

AHST 4342-501 (80555)
History of Media and New Media Art
Fall 2016

Dr. Charissa N. Terranova
University of Texas at Dallas
Arts & Humanities
Wednesday 7-9:45
Class Location: AH2 1.204

Wednesday September 7

Chronophotography: Capturing Time and Movement in Image

Train: Movement, Image and Architecture

UT Dallas Writing Center

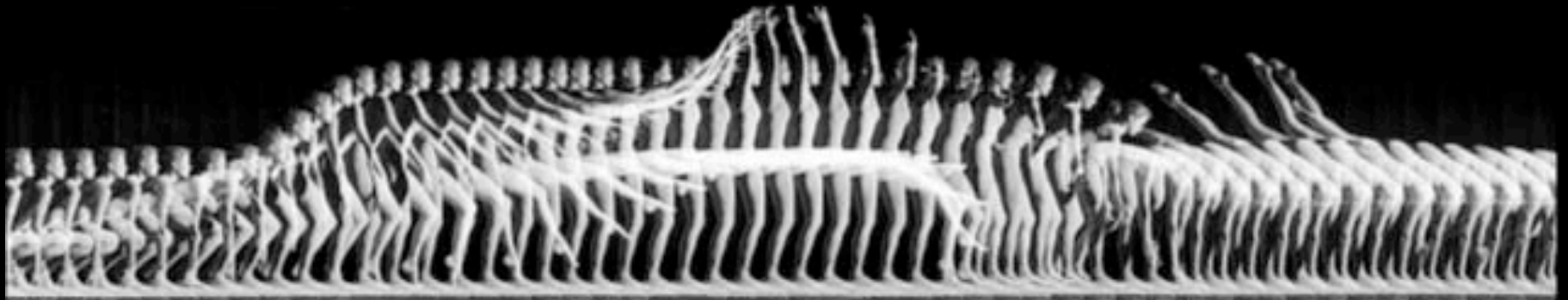
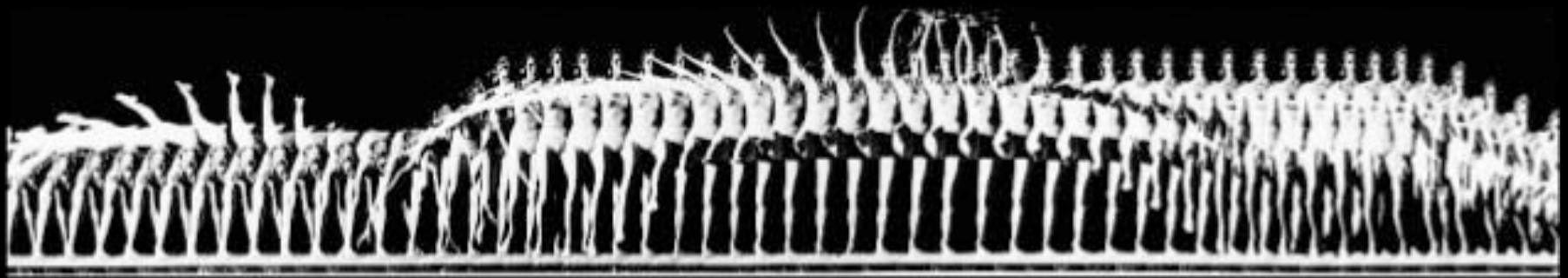
- <http://www.utdallas.edu/studentsuccess/writing/>
- **Regular hours**
- McDermott Library, MC 1.312
- Mon — Thurs: 9 am - 5 pm
- (last appointment at 4:30)
- Fri 10 am - 4 pm
- (last appointment at 3:30)
- Sun: 1 pm - 4 pm

- Syntax
- Grammar
- Active voice rather than Passive voice
- WC = word choice
- Proofread / spellcheck
- Vary language; do not repeat yourself
- Cite author and title of essay in the beginning to orient your reader
- Read your paper out loud to ensure clarity
- Avoid colloquialisms
- Avoid stilted language

Chronophotography: Capturing Time and Movement in Image

Chronophotography

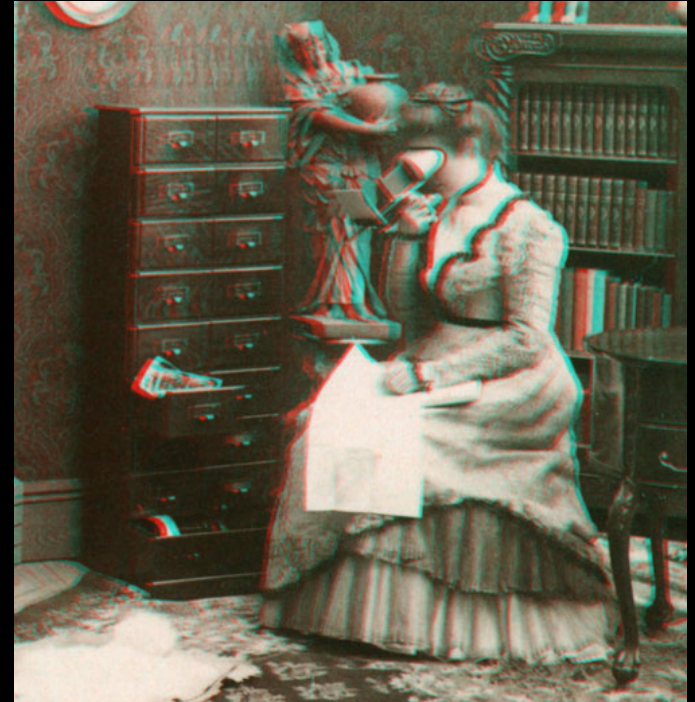
Chronophotography originated as a Victorian application of science (the study of movement), and art (photography).



Photographs by Andrew Davidhazy

Modernization is a process by which capitalism uproots and makes mobile that which is grounded, clears away or obliterates that which impedes circulation, and makes exchangeable what is singular.

J. Crary



Sir Charles Wheatstone, stereoscope, 1840

Spectator vs. Observer

The observer is one who sees within a prescribed set of possibilities, one who is embedded in a system of conventions and limitations...Unlike spectare, the Latin root of 'spectator,' the root of observer does not literally mean 'to look at.'...In a sense more pertinent to my study, observare means 'to confirm one's action to comply with' regulation and practices.

J. Crary



*Underswood & Co. Lithographers,
New York, London, Birmingham, Calcutta, Canton, Amoy.*

*Wheatstone and Lubbock's
Stereoscopic Pictures
No. 100*

*The Stereograph as an Optical Experiment. From the original, taken in a room in London.
Copyright 1840 by Wheatstone & Lubbock.*

Sir Charles Wheatstone, stereoscope, 1840

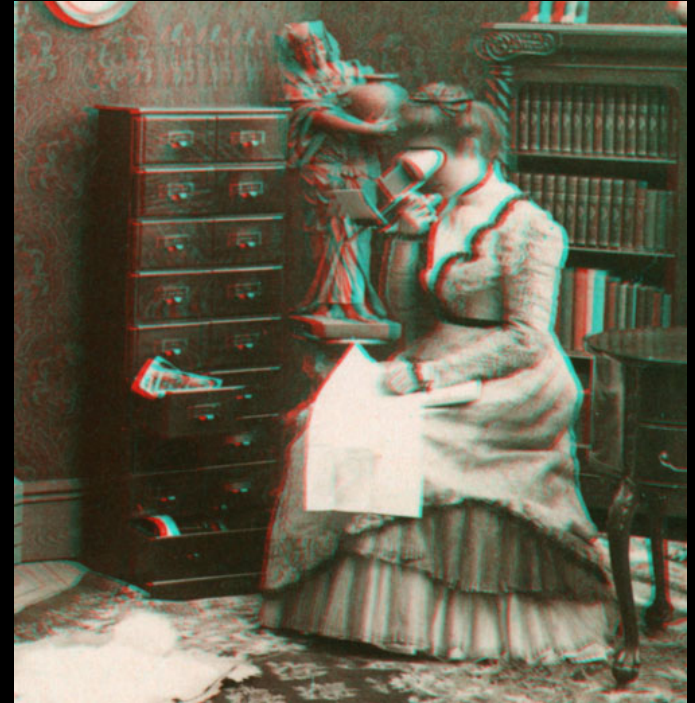




Wm Mills & Son

58 & 60 Arcade
PROVIDENCE,
& OLNEYVILLE.
R.I.

As opposed to the spectator, the observer is “one who sees within a prescribed set of possibilities, one who is embedded in a system of conventions and limitations.”



Sir Charles Wheatstone, stereoscope, 1840

*Underwood & Underwood, Publishers,
New York, London, Toronto-Canada, Ottawa-Kansas*



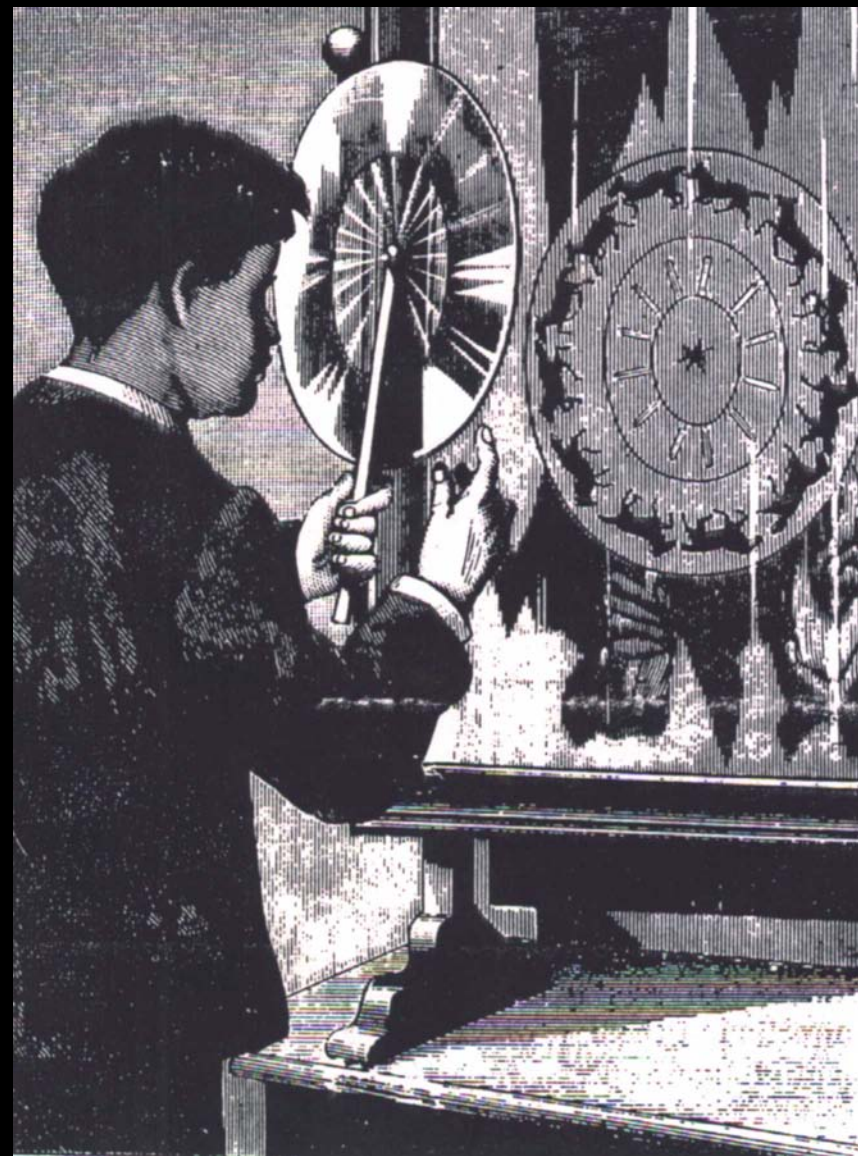
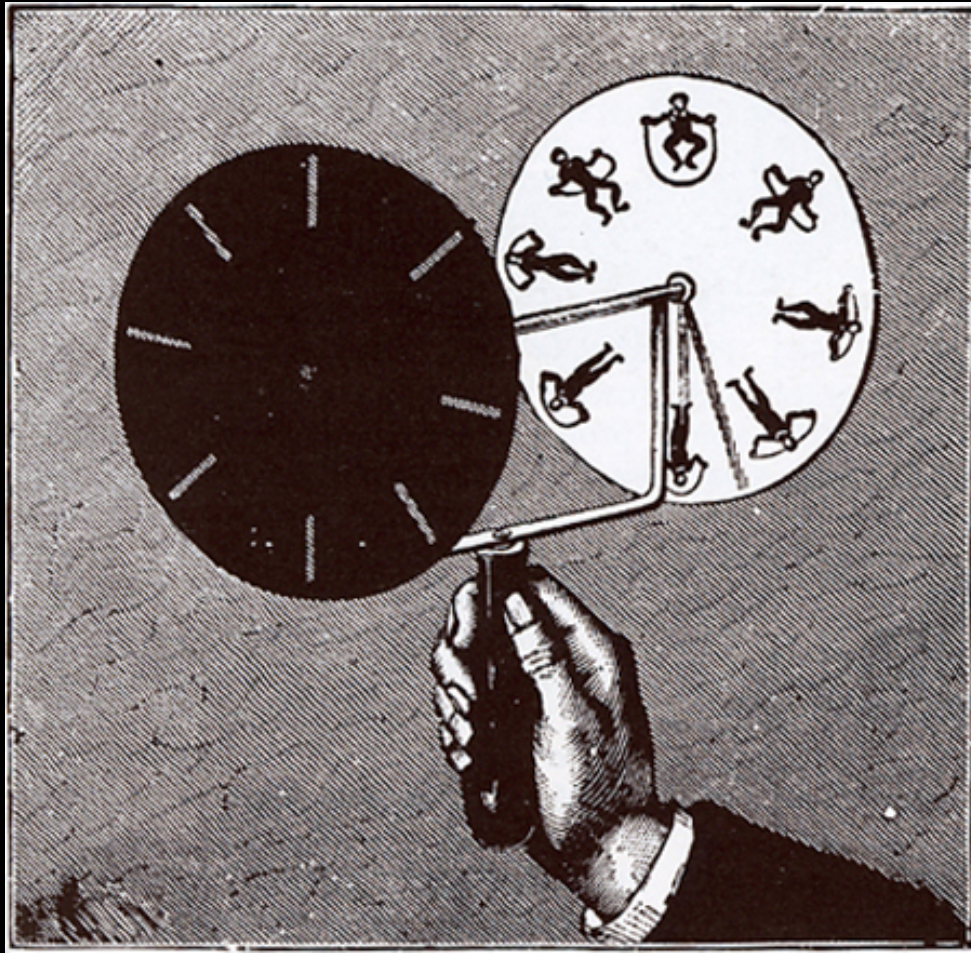
*Views and Landscapes for
Study in
Washington DC*

(17) The great Pyramid of Gizeh, a tomb of 5,000 years ago, from S. E. Egypt.

Copyright 1908 by Underwood & Underwood

Anonymous, The Great pyramid of Gizeh, a tomb of 5,000 years ago, from S.E. Egypt, 1908





Joseph Plateau and Simon von Stampfer,
Phenakistoscope, 1832



THE ZOOPRAXISCOPE

35

A COUPLE WALTZING.

COPYRIGHT

1882

BY EDWARD MUYBRIDGE.

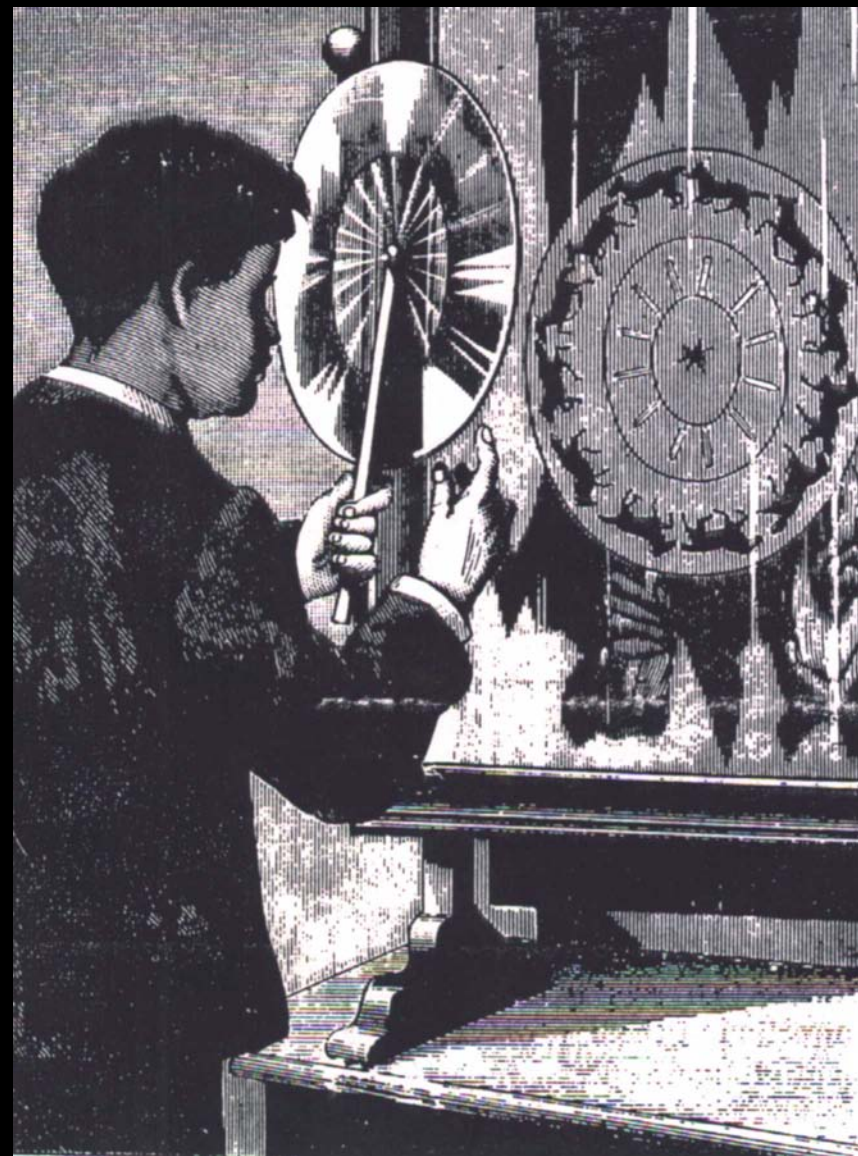
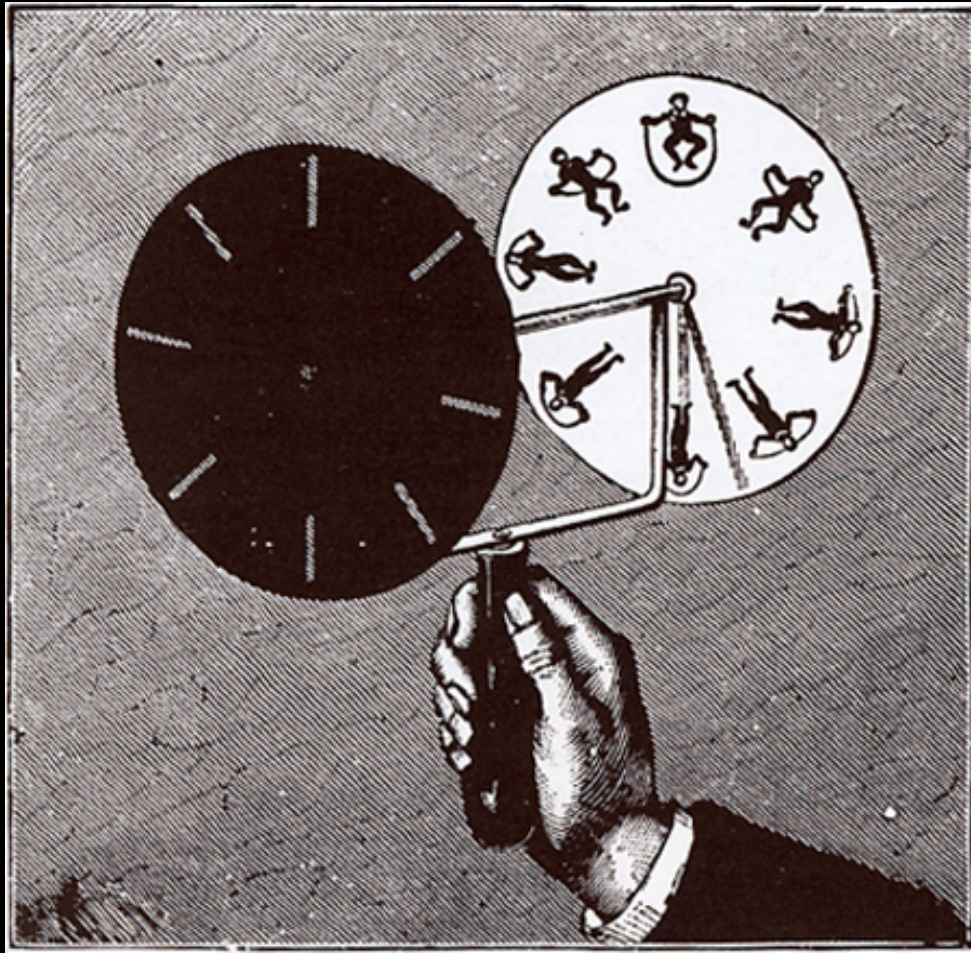
WENT APPLIED FOR.



Evolution of the Nickelodeon

Hermann Casler, Mutoscope, 1890-95

Flipped pictures while cranked



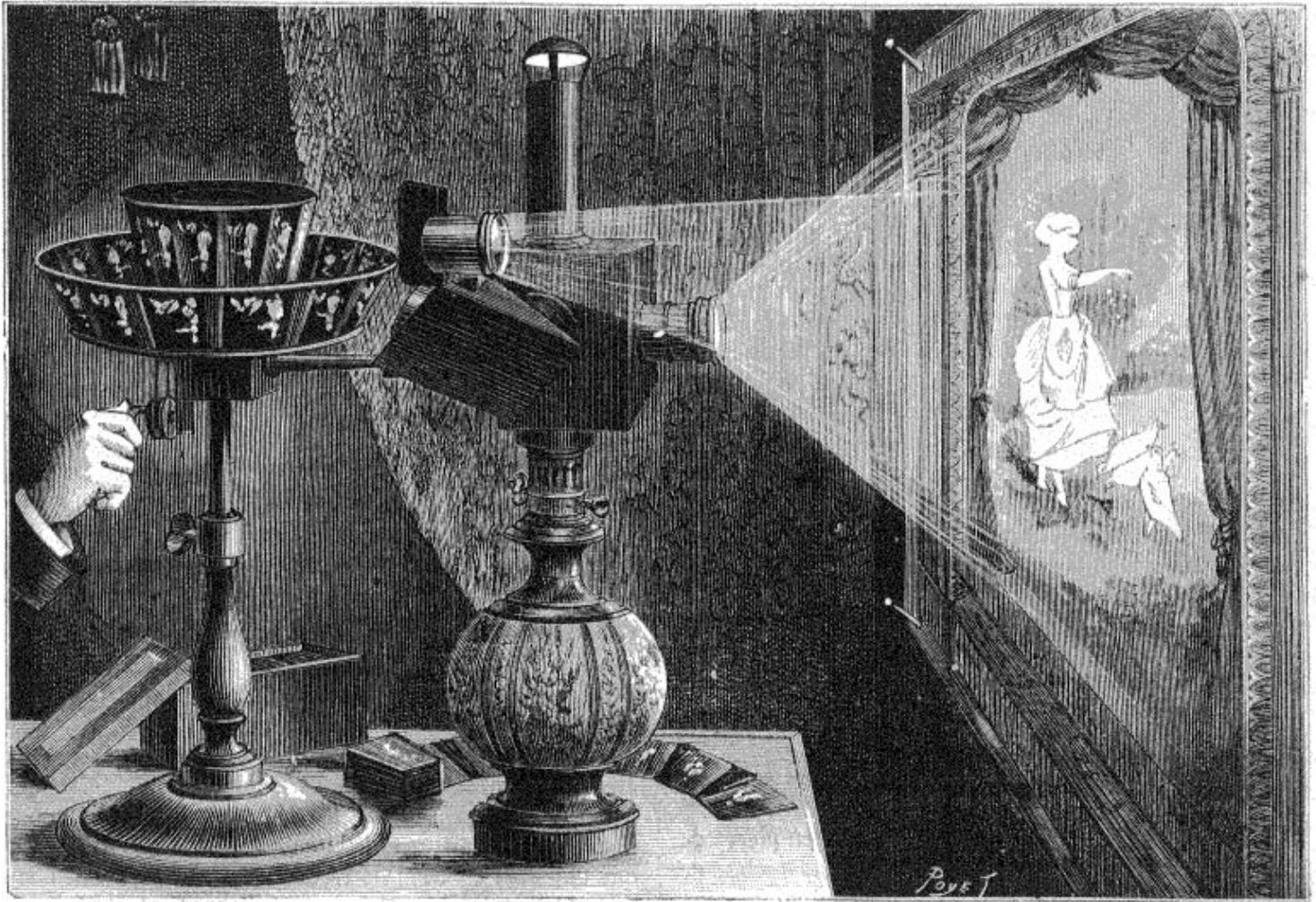
Joseph Plateau and Simon von Stampfer,
Phenakistoscope, 1832



William George Horner, Zoetrope, 1833



Charles-Emile Reynaud, Praxinoscope, 1877



Nouveau praxinoscope à projection de M. Reynaud.

Charles Emile Raynaud, Praxinoscope, 1877 THEATRE OPTIQUE

Persistence of Vision

A metaphor used to describe our ability to see continuously while blinking. Whenever light strikes the retina, the brain retains the impression of that light for about a 10th to a 15th of a second (depending on the brightness of the image, retinal field of view, and color) after the source of that light is removed from sight. This is due to a prolonged chemical reaction. As a result, the eye cannot clearly distinguish changes in light that occur faster than this retention period. The changes either go unnoticed or they appear to be one continuous picture to the human observer.

When we go to the movies, we know that a motion picture creates an illusion of a constantly lit screen by flashing individual photographs in rapid succession. Even though the movie screen appears to be constantly lit, it is in fact dark part of the time. It was the flickering image on the screen that gave rise to the term *flicks* in the early days of movies. Today's motion pictures flash images on the screen at 24 frames per second (or 48, in that each frame is flashed twice) for a flicker-free picture. You may remember making little "flipbooks" as a child. They worked on this same principle: the more images per second, the smoother the picture.

Crary looks to these optical devices not simply as “models of representation they imply, but as sites of both knowledge and power that operate directly on the body of the individual.”

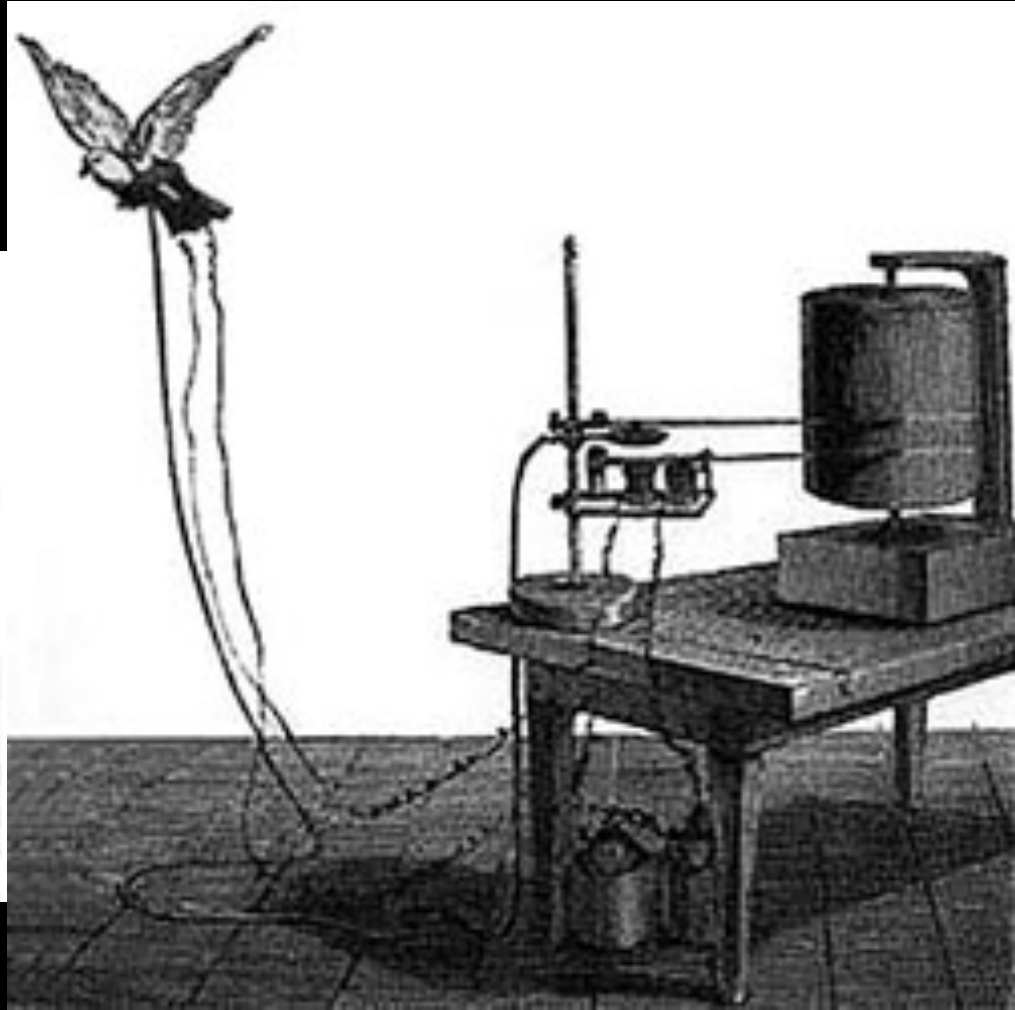
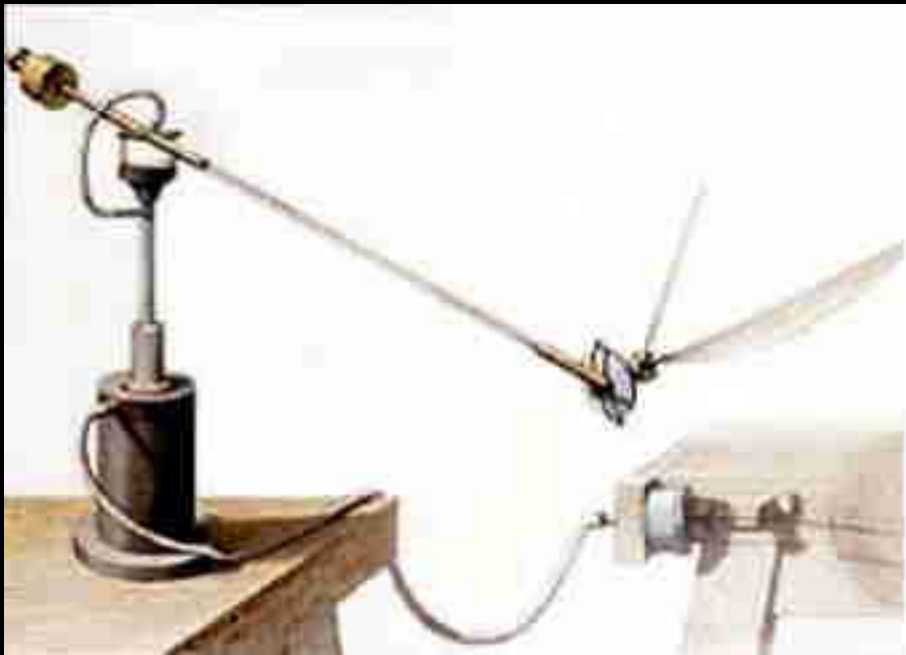
TECHNICS OF VISION – TRAINING
PEOPLE HOW TO SEE IN CERTAIN
WAYS USING CERTAIN DEVICES

...the most pervasive means of producing 'realistic' effects in mass visual culture, such as the stereoscope, were in fact based on a radical abstraction and reconstruction of optical experience, thus demanding a reconsideration of what 'realism' means in the nineteenth century.

J. Crary

Rather than seeing the separation between art and science in the nineteenth century, it is important to see how they were both part of a single interlocking field of knowledge and practice.

J. Crary



Étienne-Jules Marey, insect flight machine, 1869 Étienne-Jules Marey, air pantographe, 1870

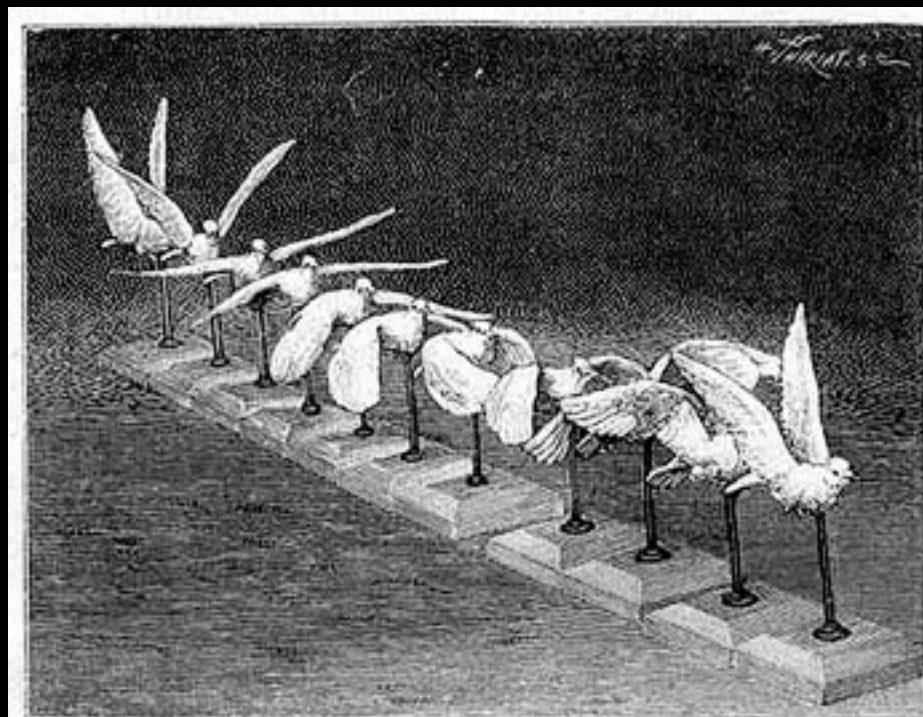
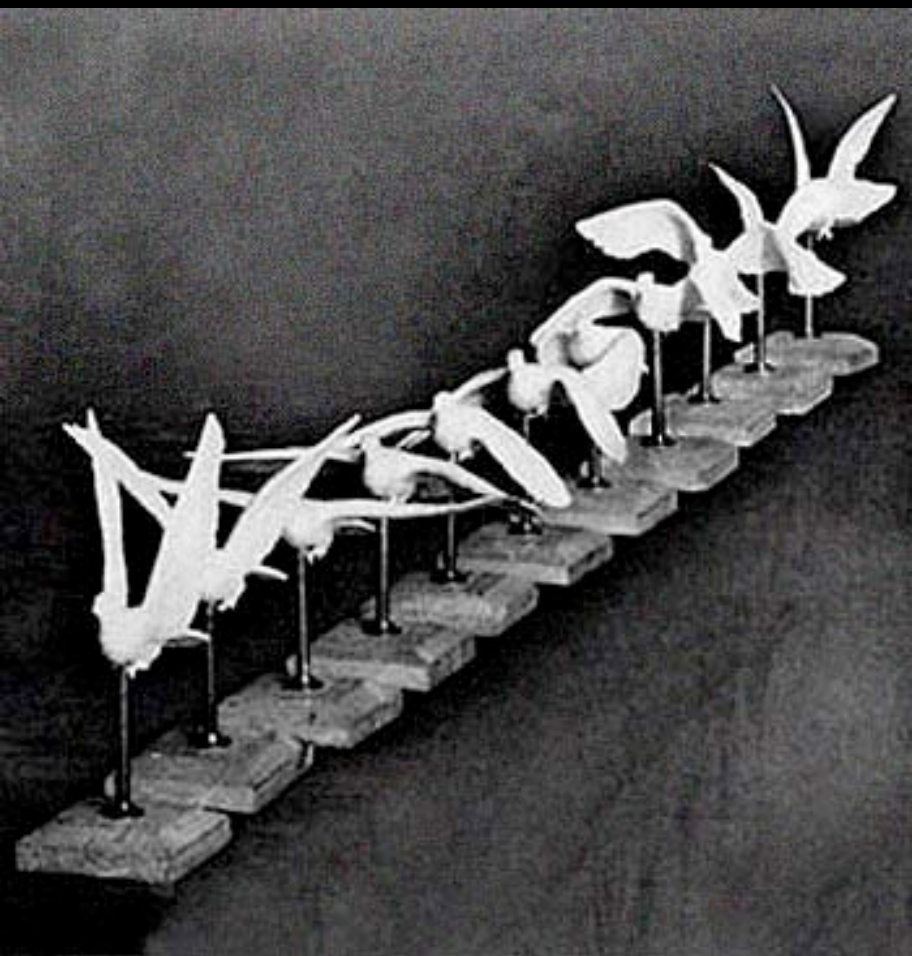
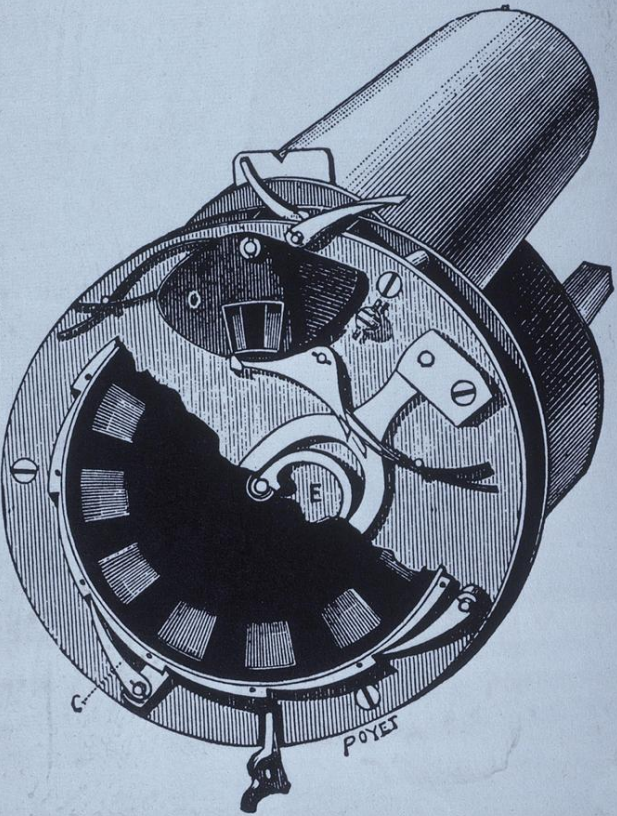
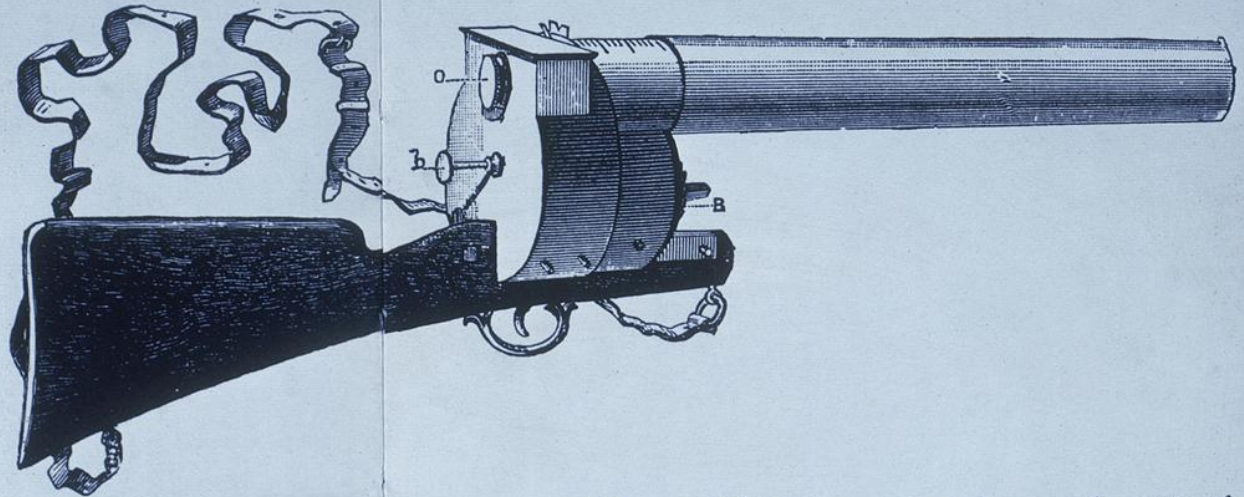


Fig. 8. — Figurines de bronze représentant 11 attitudes successives de l'aile d'un pigeon à des instants successifs d'un coup d'aile.

Étienne-Jules Marey, Sculptures of birds in flight, 1887-1890

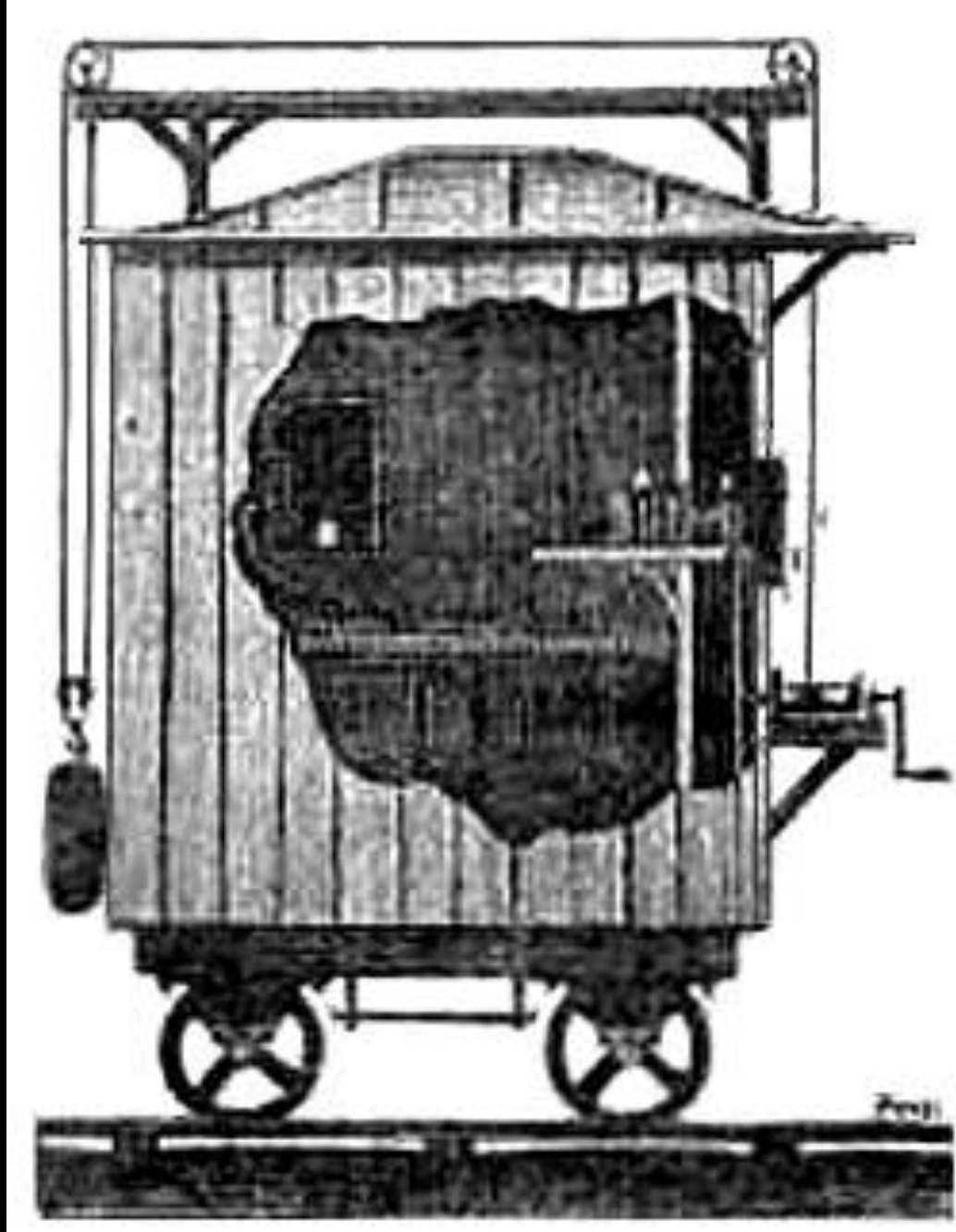


Étienne-Jules Marey, Chronophotographic Camera, 1882/1888

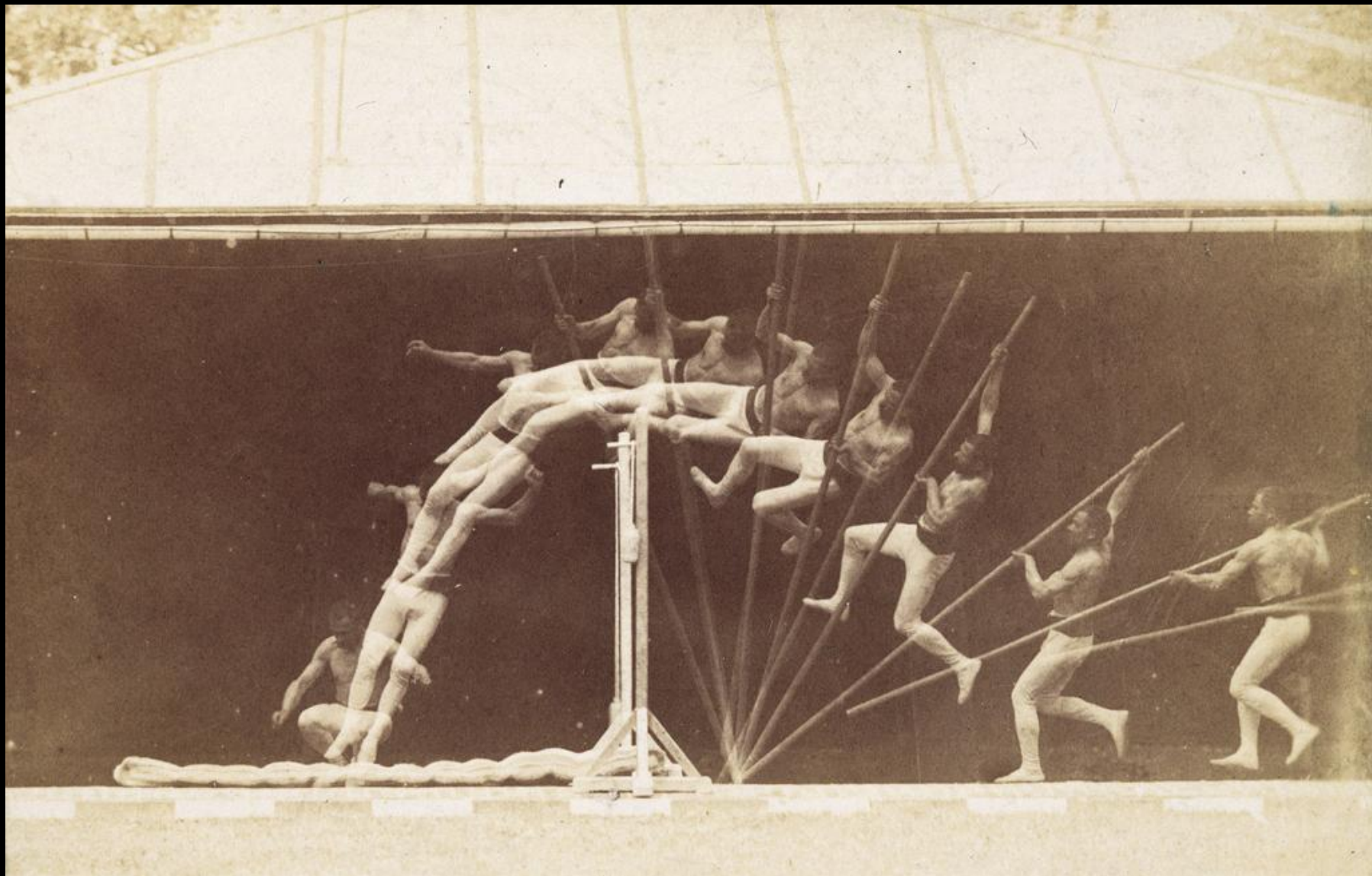


Marey and his achievements are shown on the reverse of a coin that was struck in 1912 to raise funds for the Marey monument. (16)

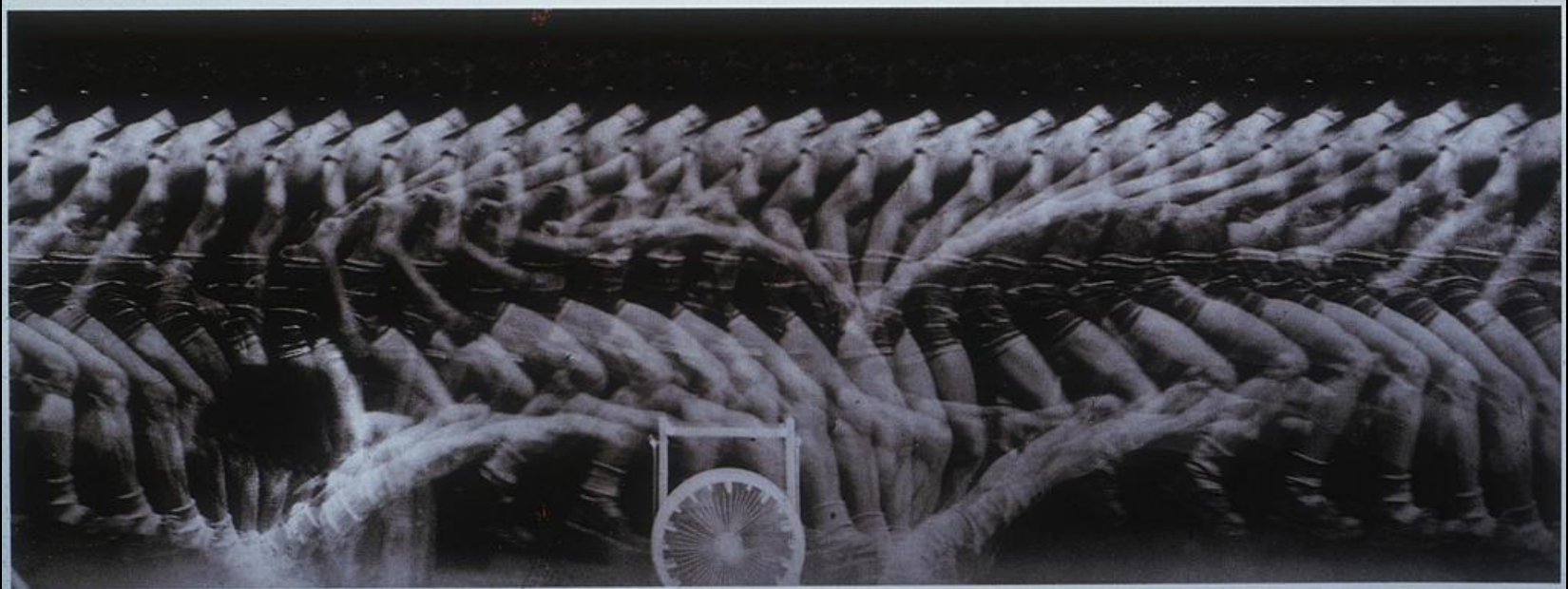




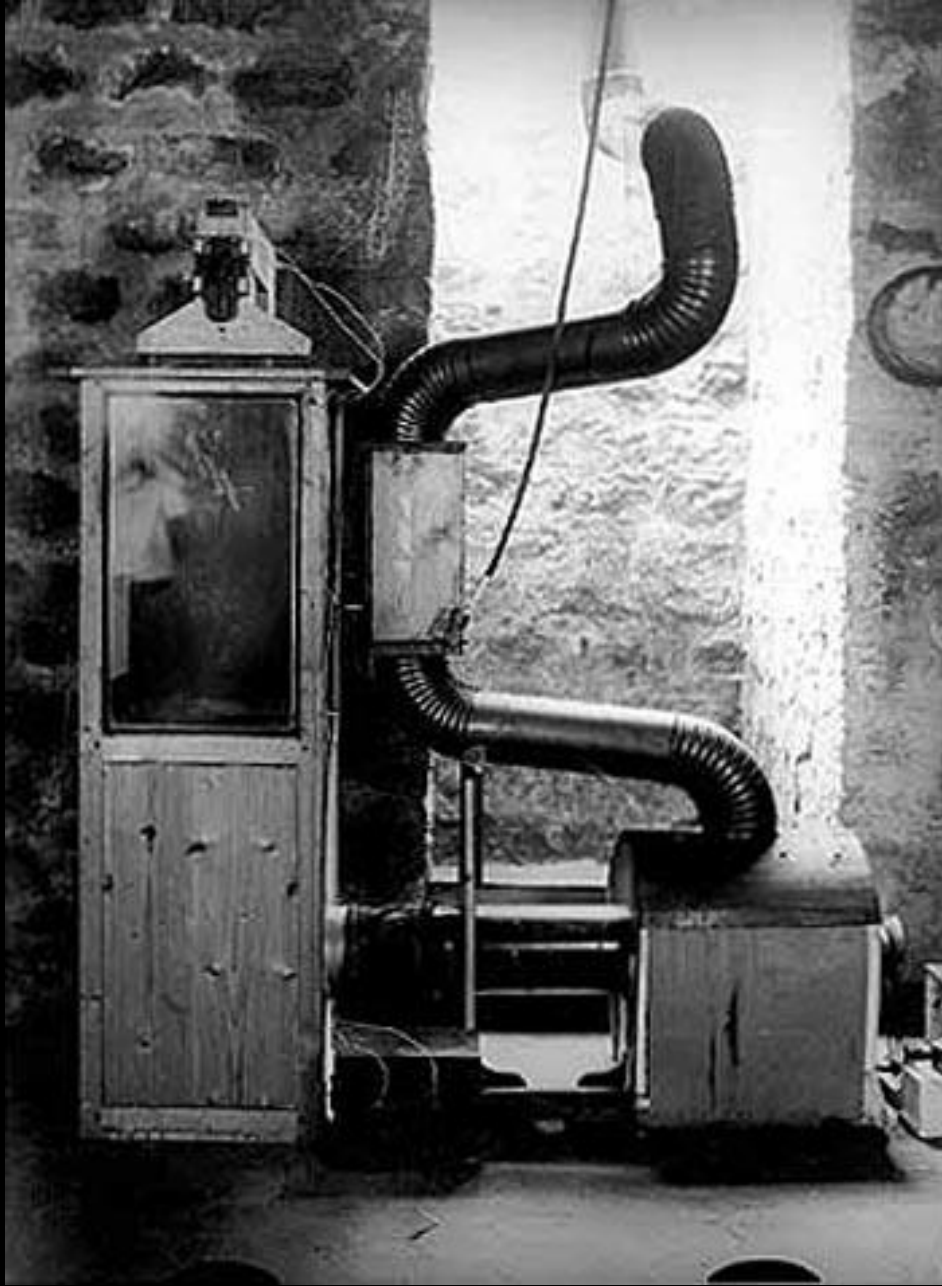
Étienne-Jules Marey, camera for chronophotography in box on wheels, c. 1885



Etienne Jules Marey, Chronophotographic Study of Man Vaulting, 1890-91

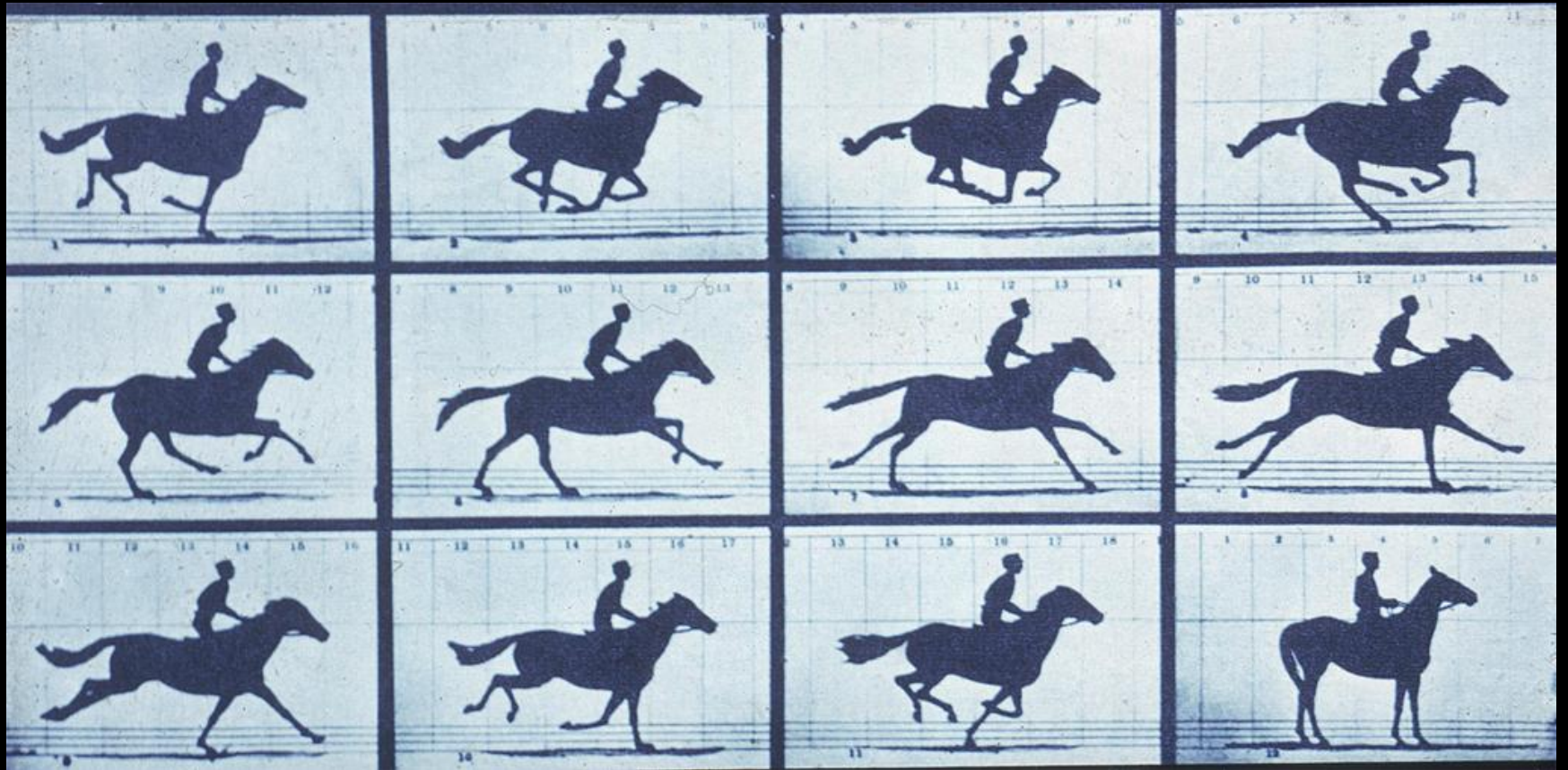


Etienne Jules Marey, Study of Lateral Walking and Running, 1886



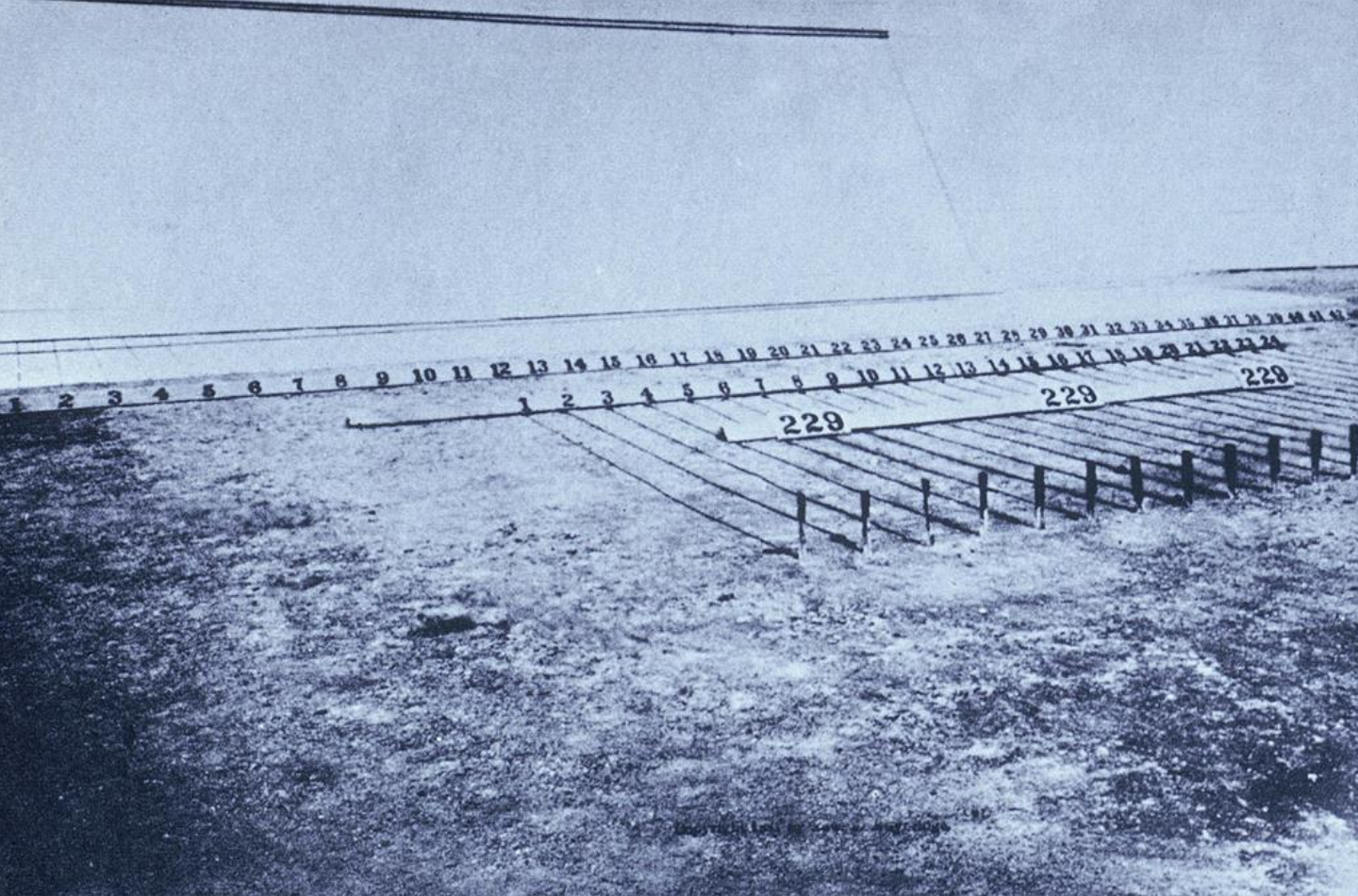
Étienne-Jules Marey, machine for studying smoke trails and image of smoke trails, 1901

Crary explains that optical apparatuses of the nineteenth century “are the outcome of a complex remaking of the individual as observer into something calculable and regularizable and of human vision into something measurable and thus exchangeable.”

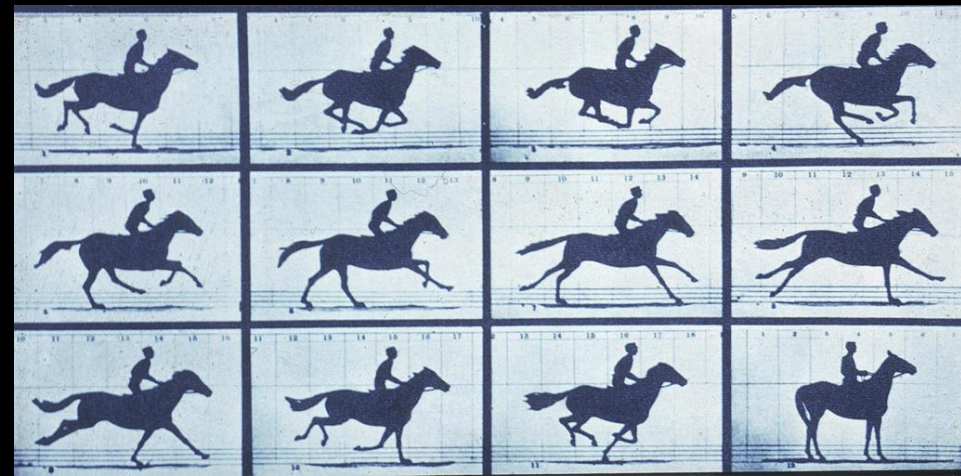


Eadward J. Muybridge, Galloping horse (Sallie Gardner running), 1878





Muybridge's Stanford photographic facility,
1863



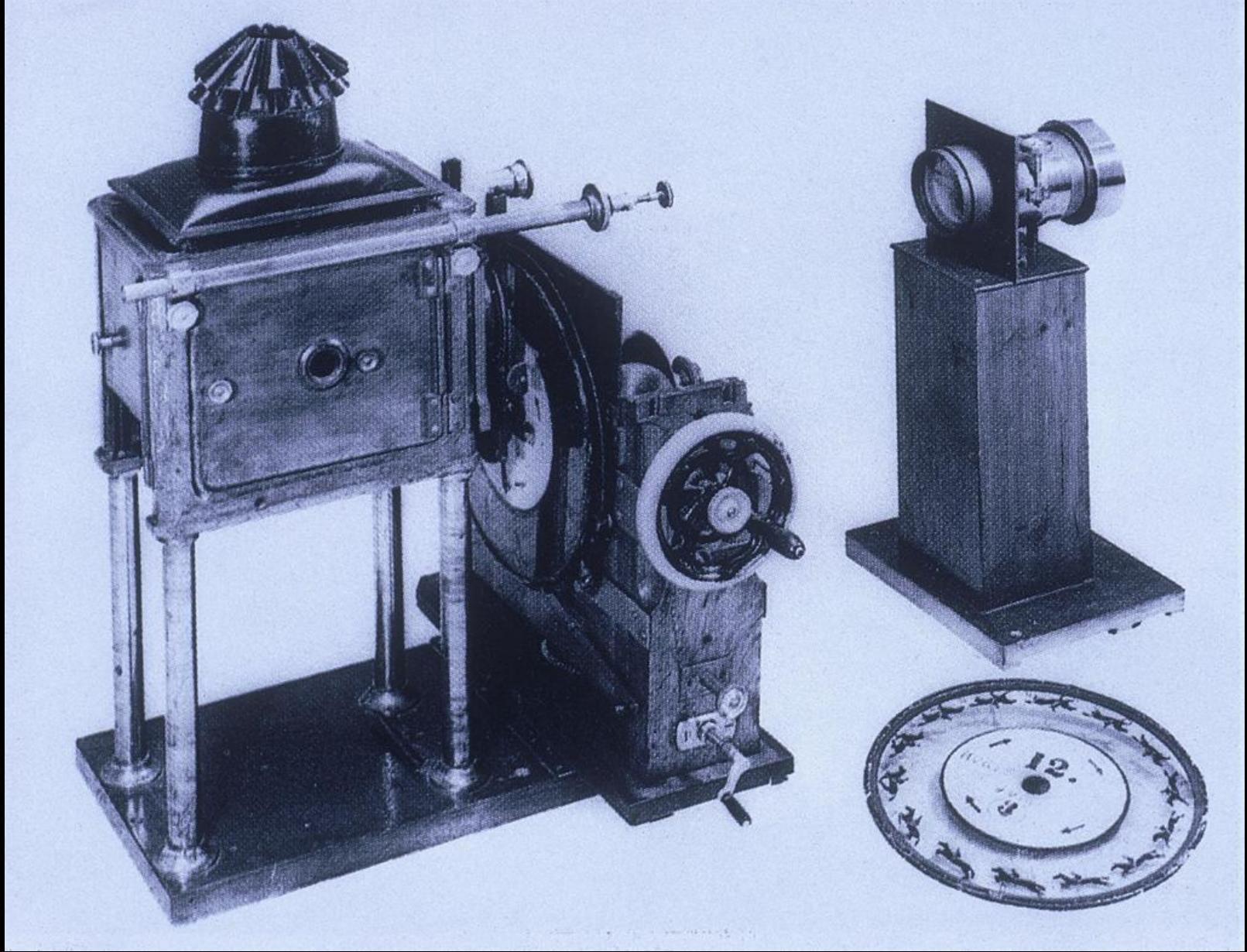


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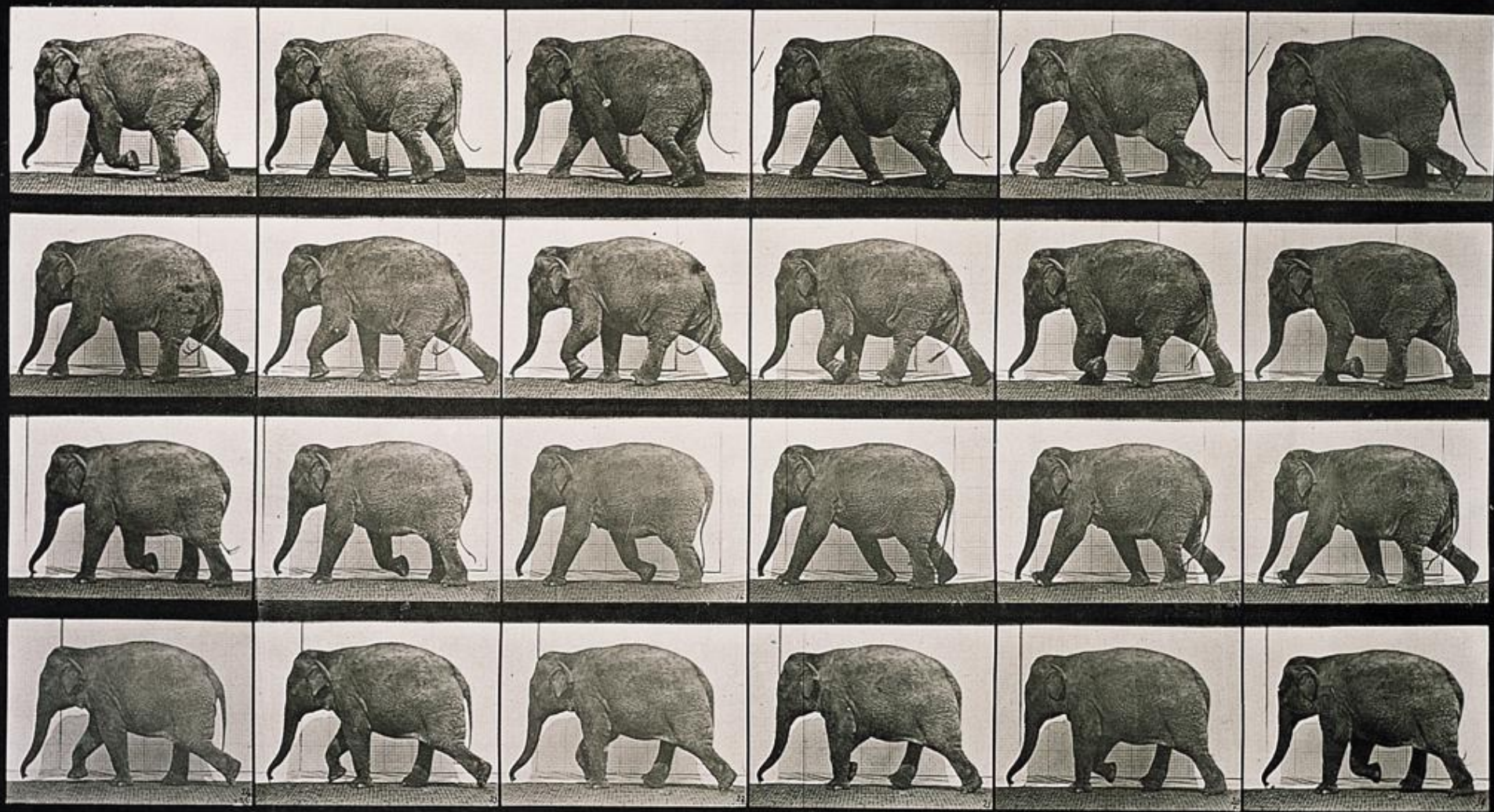
14

15

16



Eadweard J. Muybridge, Zoopraxiscope, c. 1870



Eadweard J. Muybridge, Elephant Walking, 1884-87



Eadweard J. Muybridge, *Two Models, 8 Drinking from Water-Jar on the Shoulder of 1*, 1885

technics of vision

emancipation

extension (prosthetic)

subjugation

Summary: 14 September

- David Bordwell, “The Idea of Montage in Soviet Art and Film,” *Cinema Journal*, Vol. 11, No.2 (Spring, 1972) 9-17.

Train: Movement, Image and Architecture

There is a mode of vital experience – experience of space and time, of the self and others, of life’s possibilities and perils – that is shared by men and women all over the world today. I will this body of experience “modernity.” To be modern is to find ourselves in an environment that promises us adventure, power, joy, growth, transformation of ourselves and the world – and at the same time, that threatens to destroy everything we have, everything we know, everything we are. Modern environments and experiences cut across all boundaries of geography and ethnicity, of class and nationality, of religion and ideology; in this sense, modernity can be said to unite all mankind. But it is a paradoxical unity, **a unity of disunity**: it pours us all into a maelstrom of perpetual disintegration and renewal, of struggle and contradiction, of ambiguity and anguish. To be modern is to be part of a universe in which, as Marx said, “all that is solid melts into air.”

Marshall Berman



Claude Monet, La Gare Saint-Lazare, 1877



Honoré Daumier, The First-Class Carriage, 1864



Gargantua

Honoré Daumier, Gargantua, 1831 – a lithograph in La Caricature



Jacques-Louis David, Oath of the Horatii, 1784



Alexandre Cabanel, The Birth of Venus, 1863



Honoré Daumier, The First-Class Carriage, 1864

The break with classical models of vision in the early nineteenth century was far more than simply a shift in the appearance of images and art works, or in systems of representational conventions. Instead it was inseparable from a massive reorganization of knowledge and social practices that modified in myriad ways the productive, cognitive, and desiring capacities of the human subject.

J. Crary



Honoré Daumier, *The First-Class Carriage*, 1864



Walker Evans, Subway Passengers, New York City, 1938



VOYEURISM

What changes are the plural forces and rules composing the field in which perception occurs. And what determines vision at any given historical moment is not some deep structure, economic base, or world view, but rather the functioning of a collective assemblage of disparate parts on a single social surface. It may even be necessary to consider the observer as a distribution of events located in many different places.

J. Crary



Honoré Daumier, The Second-Class Carriage, 1864

LE MONDE ILLUSTRÉ

JOURNAL HEBDOMADAIRE



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6^{me} Année, N° 247. — 4 Janvier 1862.
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Intérieur d'un omnibus. (Dessin de Daumier.)

Daumier, drawing of Omnibus, *Le Monde Illustré*, January 30, 1864



Honoré Daumier, The Second-Class Carriage, 1864



Robert Frank, Trolley, 1955



Honoré Daumier, *The Third-Class Carriage*, Oil on Canvas, 1862-64



Honoré Daumier, Third-Class Carriage, Crayon, Watercolor, 1862-64



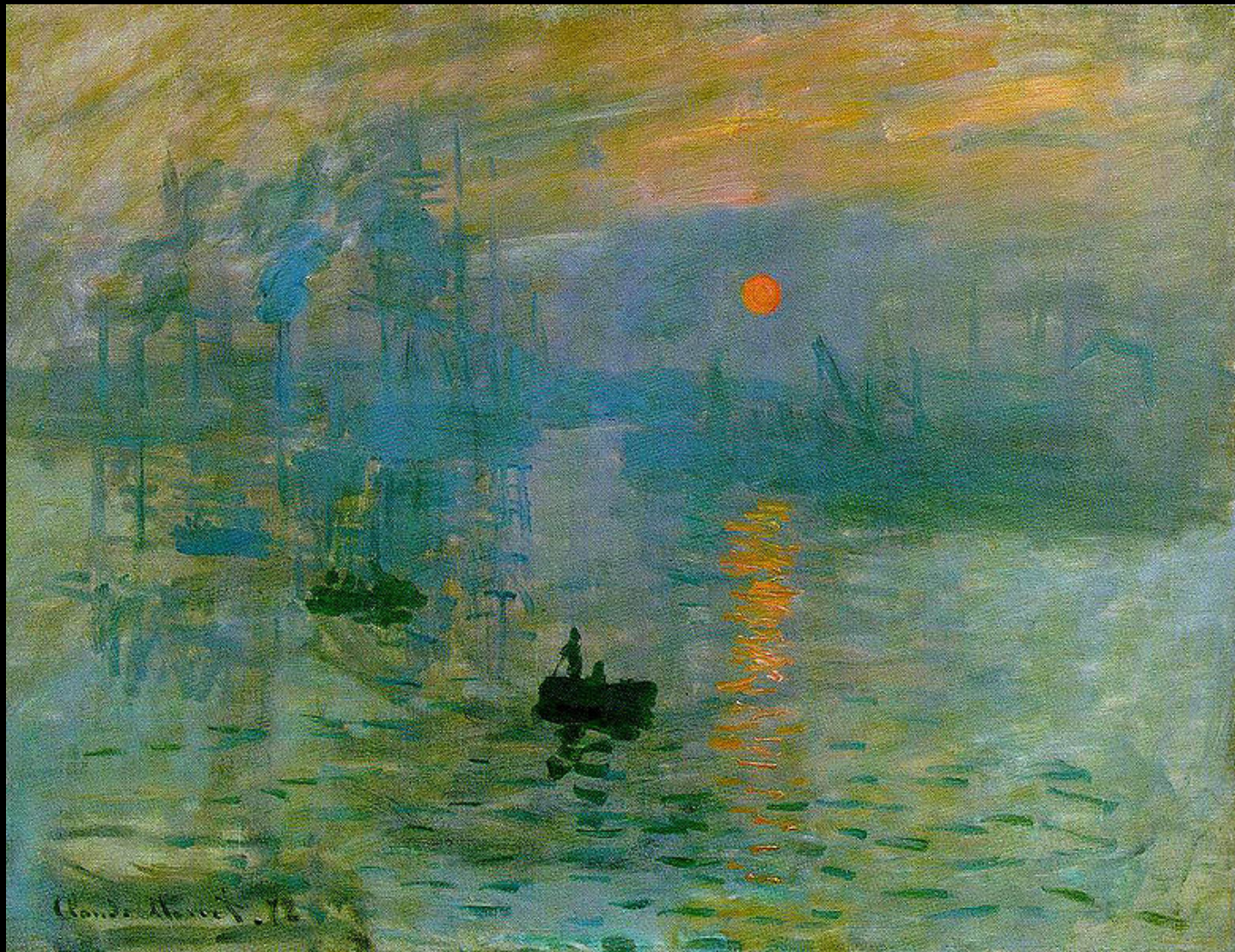
Claude Monet, Train in the Countryside, 1865

The empirical reality that made the landscape seen from the train window appear to be ‘another world’ was the railroad itself, with its excavations, tunnels, etc. Yet the railroad was merely an expression of the rail’s technological requirements, and the rail itself was a constituent part of the machine ensemble that was the **system**. It was, in other words, that machine ensemble that interjected itself between the traveler and the landscape. The traveler perceived the landscape as it was filtered through the machine ensemble.

W. Schivelbusch



Claude Monet, Train in the Countryside, 1865



Claude Monet, Impressionist Sunrise, 1872



Claude Monet, Boulevard des Capucines,
1873-74

Felix Nadar, Nadar's Studio: 35 boulevard
des Capucines, c. 1860



Claude Monet, Train in the Snow, 1875

Industrial Revolution, generally seen as having begun in the last third of the eighteenth century, was a complex process of denaturalization. The abolition of 'live' workmanship by the division of labor, a process first described by Adam Smith, corresponded in terms of materials and energies to the 'emancipation from the boundaries of nature' (Sombart) which occurs when 'live' natural materials and energies are replaced by mineral or synthetic ones...The technological development of the steam engine in the eighteenth century exemplified the gradual process of industry's emancipation from nature.

W. Schivelbusch

All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses, his real conditions of life, and his relations to his kind.

Karl Marx and Friedrich Engels, preamble to the Communist Manifesto, 1848



Claude Monet, La Gare Saint-Lazare, 1877



Claude Monet, La Gare Saint-Lazare, Arrival of a Train, 1877



Claude Monet, Le Pont de l'Europe, Gare Saint-Lazare, 1877



Gustave Caillebotte, Pont de l'Europe, 1876



Edouard Manet, Railway, 1873



Edouard Manet, Le déjeuner sur l'herbe, 1862-63



Edouard Manet, Olympia, 1863

INDUSTRIALIZATION AND
ARCHITECTURE

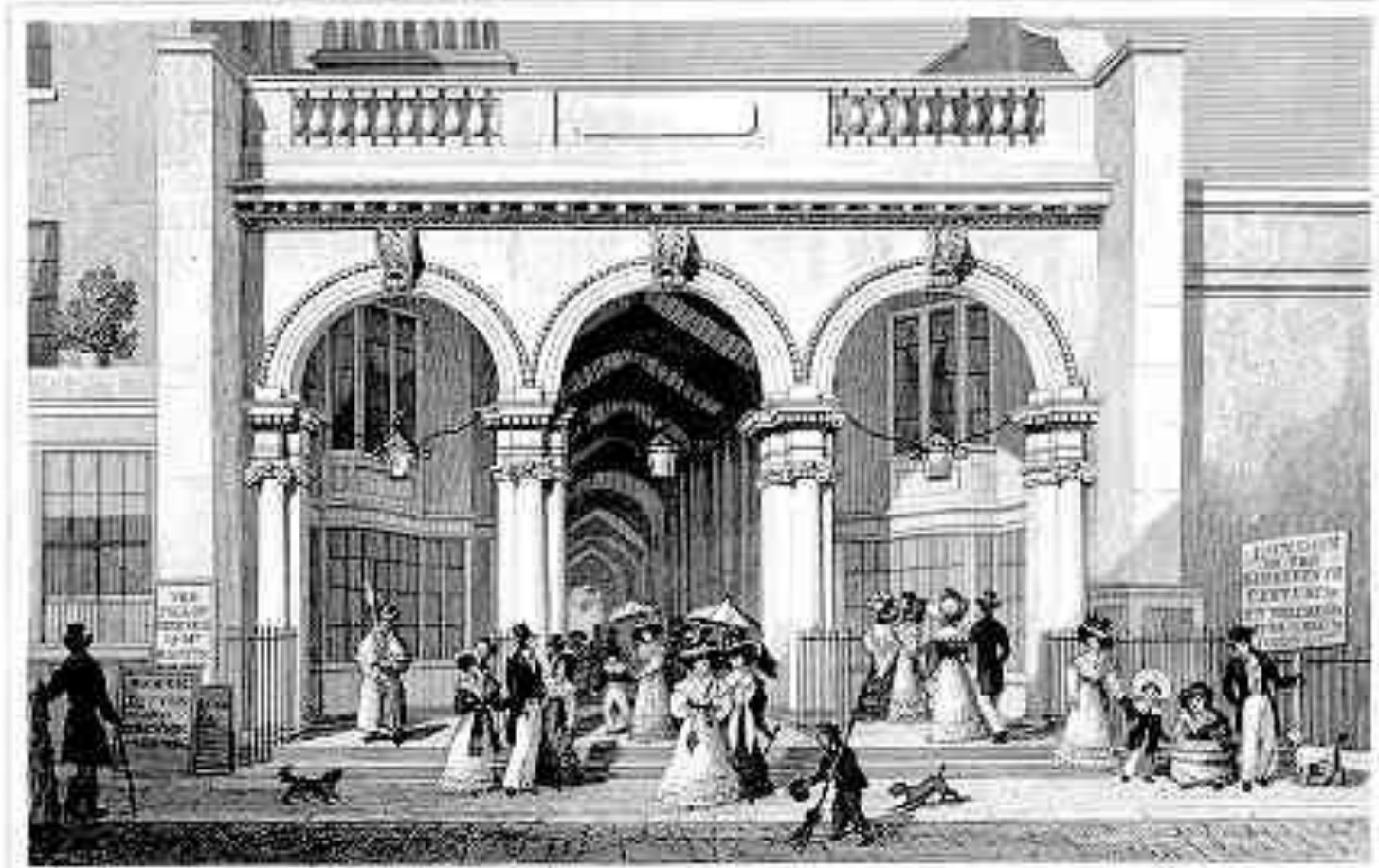
FERRO-VITREOUS MATERIALS

NEW TYPOLOGIES

ARCADE

MARKET SHED

TRAIN STATION/GARE



BURLINGTON ARCADE, PICCADILLY.

Samuel Ware, Burlington Arcade, Piccadilly entrance, London, building built 1819, engraving 1827-28



North entrance



BURLINGTON ARCADE

BURLINGTON ARCADE

N. PEAL
CASHMERE

John Lewis
1834







Jean-Pierre Cluysenaar, Royal Galleries of Saint-Hubert, Brussels, 1846-47



Gallery of the King



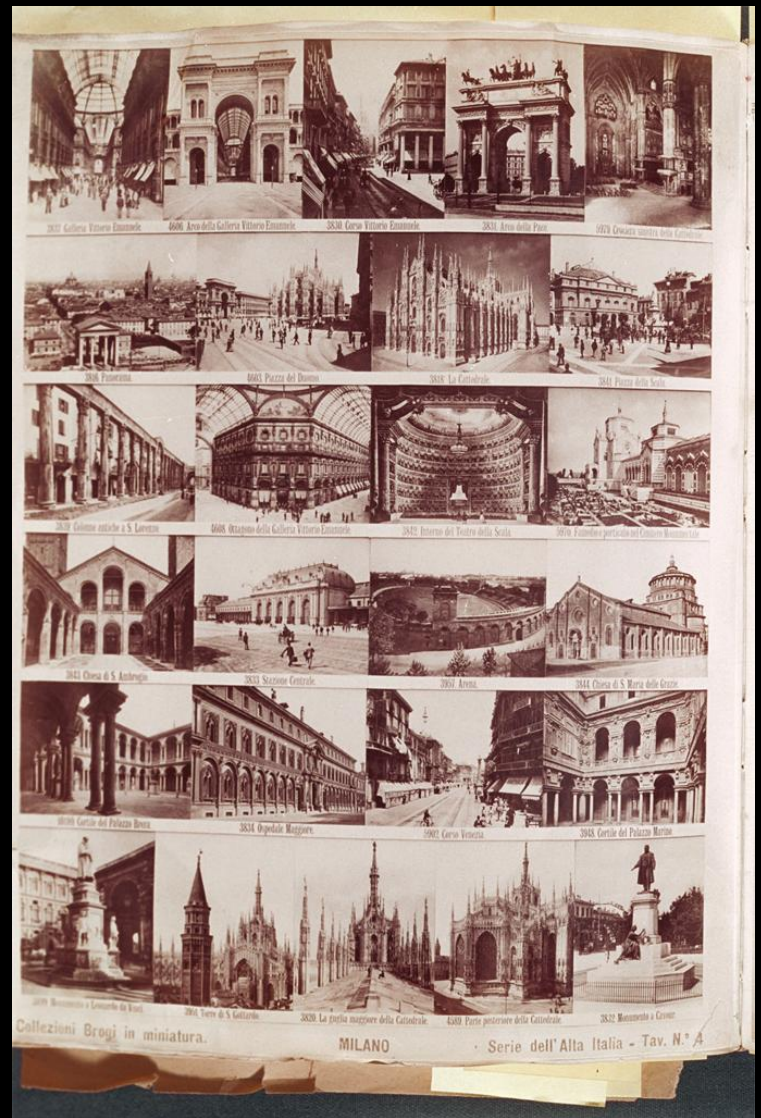
Gallery of the King



Gallery of the Queen



Gallery of the Princes



Giuseppe Mengoni, Galleria Vittorio Emanuele II, Milan, 1861-67









SPQR

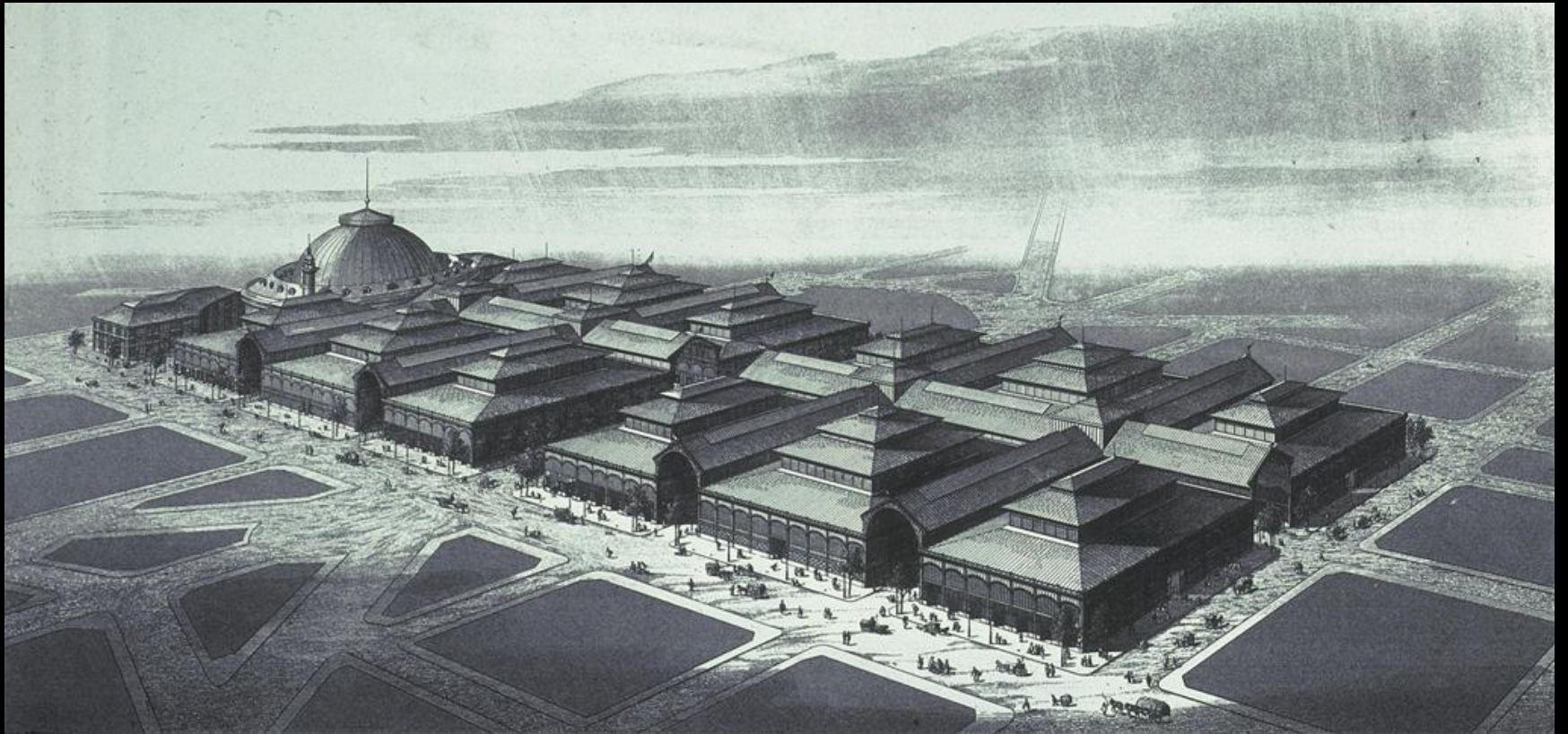
Senātus Populusque Rōmānus
"The Roman Senate and People"





EVANESCENCE

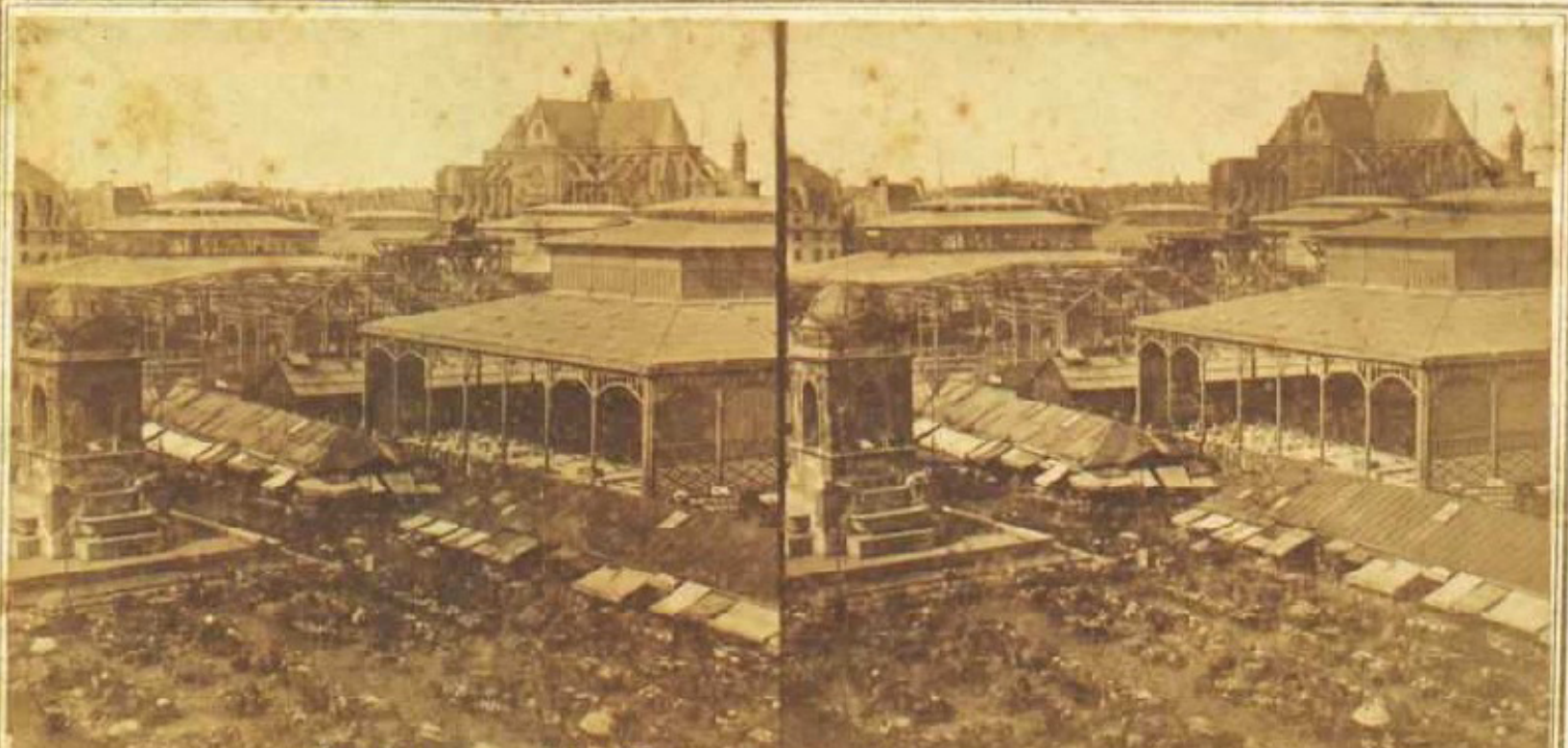




Victor Baltard, Les Halles, 1851-57 (demolished 1971)







Les Halles



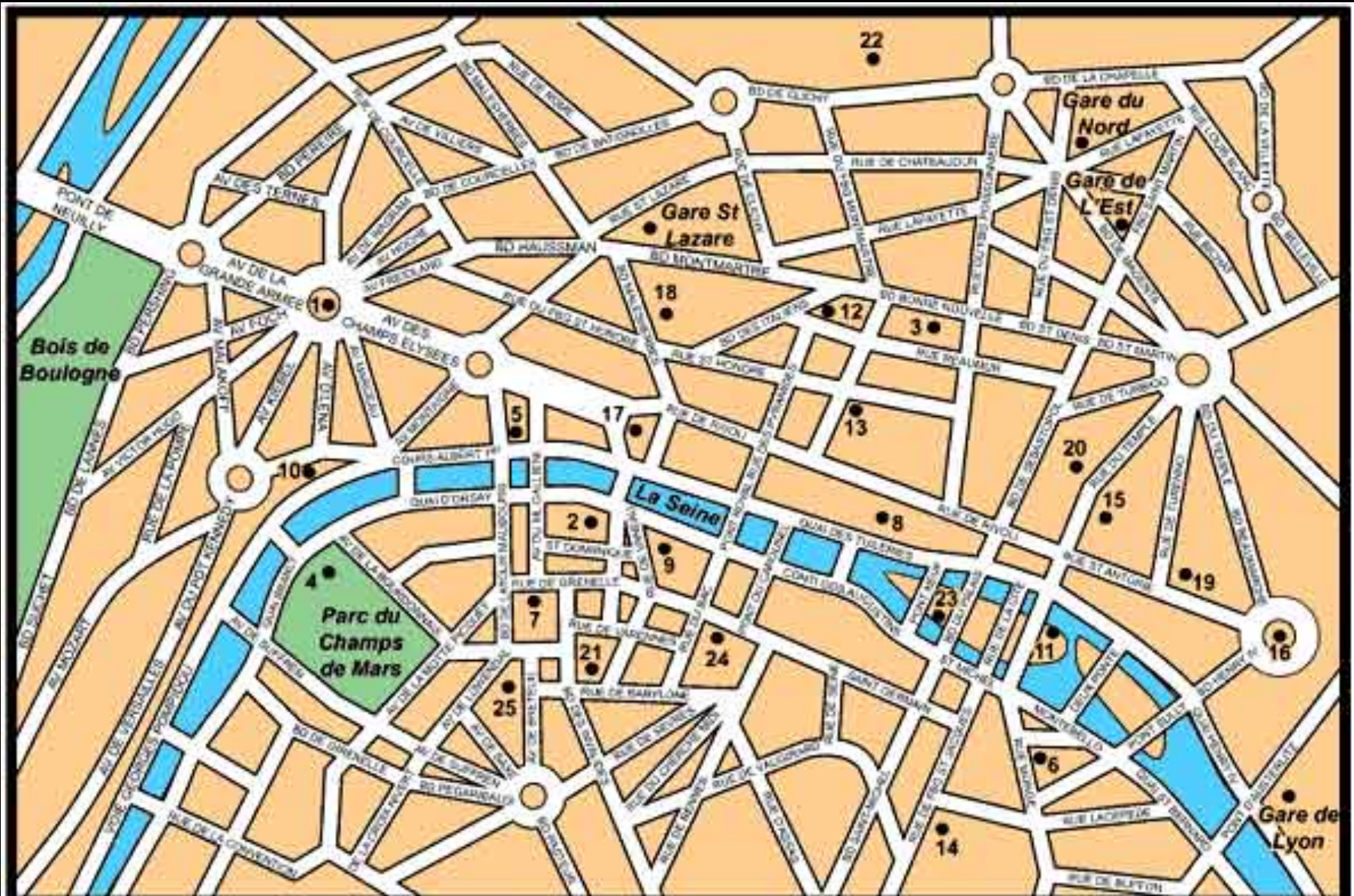








Châtelet les Halles, 1977; Forum des Halles, 1979



PARIS

- | | | | | |
|---------------------------|-------------------------|--------------------------|---------------------------|-----------|
| 1 Arc de Triomphe | 7 Invalides | 13 Palais Royal | 19 Place des Vosges | 25 UNESCO |
| 2 Assemblée Nationale | 8 Louvre Museum | 14 Pompidou | 20 Pompidou Centre | |
| 3 Bourne de Paris | 9 Musée d'Orsay | 15 Picasso Museum | 21 Rodin Museum | |
| 4 Eiffel Tower | 10 Museum of Modern Art | 16 Place de la Bastille | 22 Sacré Coeur | |
| 5 Grand & Petit Palais | 11 Notre Dame | 17 Place de la Concorde | 23 Sainte Chapelle | |
| 6 Institut du Monde Arabe | 12 Opéra | 18 Place de la Madeleine | 24 Saint Germain des Prés | |



Jacques Ignace Hittorf, Gare du Nord, Paris, 1846 BEAUX-ARTS /boze-ar/ CLASSICISM



GARE DU NORD

SNCF







François Duquesney, Gare de l'Est, Paris, 1849



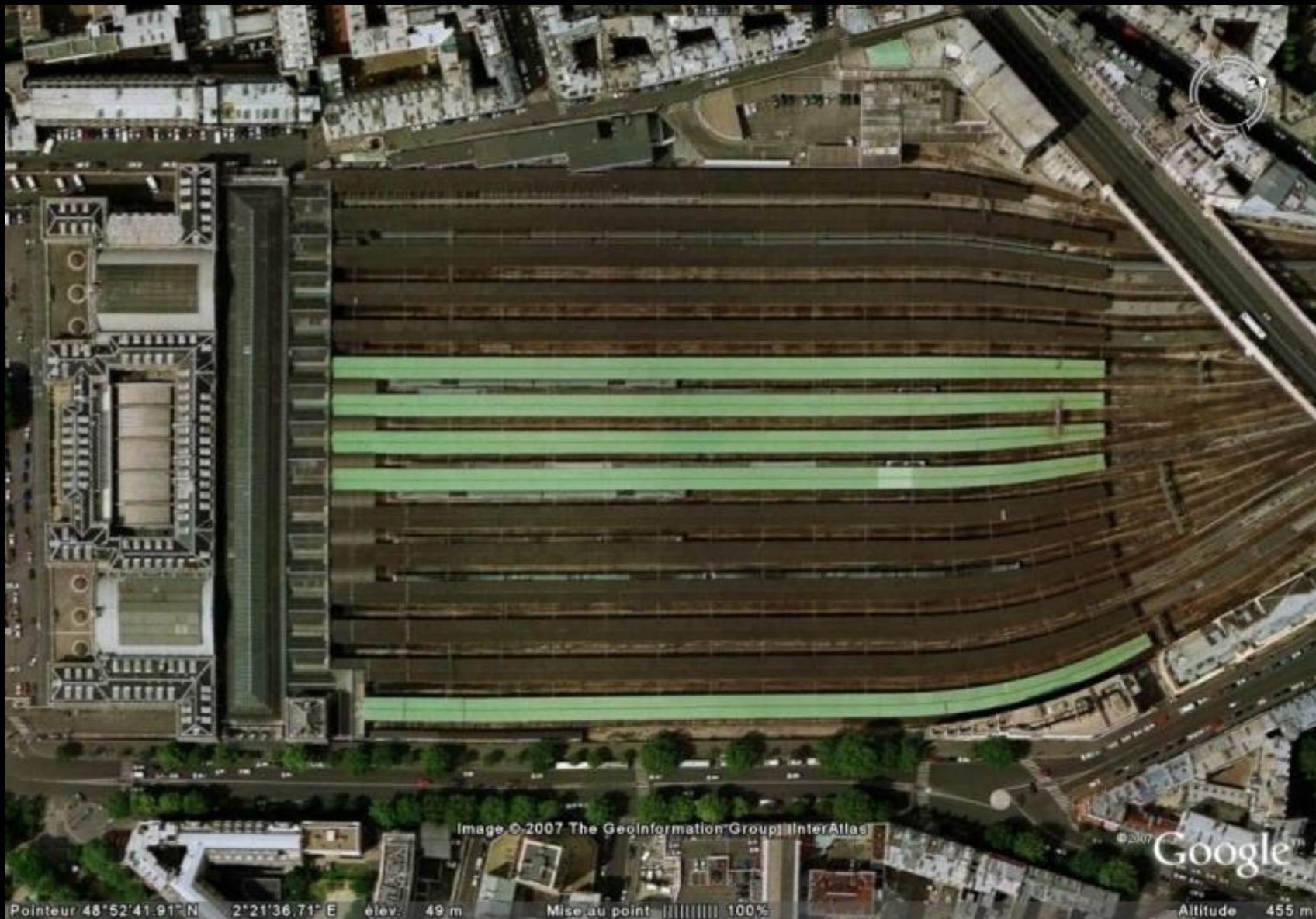


Image © 2007 The GeoInformation Group | InterAtlas

© 2007 Google™

Pointeur 48°52'41.91" N 2°21'36.71" E elev. 49 m Mise au point ||||| 100% Altitude 455 m







Light and atmosphere were perceived as independent qualities, no longer subject to the rules of the natural world in which they had hitherto manifested themselves. This process was comparable to the experience of pure speed on the railroad, that is, speed perceived as an independent quality because it is divorced from the organic base of horse-power.

Wolfgang Schivelbusch



William Henry Barlow and George Gilbert Scott, St. Pancras Station (and Midland Hotel), London, details of southeast corner and south (main entrance), 1868-1874







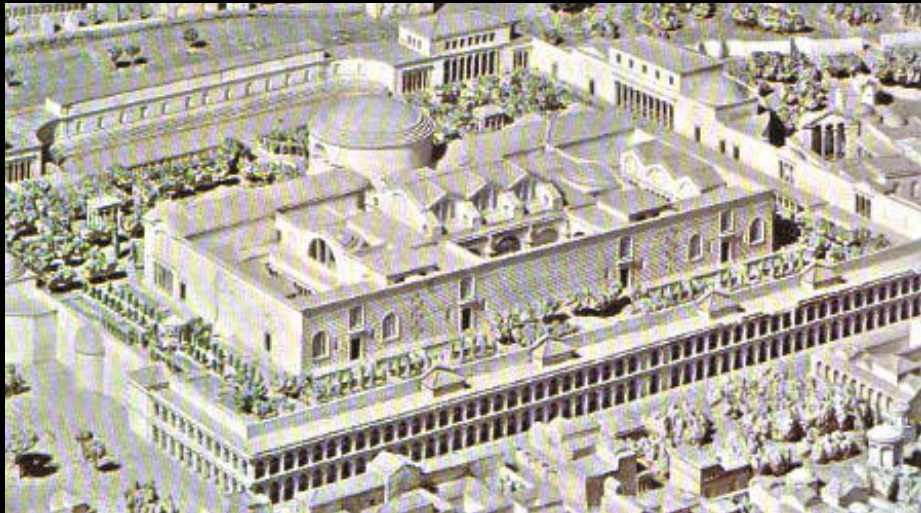


Bird's-eye View of the P. R. R. Depot, New York.



McKim, Mead and White, Penn Station, New York, 1910 (demolished 1963)

Pennsylvania Station, New York City.



Reconstruction of the 3rd century Baths of Caracalla, Rome, by architect Italo Giamondi











