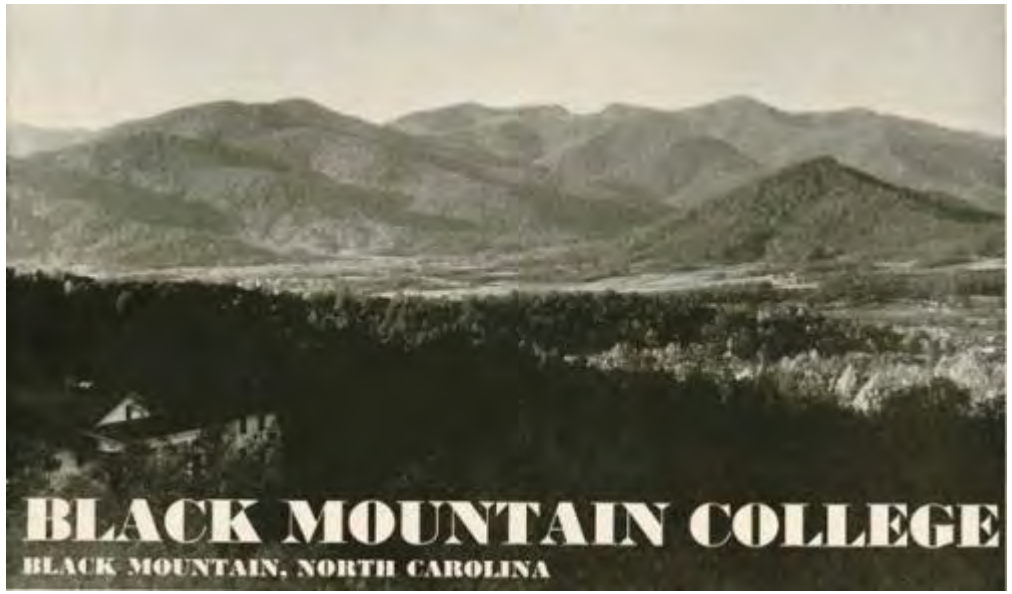
## Memphis Milano (1981-1987)

- Collective of designers (Ettore Sottsass, Aldo Cibic, Marco Zanini, Michele De Lucchi, Matteo Thun and others)
- Reaction against minimalism and «good design»
- Post-modernism and kitsch
- Use of poor materials (polipropilene, glass)
- Large impact on industrial design and Made in Italy (Kartell, Artemide)

Michele De Lucchi, *First chair*

Ettore Sottsass, *Casablanca*



Great Groups

parc®
Palo Alto Research Center

**People**

- Superb people
- Intrinsically motivated

**Leader**

- Strong leader
- Leader and group create each other
- Leader attracts talented people who smell excitement
- Share information effectively
- Free people from trivial duties
- Protects the group

**Collaboration**

- People who want to work together
- Isolated from the external world but connected
- Equity in allocation of tasks
- Oriented towards the task- «action places» that deliver

**Motivation**

- Doing something vital
- Challenging task
- Always have an enemy
- Often have a dark side
- Optimistic

# Look for feedback soon

One of the most recent commercial failures (Segway) was due to the inability  of the company to listen to feedback.

Limitations of the product
- No substitution of cars
- Wrong market target
- Too large to be used to overcome trafic in town
- Substitution of bycicles- but too expensive
- No way to manage the parking
- No opportunity to hang bags to a hook

New opportunities today
- Social media
- Rapid prototyping/ 3D printing
- Minimum Viable Product (Eric Ries, *The Lean Startup*)
- Test different versions of the product

# Transform constraints into opportunities

Michelangelo, *Mosè*. Roma, San Pietro in Vincoli

Michelangelo modified his Mosè before the final version.

He had to overcome a physical constraint in the space for the left foot.
This led him to reshape the figure, by tilting the leg and the body, producing a dramatic effect of dynamism.

# Be flexible, adaptive and resilient

Number of times the founders pitched investors before finally succeeding

| Company | Number of investor pitches |
|---|---|
| Skype | 40 |
| Cisco | 76 |
| Pandora | 300 |
| Google | 350 |

# The collage experiment

Students were asked to give a short speech on their dream job. They were randomly assigned to a positive- or negative-feedback condition (e.g. smiles and vertical nods vs. frowns and horizontal shakes).

After the speech was over, the subjects were given glue, paper and colored felt to make a collage.

Those with negative-feedback created much better collages.

Sadness improved their focus and made them more likely to persist with the creative challenge.

# Manage the risk portfolio

People become original in one part of their lives, while remaining quite conventional in others.

Study of > 5,000 US entrepreneurs, 1994-2008.
Entrepreneurs who kept their jobs at the early stage of the startup period were 33% *less likely* to fail.

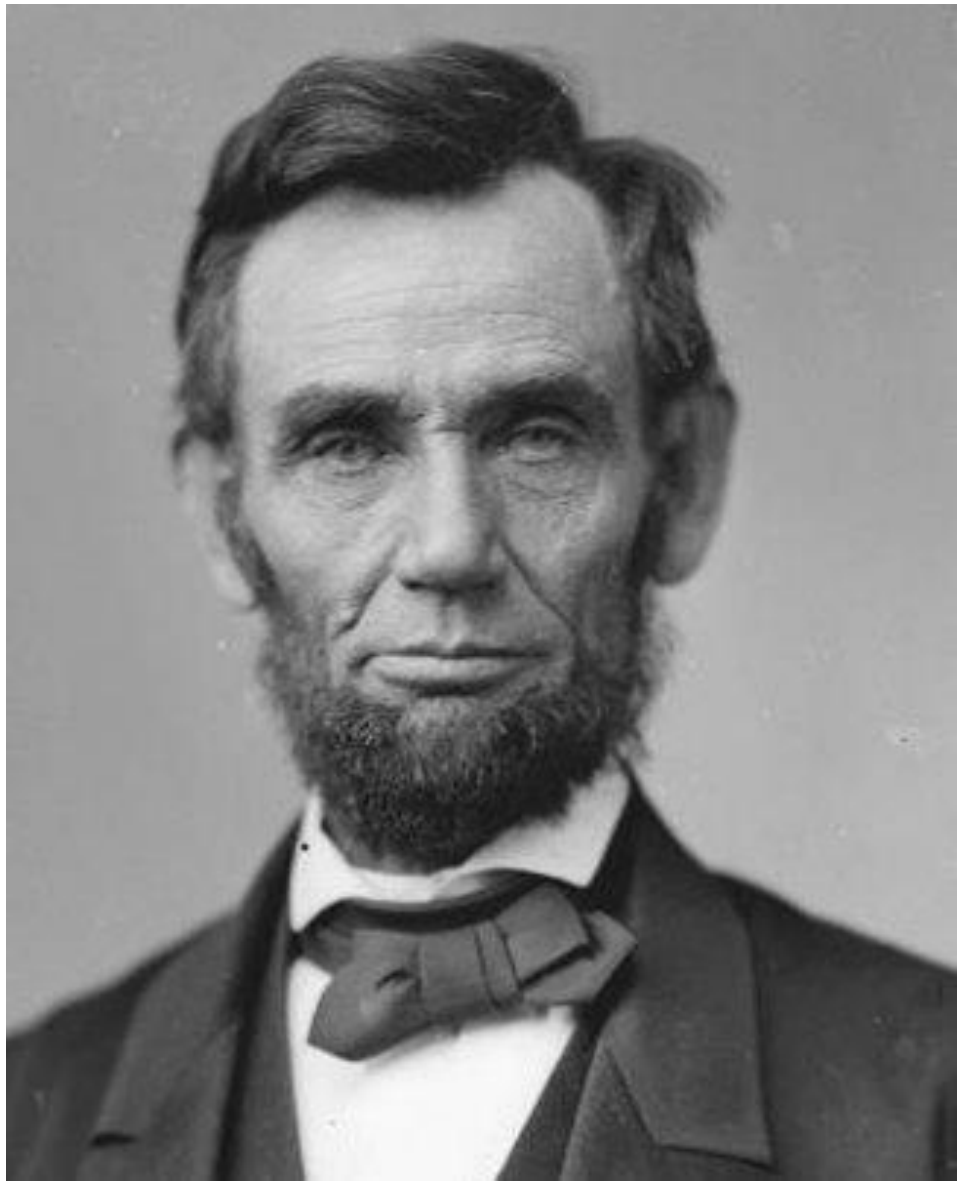
«No person could possibly be original in one area unless he were possessed of the emotional and social stability that comes from fixed attitudes in all areas other than the one in which he is being original» (Edwin Land, founder of Polaroid).

# Wait the right time

Innovators run the risk of being ahead of time.

**Procrastination** might be an appropriate strategy

- keep in mind several alternatives until the last minute may help to select
- wait until you have the authority to put in place the innovation you have been thinking for a while

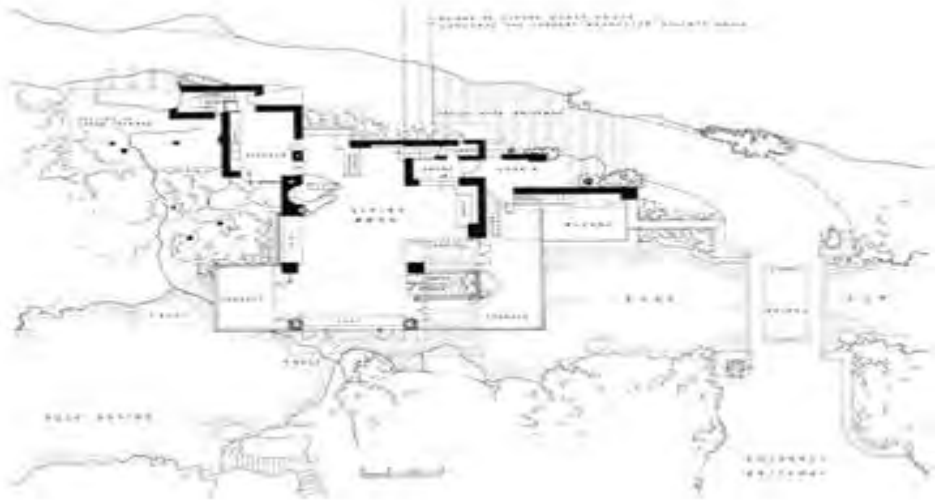


The most famous speech by President Lincoln was written the night before.

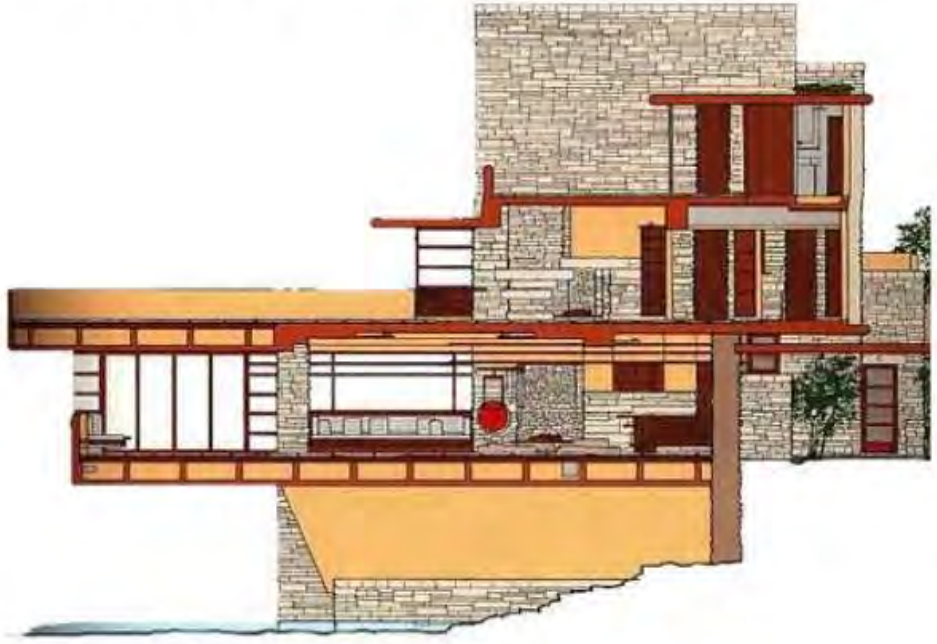
## The Gettysburg Address

Delivered at the dedication of the Soldiers' National Cemetery in Gettysburg, Pennsylvania, November 19, 1863

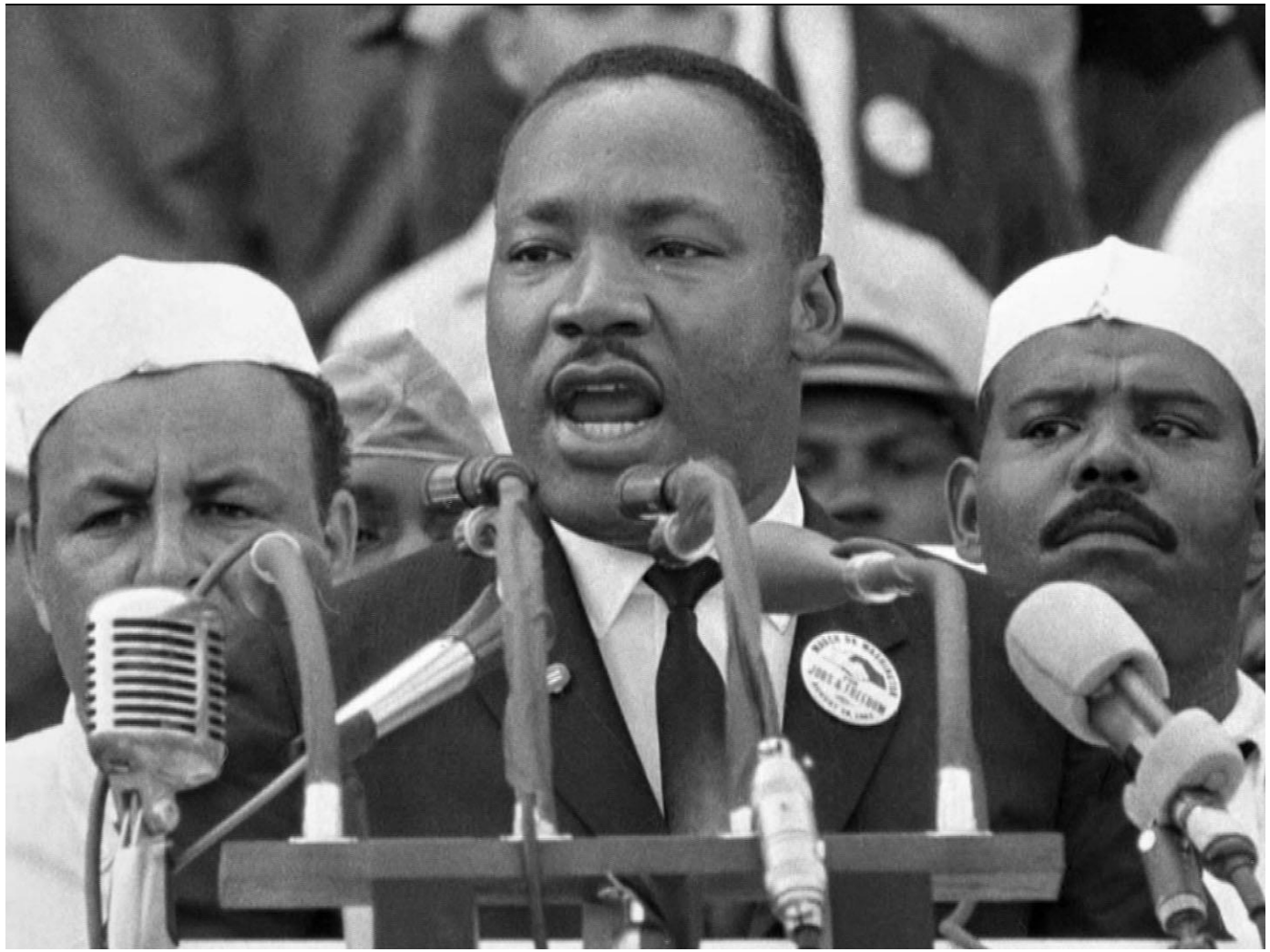
After having received the order for the Fallingwater House,
Frank Lloyd Wright procrastinated the work by more than one year.



SECTION OF FALLING WATER:



# I have a dream



The most famous speech in XX century was composed the night before the Washington March.

The expression «I have a dream» was not in the written text.

# What about humanities?

Digital Humanities as a way to use digital technologies for doing better what scholars in humanities already do well- *to study texts*.

Wrong approach.

The challenge is not to digitalize the humanities, but to find the way to extract from humanities the **meanings** that can create value for a large audience of users.

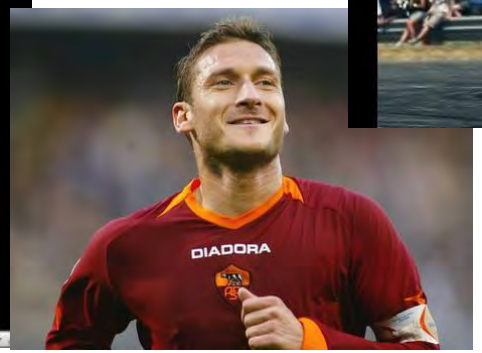
In moving from black-and-white to color to High Definition TV you see a huge progress in the quality of image.

But you basically do better the same thing.

Watching.

With You Tube you can

- Watch
- Upload
- Customize
- Comment
- Rate
- Share
- (…)




# What kind of innovation is possible with Humanities?

My assumptions

1. people live by meanings
2. meanings are embedded into words and images
3. meanings are meaningful only if there is a continuity in history, which makes words and image speak
4. research in Humanities ensures the continuity of meanings- without such research they would be lost.

# Most modern movies would not have emotional impact without a reference to mythological themes

# The source of most meanings is European

Walt Disney, *Grimilde* (1937)

Naumburg Cathedral, *Margravia Uta di Ballenstedt* (1243-1249)

# What kind of innovation is possible with Humanities?

Involve junior people in the search of meanings which might be relevant to a large audience

Develop ideas on how to bring them to people

Test the ideas as early as possible. Try and try again

Use academic research in Humanities as an **authenticity certification-** research ensures that the underlying knowledge is state of the art- it is authentic

Not let the academicians do the job

# Welcome inside the storm of innovation!

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**Acknowledgment**

Tommaso Bonaccorsi (aged 10) provided support to the identification of artists' works.

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