AHST 2331-001 (21626)
Understanding Art
Dr. Charissa N. Terranova
Spring 2019
Tuesdays and Thursdays 11:30-12:45
ATC 1.102

Office Hours: By appointment
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Tuesday 01/14/20
Introduction

DESCRIPTION:
This course offers a general investigation into the hybrid realm of **art-science-technology**. The class focuses on the nature of the visual arts and architecture and the role of science and technology therein. It emphasizes the influence of scientific and technological invention on the issues and ideas that artists explore through their work and how these ideas translate into the artwork. Attention is given to the interpretation of the role of science and technology within art and architecture and how the forces together relate to and constitute society over the last two millennia.

THEMES:

There are three primary themes in this class, which are often interwoven each week. This means, most lectures have elements of each theme.

Virtual Reality: In the most basic sense, “virtual reality” or VR refers to an experience that is not exactly real, but near real. Humans have been creating near real experiences in VR for several millennia. This class will study the human penchant to recreate reality virtually in drawing, painting, architecture, and through digital technology.

Infrastructure: The term infrastructure refers to the basic, underlying framework or features of a system or organization. Often, these basic frameworks serve a country, city, or defined area. Examples include sewer and light systems, transportation and communication systems, power plants, and schools.

Extensions of the Senses and/or Prosthetic Extensions: The great Canadian media theorist Marshall McLuhan used the word “extension” to describe various technological media, ranging from writing and moveable print-type to film and the automobile to photography and the computer. This class explores how such technological extensions function as prosthetics which enhance the capabilities of the basic human body.

ORGANIZATION:
The class is organized around theme-driven modules that include short reading assignments, lectures, in-class note-taking, films, quizzes, and discussion.

REQUIREMENTS:
Students are required to attend every class, complete all assignments, and participate with candor and verve in class. Students are allowed two unexcused absences after which each absence will result in the lowering of the final grade by a half a letter grade. Students with illnesses that require extended periods of absence are encouraged to officially withdraw from class.

ASSIGNMENTS – QUIZZES and EXAMS:

- Quizzes: Each sub-module culminates with a quiz, which is then followed by discussion. The quizzes consist of one very general question derived from the week's reading assignment(s). There are ten quizzes in the class. Percentage of grade: 40%.

- Exams: There are two exams in the course, a mid-term on **Thursday March 12, 2019** and **a final exam, tba**. The tests consist of slide identification and short answer questions. The test material is taken from the lectures and reading. The professor distributes a review sheet prior to each test. Percentage of grade: 60%.

READING ASSIGNMENTS:

The reading assignments are available in your textbook listed below and on reserve at e-learning through Leganto. Instructions for accessing Leganto are on pp. 5-7 below.

- Textbook: Oliver Grau, *Virtual Art: From Illusion to Immersion.* Cambridge, MA: MIT Press, 2003.

SLIDE PRESENTATIONS:

All slide presentations are available at www.charissaterranova.com.

CLASSROOM BEHAVIOR:

- **No food or drink in the auditorium.**
- **No laptops or smart devices are allowed once the lecture has begun.**
- **Discussion is encouraged.** Please raise your hand to ask questions or make comments.

STANDARD UTD POLICIES:

http://www.utdallas.edu/deanofstudents/conductguidelines.html
http://provost.utdallas.edu/
http://www.charissaterranova.com/syllabi/utd-policies.htm

SCHEDULE:

VIRTUAL REALITY: FROM PREHISTORIC CAVES TO ANCIENT ROME

Tuesday January 14
Introduction and Lecture: *Techne* and Art; Virtual Reality and Prehistoric Cave Drawings
Reading Assignment
Chapter 1, "Introduction," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 2-22.
"Virtual Realities Then and Now: The Caves of Lascaux," http://www.transparencynow.com/lascaux.htm.

Thursday January 16
Film Screening: *Cave of Forgotten Dreams* (2010) Directed by Werner Herzog

Tuesday January 21
Quiz #1 and Discussion

Thursday January 23
Lecture: Roman Urbanism, Architecture, and Infrastructure
Reading Assignment:
J. N. Hopkins, "The Cloaca Maxima and the Monumental Manipulation of Water in Archaic Rome," in K. Rinne, ed., *The Waters of Rome* (Charlottesville, VA: University of Virginia Press, 2007) 1-15. http://www3.iath.virginia.edu/waters/Journal4Hopkins.pdf

Tuesday January 28
Lecture: Roman Interiors and Paintings
Reading Assignment:
Chapter 2, "Historic Spaces of Illusion," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 24-89.

Thursday January 30
Quiz #2 and Discussion

VIRTUAL REALITY AND SACRED SPACES

Tuesday February 4
Lecture: Hagia Sophia: Symbolisms and Strata of Structures and Time
Reading Assignment:
Emma Wegner. "Hagia Sophia, 532–37." In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–. http://www.metmuseum.org/toah/hd/haso/hd_haso.htm (October 2004)
Rowland J Mainstone. "Questioning Hagia Sophia." In *Hagia Sophia: From the Age of Justinian to the Present*. Princeton, NJ: Princeton University Press, 1988. 158-176.

Thursday February 6
Quiz #3 and Discussion

Tuesday February 11
Lecture: Mosque of Cordoba: Spoilage and Repetition of Forms
Reading Assignment:
D. Fairchild Ruggles. "The Stratigraphy of Forgetting: The Great Mosque of Cordoba and Its Contested Legacy," in *Contested Cultural Heritage: Religion, Nationalism, Erasure, and Exclusion in a Global World*, ed. Helaine Silverman (New York: Springer, 2011) 51-67.

Thursday February 13
No Class Annual Meeting of the College Art Association

Tuesday February 18
Film Screening: *Cathedral* (2012) PBS Documentary narrated by David Macaulay
Reading Assignment:
Jean Sorabella. "Pilgrimage in Medieval Europe." In *Heilbrunn Timeline of Art History*. New York: The Metropolitan Museum of Art, 2000–. http://www.metmuseum.org/toah/hd/pilg/hd_pilg.htm (April 2011).

Thursday February 20
Quiz #4 and Discussion
Distribution of Mid-Term Exam Review

TECHNOLOGICAL EXTENSIONS AND PROSTHETICS OF VISION

Tuesday February 25
Lecture: Lenses and Prosthetic Vision in Early Modernity: Italy and England
Reading Assignment:
Cullen Murphy, "Our Predictions about the Internet Are Probably Wrong," Jan./Feb. 2020.
"The Telescope," The Galileo Project, Rice University, http://galileo.rice.edu/sci/instruments/telescope.html
Samuel Pepys [Primary Source], "Samuel Pepys Describes the Fire of London" (1666) http://media.bloomsbury.com/rep/files/Primary%20Source%209.5%20-%20Pepys.pdf.

Thursday February 27
Quiz #5 and Discussion

Tuesday March 3
Lecture: Painting with Grids – From Vermeer to Photorealism
Reading Assignment:
Gerhard Gutruf and Hellmuth Stachel, "The Hidden Geometry in Vermeer's 'The Art of Painting'," http://www.heldermann-verlag.de/jgg/jgg14/j14h2gutr.pdf
"Vermeer and the Camera Obscura," http://www.essentialvermeer.com/camera_obscura/co_one.html#.WFBlqJIuqVs

Thursday March 5
Quiz #6 and Discussion

Tuesday March 10
Mid-Term Exam Review

Thursday March 12
Mid-Term Exam

Tuesday March 17 / Thursday March 19
Spring Break No Class

ARCHITECTURE, MOBILITY, INFRASTRUCTURE, AND VIRTUAL REALITY

Tuesday March 24
Lecture: Rolling Through the Landscape and Spatial Surrounds: Trains and Panoramas
Reading Assignment:
Chapter 3, "The Panoramas of the Battle of Sedan: Obedience through Presence," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 90-139.

Thursday March 26
Quiz #7 and Discussion

Tuesday March 31
Lecture: Mobile Prosthetics: Automobiles and Highways
Reading Assignment:
Paul Mason Fotsch, "The Building of a Superhighway Future at the New York World's Fair," *Cultural Critique*, no. 48 (Spring 2001) 65-97.

Thursday April 2
Quiz #8 and Discussion

Tuesday April 7
Lecture: Virtual Realities in Painting and Photography
Chapter 4, "Intermedia Stages of Virtual Reality in the Twentieth Century: Art as Inspiration for Evolving Media," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 140-191.

Thursday April 9
Lecture: Virtual Realities Constructed, Edited, and Made: Film and Montage
Dziga Vertov, "WE: Variant of a Manifesto," 5-9; [Various writings on Kino-Eye], 40-49, In *Kino-eye: The Writings of Dziga Vertov* (Berkeley: University of California Press, 1984).

Tuesday April 14
Film Screening *Man with a Movie Camera* (1929) Directed by Dziga Vertov

Thursday April 16
Quiz #9 and Discussion/**Distribution of Final Exam Review**

VIRTUAL REALITY IN THE DIGITAL AGE

Tuesday April 21
Lecture: The Digital Image in Art
Reading Assignment:
Chapter 5, "Virtual Art – Digital! The Natural Interface," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 192-211.
Chapter 6, "Spaces of Knowledge," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 212-269.

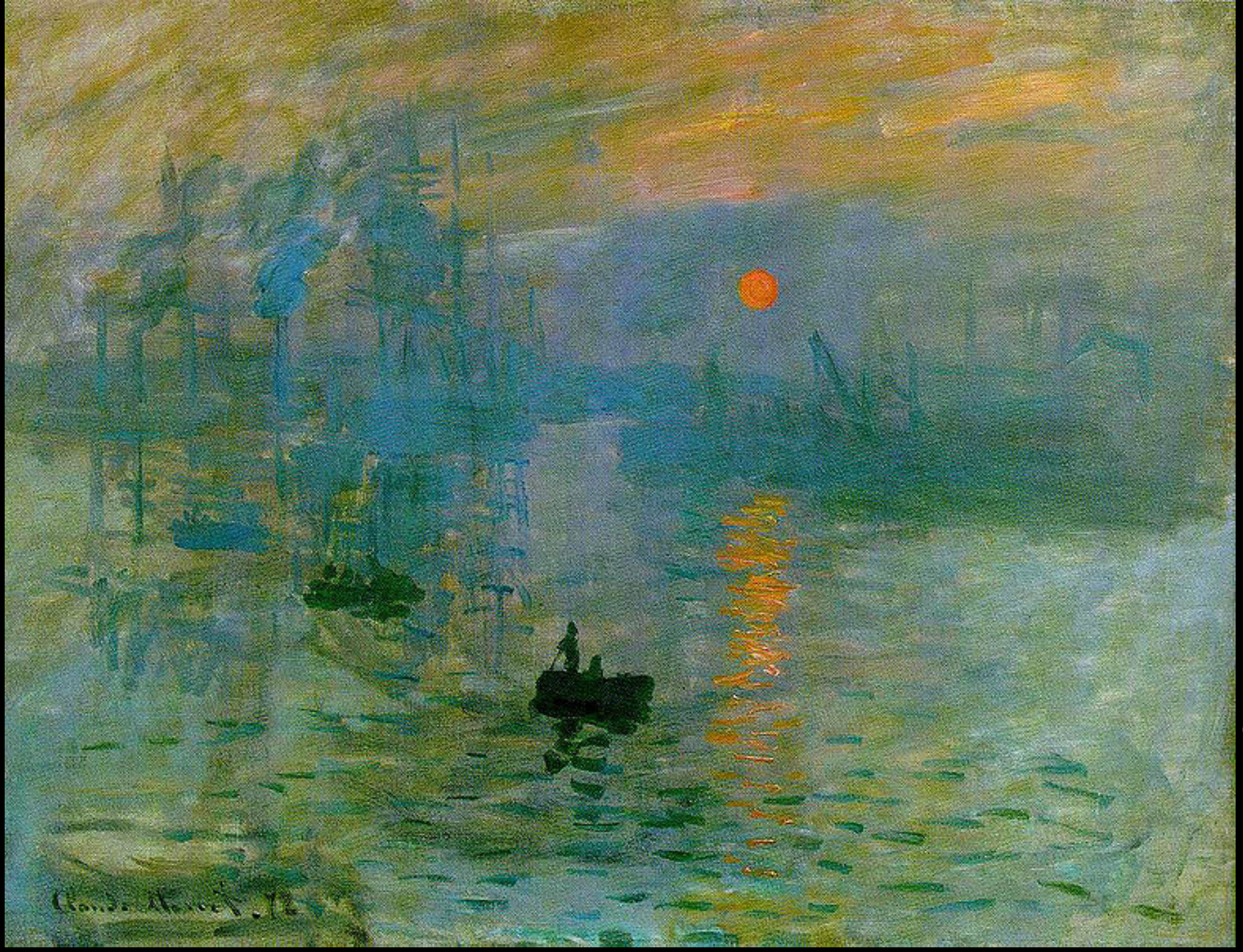
Thursday April 23
Quiz #10 and Discussion

Tuesday April 28
Lecture: Telecommunications and Biology in Art
Reading Assignment:
Chapter 7, "Telepresence: Art and History of An Idea," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 270-295.
Chapter 8, "Evolution," Oliver Grau, *Virtual Art: From Illusion to Immersion*, 296-337.

Thursday April 30
Discussion and Final Exam Review

FINAL EXAM TBA

What is the relationship between art and technology?

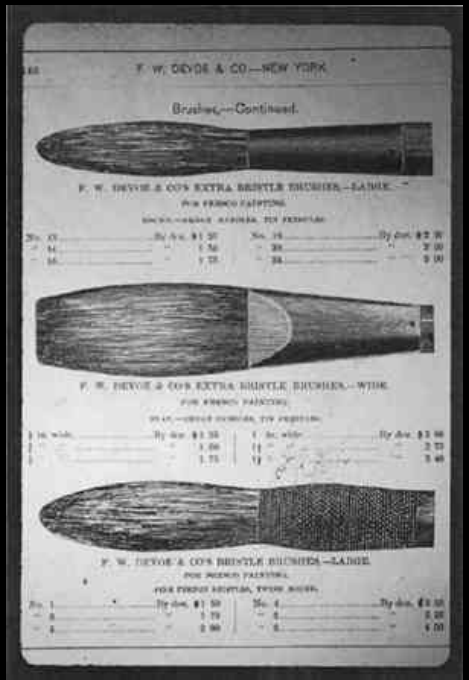


Claude Monet, Impressionist Sunrise, 1872
1′ 7″ x 2′ 1″

Painted “*en plein air*”

Claude Monet, La Gare Saint-Lazare, 1877

The tin tube was more resilient than its predecessor (the pig bladder), enabling painters to leave their studios. (Chrysler Museum of Art). The collapsible paint tube was invented in 1841 by portrait painter John Goffe Rand, superseding pig bladders and glass syringes as the primary tool of paint transport. By 1842, the tube was being sold exclusively by the firm of Winsor & Newton as “Rand's Patent Collapsible Tube”. Other technical advances include the portable easel and the portable stool, (near right). The change in brush ferrules from quill, thread, or wire-bound brushes to metal ferrules (far right) also made painting more mobile. The metal made paint brushes sturdier and less subject to damage. Probably introduced in the 18th century, the metal ferrule gained popularity in the 19th century.



The HISTORY of the ARTISTS' COLOUR TUBE.

Bladders in use
prior to 1840
Perforated & closed
with Tack.

WILLM WINSOR'S
First Patent Tube
1840
PATENT Nº 8394.

Early makes
OF
Metal Tubes
ABOUT 1841.

A B C

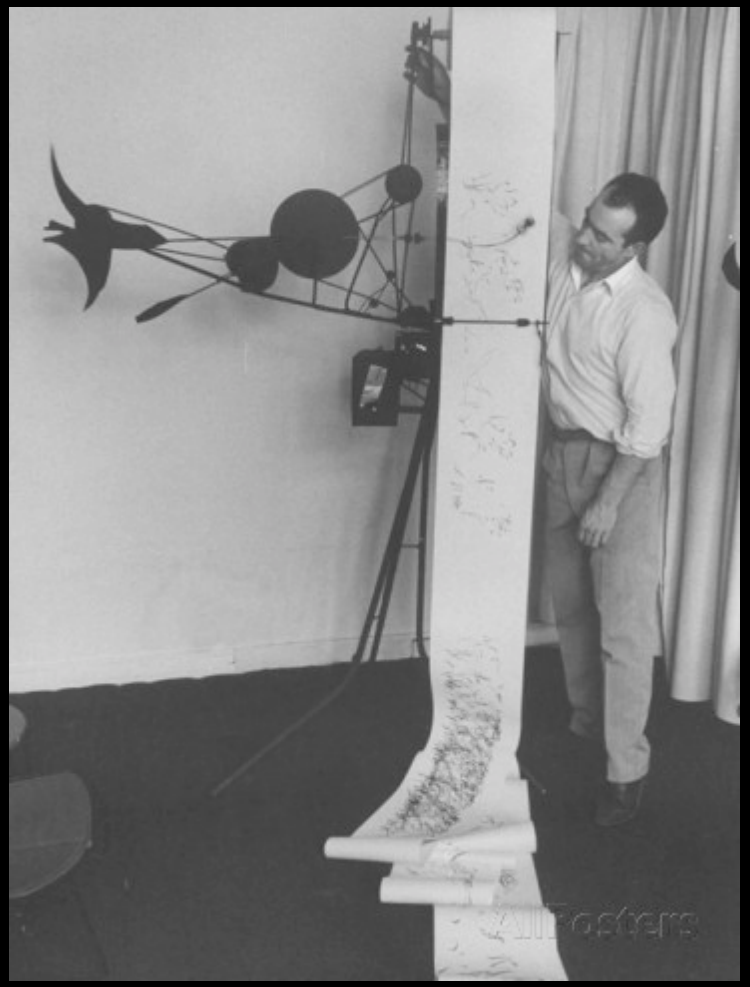
Specimens of Tubes manufactured by
MESSRS WINSOR & NEWTON, LTD
UP TO PRESENT TIME.

A. PATENT SPRING CLIP 1897. Nº 7402.
B. „ SLOW DRYING CLIP 1905. „ 10522.
C. „ TUBE CAP 1904. „ 28031.
„ „ „ 1905. „ 11435.

1st August 1911.

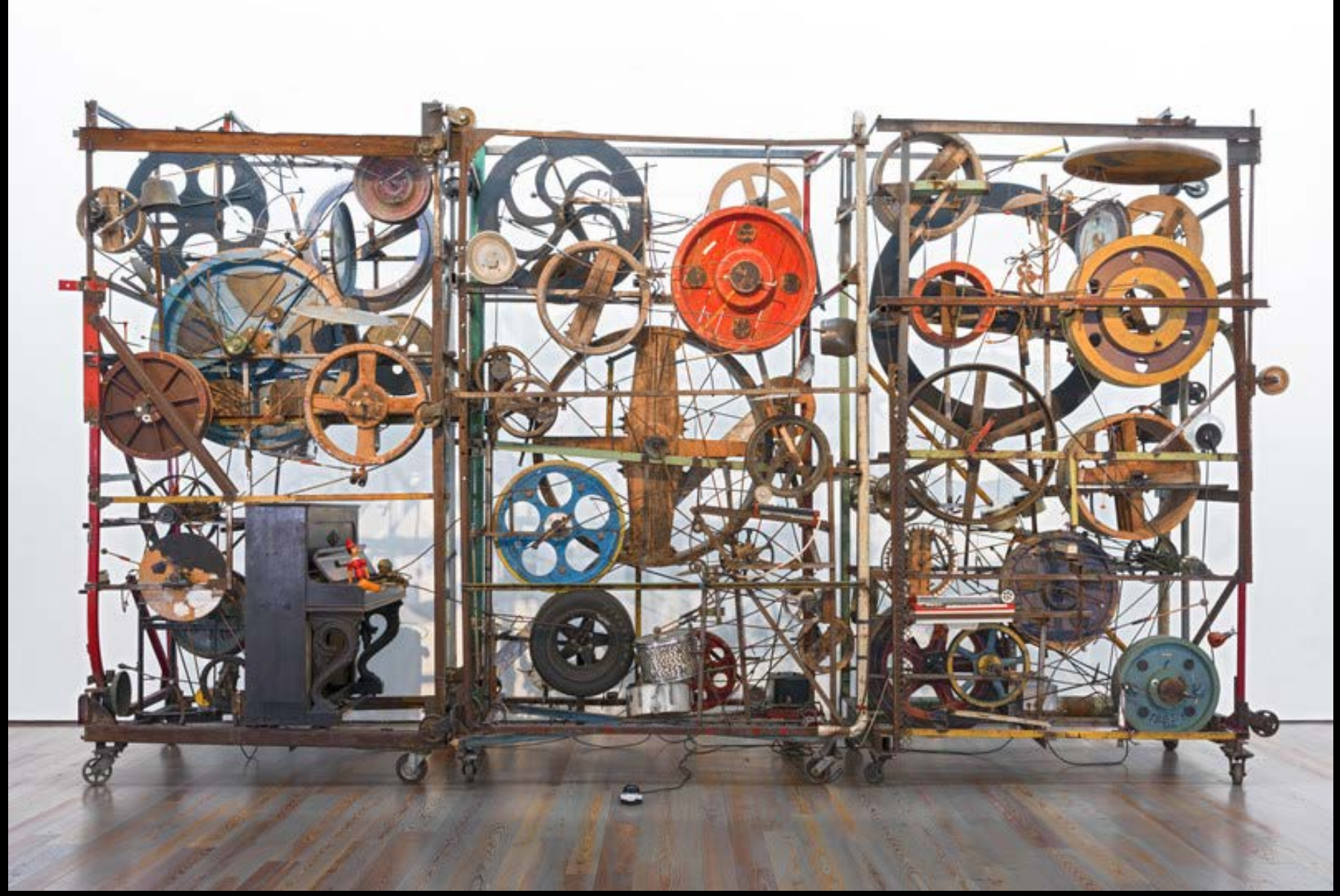
What is the role of technology in this work of art?

Marcel Duchamp, Bicycle Wheel, 1913



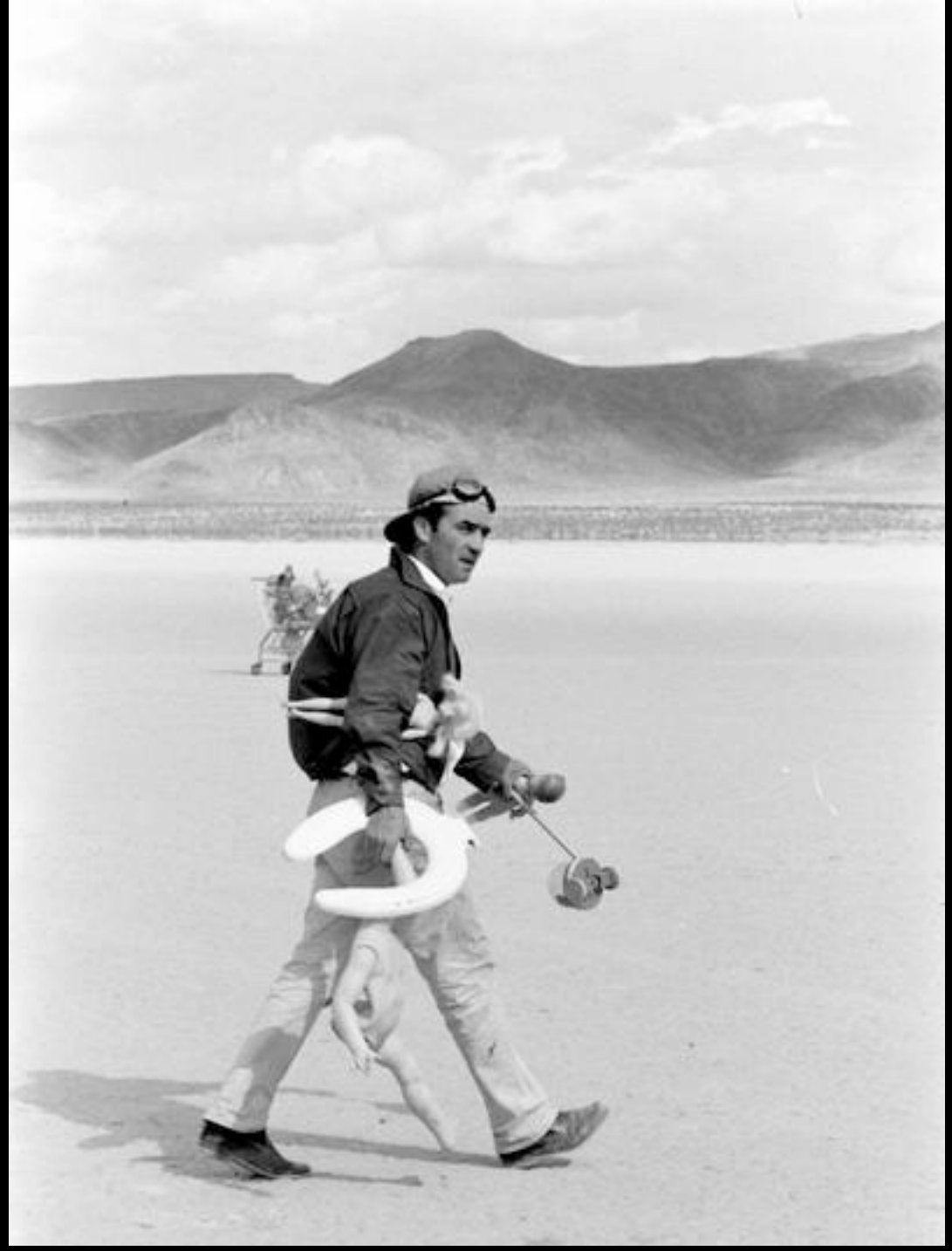
Tinguely at Iris Clert Galerie, 1959

Jean Tinguely, Méta-Matic #17, 1959



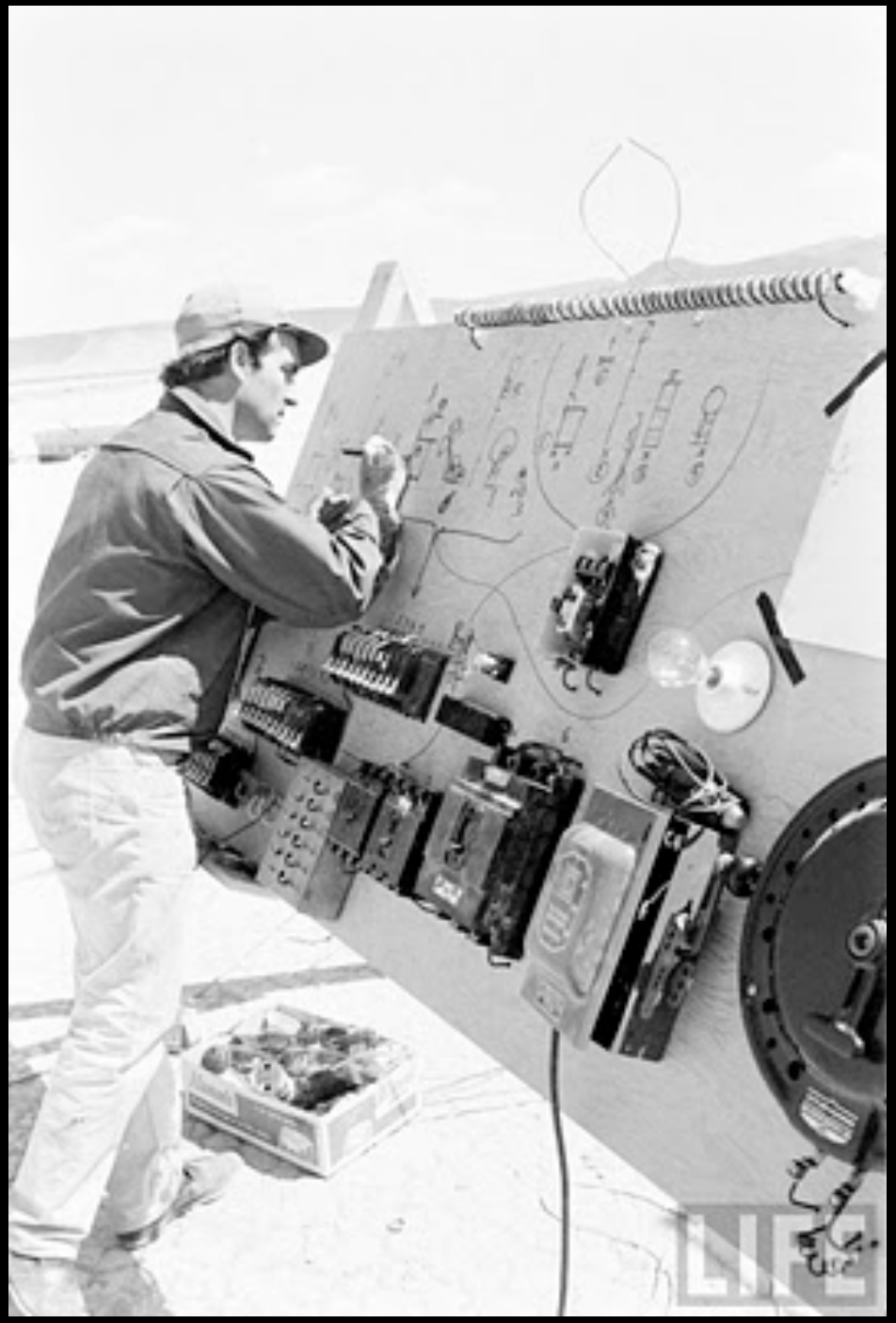
Jean Tinguely's Four Méta-Harmonie Music Machines at Museum Tinguely, Basel

https://www.youtube.com/watch?v=-Xp2jjSaRVg



Study for an End of the World, No. 2 , 1962

Tinguely in Nevada desert outside of Las Vegas, 1962


LIFE

LIFE

Surrealism, Technology, Biology

Above: Yves Tanguy, Heredity of Acquired Characteristics, 1936

Top Left: Jean Study for an End of the World, No. 2 , 1962

Bottom Left: Yves Tanguy, 'Azure Day' 1937

LIFE

Jean Tinguely in Nevada Desert Trying Out His Self-Destruction Machine Sculpture

LIFE

Etymology

Techne (Greek root of technology)

- 1 activities, skills of craftsman
- 2 arts of mind, fine arts

“the bringing-forth of the true into the beautiful”

Our word "technology" comes from the Greek *technikon,* which is related to the word *techne*. In the sense of "technique," *techne* refers to *both* manufacturing (the techniques of shoemakers and printers, for example) and to the arts (the techniques of poets and graphic designers, for example). *Techne* is part of *poeisis*, or poetry and/or crafting.

The most elemental process of modern times is the conquest of the world as images.

Martin Heidegger, quoted by Oliver Grau in *Virtual Art: From Illusion to Immersion*

Thus what is decisive in techne does not lie at all in making and manipulating nor in the using of means, but rather in the aforementioned revealing. It is as revealing, and not as manufacturing, that techne is a bringing-forth. (13)

Martin Heidegger, “The Question Concerning Technology” (1954)

technology = a challenging, a bringing-forth

What is the relationship between art and design?

Virtual Reality and Prehistoric Cave Drawings

Tuesday January 14

- Chapter 1, “Introduction,” Oliver Grau, *Virtual Art: From Illusion to Immersion*, 2-22.
- “Virtual Realities Then and Now: The Caves of Lascaux,” http://www.transparencynow.com/lascaux.htm.

Thursday January 16

- Film Screening: *Cave of Forgotten Dreams* (2010) Directed by Werner Herzog

Tuesday January 21

- Quiz #1 and Discussion

Cave Paintings, Lascaux Cave, Lascaux France, c. 17,000 BCE – up to 20,000 years old

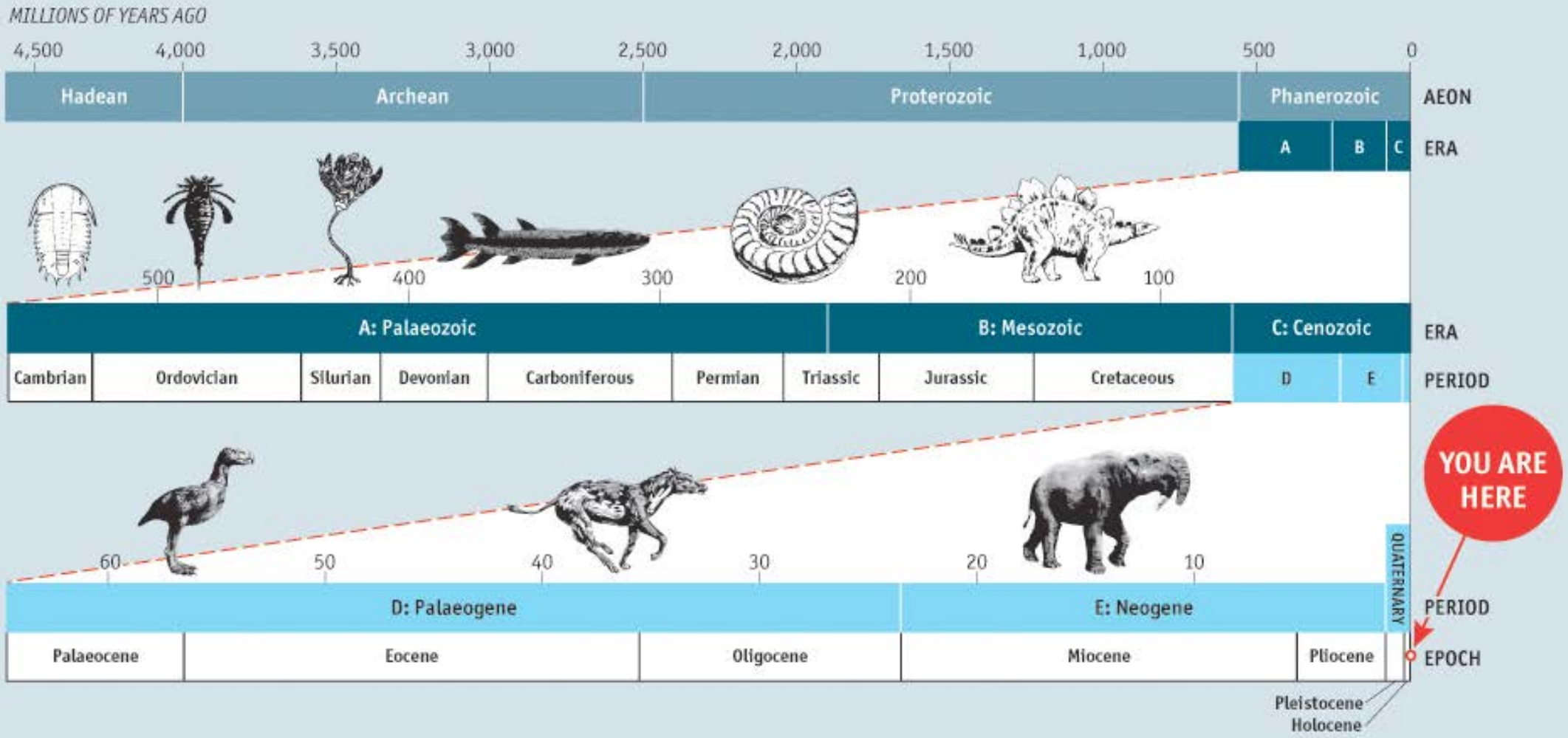
Parietal Art: archeological term for cave paintings; “parietal” means “of or relating to the walls of a part or cavity”

virtual reality

immersion

Major Paleolithic caves in France and Spain
FRANCE
Lyons
Jovelle
Gabillou
Lascaux
Isle
Rouffignac
Cougnac
Rhône
Bordeaux
Dordogne
La Mouthe
Pech Merle
ATLANTIC OCEAN
Lot
ARDÈCHE REGION
Ardèche
Cahors
Garonne
Bayol
La Baume-Latrone
Toulouse
Altamira
Le Portel
Marseilles
Les Trois Frères
Fontanet
Cosquer
Gargas
Réseau Clastres
Niaux
N
SPAIN
ARDÈCHE REGION
Chauvet
4 km
Vacheresse
4 miles
Ebbou
Le Colombier
Les deux-Ouvertures
Ardèche
Tête-du-Lion
Le Figuier
Oulen
Chabot
100 km
100 miles

A geological timeline of the Earth



STONE AGE

Mesolithic | Neolithic | Bronze Age | Iron Age

The end of the last Ice Age dates to about 12kya.

Britain was finally an island around 8kva

10kya 8000 BC

8kya 6000 BC

6kya 4000 BC

4kya 2000 BC

2kya AD 43

Star Carr, a lakeside settlement in North Yorkshire with the earliest house in Britain (it would have look like a tipi), was almost permanently inhabited around 11kya. People wore red deer antlers in ceremonies

Farming was developed in the Near East around 10kya This involved domesticating wheat, barley and sheep

Another tipi-like house was found at Howick in Northumberland and dates to about 7600 BC

The Storrega landslide off the coast of Norway c. 6100 BC caused a tsunami on the east coast of Britain and flooded Doggerland.

Farming reaches central Europe by about 7.7kya, 5700 BC

The earliest copper objects start being made in Europe around 7kya, 5000 BC

Farming was introduced to Britain around 6kya, 4000 BC. This included domesticated wheat and barley, sheep and cattle. Pottery was also introduced

The earliest feature of Stonehenge, a circular bank and ditch, was started around 5kya, 3000 BC. The stones came later. Skara Brae was also first inhabited in 3000 BC

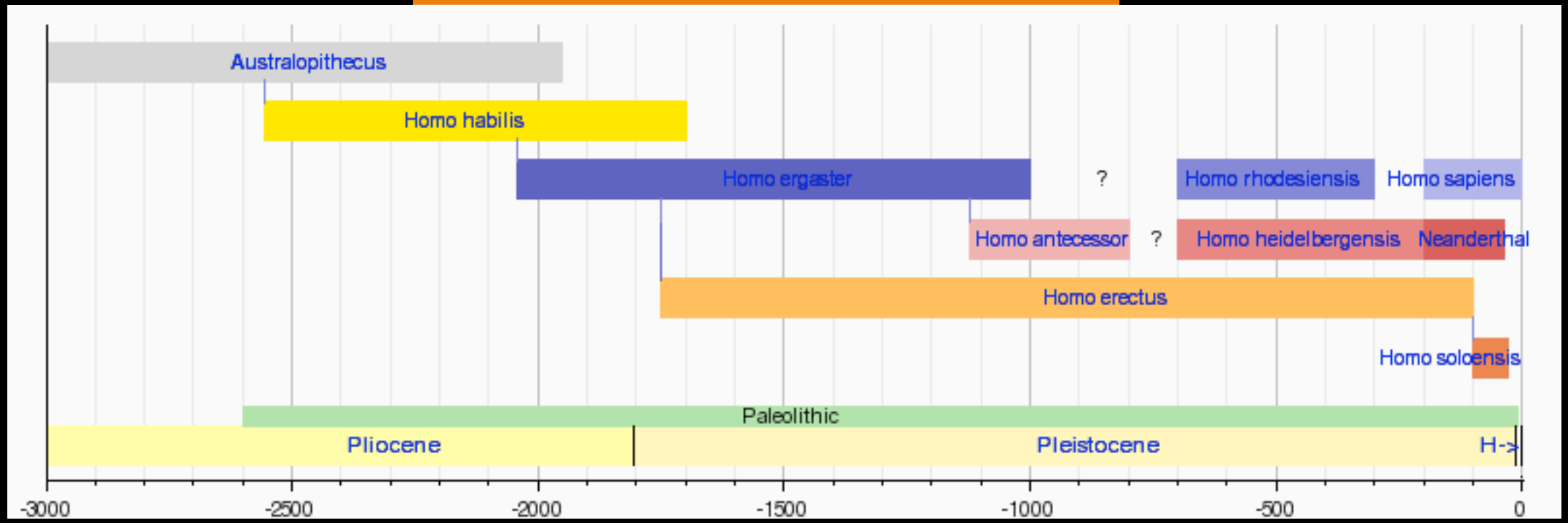
The Bronze Age begins around 4.3kya, 2300 BC. The Amesbury Archer is buried near Stonehenge with the earliest metal tools and jewellery in Britain

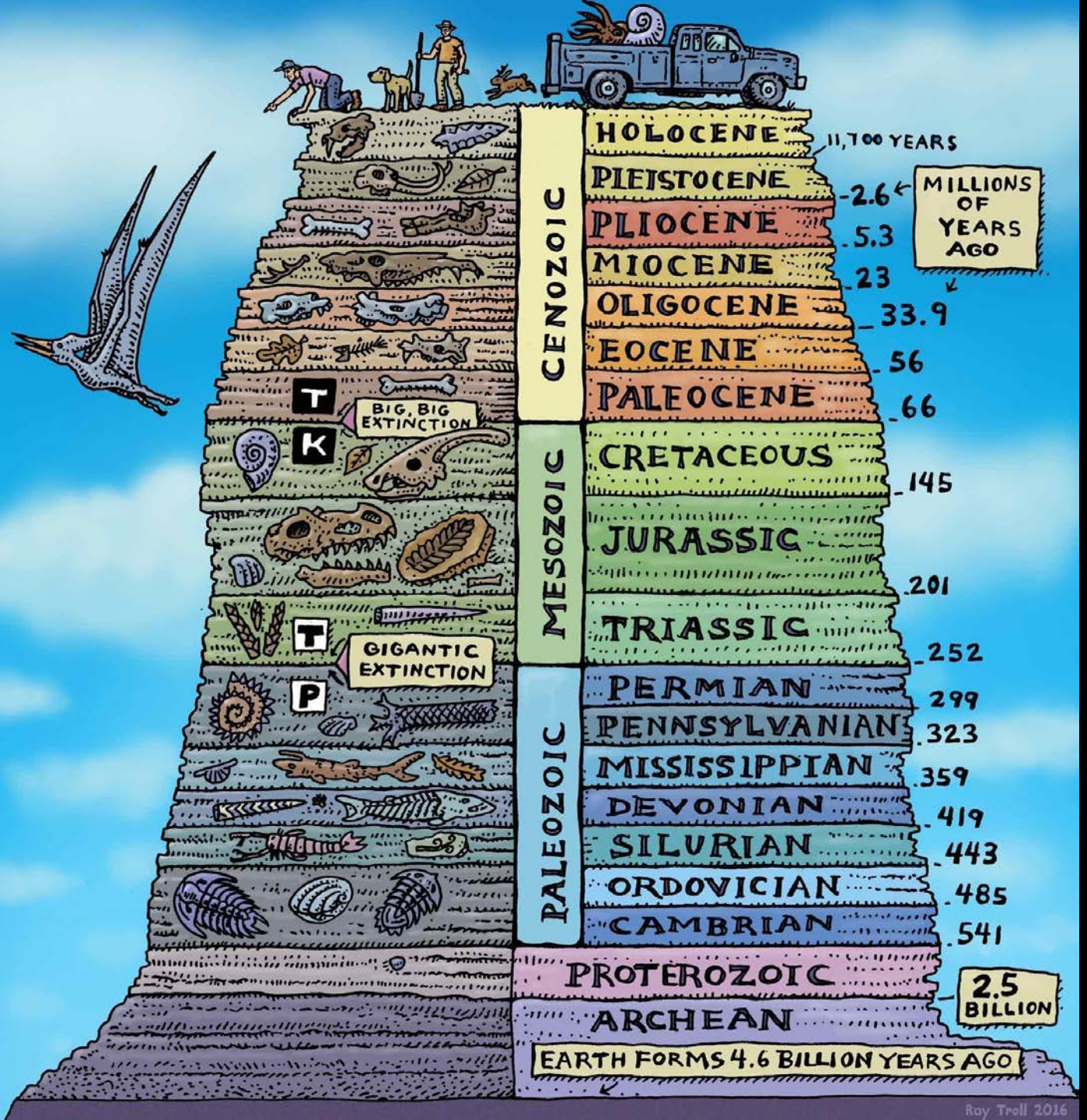
The Iron Age in Britain begins around 2.8kya, 800 BC

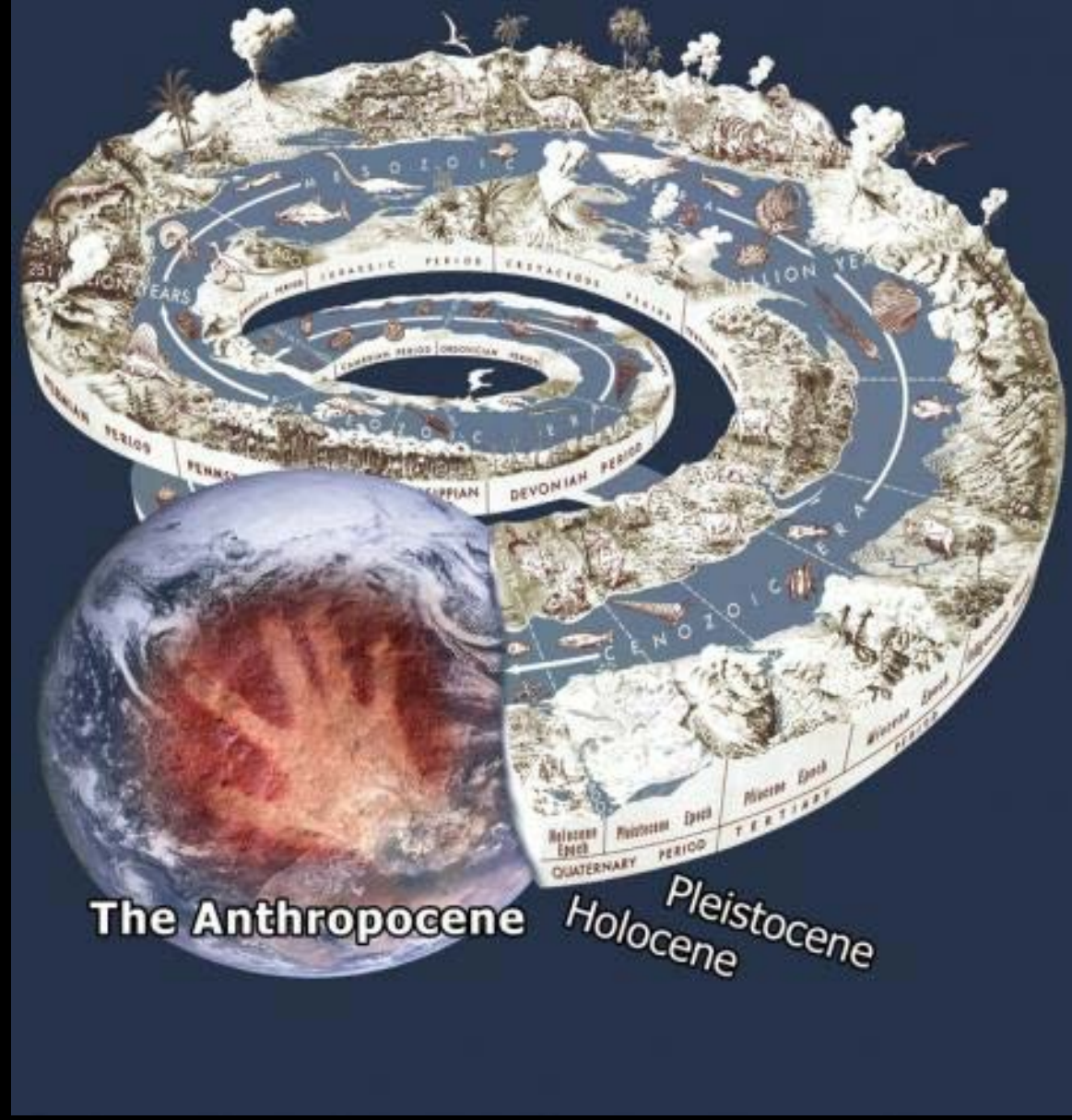
The second Roman invasion of Britain in AD 43 is usually used as the end of the Iron Age and prehistory in Britain.

The Paleolithic Era

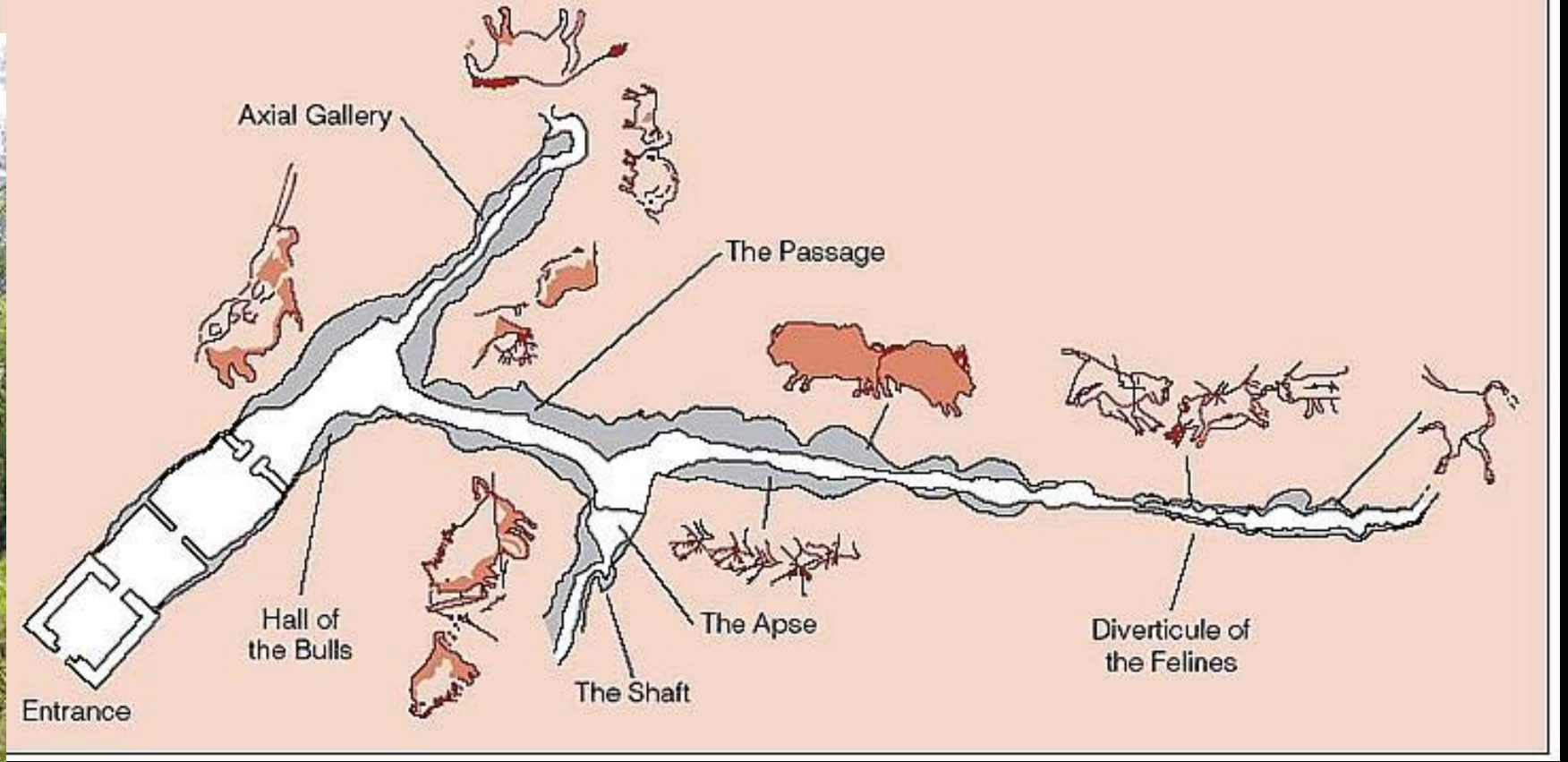
- The Paleolithic Era (Old Stone Age) began when hominids first made tools.
- These tools were used to make their lives easier.







Anthropocene: relating to or denoting the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment.


Axial Gallery
The Passage
Hall of
the Bulls
The Apse
Diverticule of
the Felines
The Shaft
Entrance

Vallée de la Vézère
LASCAUX II

Left: Entrance to Lascaux I
Above: The entrance to Lascaux II, which mimics the entrance to Lascaux.

Hall of Bulls

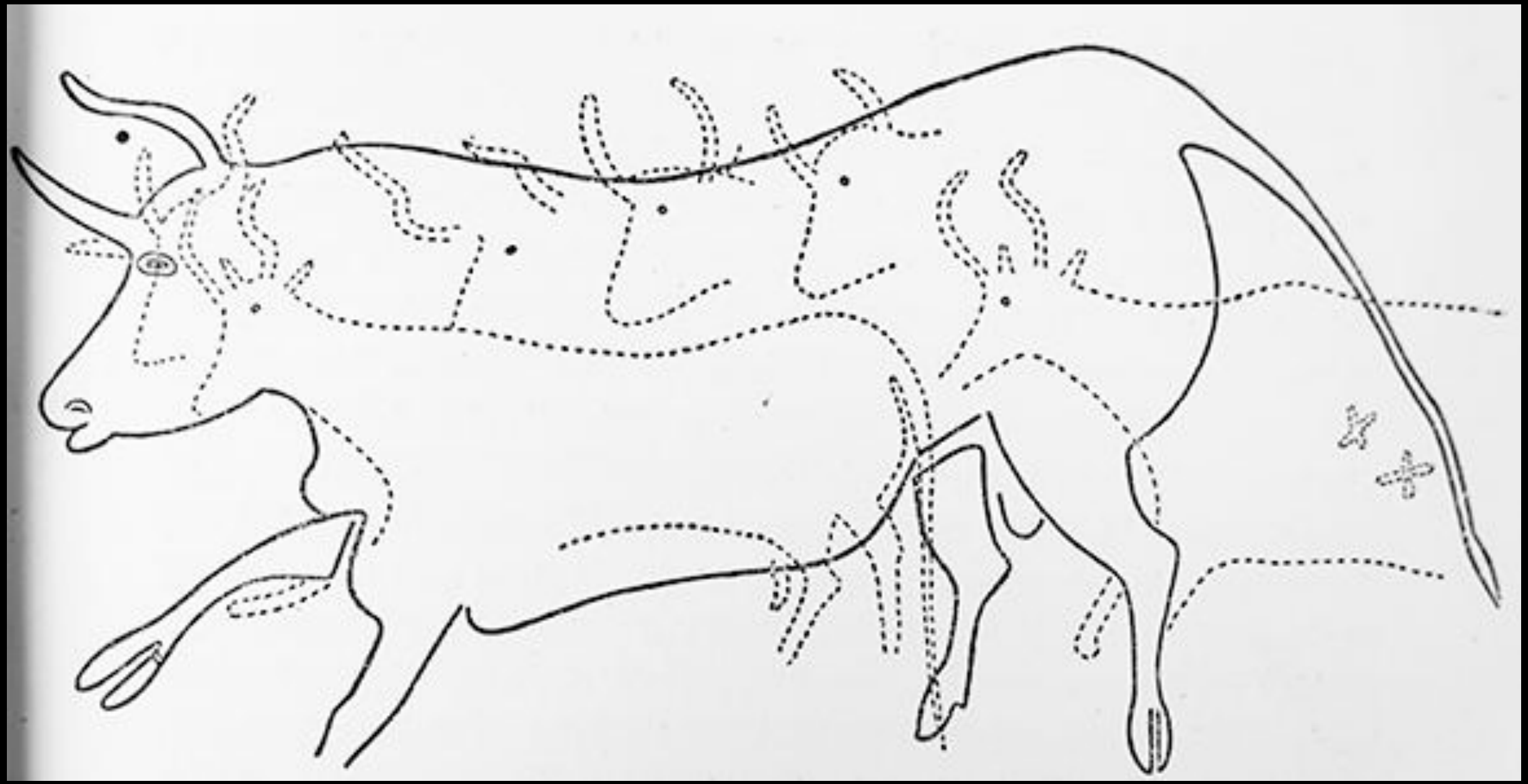
IMMERSION

IMMERSIVE SPACE

IMMERSIVE EXPERIENCE

The Unicorn, in the Hall of the Bulls; left, from afar, right close up. -- Perhaps referencing a rhinorceros

The Great Black Bull

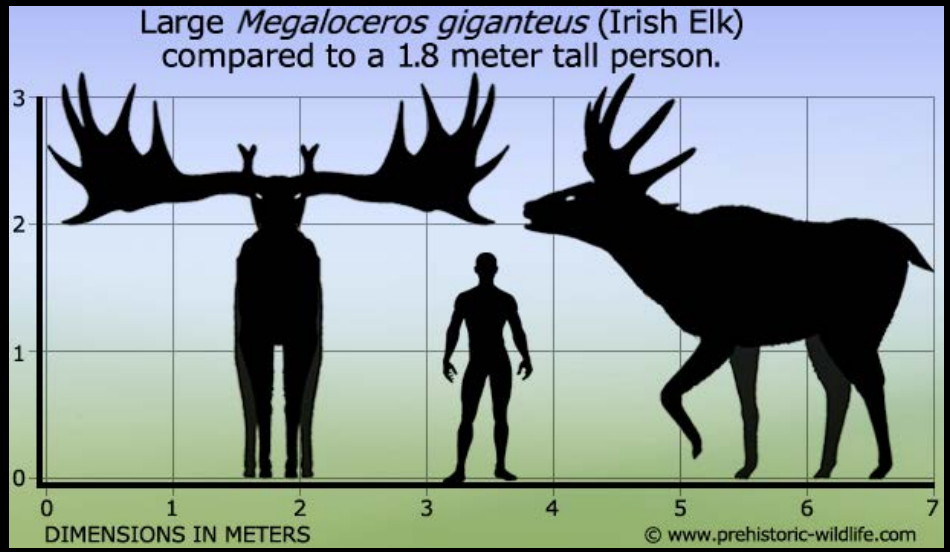


Superimposed paintings on the Great Black Bull.

PALIMPSEST

The right wall of the Axial Gallery

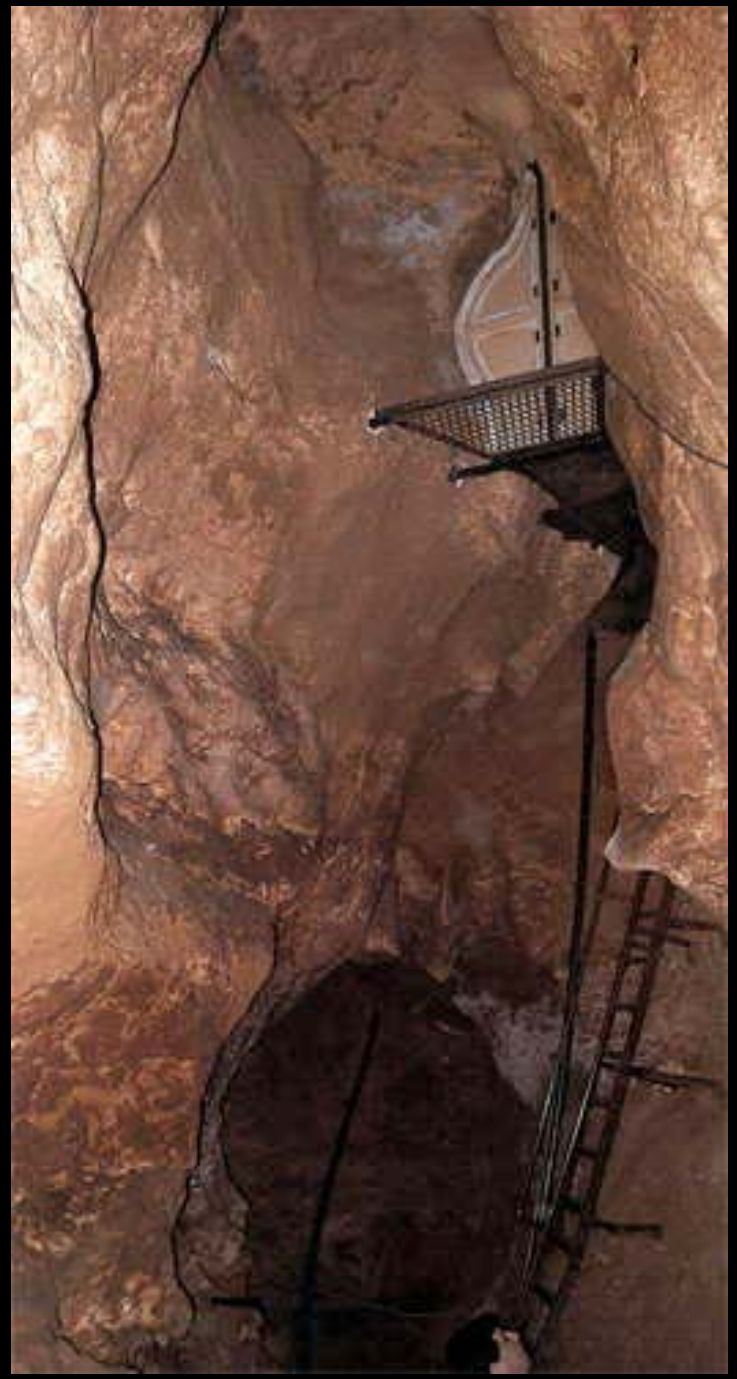
View into the axial gallery



Megaloceros in Axial Gallery

The Passageway, or the Passage, connects the Hall of the Bulls to the Nave and the Apse. It has a high density of images which are often difficult to interpret. There are several hundred engraved figures, and some painted ones, 385 in all. The images which could be identified included horses, bison, ibex, aurochs, deer, and various signs including a hook, a cross, and a quadrangular sign.

Photo and text:
http://www.lascaux.culture.fr/



This is one of the most studied and argued about paintings in Lascaux. It is in what is known as the Well, or the Shaft, and is reached by climbing down a ladder from the Apse.

The main scene includes a disembowelled bison, a man with a bird's head who appears to have been felled by the bison, a spear, and a bird on a pole.

Was the man a shaman with a bird as totem? Did the painter believe that dead people became birds? We shall never know.

Photo: Don Hitchcock 2008
Source: Display at Lascaux Révélée

Several views of an oil lamp (a deer fat lamp), found in the sediments in the floor of the Shaft at Lascaux cave

techne