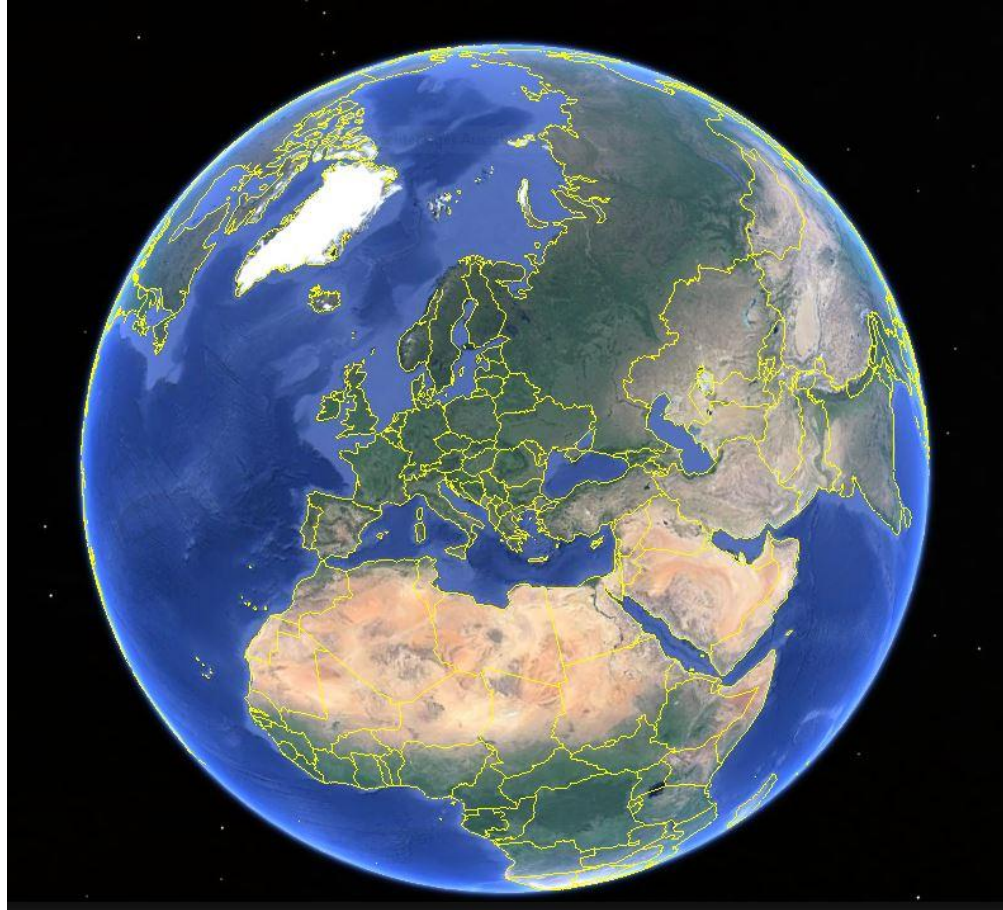


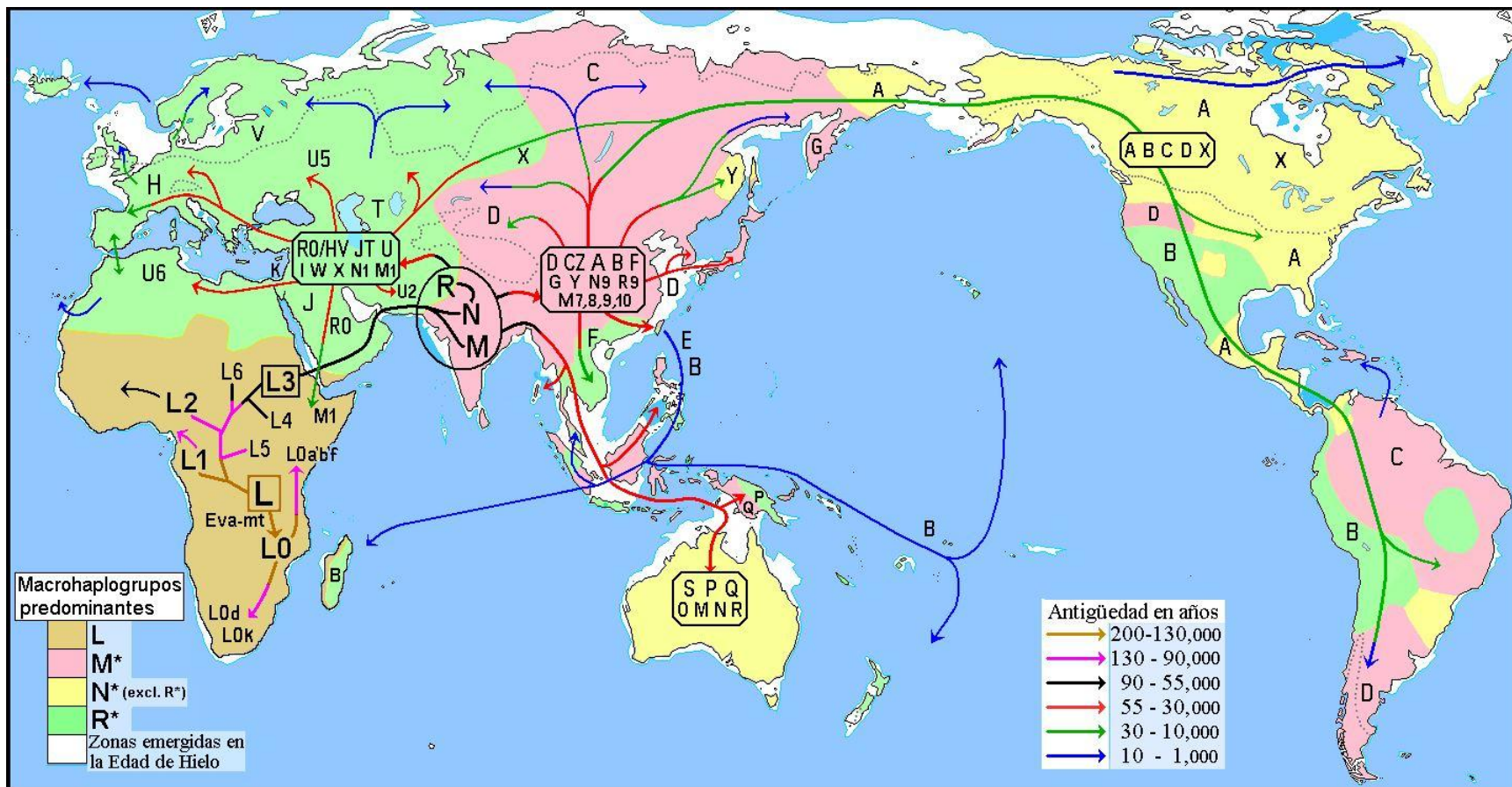
SPACE THEORY



Space – Espace – Espacio – Raum

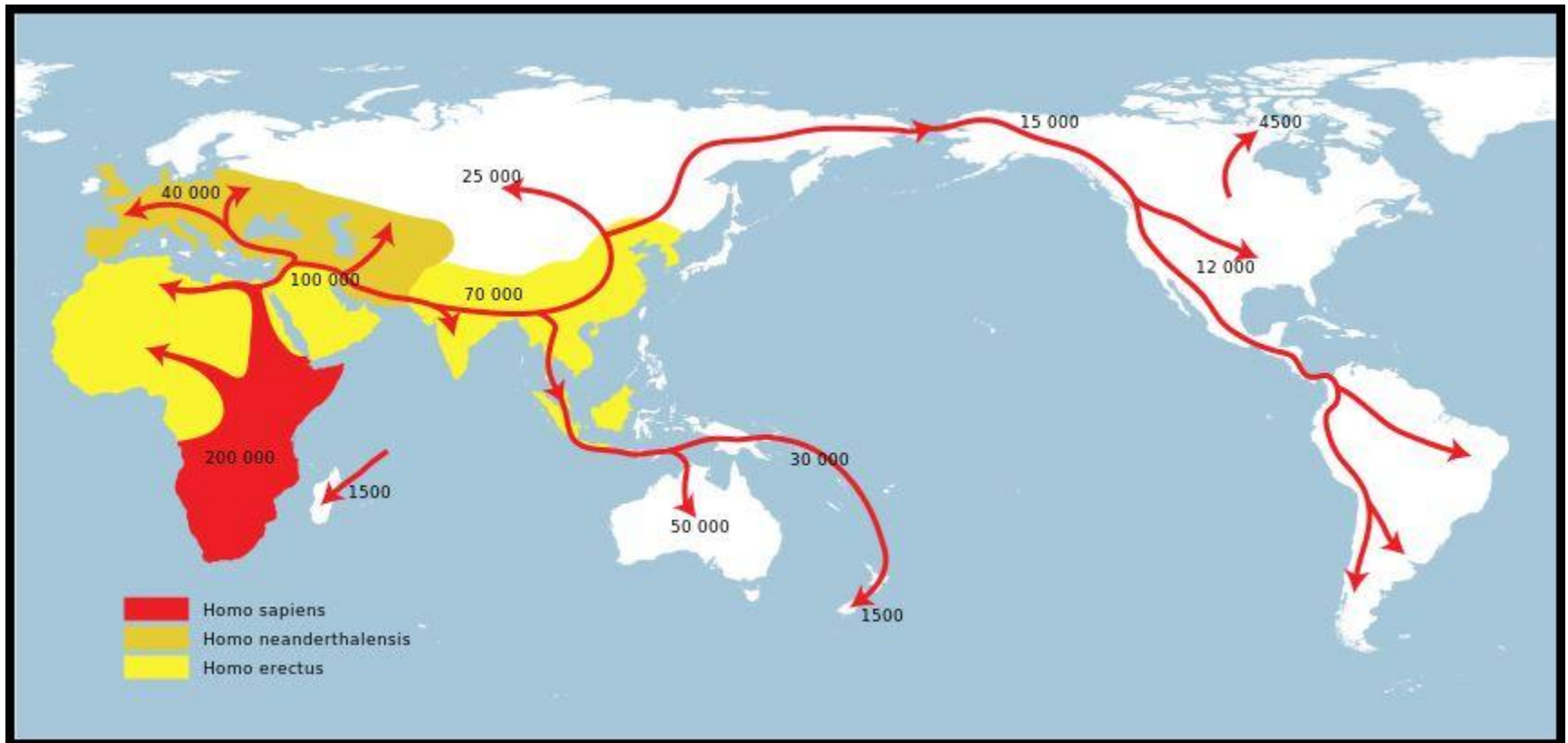
Man and Space

The spreading of mankind Hodological Space



Primary Creative Intervention:

Expanding Homo Sapiens Creates His World Crossing The Territory
He Makes History: Our Story Within Space & Time



Experience: Discovery of Space

Nature & Reproduction

Evolution

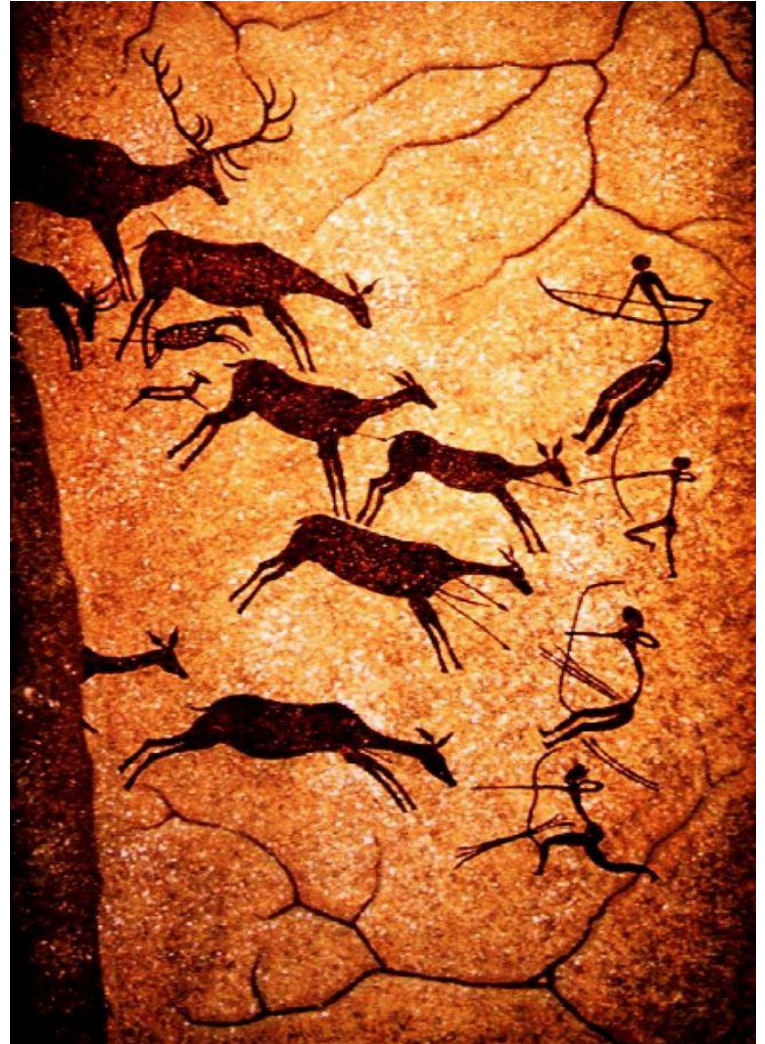


Let's Work Together: The Social Space

Hunting – Gathering – Looking For Shelter – Creating Artworks



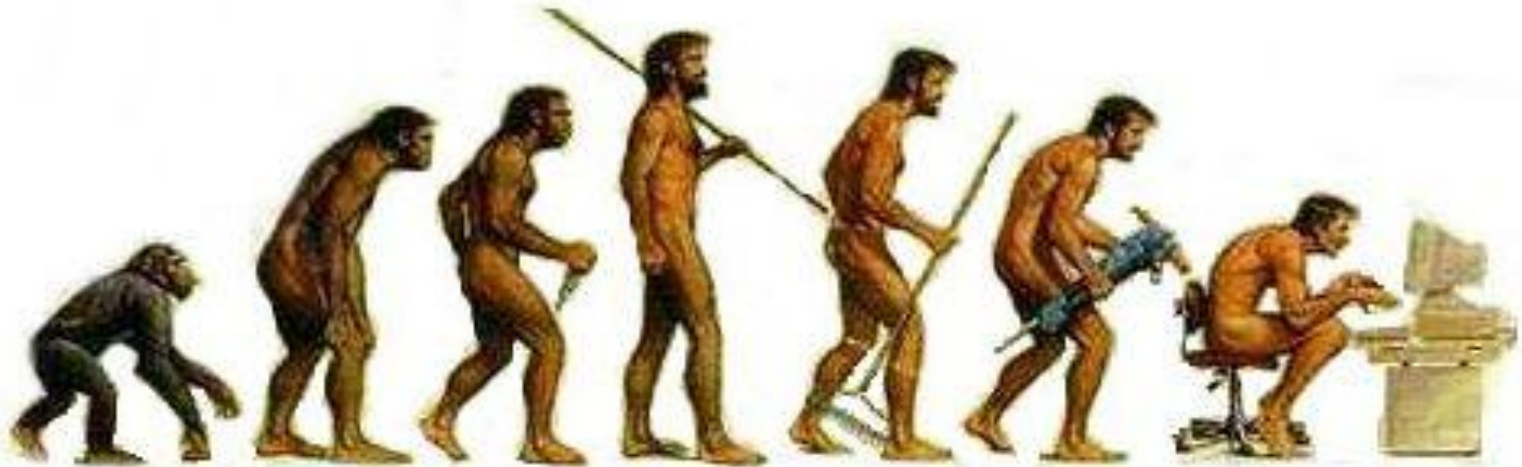
Creativity in Action: Invention Of The Aesthetical Space



Technology

Time Period	Time Range	Technology
Lower Paleolithic	2 million – 200,000	Oldowan tools: stone choppers, flakes Archeulian tools: bi-faced stone axes
Middle Paleolithic	200,000 – 40,000	Mousterian technology: prepared stone cores used as raw materials for the manufacture of smaller tools, including scrapers for dressing animal hides and points for spears
Upper Paleolithic	40,000 – 12,000	Stone blade tools consisting of thin narrow flakes with long parallel sides; other tools include needles, fish hooks, harpoons and spear throwers
Mesolithic	12,000 – 10,000	Small pieces of flint worked into various shapes that were cemented with resin to bone, wood or antlers to form tools such as arrows, spears and barbed rods; other tools included axes and adzes
Neolithic	10,000	Domestication of plants and animals and the rise of agricultural communities
Bronze & Iron Ages	5,000	Beginning of technology based on metals: copper then bronze then iron
Industrialization	200	Beginning of the industrial age

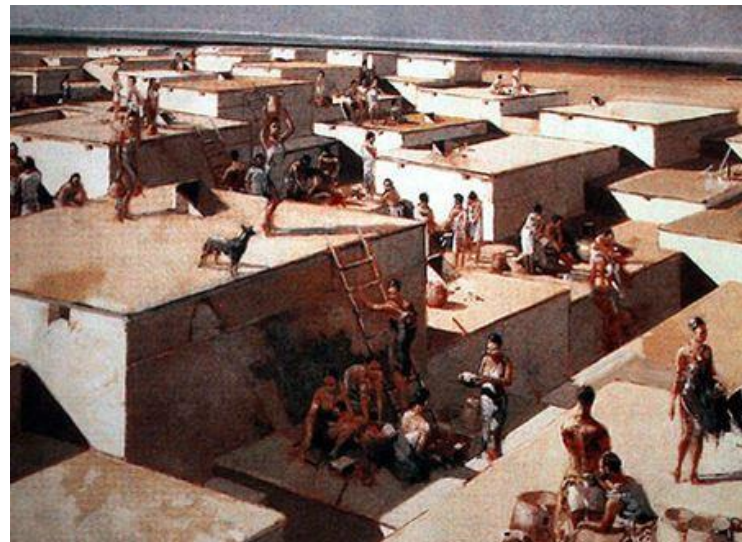
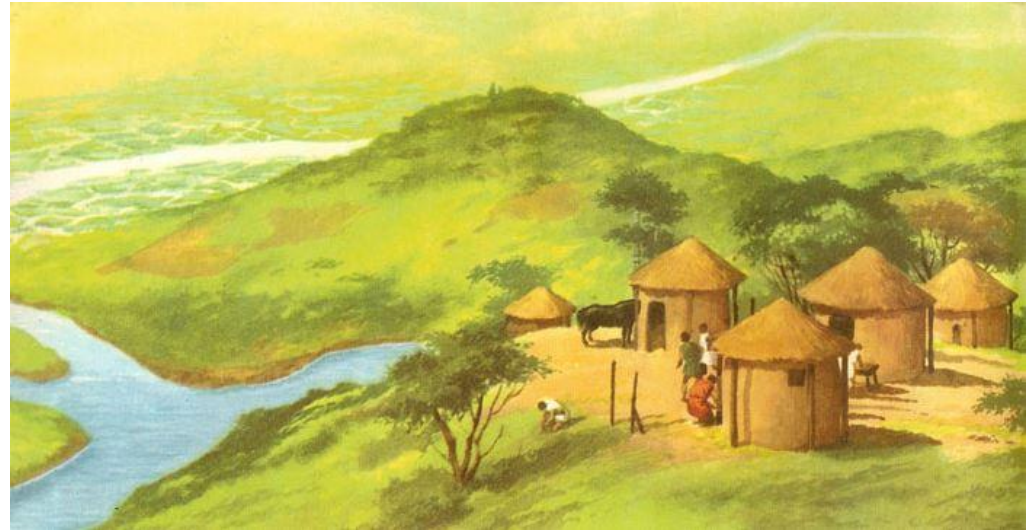
Evolution



Settlement: The Neolithic Revolution

Agriculture substitutes nomad mobility

The origin of new spaces: Field - House - Urbanity



Mesopotamiam



Urban Space: Babylon

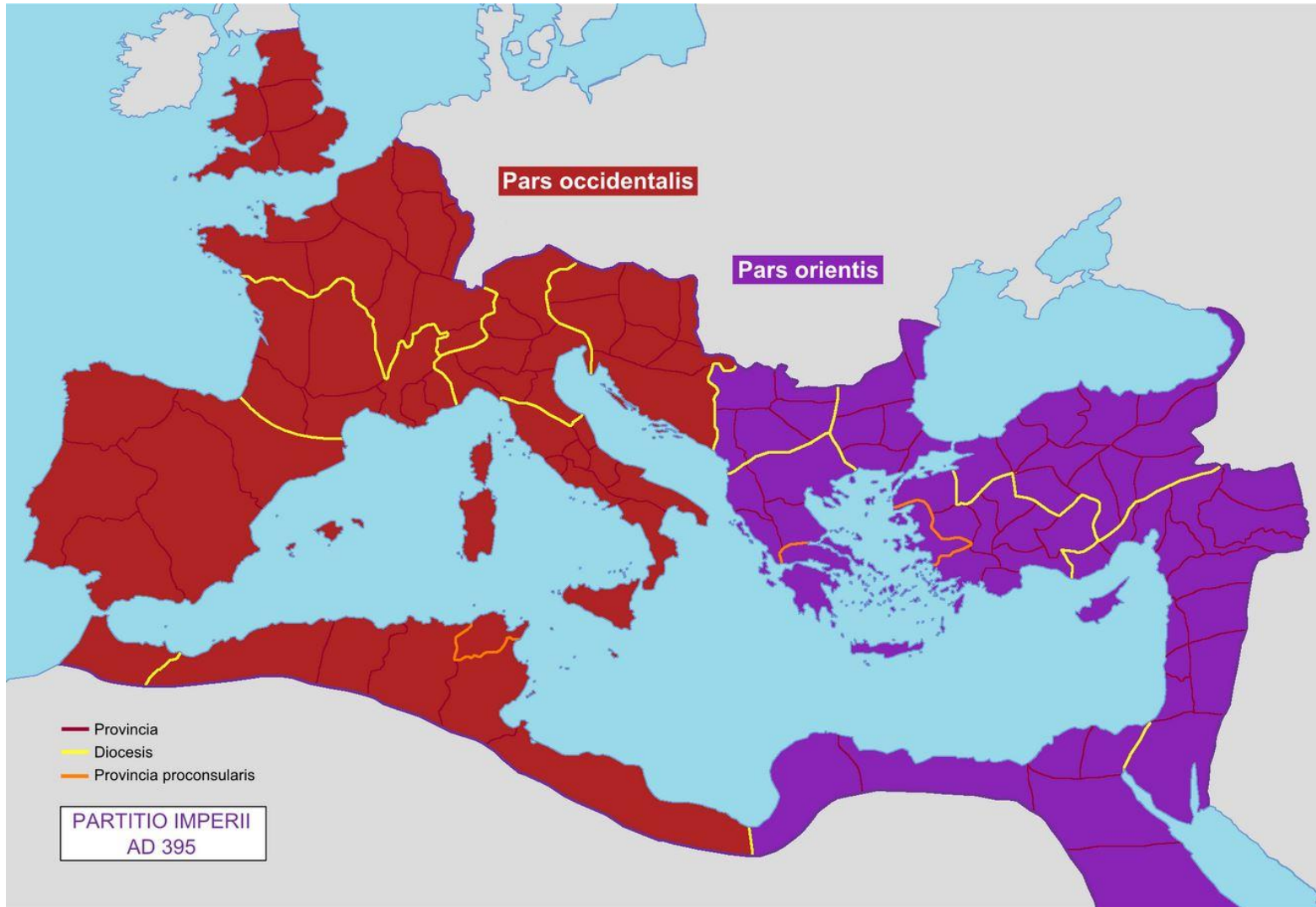


The Imperial Dream Space I : Egypt



The Imperial Dream Space II: Rome

The Political Space: Geopolitics



The Roman Empire: The Idea of Europe

Power Space

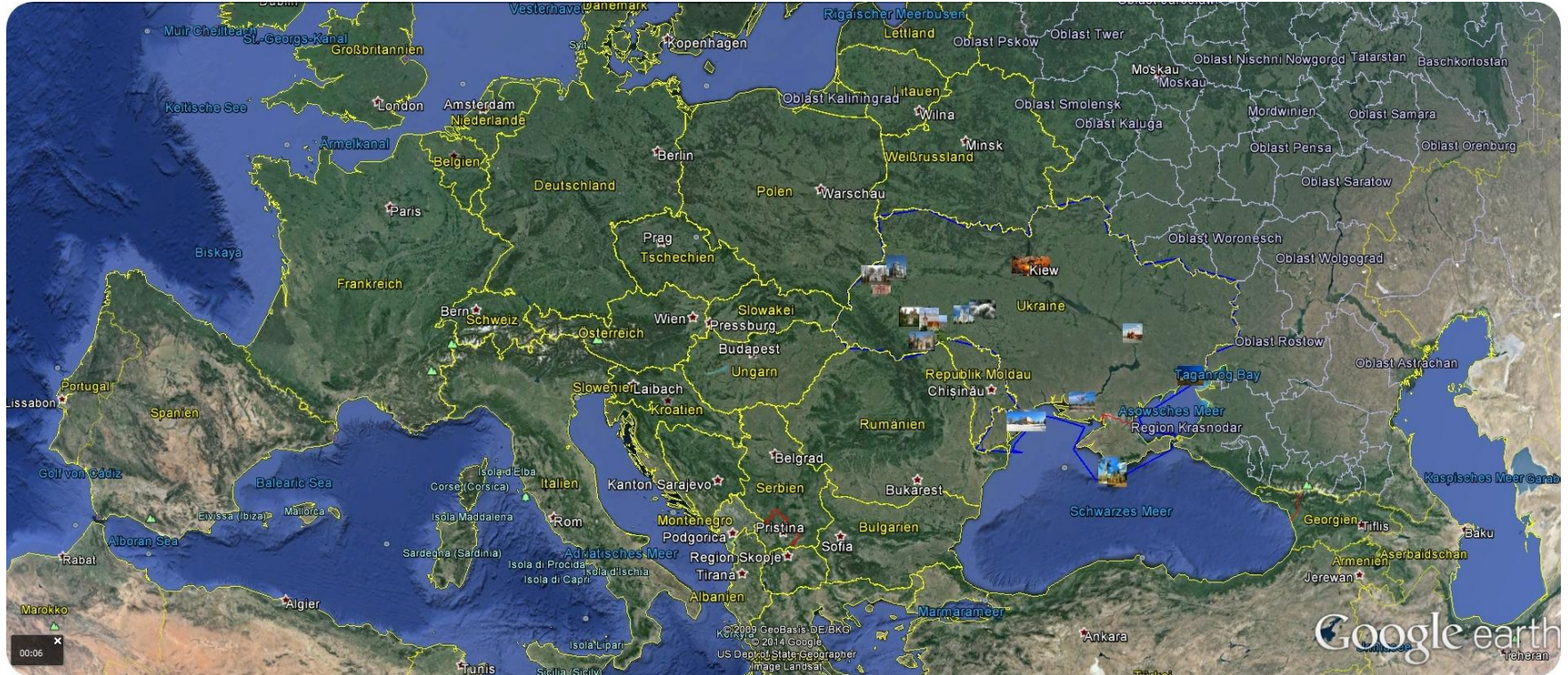


Spatium: Bread & Games



Europe

Imagination – Reality
War Space – Peace Space



European Union

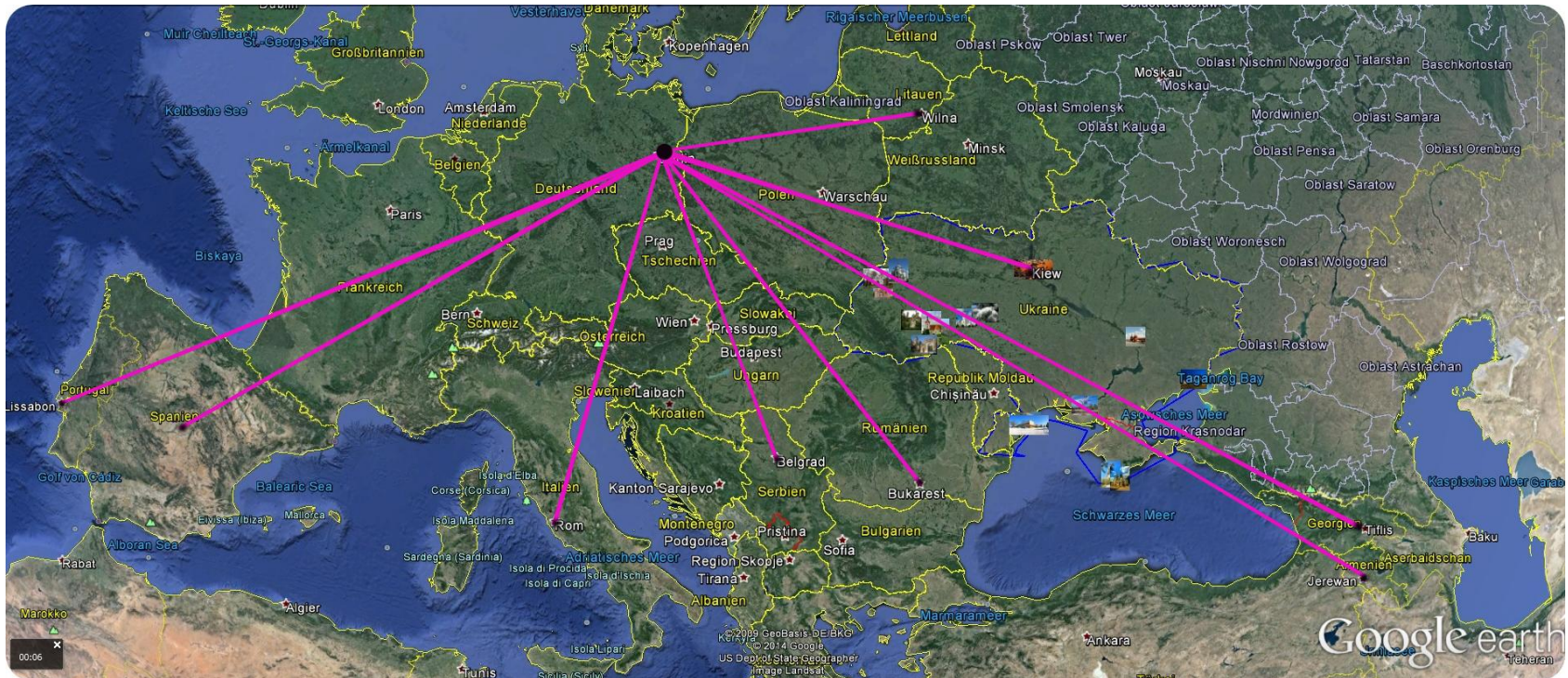
A Process Of Space And Mind: Inside - Outside



The Training Course:

Where do we come from? – Why are we here?

We did not come here to find answers but to find questions.



The European House Under Construction

The Question Of Security And Identity



Europe's house under construction 1965

The House And The Place

Search For Democratic Space



Asamblea: Concepts and Discourses On Man And Space

A SpaceTime Theatre Play With Famous Actors

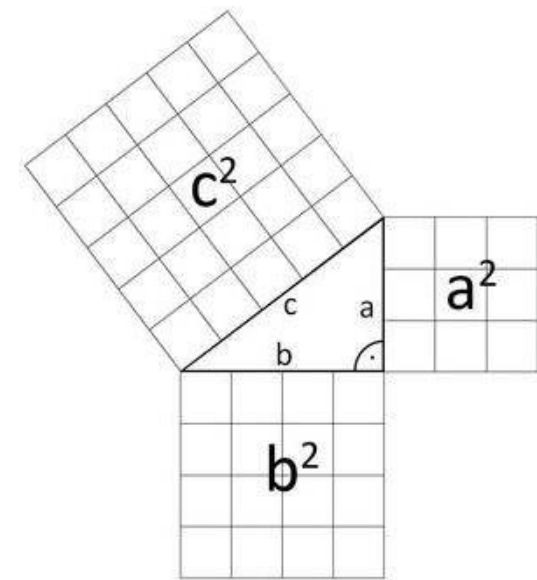


Act 1: European Antiquity

Pythagoras

570 – 510 BC

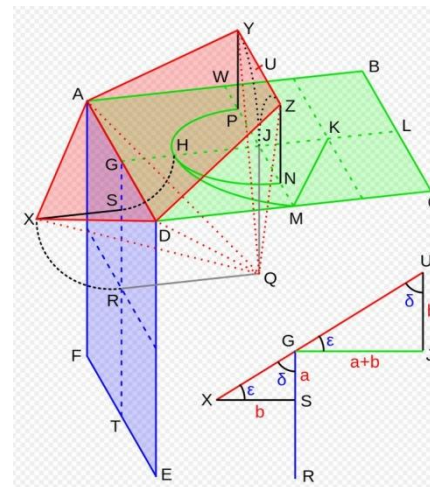
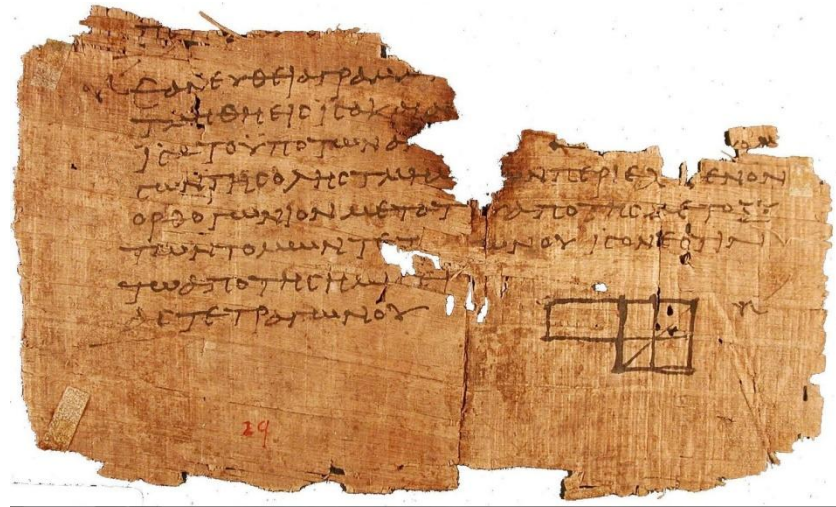
Understanding Space By Numbers



Euclid of Alexandria

3. Century BC

The Geometrical Space



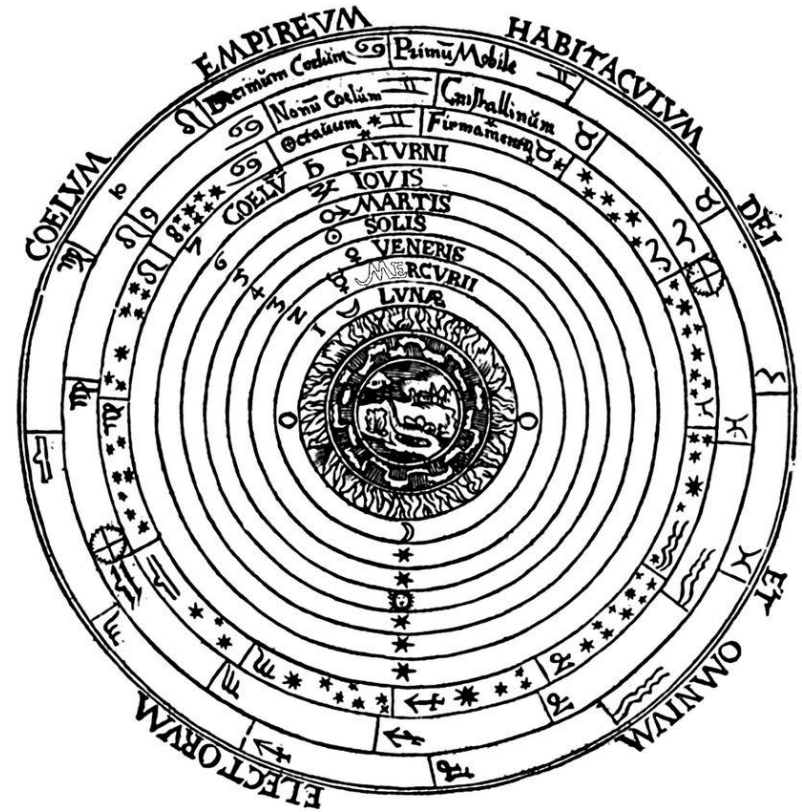
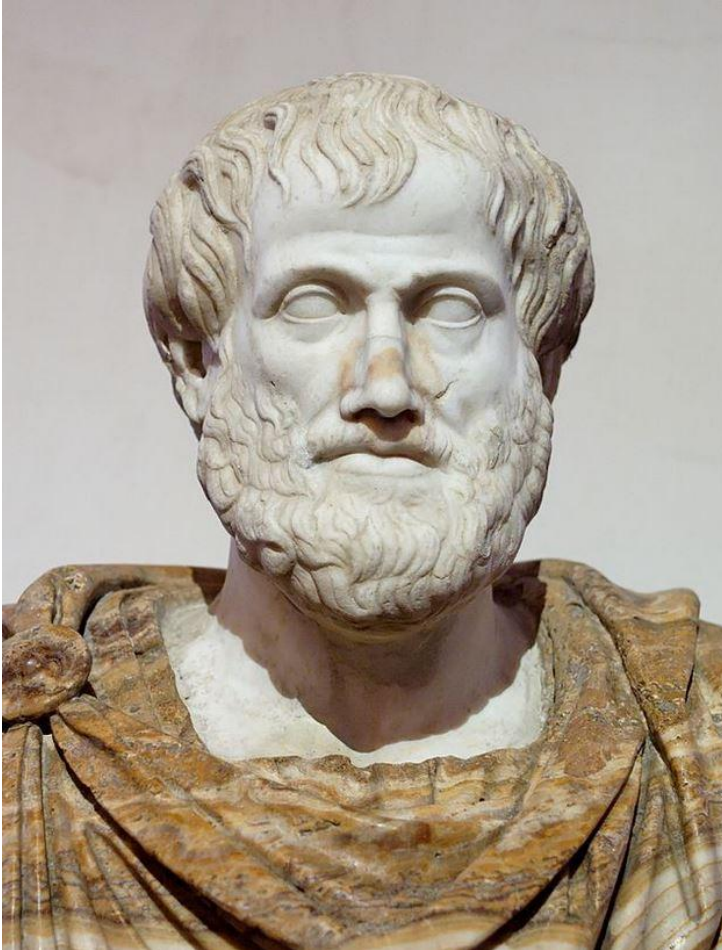
Aristotle

384 – 322 BC

The Cosmos as a Closed Space: The Earth as a Disk Overarched by Spheres

The Principle of Cause and Result

Physics & Metaphysics



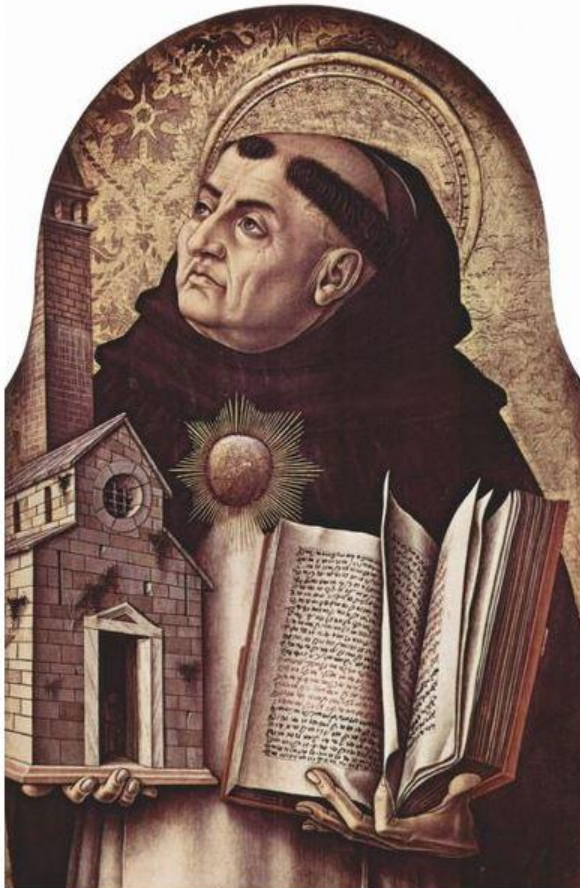
Act 2: European Middle Ages

Thomas of Aquin

1225 – 1274

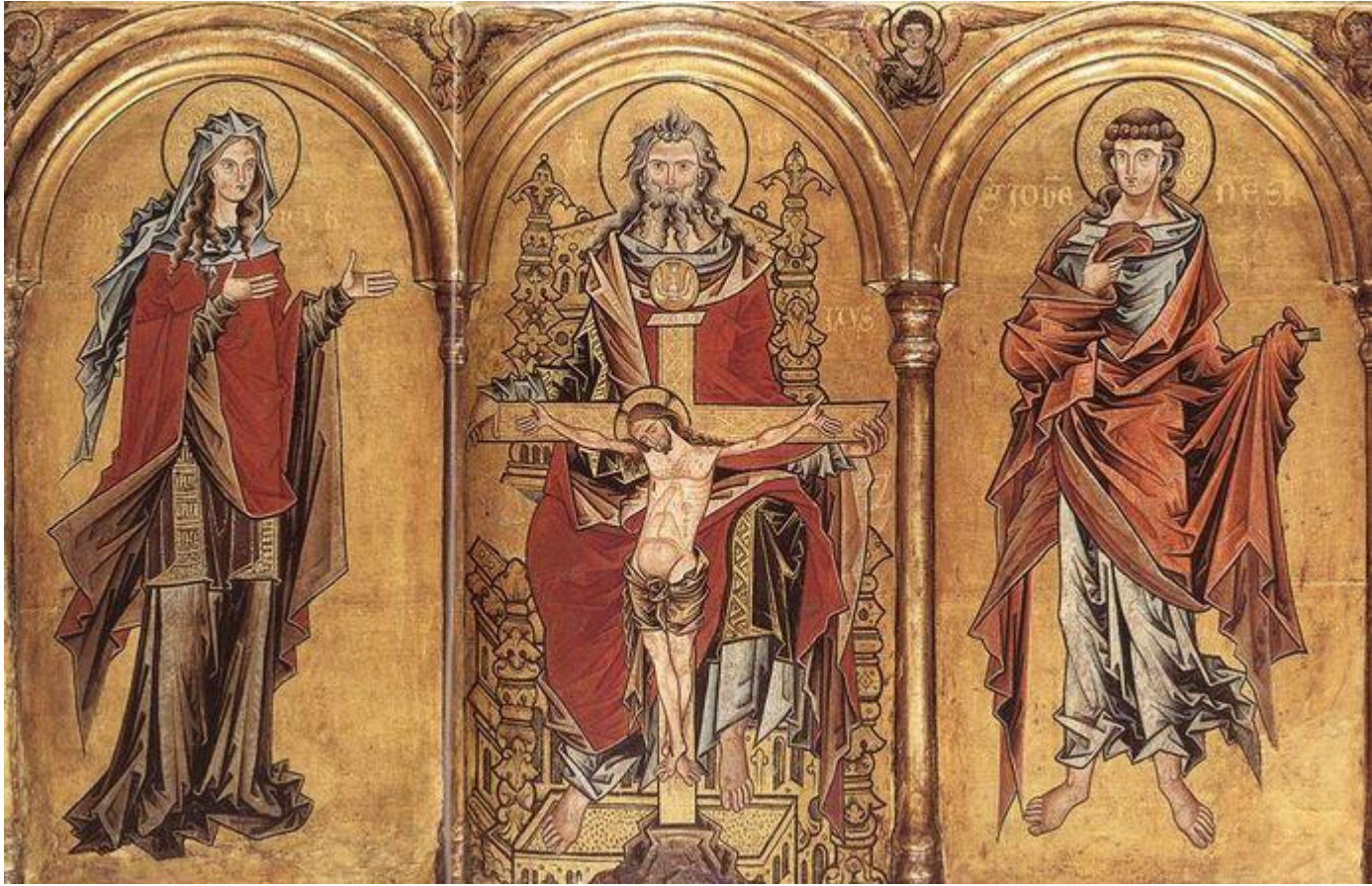
Ordo Mundi: Everything And Everybody On Its Place. Unchangeable Natural Order.

No Doubt Possible. Don't Think! Believe!



Artistical Representation

2-Dimensional – Sacral Motives



Sacred Architecture: Ideological Power Plants

Notre Dame de Paris – Constructed 1163 - 1345



Mental Space: Imagination – Fantasy – Fear Inferno – Damnation – Search For The Exit Hieronymus Bosch

1450 - 1516



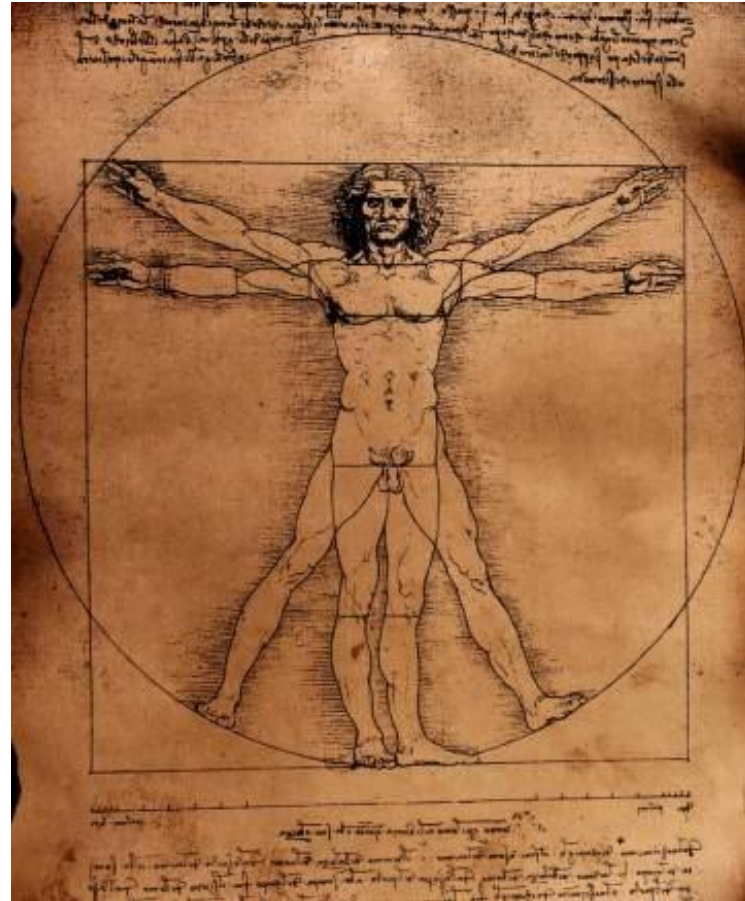
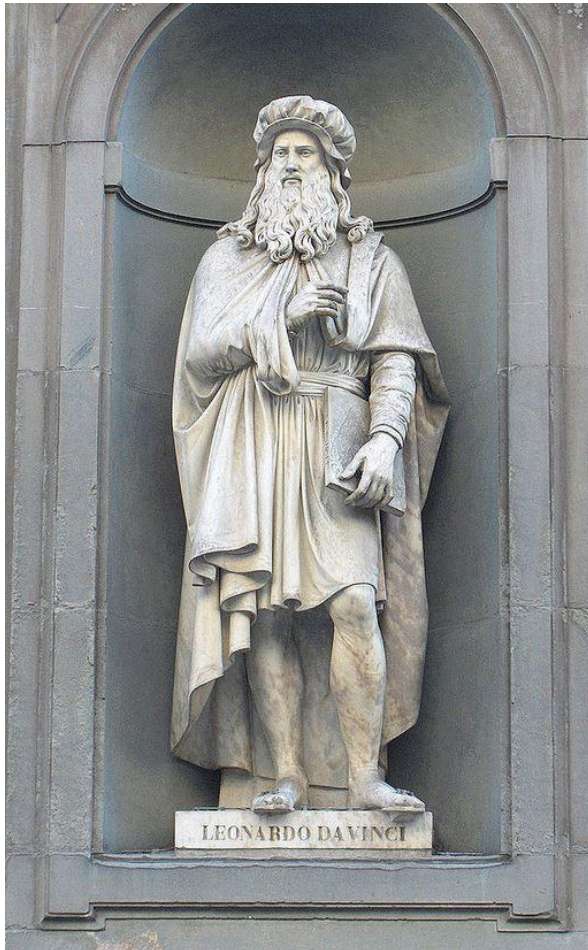
Act 3: Transition Towards New Spaces

The End Of Stagnation And The Renaissance Of Man

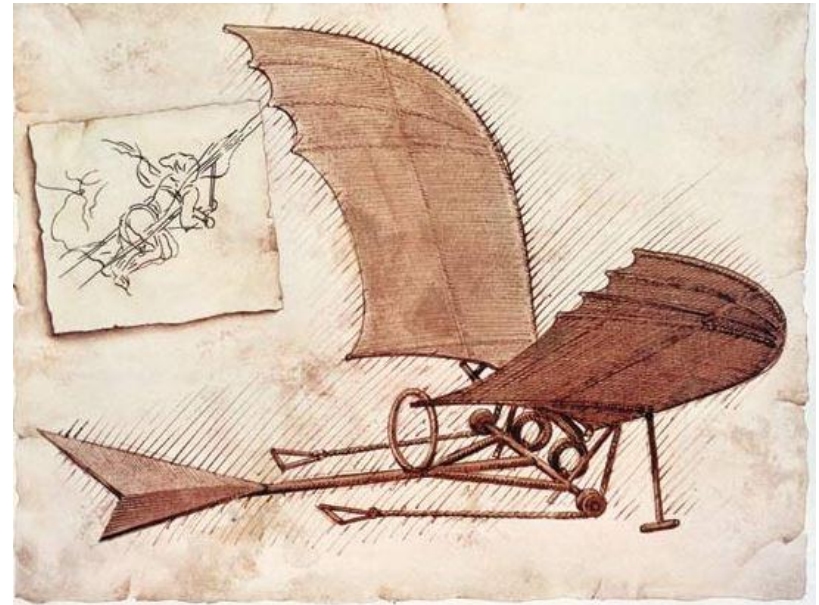
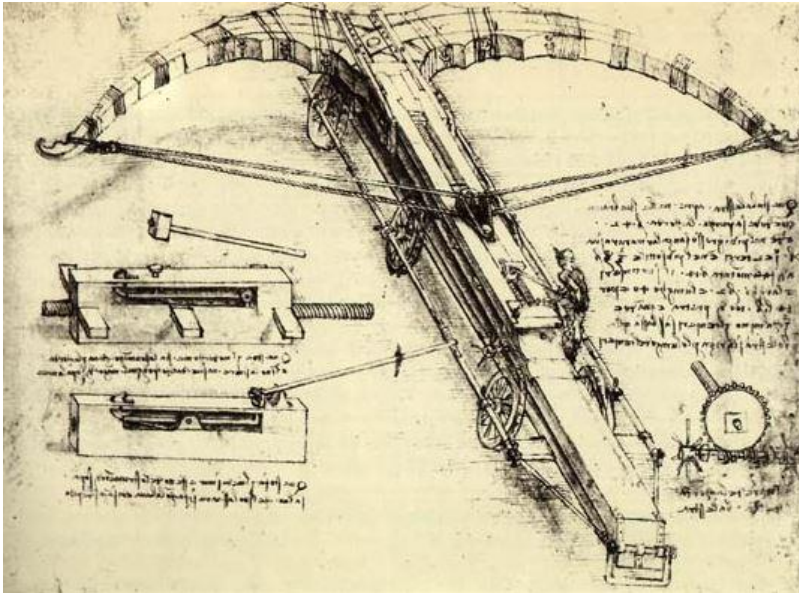
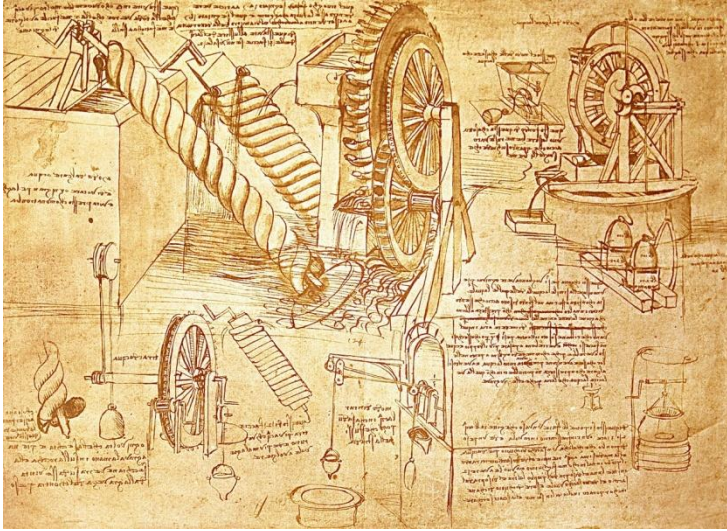
Leonardo Da Vinci

1452 – 1519

Mind Extension: New Interests – New Perspectives – New Inventions – New Visions – New Possibilities

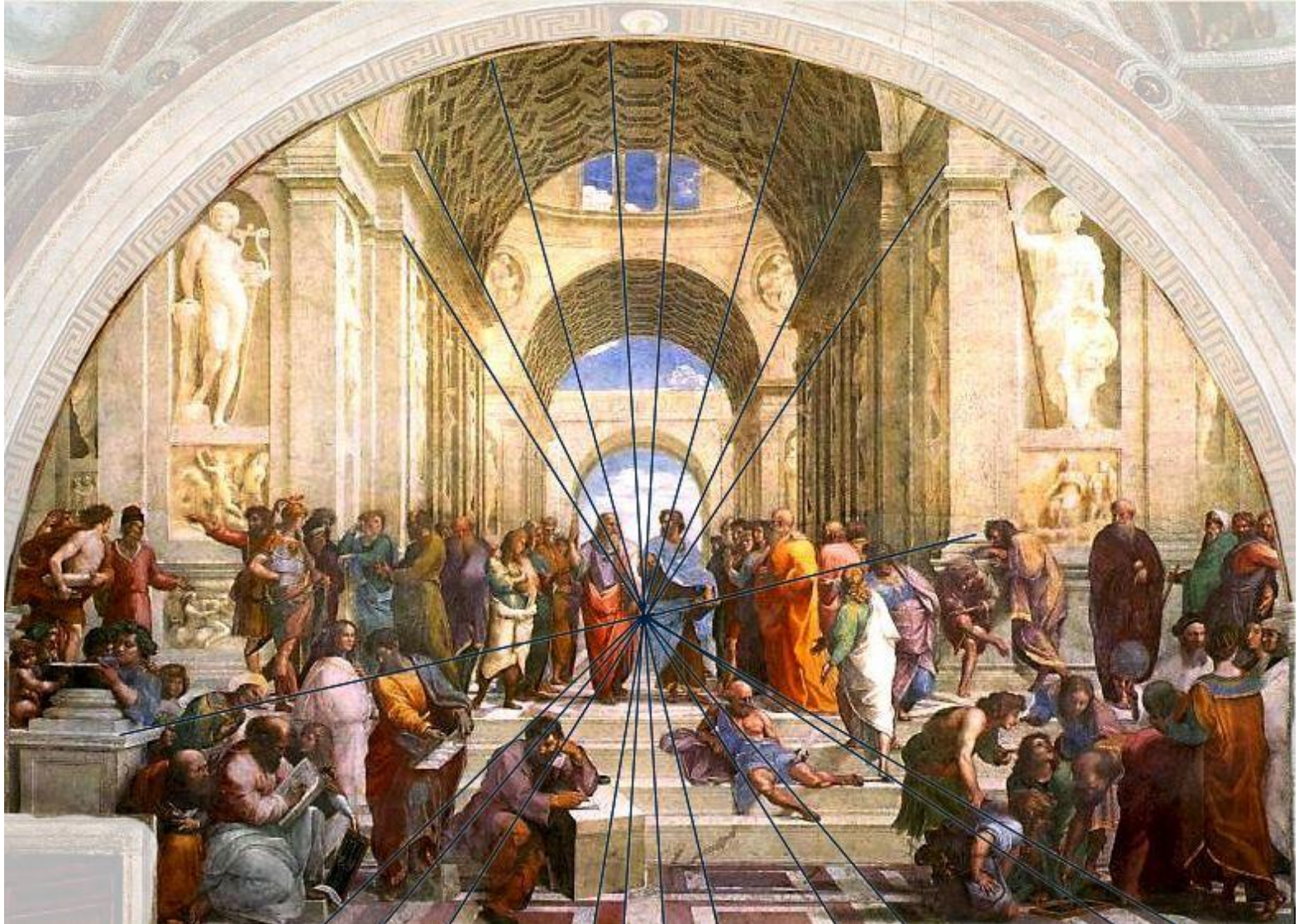


A Lot To LEARN And A Lot To DO: A New Configuration Of Theory And Practice



Central Perspective

Raffael: The School Of Athens 1510/11



Extension of the Dissemination of Ideas: The Media Space

Johannes Gutenberg

1398 – 1468

The Printing Press: A Revolution In The Space Of Communication And Discourse



Discovery Of New Worlds

Cristofor Columb

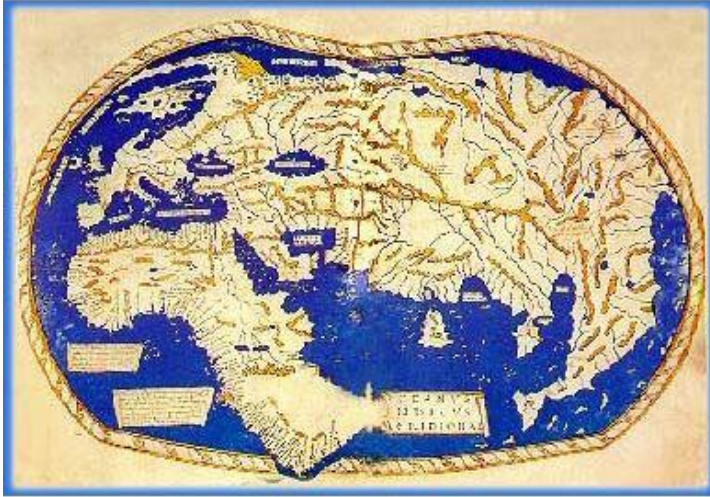
1451 – 1506

The Extension Of The Geographical Space And Change Of The World Vision

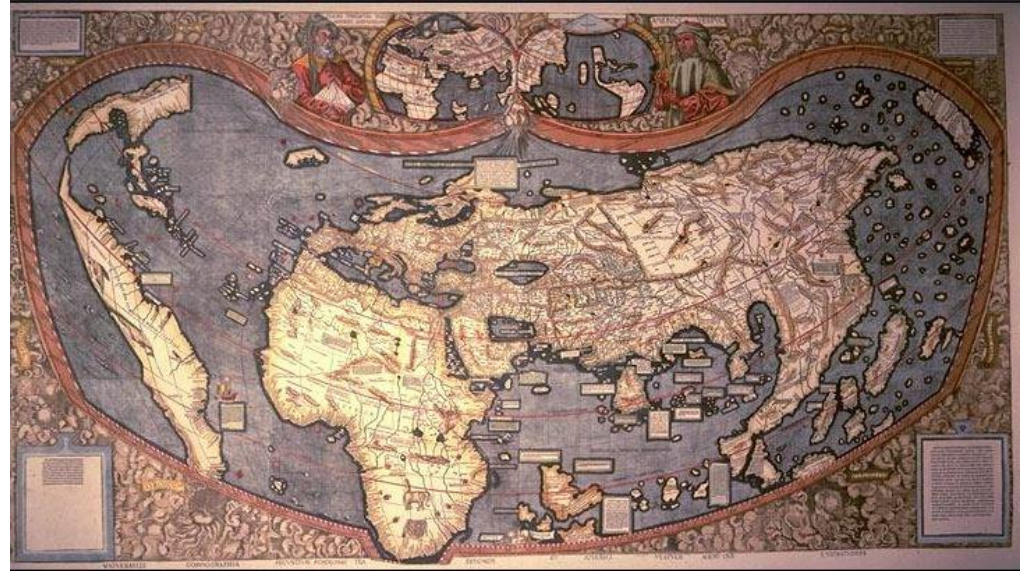
The Beginning Of Globalization: Conquest – Genocide - Colonialism



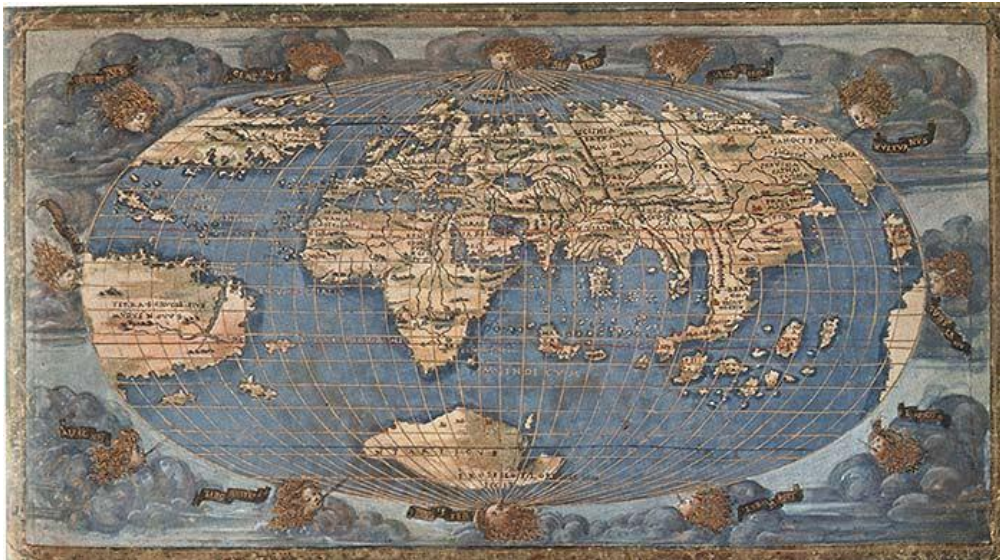
Cartography: A Changing View



Former World View



1507



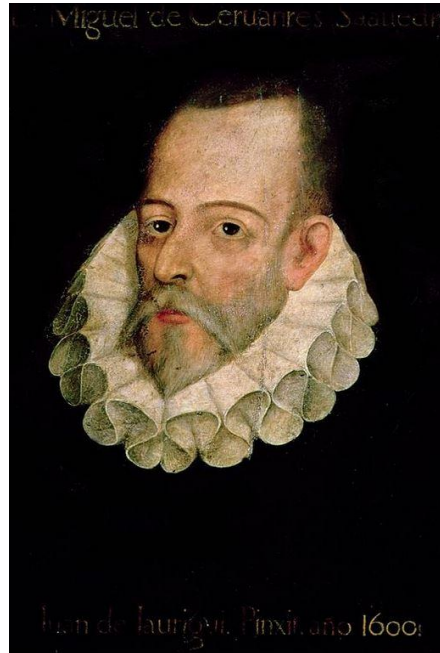
1508

Literary Space: Change Of Content And Form

Novel And Drama



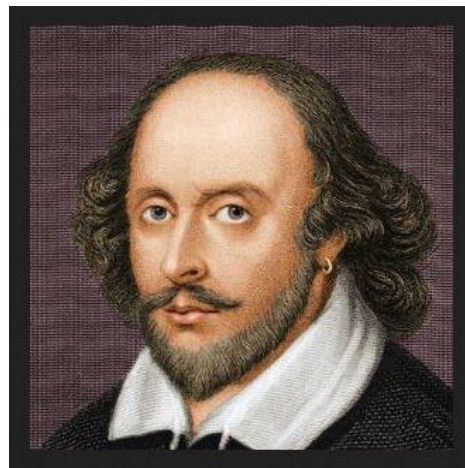
Francois Rabelais 1483 – 1553:
Gargantua and Pantagruel
All-embracing break free laughter



Miguel de Cervantes 1547 – 1616:
Quijote: The Invention Of The Modern Novel



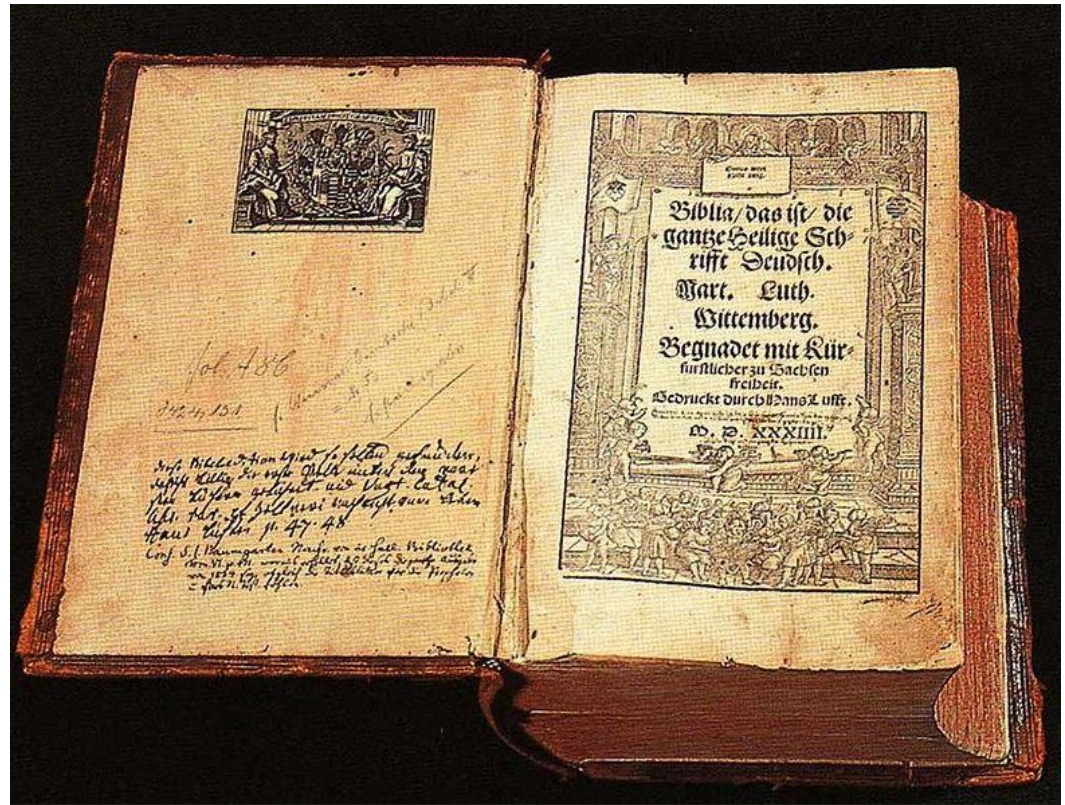
William Shakespeare 1564 – 1616:
New Forms Of Dramatization – The Beginning Of Modern Theatre



Exit From The Dogmatic Space Of Catholicism: Theological Change Martin Luther

1483 – 1546

Translation Of The Bible – Protestant Movement – Origin Of A New Life Space
New-Configuration Of The Social Space: The Emerging Of Capitalist Civil Society in Urban
Spaces

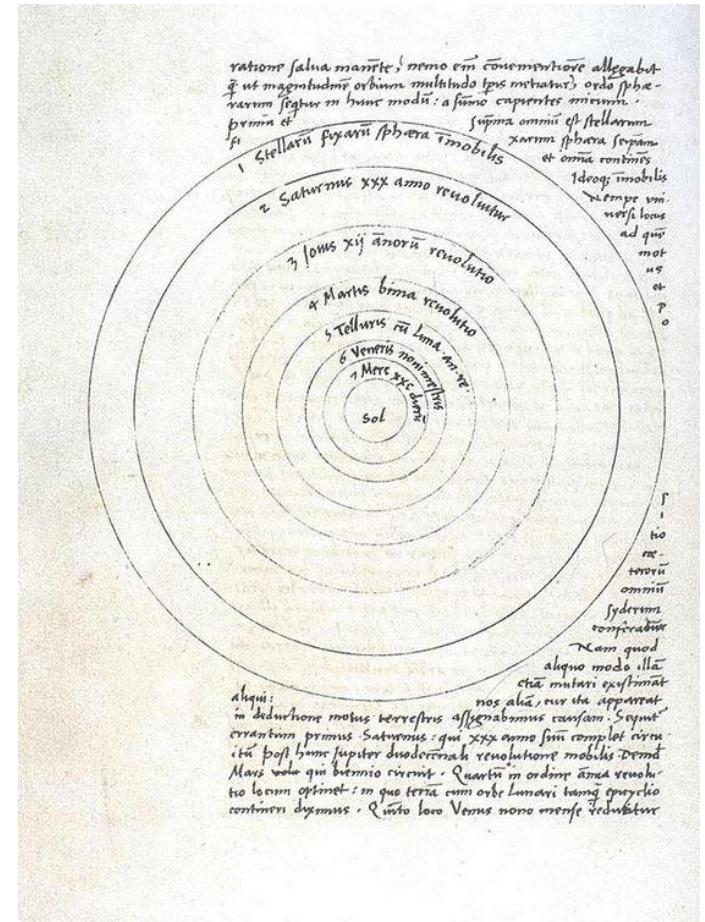
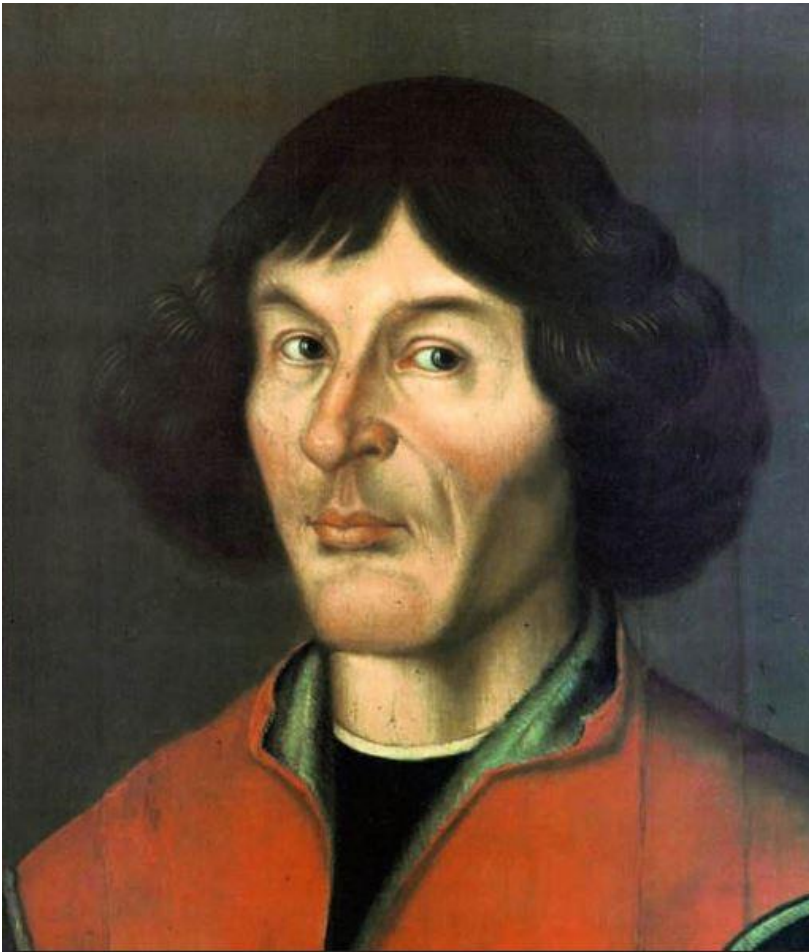


Emancipation Of Natural Science From Theology: Observation/Experiment/Experience vs. Dogma

A New Space Perspective Nicolaus Copernicus

1473 – 1543

The Heliocentric World Vision

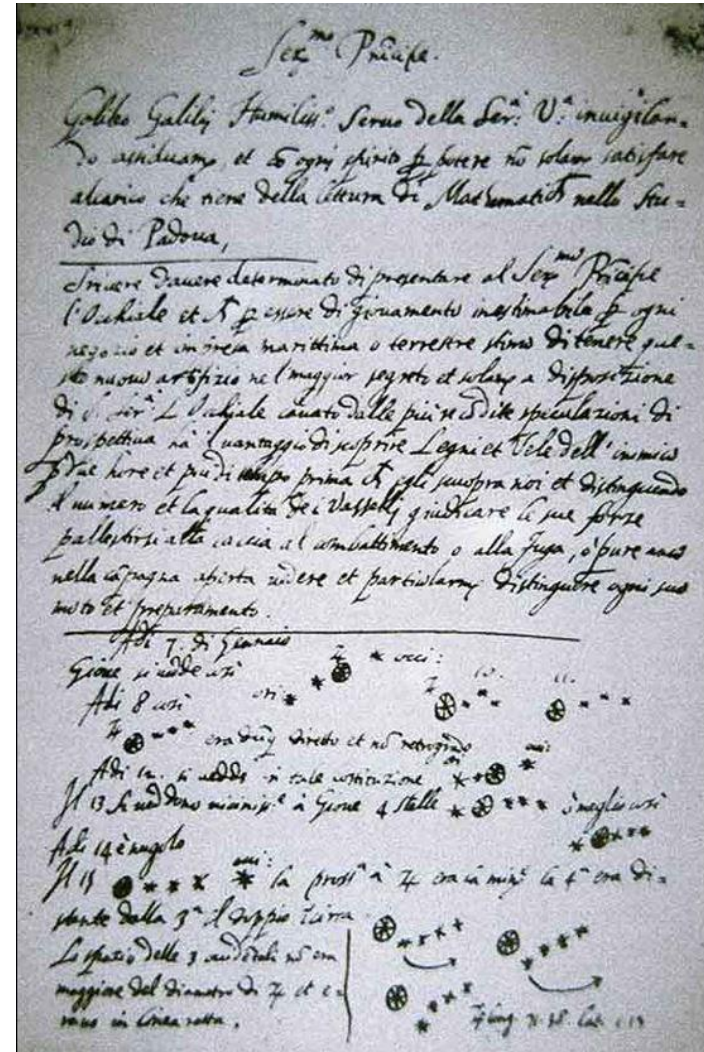
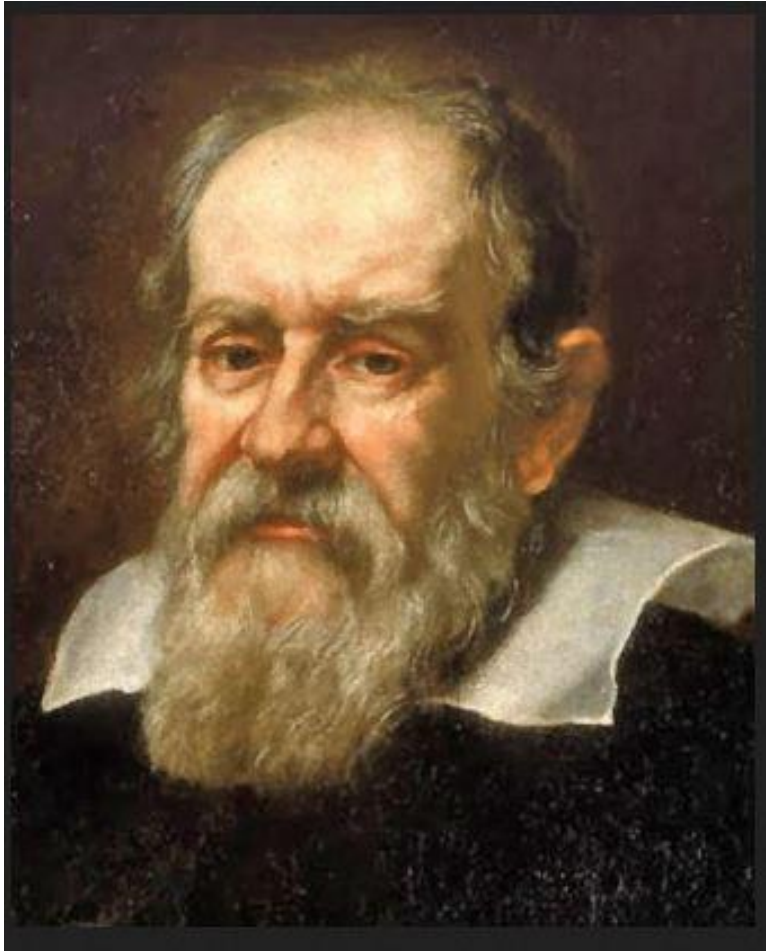


De revolutionibus orbium coelestium 1543

„Nevertheless, it does move!“

Galileo Galilei

1564 - 1642

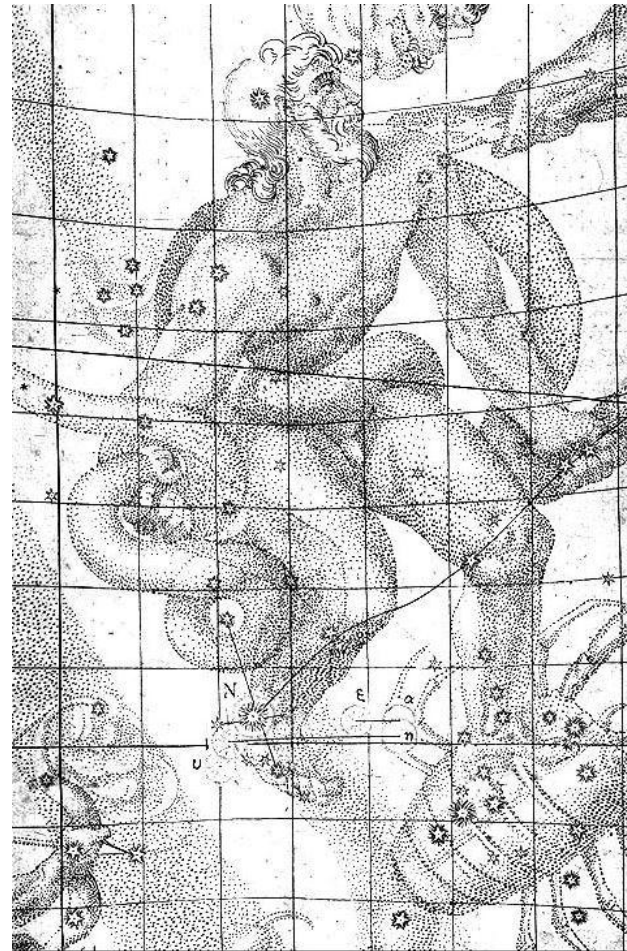


Scientific Formalization Of The New Space Concept

Johannes Kepler

1571 – 1630

The Laws Of Planetary Motion



Philosophy – Natural Science – The Idea Of The Reflecting Subject

René Descartes

1596 – 1650

„Cogito ergo sum“: A New Concept Of Man In Space

Space is represented in human thinking. This makes human cognition a tool for examination of the world and opens the way for modern research on experimental basis for exact definitions of physical phenomena.

The space which is inhabited by objects is defined by length, width and depth as volume, and therefore measurable.

3-Dimensionality



The key to the next act →

Act 4: Modern Times

The Scientific Revolution: Breakthrough To A New World Vision

Isaac Newton

1643 – 1727

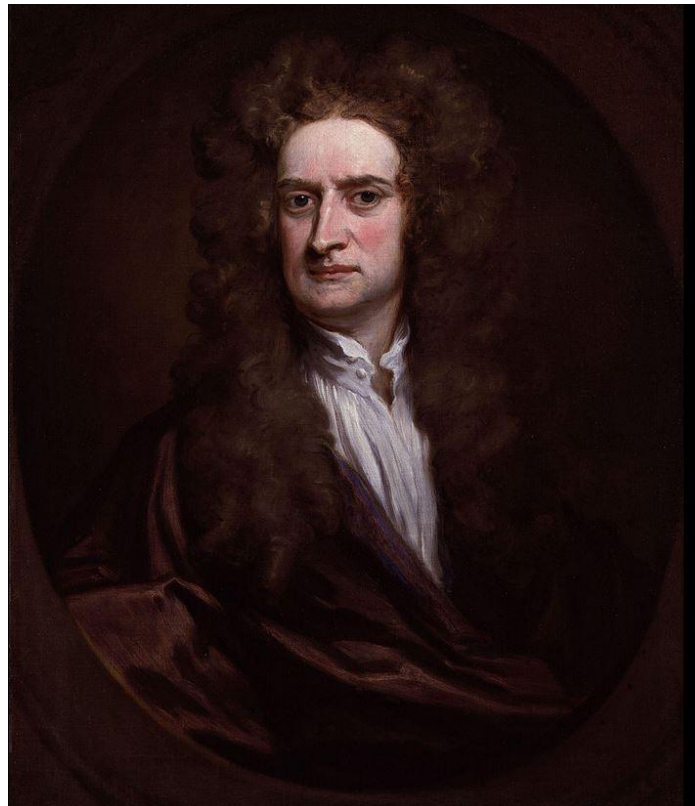
The Foundation Of Classical Mechanics: Philosophiae Naturalis Principia Mathematica 1687

Formulation of the Laws Of Motion And Universal Gravitation

Everything Is In Motion

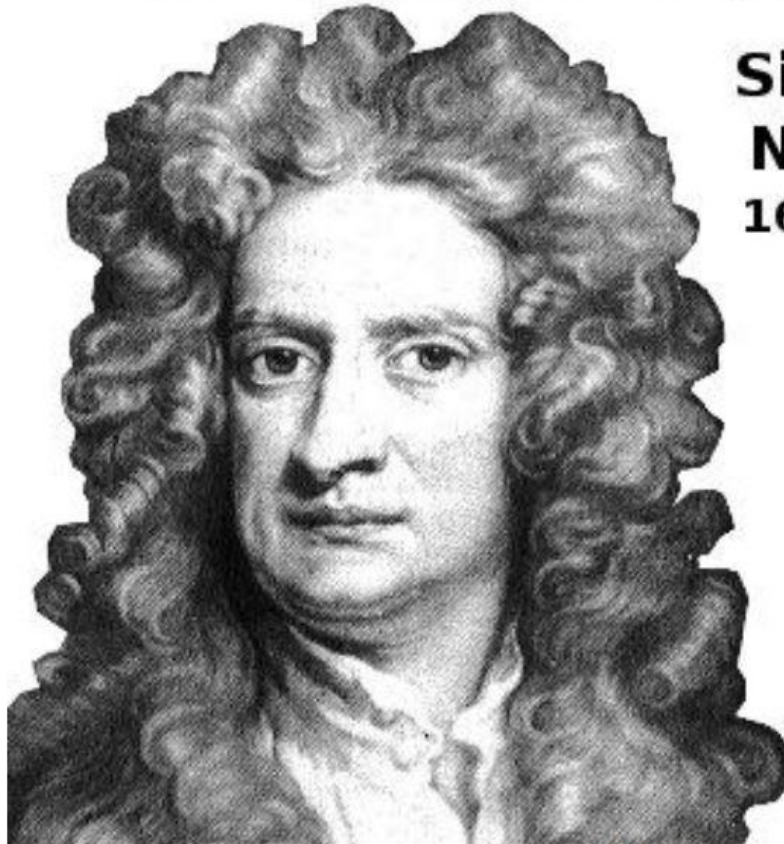
Every Movement Is Relative To A Reference System

Absolute Space as a *Container* for All Relative Spaces



The Process Of Cognition:

**"If I have seen further, it
has been by standing on
the shoulders of giants."**



**Sir Isaac
Newton
1643-1727**

Epistemology

„What Can We Know?“

Immanuel Kant

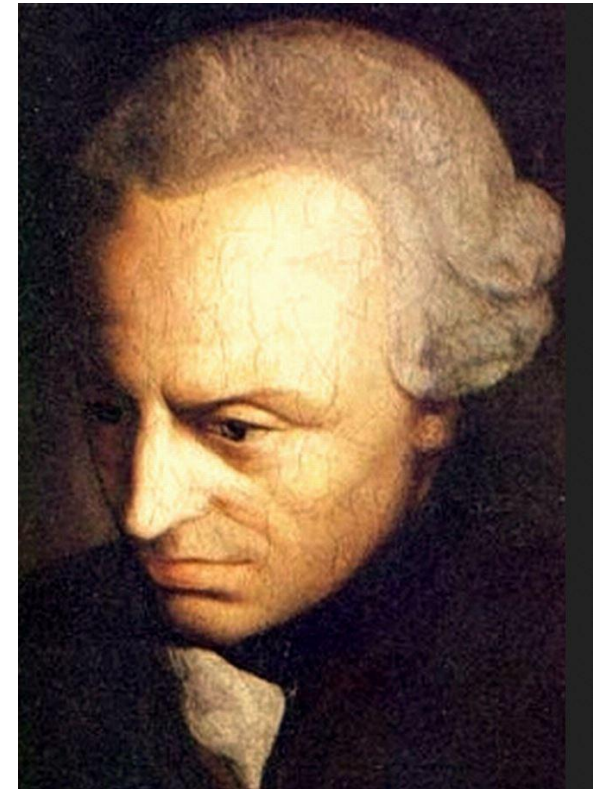
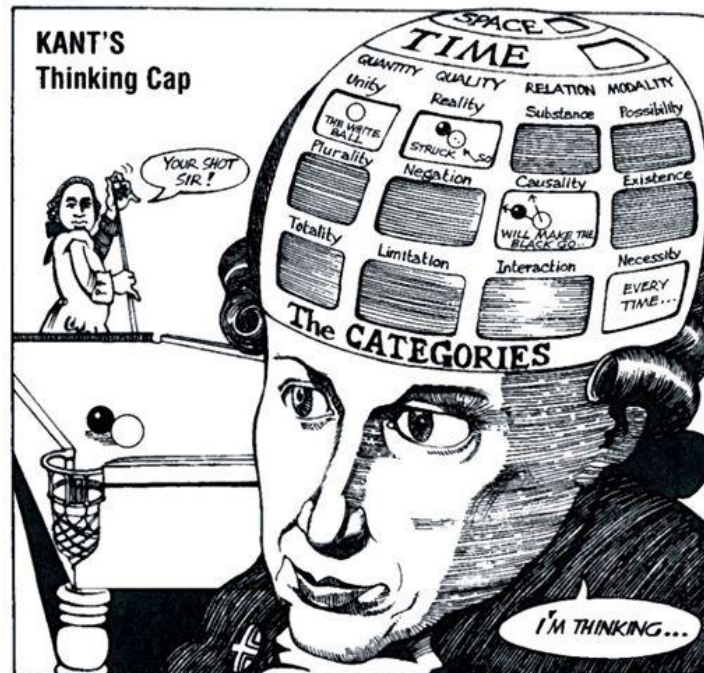
1724 – 1804

For a human subject there is no direct experience of things.

The mind shapes and structures experience.

The concepts of space and time are integral to all human experience.

Subject, perception and space are transformed into variables that depend on each other



20th Century: Diversification of the notion of SPACE

- * Natural Sciences: Relativity – Space can only be understood in relation to a reference system.**
- * Human Sciences: Environment – Space is something that is experienced by the individual, by the species, by social groups.**



A Scientific Revolution: From $F = ma$ to $E = mc^2$

Albert Einstein

1879-1955

Theory of Special Relativity 1905:

Rejection of Newton's world vision as „container thinking“.

There is no absolute space, but only a system of relations of fields.

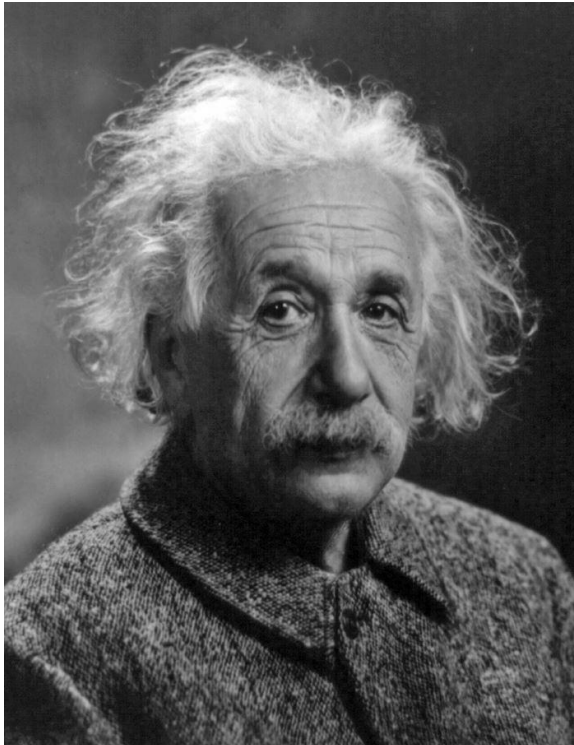
Space is where the attributes of fields appear and act.

Space is the only carrier of reality.

Energy (E), not Force (F) is the most important factor.

General theory of relativity 1915:

The idea of SPACETIME – 4-dimensional universe



$$E=mc^2$$



**Einstein's ideas influenced the area of philosophy and social sciences.
Space is not given, but defined by the interaction of space objects or human
activities.**

Phenomenology

Description of the essence of human existence and conception on the basis of the own experience.

Edmund Husserl

1859-1938

**Spacebody: Space gives security and orientation.
The Concept of Lifeworld.**

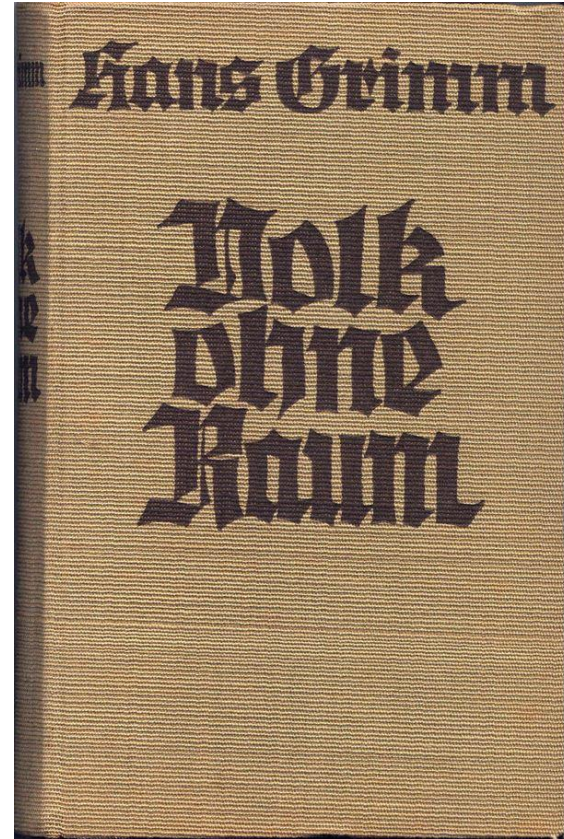


The German Aberration

Martin Heidegger

1889-1976

The being of man ist not *in space*, it *takes space*.
To make history means: to create space.



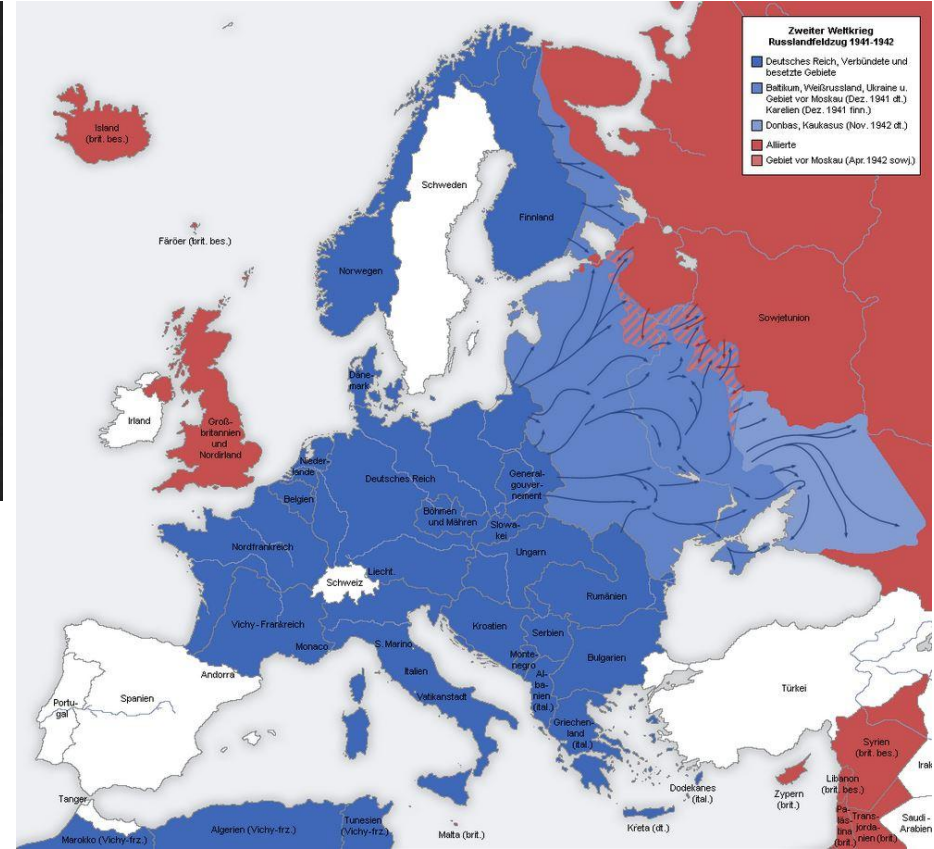
1926

**Political Space:
Geopolitics**

Worldwar II



Geopolitics



The Plan: The conquest of space and extension of territory



The method of land-grabbing

French Phenomenology: The experienced lived space

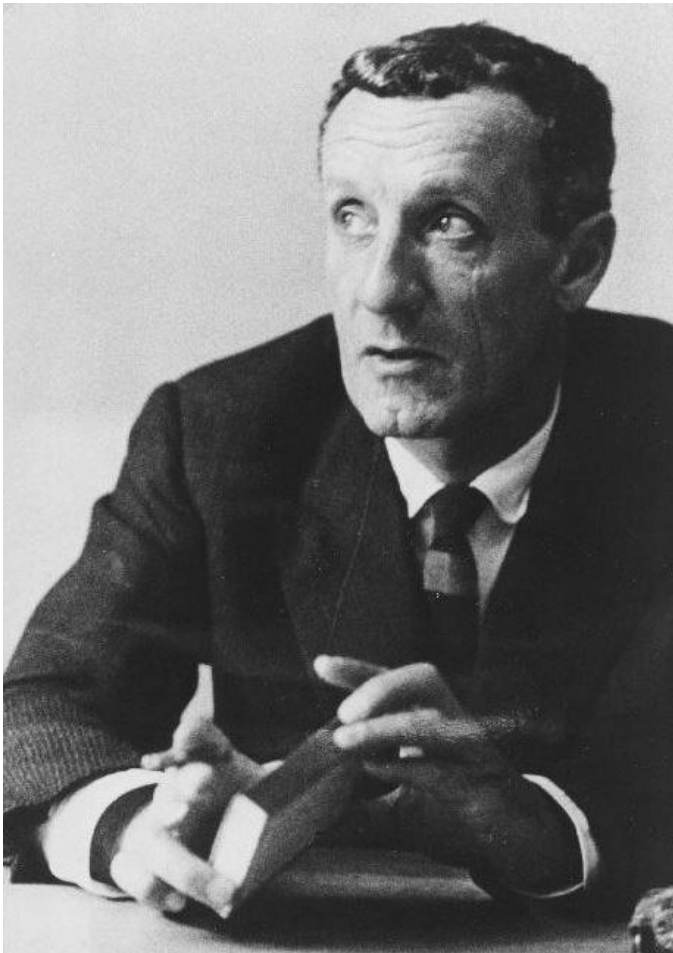
Maurice Merleau-Ponty

1908-1961

Space should not be thought as something outside, but in a combination of ego and world.

Space is seen, felt and experienced. Psychology and cognitive sciences.

Corporeity: One's own [body](#) (*le corps propre*) is not only a thing, a potential object of study for science, but is also a permanent condition of [experience](#), a constituent of the perceptual openness to the world.



Paul Cézanne

Space Poetry

Gaston Bachelard

1884-1962

Philosophical works on the theory of science and poetry

Significance of imaginative and phantastic motives for every space concept:

Psychological approach to space.

For alternative descriptions of space poetic patterns and methods should be used.

Necessity of new configurations of thinking space.



Hodological Space

Kurt Lewin

1890-1947

Pioneer of modern psychology

His ideas about space lean on the physical field theories.

Focus on the behaviour of man in a specific environment: Behaviour is a function of person and environment.

Lived space is **hodological space** [greek *hodos* = way, path, trail].

Reciprocity of action-space and space-activity.



If you want to truly understand something, try to change it

~ Kurt Lewin ~



Existentialism

Jean-Paul Sartre

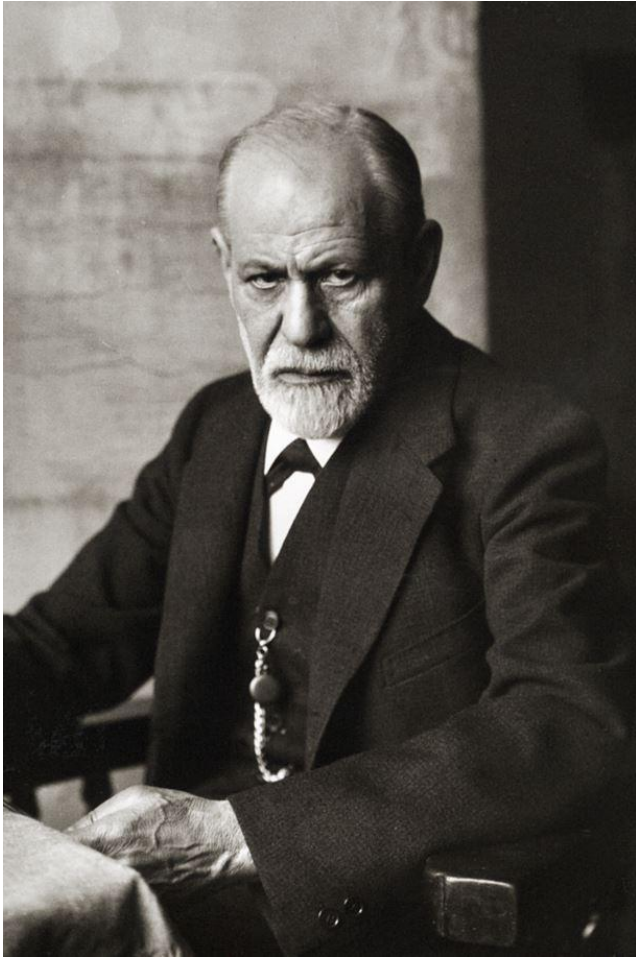
1905-1980

**The reception of Lewin's approach opened the way to recognize „the real space of the world“, because it puts light on both sides: the subjective of the person and the objective of the world.
„Man and world are relative beings, and the principle of their being is the relation.“**

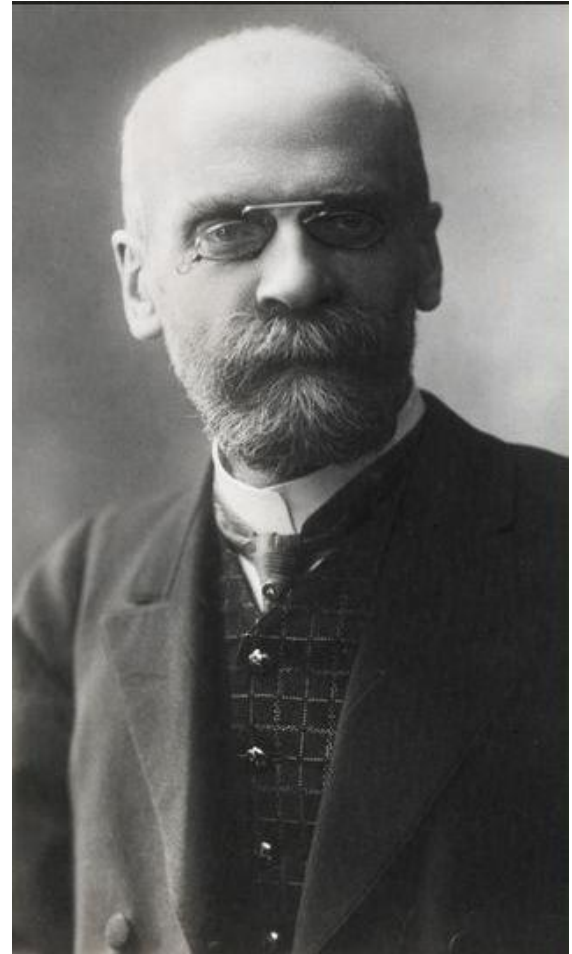


Social Spaces

The origin: Differentiation of human sciences into **psychology** and **sociology** at the end of the 19th century.



Sigmund Freud 1856-1939



Emile Durkheim 1858-1917

**Focus on societies that inhabit spaces:
Social order, social dynamics and its relation to physical space**

Georg Simmel

1858-1918

Fundamental examination of the historical changes of the perspective of space.

Social organisation – Spatial organisation



The discourse on Social Space in France

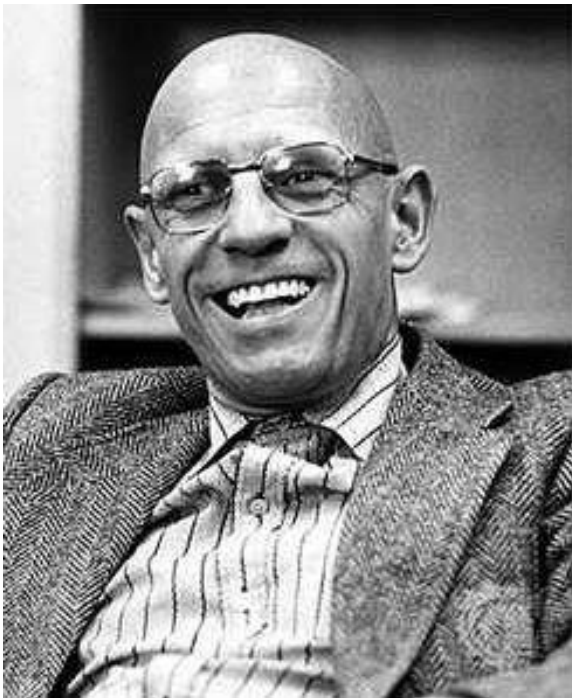
Michel Foucault

1926-1984

Research focus on the relationship between **power** and **knowledge** and how knowledge is used as a form of **social control** through **social institutions**.

The social order of knowledge is constructed by exclusion of all forms of thinking that can not be discussed at a certain point of time.

„Other Spaces“: Heterotopy - Utopy



History of social spaces:

* The Middle Ages: Sacred Spaces – Profane Spaces

Space type: *localization*

* Renaissance: Geometrification of space (cartography)

Space type: *extension*

* Modernity: Relational constitution of space and social order

Space type: *position*

Method: Isolation of archeological layers in the space-time structure.



Social Geography: *sense of place* = understanding the interrelation between the dynamics of globalization and regional relationships. Close spaces – Far spaces and their technical and political mediations.

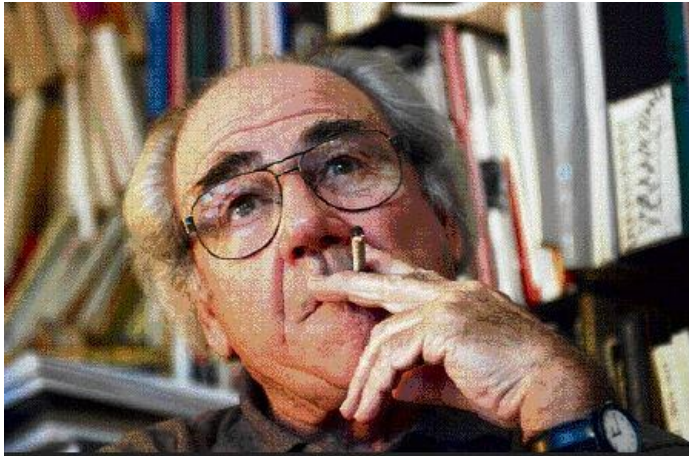
Post Colonial Studies: Localization of Cultures.

Radicalization of the approach: The social constitution of space
Social practises construct space. Theories of practise developed in the 1970ies in dialogical forms between various intellectuals.

Henri Lefebvre

1901-1991

The production of social spaces: Space is – in the marxist tradition – part of the means of production but at the same time product of a social practise.



Lefebvre's theory is – in the consideration of avantgarde art forms – quite emphatic and carried by the hope of social change.



René Magritte 1898-1967

3 levels of understanding space:

- **Perceived Space** of everyday social life and commonsensical perception.
- **Conceived Space** of cartographers, urban planners, property speculators, etc.
- **The Lived Space** of imagination which has been kept alive and accessible by the arts and literature. **This third space has the power to refigure the balance of popular perceived space and official conceived space.** (Dada, the surrealists, Magritte, the situationists)

The practise of everyday life

Michel de Certeau

1925-1986

Works on history, psychoanalysis, philosophy and social science.

The examination of *everyday life* is the point of reference for Certeau's concept of space:

De Certeau refers to Foucault's considerations on *Control and Punishment* where a space model of visual control was established: Strategic space control from above (video, watchtower) – Space Practise from the bottom (walking through the city) = relational space of experience.

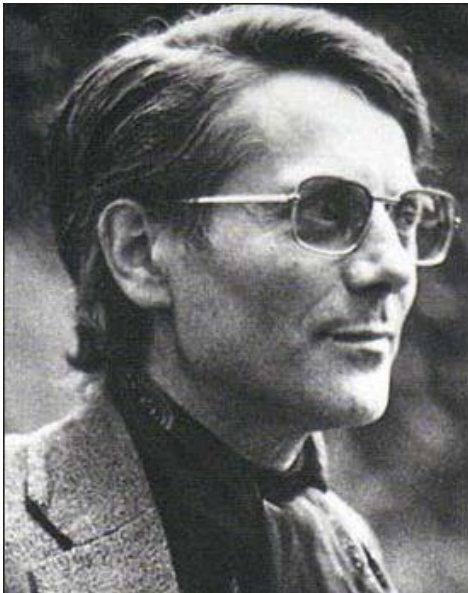
Strategic space control creates *maps* related to an external classification system. – Repressive aspect of modern society.

Space practice creates a *parcour* as a relative reference system. – Elements of creative resistance to power structures in everyday life space practices.

***Strategies* and *tactics* in the battle between repression and expression:**

Strategies are used by those within power structures – Tactics are employed by those who are subjugated.

Tactical space practises have the potential to destabilize or transform space concepts and systems that are constructed by official powers.



Social Interaction Space

Pierre Bourdieu

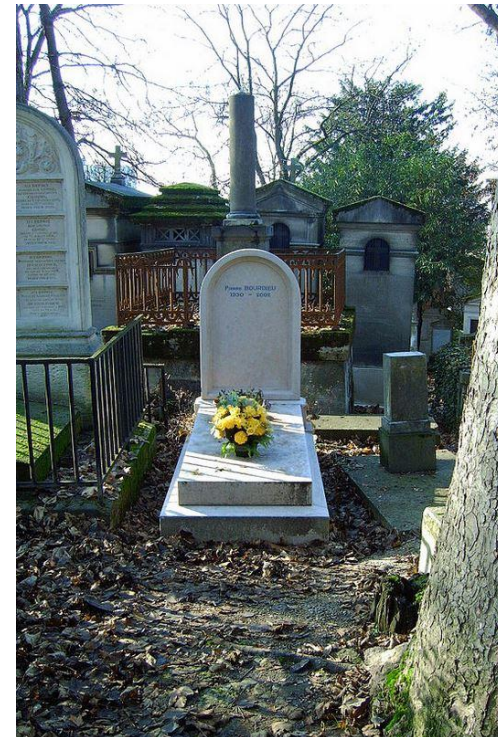
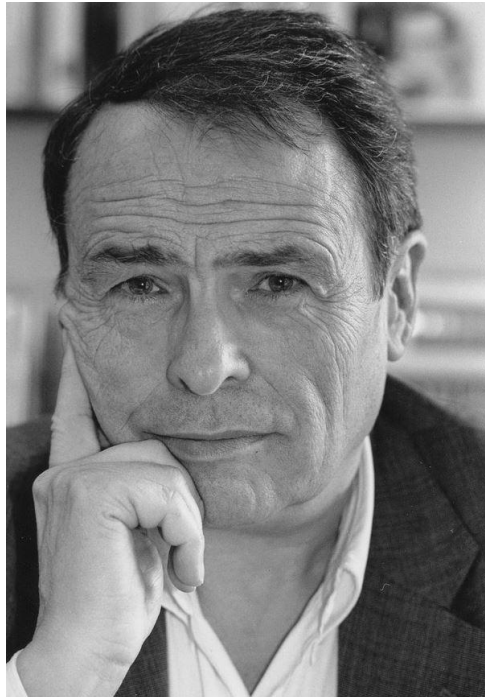
1930-2002

Bourdieu's social space theory is based on the key terms *habitus* and *social field*.


Habitus = Bridge between individual action and social structure. Organisation of individual action according to collective rules.

Social space is the force field where habitualized action forms compete to gain material or symbolic capital which is the basis for social distinction.

Bourdieu's space concept is highly abstract. But it can be the basis for a social theory of space that transgresses the duality of natural/physical space and social space towards a *concept of social interaction space* which is constructed dynamically by the relationship between actors and objects.





- They are all dead.... Left the stage.
- They left us ideas and concepts.... Markers on the road.
- We are the ASAMBLEA.
- We have to find out for ourselves. Make Our Way in SpaceTime.
- It's our everyday life experience as creative subjects that counts.
- Theory & Practice: **Think and Act !** 

Act 5: Our Play → Constructing New Spaces

Jane Jacobs

1916-2006

American-Canadian Journalist and Activist.

Influence on urban studies: „The Death and Life of Great American Cities (1961). She organized grassroots efforts to protect existing neighbourhoods from „slum clearance“. She protested and mobilized people against the construction of highways through the cities.

Experience: Everyday life experience = perceived space / conceived space (non-formal)

Lefebvre

Practice: Bottom-Up-Tactics / Action against the power concepts

De Certeau

Field = neighbourhood / urban space - Habitus = critical experience / protest

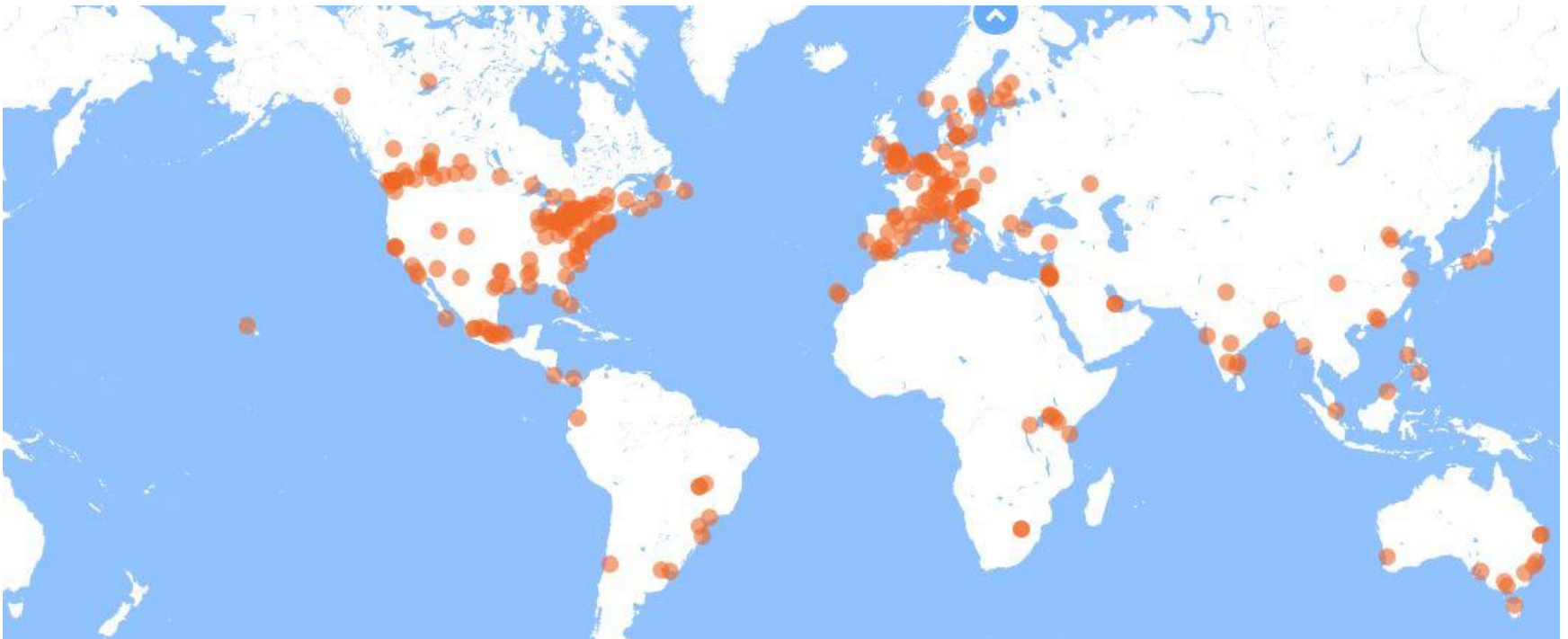
Accumulation of social capital

Bourdieu

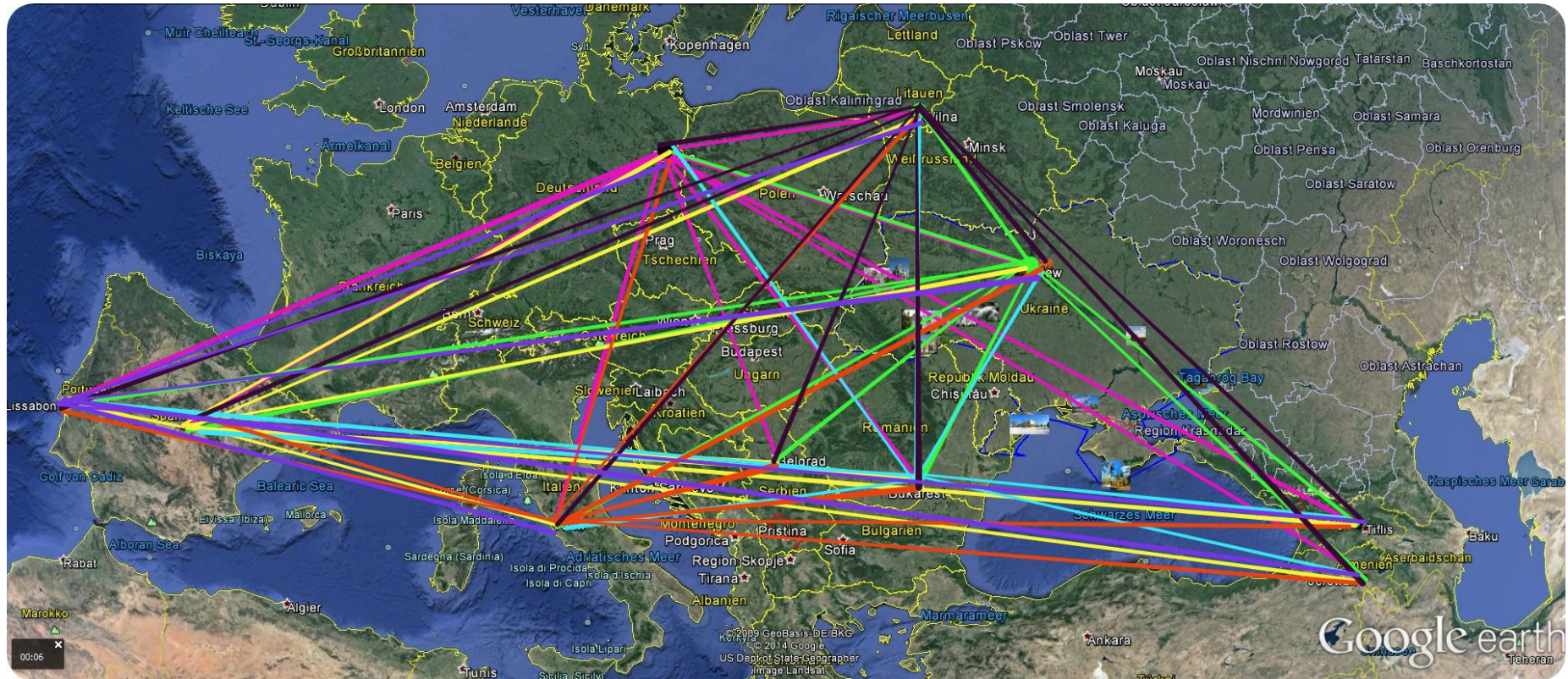


Newconfiguration of the Hodological Space

Jane's Walk is a movement of free, locally led walking tours inspired by Jane Jacobs. The walks get people to explore their cities and connect with neighbours.



Theory/Practise Network



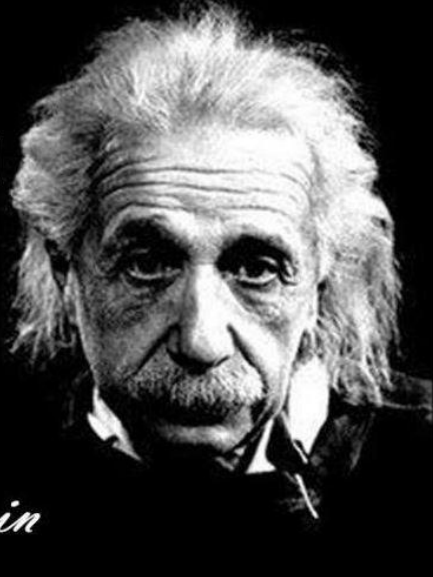
A New Dynamic Creative Space

...in construction

... a voice from beyond:

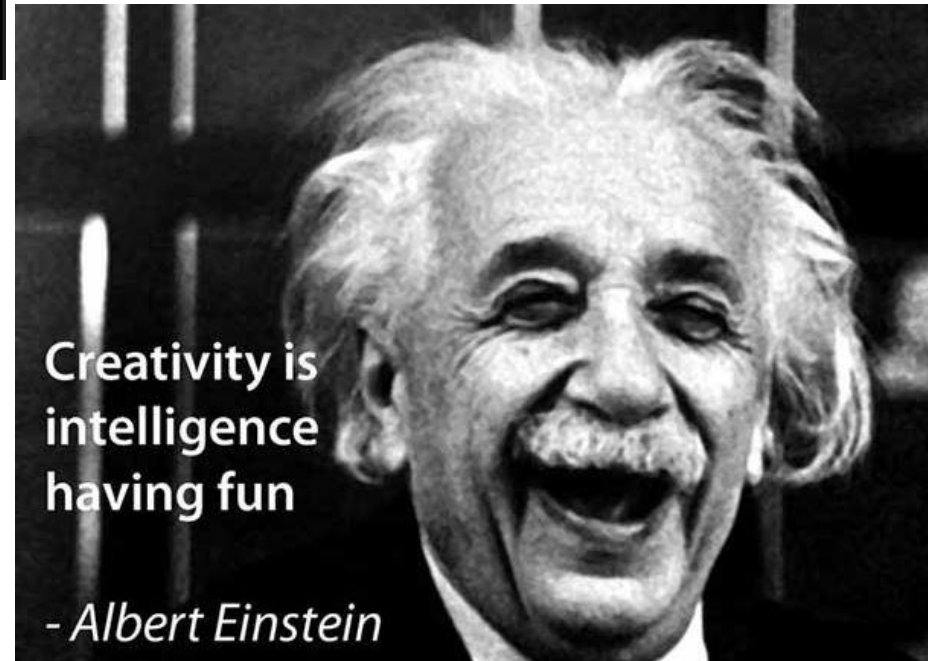
WE CANNOT SOLVE
OUR PROBLEMS WITH
THE SAME THINKING
WE USED WHEN
WE CREATED THEM

~ Albert Einstein



Creativity is
intelligence
having fun

- Albert Einstein



- The material was arranged by FUSION-Intercultural Projects Berlin e.V. and can be used for educational purposes.
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