In the years between the first French publication on the paper negative in 1847 and more-streamlined mechanical advancements in the 1860s, dynamic debates were waged in France regarding photography’s prospects in the contrary fields of science and art. As a medium capable of unprecedented veracity, did photography simply record the real world, or could it express an aesthetic vision or ideal? This dialogue was contemporaneous with changes in practice among novelists and painters, who were bringing everyday people, places, and things—rather than academic, mythical, or biblical subjects—to the forefront of the artistic imagination. At the same time that writers and artists were forging a new art for an era of social, economic, and political change, photographers were contending with “realism”—both exemplifying it and undermining it—as they explored the possibilities of the paper and glass negatives. Organized around the Getty Museum’s holdings of French photography and supplemented with important international loans, this exhibition highlights the work of four photographers during this formative period: Édouard Baldus, Gustave Le Gray, Henri Le Secq, and Charles Nègre.

*It is by the real that we exist; it is by the ideal that we live.*
—Victor Hugo, *William Shakespeare*, 1864
The entire future of photography is on paper.
— Gustave Le Gray, *Traité pratique de photographie sur papier et sur verre* (Practical treatise on photography on paper and on glass), 1850

The daguerreotype, a unique positive image on a highly polished silver plate, was announced in Paris in January 1839 and dominated the photographic industry in France in the 1840s. At the same time, William Henry Fox Talbot’s experiments in England with photographs on paper—also announced in January 1839 and followed by his “calotype” paper negative in 1840—traveled across the Channel to inspire several French enthusiasts, including the civil servant Hippolyte Bayard and the scientist Henri-Victor Regnault. In 1847 Louis Désiré Blanquart-Evrard, a cloth manufacturer from Lille who had received instruction from a student of Talbot’s, published his own process for photography on paper, which included improvements to the sensitivity and definition of the paper negative. Although it was promoted by the scientific and artistic communities, Blanquart-Evrard’s publication appeared during a period of political instability on the eve of the February Revolution of 1848. This unfortunate timing carried a silver lining: without a national mandate or commercial viability, photographers working with the paper process enjoyed a brief but fertile phase of experimentation and innovation. The photographers featured in this exhibition were integral to the development of paper photography, and Gustave Le Gray’s waxed paper negative was particularly vital, rendering the negative more translucent.
COMMISSIONS, DEMOLITIONS, AND RENOVATIONS

The year 1851 marked the founding not only of the Société héliographique but also of the Mission héliographique by the government-sponsored Commission des monuments historiques. Five photographers—Édouard Baldus, Gustave Le Gray with his student Auguste Mestral, Henri Le Secq, and Hippolyte Bayard—were sent out simultaneously across France to record historic monuments before they were transformed through renovations under the administrations of the Second Republic (1848–52) and the Second Empire of Napoléon III (1852–70). Working from a list of 175 key sites, each photographer was assigned a region of France: Baldus went south, Le Gray and Mestral went south and west, Le Secq went east, and Bayard went north and east.

Following these missions, photographers documented the transformations of monuments in Paris, such as Notre-Dame, the Hôtel de Ville, the Louvre, the place du Carrousel, and the Tour Saint-Jacques. Employing individual technical and compositional approaches to the same subjects, different photographers created independent identities. In some instances, they used the opportunity to experiment with the glass negative, first introduced in London at the Great Exhibition of 1851.
THE EVERYDAY AND
THE ARTISTIC SUBLIME

From my point of view, the beauty of a photograph almost always consists...in the sacrifice of certain details, so as to attain an arrangement of effects that sometimes verges on the artistic sublime.

—Gustave Le Gray, _Traité pratique de photographie sur papier et sur verre_ (Practical treatise on photography on paper and on glass), 1850

Like the realist artists and writers of the 1840s and 1850s who rejected idealized, academic themes in favor of “real” subjects from modern life, photographers attempted to capture common individuals and everyday scenes with their cameras. It was challenging to present these subjects in painting or literature to an audience accustomed to unearthly protagonists or lofty themes; it was all the more daunting in the still-novel medium of photography. Many of the prints displayed here attest to photographers’ abilities to achieve a kind of “artistic sublime” in the most mundane subjects—whether workers or merchants on the streets of Paris, a quiet suburban town, laundry drying outside a building, or a composed still life of rural objects.
THE NEGATIVE

Where science ends, art begins.
—Charles Nègre, “Héliographie sur papier ciré et à sec” (Heliography on waxed and dry paper), La lumière, May 11, 1851

William Henry Fox Talbot introduced the “calotype” paper negative in England in 1840 stemming from his work with the “photogenic drawing” (see below), created by placing objects on sensitized paper and exposing the sheet to light. To make a paper negative, a piece of paper was sensitized with silver nitrate and potassium iodide, exposed in the camera, and developed in the darkroom to form a negative image. It was then placed on another sheet of sensitized paper and exposed in sunlight to produce a positive print.

In France, the paper negative experienced a delayed start. Talbot had the idea of establishing a Société calotype in Paris and in 1842 sold his patent to the French entrepreneur Hugues-Antoine-Joseph-Eugène Maret, marquis de Bassano, who intended to train several calotypists. Due to the lack of success in producing commercially viable prints, however, the effort was abandoned. Bassano returned the patent rights in 1845, just before Louis Désiré Blanquart-Evrard sent examples of his improved paper-negative process to the Académie des sciences in 1846. Several years later, Gustave Le Gray introduced the waxed paper negative, which provided greater translucency and sharper prints.
There is thus only the artist...who can surely obtain a perfect work with the aid of an instrument capable of rendering the same subject with an infinite variety of interpretations.


Experimentation with paper and glass negatives occurred simultaneously in France. It was not until the collodion-on-glass negative was presented by Frederick Scott Archer at the 1851 Great Exhibition in London that French photographers began to favor the glass negative, which offered faster exposure times and sharper images. With the subsequent introduction of affordable, efficient albumen paper, there was greater ease in producing multiple prints. When Napoléon III commissioned photographs of architectural renovations, feats of engineering, natural disasters, or historic occasions during his reign, photographers often opted for the expediency of the glass negative and albumen paper. Édouard Baldus made a series of images of the new railway between Paris and Marseille on the Mediterranean, and Gustave Le Gray documented a recently inaugurated military training camp at Châlons-sur-Marne. At the same time, photographers initiated a number of independent series, including Henri Le Secq’s cyanotype still lifes and Le Gray’s renowned marine views.
The free-market policies of Napoléon III’s administration (1852–70) coincided with an explosion of commercial activity in photography, which was becoming increasingly industrialized and commonplace. Seeing that many of their salted paper prints were beginning to fade, photographers shifted their concern from experimentation to the preservation and dissemination of their images. A variety of photomechanical techniques were developed, which transferred the original negative image onto stone (photolithography), metal (photogravure), or carbon tissue, and then printed the image in ink. These processes resulted in more-stable prints, greater ease in reproduction, and wider distribution. Charles Nègre started working with photogravure (which he termed “heliogravure”) alongside his salted paper and albumen silver prints in the 1850s, and by the late 1860s Édouard Baldus, Gustave Le Gray, and Henri Le Secq had all turned toward photomechanical methods.
Édouard Baldus, Gustave Le Gray, Henri Le Secq, and Charles Nègre were all founding members of the Société héliographique. Formed in early 1851, this professional association was the first in the world to be devoted to photography. A crucial outlet for the group’s dialogue was its accompanying journal *La lumière*. The inclusion of “Beaux-Arts—Héliographie—Sciences” in the weekly’s masthead tellingly situated heliography (photography) between the fine arts and the sciences. It also represented the interests of the group’s constituents, who embraced the wide range of practices and applications of the photographic medium—artistic, scientific, commercial, and industrial.
REALISM

At all times there have existed in painting two schools: that of the idealists and that of the realists.

—Théophile Gautier, “Salon de 1850–51,” La presse, February 15, 1851

The year 1849 marked the first international exhibition to include photographs, the Exposition nationale des produits de l’industrie in Paris, which ignited controversies about photography’s legitimacy as an art form. It was also the year the term “realism” was first used by critics, in reference to the roughly brushed, unidealized paintings of rural life by Gustave Courbet at the Salon des beaux-arts. Since the 1830s, the academic tradition had been under attack by both the partisans of plein-air painting (notably the Barbizon school) and the realist painters, who argued for more-relevant subjects and styles that reflected modern trends in literature, current scientific progress, and the political and economic upheavals affecting French society. Displayed here are portraits of some of the figures associated with the realism debates in the nineteenth century.
In the present digital age, we are somewhat removed from negative-positive photography. Yet it was this concept that allowed the medium to develop into the industry it became in the nineteenth and twentieth centuries. Although the negative’s support structure changed from paper to glass to film, the idea remained the same: multiple positive prints could be produced from a single negative image.
THE WAXED PAPER NEGATIVE

The waxed paper negative was introduced by Le Gray in 1848–49 and published in 1850. The layer of wax consolidated the paper fibers in the negative and allowed more light to pass through, resulting in a more-defined positive image. Photographers could prepare numerous unexposed negatives in advance and store and carry them in portfolios. They could also wait several days to complete the development of the negative following exposure in the camera. Before making a positive print, they frequently applied fine pencil lines and washes of graphite, gouache, or pigment to highlight certain elements or accentuate depth and form in the composition.

Although Baldus, Le Gray, Le Secq, and Nègre were working primarily with the glass negative after the mid-1850s, it was through the waxed paper negative that they found their early expressive potential as photographers. The examples displayed in this gallery attest to the incredible detail achievable with the paper negative, often making it difficult to determine whether a positive was produced from paper or glass.
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