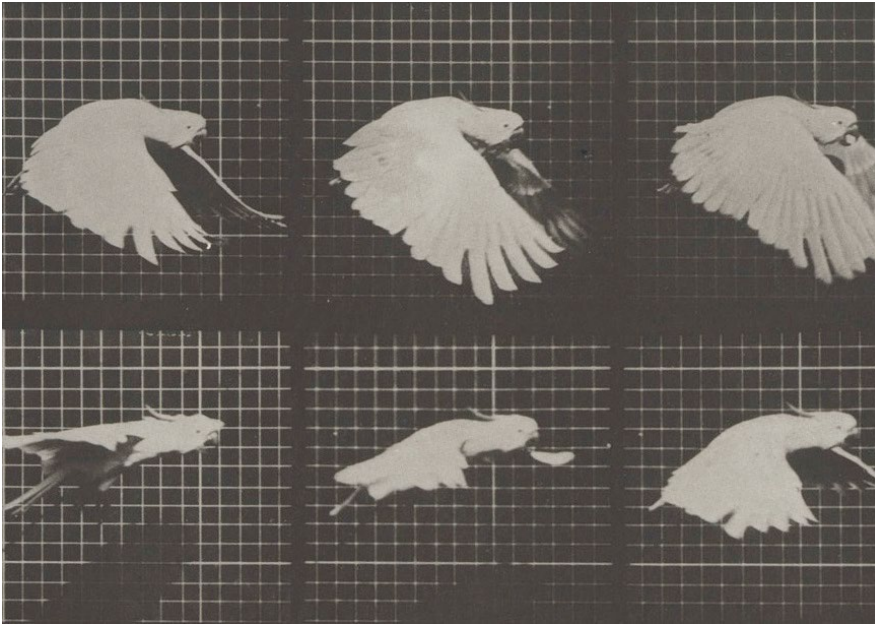


# Eadweard Muybridge.



*Eadweard Muybridge, Zoopraxographer* (Thom Andersen, 1975)

Eadweard Muybridge made an extensive series of photographs during the 1880s analyzing the movement of the human figure in order to compile a complete anatomy of human motion. These sequential pictures of simple actions were animated on Muybridge's zoopraxiscope to produce the first real motion pictures. In each of these sequences, a man or woman, most often nude, goes through a pedestrian action in front of a black backdrop which is crisscrossed by white lines two inches apart thus forming a gridwork, white on black. The sequences are generally photographed by three sets of cameras simultaneously, positioned to afford a lateral view, a front foreshortening and a rear foreshortening. These sequences of the human figure in motion were an outgrowth of Muybridge's earlier work for Leland Stanford photographing horses in various kinds of motion – walking, ambling, trotting, cantering, galloping.

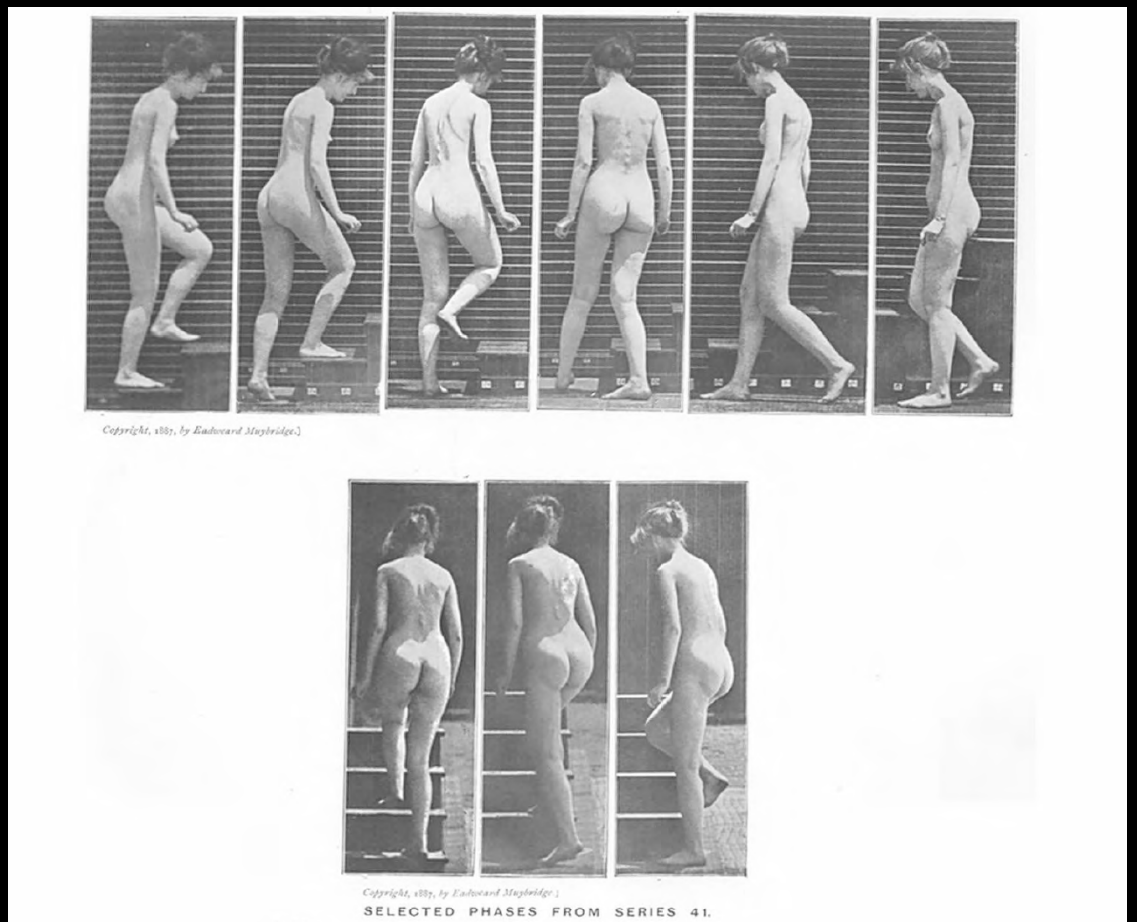
As Terry Ramsaye points out in his book *A Million and One Nights*, a history of motion pictures which contains a lengthy attack against what Ramsaye calls the Muybridge legend, Muybridge became involved in motion studies accidentally. He was a San Francisco landscape photographer when Leland Stanford asked him in 1872 to assist in an experiment. To settle a dispute in his favor, Stanford wanted scientific evidence that at some point in the stride of a trotting horse all four legs were off the ground simultaneously. Muybridge was to photograph Stanford's horse Occident in motion; however, his first efforts were unsuccessful

as the collodion wet plate process he used did not permit a fast enough exposure to avoid blurring. But in 1877, taking advantage of advancing technology, Muybridge succeeded in getting a sequence of clear pictures, and at the age of forty-seven found his life's work. Stanford widely advertised these pictures, and their fame enabled Muybridge to obtain a position at the University of Pennsylvania where – with nearly unlimited funds and facilities, and apparently with complete freedom – he did his major work. There he photographed many other animal species which he seemed to pick especially for the euphony of their names – the guanaco, the chacma baboon, the dorcas gazella, the oryx, the white-tailed gnu, and more. There also he began photographing nude men and women.

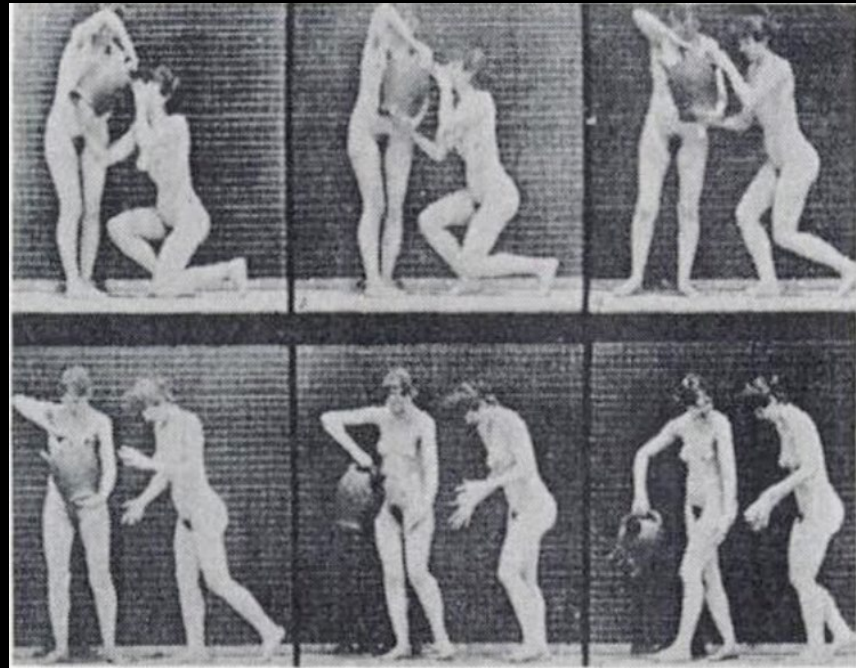
The captions which Muybridge appended to his sequences indicate clearly the nature of his work, captions like “Woman sitting down in chair held by standing companion, smoking cigarette” (the modifier is typically misplaced; it is the woman sitting down who is smoking) or “Woman turning and feeding dog” or “Woman turning and holding water jug for kneeling companion” or “Woman turning and walking upstairs”. They connote definitive treatments of simple actions: walking, running, standing, lifting, heaving, throwing, catching, jumping, climbing, crawling, kicking, dancing, turning, sitting, kneeling, lying down, rising.

In “Woman turning and walking upstairs”, a girl of about twenty-two years turns a one-hundred-and-eighty degree arc and walks up a platform of four steps. By today's standards of feminine voluptuousness, her legs and hips are disproportionately large, her breasts are small and quaintly flat. Each mamma covers an area no larger than that covered by her pubic hair. In the first panel of the front foreshortening in which the girl's body faces the camera, this dark mass of pubic hair forms a perfect equilateral triangle, but as she turns to walk up the steps this precise triangle becomes elongated until it is obscured by her left hip in the fifth panel. Everything in these images appears clear and unambiguous except the girl's facial expression which seems to me a commingling of intentness and bemusement. Altogether she is beautiful.

“Woman turning and holding water jug for kneeling companion” is reproduced only in lateral view so the two women are more narrowly circumscribed in the pictorial space they inhabit. These women are older and more severe in appearance than the girl who turns and walks upstairs. As they approach each other,



Woman turning and walking upstairs (Eadweard Muybridge, 1897)



Woman turning and holding water jug for kneeling companion (Eadweard Muybridge)

one lifting the jug, the other sinking to one knee, their action takes on the aspect of a drama, its import unknown, which coalesces into a static tableau and then decomposes itself as the two women walk off together, smiling or grimacing, perhaps about some water spilled from the jug.

These two sequences present contrasting images of women in their nakedness, but they were both photographed with the same insistently two-dimensional backdrops and according to the same frozen system so that, superficially, they appear identical. And this is precisely Muybridge's method: to completely suppress pictorial values to reach the essential. Thus the setting and the scheme are always the same. His forty-eight cameras were set in three batteries: one of twenty-four cameras positioned in a horizontal row, parallel to the backdrop; one of twelve cameras placed in front of the subject at a sixty degree angle from the backdrop; and another of twelve cameras, which could be aligned either horizontally or vertically, placed behind the subject, perpendicular to the fixed backdrop. Thus the actions can be depicted in twenty-four lateral views, twelve front foreshortenings and twelve rear foreshortenings – the front and rear foreshortenings corresponding to the first twelve lateral views. The subjects always moved along the same runway sixty-six feet long and were photographed against a perpendicular grid twelve feet high.

Only in his photographs of animals where he was forced to go out to the subject was Muybridge less rigid. These pictures, unlike those he took of men and women, were not made in uniform settings. Many of them were made away from his studio, at the Philadelphia Zoo, and the backdrops used present several variations on the basic white-on-black. Some are all white, others are precisely the negative image of his studio backdrop, that is, a gridwork formed by black lines on a white background. In his pictures of the sulphur-crested cockatoo, the white lines forming a standard backdrop are resolved with unusual clarity and brilliance so they appear broader than normal. In some instances, the backdrops do not cover the entire background area of the frame and so the pictures take on a totally different aspect: the animal is no longer in a closed artificial universe, but in captivity. In the photographs of the capybara, the bars on the animal's cage substitute for the gridwork.

The pictures of animals often cover just one stride, in as many as twenty-two separate exposures. So the interval between exposures is very brief, from a twentieth to a fiftieth of a second.

At first glance, all of the images in these sequences appear identical, like single frames of a motion picture set side by side or the repeated images used by Andy Warhol in some of his silk-screen canvasses. In the sequence entitled “American bison walking”, the bison, seen in profile against an all-white background, moves only its legs and tail while the rest of its body and its shadow remain monumentally immobile. The multiplication of almost identical images works in this case to mythopoeticize the bison.

Muybridge considered himself a scientist, not an artist; he called his work descriptive zoopraxography, the science of animal locomotion. He simply titled his major work *Animal Locomotion*. But his work transcended its narrow scientific purpose which has been summarized succinctly by Beaumont Newhall in his *History of Photography*: “his specific intention was to create an atlas for the use of artists, a visual dictionary of human and animal forms in motion”. In compiling this atlas, Muybridge also made a series of uniquely beautiful images, as I have tried to indicate in my inadequate descriptions. (Luckily the photographs themselves are readily available in a 1955 Dover edition of *The Human Figure in Motion* and a 1957 Dover edition of *Animals in Action*.) The very severity of his scheme – naked subjects going through mechanical actions photographed sequentially against a geometrical gridwork from an arbitrarily fixed angle – enabled him to capture a beauty of gesture which evaded romantic or pictorialist photographers. Even though they were indifferently composed and often out-of-focus, his pictures in their simplicity and honesty remain beautiful today long after the cultivated beauty of Peter Henry Emerson’s work has faded. Muybridge – whom we can claim for the cinema because he projected his photographs in motion on the zoopraxiscope which he invented in 1879, one of the earliest motion picture projectors predating Edison’s kinetoscope by fourteen years – was, along with Lumière, Méliès, and Porter, one of the masters of the imagist cinema.

By photographing a conventional motion abstracted from its functionalism by the nudity of the man or woman performing it and by the geometric, hard-edged setting in which it takes place, Muybridge enables us to contemplate this motion apart from its usual connotations. His images are completely contentless for the content of each sequence is pre-empted by the explanatory title which accompanies it. These titles tell us all we would notice or need to know in the context of a dramatic or didactic film. They tell us what words can tell and

so free the images from literary import. What is left? Just the moving images themselves voided of content, existing for their own sake, allowing each person who sees them to react as he wishes.

Although nudity is generally associated with eroticism, Muybridge's images are not erotic; his bear little resemblance to the lushly painted nudes found in museums or the alluringly posed nudes published in *Playboy* magazine. We notice instead a naturalness and an innocence whose purity cannot be sullied if it behaves outrageously. Muybridge's women are just as innocent when they brazenly smoke cigarettes. Their innocence is not a circumstantial condition; it is more akin to a state of grace. It seems to shine forth completely spontaneously without any conscious attempt by Muybridge to obtain it. For he was a photographer, not an artist. He discovered his model's innocence merely by anticipating Bresson's maxim: "Films can be made only by by-passing the will of those who appear in them, using not what they do but what they are". So Muybridge did everything possible to prevent his models from expressing themselves. But all the obstacles he placed in the way of expression worked to create revelation.

Even though Muybridge's images are not sexually arousing and even though he had the academic backing of the University of Pennsylvania for his work, Muybridge still had to contend with the powerful forces of Victorian puritanism in making photographs of nude men and women. So, although his male models were respectable athletes and physical education instructors at the university, his female models were primarily professional artists' models, who were then considered fallen women, and among them were, reportedly, some prostitutes. In any case, we can still observe in the photographs themselves women with scandalously close-cropped hair and women smoking cigarettes. Wearing short hair and smoking were both shocking gestures of dissipation for women at that time.

Muybridge's work was necessarily liberating in its violation of the taboo against nudity. Even today, nudity in films is acceptable only if handled with taste and selectivity. But Muybridge treated nudity completely objectively, without any pretense at taste or sensitivity, without any hint of lyricism. It is not sentimentalized. No special lighting – always the same lucid, merciless direct sunlight. No selective angles, no selective focus. The angles are always the same predetermined ones; the images are arbitrarily in or out-of-focus like the snapshots

taken by a twenty-five cent photo machine.

Muybridge eliminated ruthlessly all hints of the lyrical, the pastoral, and the bucolic in his work because these elements distract from the basic movements which alone concerned Muybridge. Instead, he took pains to emphasize the utter nakedness of his subjects, humiliating them by making them crawl on all fours, pour cold water on each other, jump high barriers, lift and heave heavy weights. He pitilessly photographed the misshapen and the crippled – for example, an amputee walking on crutches, a legless boy climbing from a chair. But he in turn appeared naked before his own cameras, a muscular old man with a white beard sitting down in a chair. So, despite the scientific impersonality of his work, Muybridge still expressed his own perverse personality. And also, in the subject he selected – simple human motion – and in his straightforward treatment of it, he discovered the film medium.