

The fascination with space-time and motion



Neither Muybridge nor the other early pioneers of motion pictures "lived long enough to realize that the general public was drawn to movies for the same reasons as they: because movies subjected time and motion to human will." The fascination with time and motion that appeared across the culture arose, in part, from modern city life. Sklar, *Movie Made America*. 5

The film, Walter Benjamin wrote, "corresponds to profound changes in the apperceptive apparatus - changes that are experienced in an individual scale by the man in the street in big-city traffic, on a historical scale by every present-day citizen."

Carl Mayer, producer of *Symphony of a Great City*, supposedly got the idea for the film while standing in the midst of Berlin traffic.



FROM PERCEPTION TO APPERCEPTION: The motion picture, German critic Walter Benjamin noted, represented new ways in which "man can represent his environment." It provided a "deepening of apperception." The film "extends our comprehension of the necessities which rule our lives" while it also "manages to assure us of an immense and unexpected field of action. Our taverns and our metropolitan streets, our offices and furnished rooms, our railroad stations and our factories appeared to have us locked up hopelessly. Then came the film and burst this prison-world asunder."



PERCEPTION: observation, awareness via visual and physical sensation; it provides the capacity for comprehension

APPERCEPTION: introspective self consciousness; mental perception, especially the process of understanding something in terms of previous experience; synonym: recognition

"Long before anyone thought movies could be art, a new generation of thinkers and artists had begun to explore the principles of motion pictures for analogies to their own innovations in philosophy, science, painting and literature. What interested these early-twentieth-century modernists was movement, and the relativity and multi-dimensionality of space and time. The invention of cameras and projectors to record and reproduce images of motion coincided with the development of modernism, and in some cases may have fostered it." Sklar, 48



Panic and Riot, Memorial Day 1883, at opening of Brooklyn Bridge



As a work of art, it operated not like a painting that absorbed the viewer, inviting the viewer's own chain of associations, but by distracting the viewer with constant change of scene. Other critics complained of this: "I can no longer think what I want to think. My thoughts have been replaced by moving images." But Benjamin thought this "shock effect" of film might be "cushioned by heightened presence of mind." The camera helped to bring to consciousness the many things city-dwellers saw only unconsciously, but which were essential to their safety, both physical and political.

The Bill Poster's Dream: Cross Readings to be Read Downward



Time, Motion, Space: Movies appealed to city people because they “subjected time and motion to the human will,” something that cities required but also always fell short of. Sklar, 5



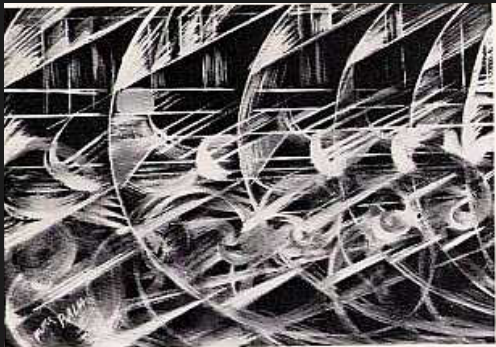
Urban planner George Ford argued that the first step in the scientific management of urban space would be to calculate “the money value of the time of the people involved and...the time interest on the capital tied up in vehicles and their load.”



Balla, “Dog on a Leash”

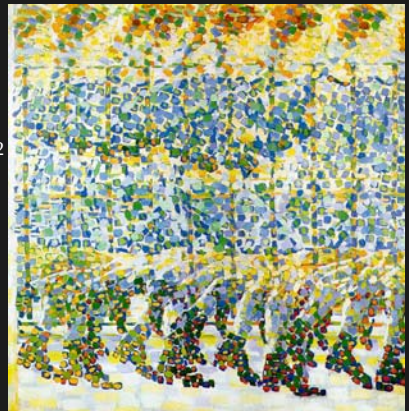


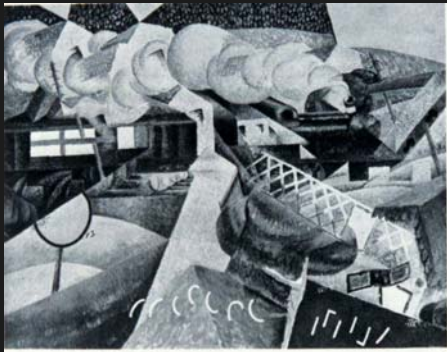
Kasimir Malevich, “Scissors Grinder,” 1912



Giacomo Balla, “Study Related to ‘Abstract Velocity,’” ca. 1913

Giacomo Balla,
“Young Girl Running on a Balcony,” 1912





371. GINO SEVERINI, *Red Cross Train*. 1914. 35¼ x 45¾".
The Solomon R. Guggenheim Museum, New York

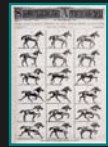
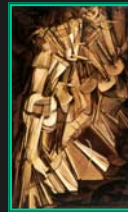


Fernand Leger, "The City," 1919



Albert Gleizes
"On Brooklyn
Bridge," 1917

The fascination with time and motion



"We perceive the world, French philosopher Henri Bergson argued, in the form of a rapid series of shots like those in motion pictures and in thinking we do little more than "see going a kind of cinematograph inside us." Writing was like the cinema too, Gertrude Stein wrote, in "making a continuous succession of the statement of what that person was." Sklar, *Movie Made America* 48



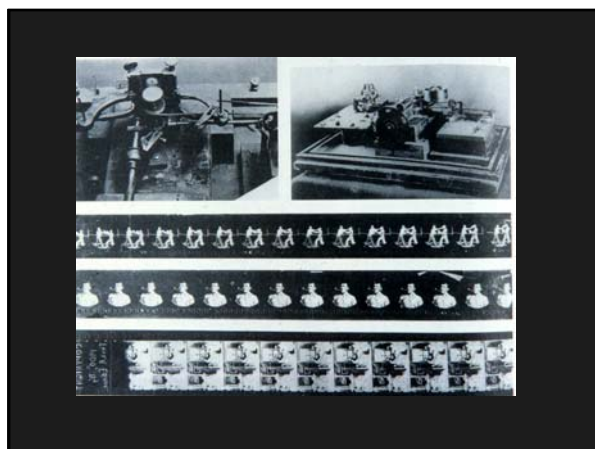
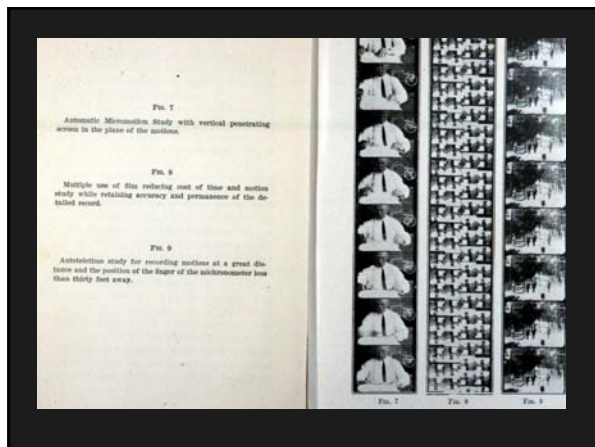
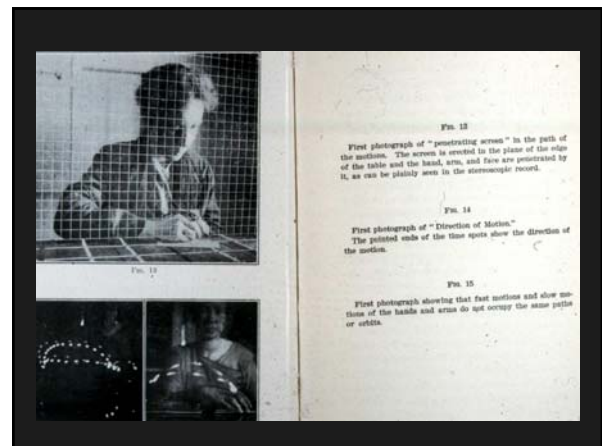
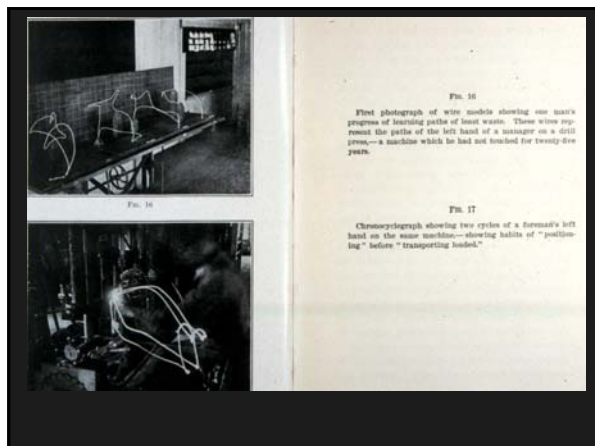
"Einstein's law of motion states that absent any force, an object moves in the straightest possible path in curved spacetime. Locally that path is always a straight line at uniform speed, but on larger scales it reflects the geometry of spacetime – which is different from the Euclidean geometry studied in tenth grade....It is hard to picture spacetime curvature in four dimensions (three of space, one of time)." - Professor of Physics Richard Wolfson

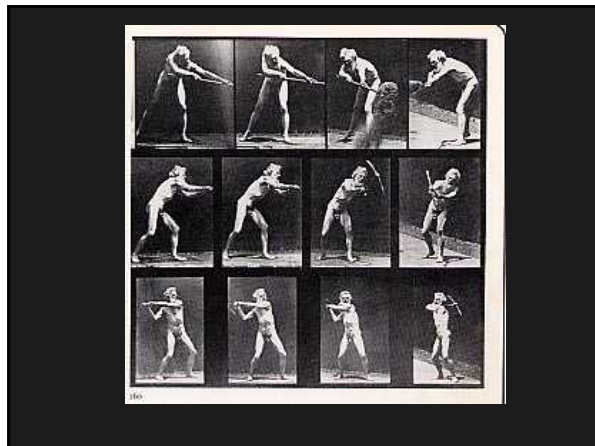


"To overcome the problem [of high-speed photographs that still blurred human motion Marey] dressed a man in black, with strips of silver lace attached to his clothes at his head and along an arm, leg and foot, and photographed the man running against a dead black background." Sklar, 9



Taylor and the Galbraiths would adapt this technique to the "scientific" management of industrial labor.





The film, Walter Benjamin wrote, “corresponds to profound changes in the apperceptive apparatus - changes that are experienced in an individual scale by the man in the street in big-city traffic, on a historical scale by every present-day citizen.”

“We hardly do anything else than to set going a kind of cinematograph inside us.”

- philosopher Henri Bergson on “the mechanism of conceptual thought” 1902

Movies and the spatialization of time and the dynamization of space: life in the modern metropolis meant understanding distance (space) in terms of time (space increasingly something to move through rather than be in); metropolitan life not only filled space with moving objects but put a premium on coordinating one's movements through space in terms of time.

The modern city's premium on the coordination of time and space - in streetcars, workplaces, entertainment and the like - influenced a range of inquiries from science and philosophy to industry and painting.

Motion pictures originated in an effort to improve perception. The French scientist Jules Marey, interested in the impact of functional alteration on organic evolution, needed a camera that could record the fluttering of birds' wings in ways that escaped the naked eye. He found it in Muybridge's apparatus for recording the pace of a horse, a perceptual problem deviled humanity since prehistory (specifically whether all four legs left the ground at one time - Muybridge's motion pictures showed that they did).

William Dickson and Jules Marey

Film, in moving across space or enlarging a corner of it, not only clarified previously unseen details, but revealed the structural and functional organization of space. In speeding or slowing motion, film explored previously unrecognized qualities of motion.

“Rush Hour, New York” Max Weber

Stills and a promotional poster from Berlin: Symphony of a Great City

Show: Symphony of a Great City and Man With a Movie Camera

Show Sunrise

In the form of the montage, Sklar writes, movies provide a mode of perception where every "spot is accessible; every action knowable."



Show greed

end