

# Appendix 2: A Brief History of Photography

### **Mid-Sixteenth Century—Camera Obscura**

Hundreds of years ago, artists discovered the camera obscura. They noticed that light coming through a keyhole into a dark room cast an inverted image on the wall. They built a camera obscura by setting a lens into a two-foot square box and placing a sheet of glass opposite the opening.

With the camera obscura in hand, the artist could set up the equipment in the field. Through the camera frame, the artist saw the view that he or she wished to draw. Then the artist traced the image reflected on the glass frame with a high degree of detail. In this way, artists used an early form of a camera picture to give their drawings realistic perspective and detail.

### **1826—Early Experimentation: Heliographs**

Joseph Nicéphore Niépce of France invented heliographs, or sun prints. This was the first experiment that created a prototype of the photograph, removing the artist's hand from the creation of the image and letting light draw the picture. Niépce placed an engraving onto a metal plate coated in bitumen, and then exposed it to light. The shadowy areas of the engraving blocked light, but the whiter areas permitted light to react with the chemicals on the plate. When Niépce placed the metal plate in a solvent, gradually an image, until then invisible, appeared.

## 1839—The Invention of Photography

On a trip to Paris, Niepce visited the painter and theatrical set designer, Louis Jacques Mandé Daguerre, and showed him the heliographs. Daguerre was intrigued by the invention, and the two men became partners in photographic experimentation. Unfortunately, after four years of creating images and testing chemical processes, Niepce passed away.

In 1839, Daguerre invented a process that “fixed” the images onto a sheet of silver-plated copper. He polished the silver and coated it in iodine, creating a surface that was sensitive to light. Then, he put the plate in a camera and exposed it for a few minutes. After the image was painted by light, Daguerre bathed the plate in a solution of silver chloride. This process created a lasting image, one that would not change if exposed to light. When set next to a black velvety surface, the metal plate reflected the shadowy areas of the picture and the light areas seemed illuminated. The Daguerrotype rendered details with such accuracy it was called “a mirror with a memory.”

At the same time, William Henry Fox Talbot, an English botanist and mathematician, made a similar invention. He sensitized paper to light with a silver salt solution. Talbot placed objects such as a leaf or lace onto the paper and then exposed it to sunlight. The background became black, and the subject was rendered in gradations of gray. This was a negative image, and from the negative, photographers could now duplicate the image as many times as they wanted. Talbot made contact prints of this image, reversing the light and shadows to create a detailed picture. In 1841, he perfected this paper-negative process and called it a calotype, from the Greek, meaning “beautiful picture.”

News of Daguerre’s and Talbot’s discoveries sparked the curiosity of the scientist and astronomer, Sir John F.W. Herschel. In 1839 he perfected the process of fixing, or making permanent, the negative image. Herschel bathed the negative in sodium thiosulfite to dissolve the silver salts, so that they would not react with light any longer, and the image became permanent. He also coined the name we use today for these processes—photography, or “writing with light.”

Soon, photographers around the world used Daguerrotypes and calotypes to record architecture and nature with finite detail, to document historic events, and to create portraits of literary and social figures, friends, and family members.

## 1851—The Glass Negative

In 1851, Frederick Scott Archer, an English sculptor, invented the wet plate. Using a viscous solution of collodion, he coated glass with light-sensitive silver salts. Because it was glass and not paper, this wet plate created a more stable and detailed negative.

However, the wet plate needed to be developed and fixed before it dried. In order to process the pictures quickly, the photographer had to carry a portable darkroom—with cumbersome black boxes, trays and tongs, bottles of chemistry and fragile glass plates—everywhere he or she went.

## 1850s—Tintypes, Cartes de visites, and Stereo Views

Throughout the 1850s, there were various technological improvements in paper, lenses, and cameras. These advancements made it easier for the general public to become involved in photography. Tintypes were pictures made on thin sheets of metal. Cartes de visites were small albumen prints on paper cards. A popular pastime was viewing pictures with a stereoscope that created a 3D effect. Because these pictures were inexpensive to make, they became common ways to carry pictures of scenic views, families, and individuals.

## 1860s—Realism and Fantasy

Newsworthy events were communicated with the aid of photography. In the 1860s, many photographers, such as Matthew Brady, William Fenton, and Timothy O’Sullivan, became interested in documenting war. These photographs were seen in exhibitions, mounted in books, and used as sources for engravings for newspapers. They provided the most realistic and compelling records of the cruelties of war available at the time.

Many photographers explored the natural landscape with cumbersome camera equipment in tow. William Henry Jackson traveled for miles over backbreaking terrain to document the crystal mountain peaks and black lakes of hitherto unknown reaches of the American landscape. He was the first person to photograph the Old Faithful Geyser in Yellowstone Park, and his work helped to preserve some of America’s wilderness.

Photography enabled artists to create a representation of the physical world that was faithful to reality, but it was also seen as another medium for rendering allegories and works of art that followed the traditions of painting. Julia Margaret Cameron purposely blurred the image, using radiant lighting and soft focus to evoke the spiritual quality of the subject. She employed this method whether photographing social figures such as Lord Alfred Tennyson and Charles Darwin or portraying allegories with models who were often family members. Lewis Carrol photographed Alice Grace Weld, his friend and the inspiration for *Alice in Wonderland*, dressed up as Little Red Riding Hood. Henry Peach Robinson combined several negatives to re-enact dramatic scenes in myths and stories.

## 1870s—Capturing Motion

In 1869, Edward Muybridge invented a way to freeze motion. He created a shutter inside the camera: two boards slipping past each other at the touch of spring. The film recorded the actions that took place during the split-second when the shutter was open. Muybridge conducted a series of studies on motion, photographing men vaulting over poles and horses galloping on a track. His work not only assisted artists in studying anatomical form in motion, but it was also a precursor to motion pictures.

## 1880s—Technological Advancements: The Dry Plate and the Hand-Held Camera

In 1879, experiments resulted in the dry plate, a glass negative plate with a dried gelatin emulsion. Dry plates could be stored for a period of time. Photographers no longer needed the cumbersome and time-consuming portable darkroom. In fact, photographers began hiring technicians to develop their photographs, and the art of photo finishing was born. In addition, dry processes absorbed light quickly—so rapidly in fact that the tripod could be stored in the closet and the camera held in the hand. With the speed of the film and the influx of hand-held cameras, action shots became more feasible.

In 1888, George Eastman, a dry plate manufacturer in Rochester, NY, invented the Kodak camera. For \$22.00 an amateur could purchase a camera with enough film for 100 shots. After use, it was sent back to the company, which then processed it. The ad slogan read, “You press the button, we do the rest.” A year later, the delicate paper film was changed to a plastic base, so that photographers could do their own processing. (Now we have a resurgence of this company-processed invention with the disposable camera.)

## The Turn of the Century—Pictorialism & Straight Photography

Many photographers were interested solely in the aesthetic possibilities of the medium. Pictorialists, such as Gertrude Kasebier and Alvin Langdon Coburn, took photographs that imitated the style of paintings. Using symbols, shimmering light, and soft focus to create impressionistic dots and streaks, pictorialists depicted a world that was one step removed from reality.

Alfred Steiglitz, a New York-based photographer, was actively involved in writing, editing, lecturing, photographing, and organizing gallery shows to establish the reputation of photography as a fine art, from Pictorialism to avant-garde methods. Finally in 1924, the Museum of Fine Arts in Boston collected Steiglitz's photographs; it was the first time that photographs were collected in a museum in the United States.

At the same time, many photographers became interested in photography as a tool to record customs and manners, the facets of their culture that they felt were disappearing at the turn of the century. With Kodak hand-held cameras and rolls of gelatin films, photojournalists burst onto the scene. They felt compelled to record life as it unfolded before their eyes, to bear witness to the world and their place in it.

## 1920s and 1930s—Experimentation

In 1925, the invention of the Leica camera liberated photographers. Because the Leica was small, light, and quick, they were now able to capture the activity of street life with greater accuracy and imagination. In responding to the momentous changes in the world around them, photographers experimented with different means of expression and techniques, such as surrealism, color, montage and F/64 straight photography. FSA Photographers Dorothea Lange, Walker Evans, Marion Post Wolcott, and others, traveled through America during the Depression, creating a visual document powerful enough to influence the government to change social welfare laws. Editorial and advertising photography became important venues for photography. Margaret Bourke-White, whose work ranged from industrial photography to portraits of such figures as Stalin, Roosevelt, and Churchill, created the cover photo for the first issue of *Life Magazine* in 1936.

## 1940s and 1950s—Photography & Publishing

Photography books of all kinds became popular. Henri Cartier-Bresson published *The Decisive Moment*; Robert Frank published *The Americans*. News magazines such as *Life* and *Look* helped to establish the importance of photography as a communication tool. During World War II, Robert Capa's historic photographs of the amphibious landing on D-Day brought news of the event home in unforgettable imagery. Roy deCarava's 1955 collaboration with Langston Hughes resulted in the publication, *The Sweet Flypaper of Life*.

## **1960s and 1970s—Photography Comes of Age**

Photography began to be shown in galleries and museums, collected in auction houses, published in books and magazines, and taught in universities. In 1974, Cornell Capa founded The International Center of Photography as a place where socially concerned photographic work could be seen as a creative art form. ICP's current collections contain works from this exciting period by such notable artists as: Diane Arbus, Manuel Alvarez Bravo, Imogine Cunningham, Bruce Davidson, William Eggleston, Elliot Erwitt, Lee Friedlander, Nan Goldin, Helen Levitt, Joel Meyerowitz, Duane Michaels, Gordon Parks, and Andy Warhol.

## **1980s and 1990s—Contemporary Photography**

Photographers use various techniques, including large-format Polaroid photography, advanced electronics, multi-media installations, and digital imaging, as well as early photographic processes and straight photography, to create works that question such topics as identity, society, issues of verity, combinations of image and text, and fact versus fiction. Some notable contemporary artists who have exhibited at ICP include: Chester Higgins, Jr., Annie Liebovitz, Mary Ellen Mark, David Levinthal, James Nachtwey, Lorie Novak, Eugene Richards, Joseph Rodriguez, Sebastio Salgado, Sandy Skoglund, Kiki Smith, and Carrie Mae Weems.

## FOCUS ON PHOTOGRAPHY: A CURRICULUM GUIDE

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Written by **Cynthia Way** for the **International Center of Photography**

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