

FRAGILE LIGHT: CONFLUENCE OF ART AND SCIENCE

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Among visual artists there is a long tradition of connections among light, art, and place. The special character of the luminous environment of a place can be correlated directly with the microclimate of the place¹ and thus is vulnerable to impacts of human activity on the environment. Hence a significant overlap exists between the interests of astrophysicists in starlight reserves, nocturnal landscapes, and clean skies, and parallel interests of artists in preserving the quality of both the night sky and the day sky.

Introduction

The everyday human experience of terrestrial natural light derives from five major contributors: sunlight, skylight, twilight, moonlight, and starlight. Faintest and most fragile of these, starlight has served as a primal source of wonder and human aesthetic experience, as well as a fundamental source of inspiration shared as a common heritage by astronomers and visual artists. In this presentation I will address the general thematic area of the night sky as a source of inspiration. Within the context of StarLight 2007's goal of defending the quality of the night sky and the right to observe the stars, my objective is to underscore the importance of recognizing and drawing upon the historic and contemporary confluence of science and art in the night sky.

Evidence of a stellar confluence of science and art lies in the works of visual artists spanning centuries. Although the representation of stars by artists seems to be as old as art itself, I will call your attention primarily to works of art created over the past five centuries, though I will begin with two earlier artifacts.

Inspiration related to the night sky is reflected in a rich diversity of work covering a broad range of themes. The examples I've selected to present are grouped into five somewhat arbitrary and overlapping categories: The Milky Way; Starry Nights; Nocturnes and Nocturnal Cityscapes; Astronomy Itself; Constellations, Galaxies, and Starfields.

The Milky Way

The prominence of the Milky Way in ancient and contemporary astronomy, as well as in legend and cultural mythology, has led to its portrayal by artists over many centuries, in both allegorical and representational contexts. However, the two contexts have not always been clearly separated. An early artifact associated with the Milky Way is an *Eccentric flint depicting a crocodile canoe with passengers* dating from the Late Classic pre-Columbian period (c. AD 600 - 900). Held in the collection of the Dallas Museum of Art, it is believed by Mayan scholars to represent the Mayan creation myth in which

the plunging canoe represents the movement of the Milky Way across the sky.² (Mayan astronomy traces the date of creation to August 13, 3114 BC.)

The Milky Way as river was similarly interpreted by Chinese silversmith Zhu Bishan in his *Raft Cup* (Chabei) created in 1345 AD.³ The cup (Cleveland Museum of Art) bears inscriptions that tell of “a traveler who began a transcendental trip on a raft in a river but ended up in the Milky Way.”⁴ The persistence of such myths is evidenced in a traditional Chinese landscape painted some four centuries later by Zhai Dakun, also in the collection of the Cleveland Museum. The inscription on that 1775 painting describes, “Waterfall and Rocks. The Milky Way descends from the ninth heaven, No matter how swift one is, one can’t even come close to it...”



Figure 1. Jacopo Tintoretto. *Origin of the Milky Way*, c. 1575. Oil on canvas, 148x165 cm. London, National Gallery. The work of art depicted in this image and the reproduction thereof are in the public domain worldwide. The reproduction is part of a collection of reproductions compiled by The Yorck Project. The compilation copyright is held by The Yorck Project and licensed under the GNU Free Documentation License.

The Greek myth of the creation of the Milky Way was depicted by the Italian Renaissance artist Jacopo Tintoretto, c. 1575. *Origin of the Milky Way* (National Gallery London) depicts the creation of the Milky Way by Hera as she breast-feeds Heracles (Figure 1). Nearly a hundred years later, this same allegorical theme was treated by Baroque Flemish painter Peter Paul Rubens in his 1668 painting *Birth of the Milky Way* (Prado Museum). More contemporary interpretations of the allegory include Spanish Surrealist Salvador Dalí’s 1964 color etching *The Milky Way (Mythology Suite)* and English artist Graham Arnold’s 1984 painting *Janet Miller and the Milky Way*.

German artist Adam Elsheimer painted the *Flight into Egypt* (Figure 2) in 1609. The painting, in the collection of Munich’s Alte Pinakothek, may be the earliest known landscape in which the Milky Way is explicitly represented. In contrast, an early twentieth-century extraterrestrial view of the Milky Way, including Earth and Moon in their “galactic context,” was portrayed by Polish-born artist Wladyslaw Benda in his charcoal illustration *Earth, Moon, and Milky Way*. This celestial view of the earth, a “world treasure” of the Library of Congress, was created in 1918 as an illustration for Maurice Maeterlinck’s *Future of the Earth* published that year in “Cosmopolitan”.⁵ Additional twentieth century Milky Way images include both a surrealist treatment and an etching (Don Quichotte series, 1957) by Salvador Dalí, and an extremely large painting by contemporary German painter Anselm Kiefer, who has devoted much of his working life to the subject of heaven and earth.⁶ Kiefer’s *Die Milchstrasse* (1985-87), which measures 381 cm by 563 cm, is in the collection of the Albright-Knox Art Gallery (Buffalo).

Starry Nights

The theme “starry night” in painting has a history that preceded Vincent van Gogh and continued through the end of the twentieth century. French Realist Jean-Francois Millet painted his *Starry Night* (Yale University Art Gallery) in 1851, more than thirty-five years before van Gogh first treated the subject. Although it is unclear whether van Gogh was directly influenced by this painting, it is well-known that van Gogh admired and was influenced by the work of Millet in general.⁷ Van Gogh himself painted five “starry night” paintings, all during the last two years of his life. The first of these was *Café Terrace at Night*, painted in Arles in 1888. The painting (Figure 3) is in the collection of the Kröller-Müller Museum. Later the same year, while still in Arles, van Gogh painted *Starry Night Over the Rhone* (Figure 4), now in the collection of the Musée d’Orsay. Van Gogh’s best-known “starry night” painting, perhaps his best-known painting of all, was painted the following year (1889) while he was at the Asylum at Saint-Remy. Titled simply *Starry Night*, the painting (Figure 5) is in the collection of the Museum of Modern Art. Van Gogh’s least-known “starry night” painting, *The Evening Walk*, was painted in December of 1889 and is in the Museu de Arte (São Paulo). In May of 1890, just before leaving the asylum, and little more than two months before his death at



Figure 2. Adam Elsheimer. *Flight into Egypt*, 1609. 31x42 cm. Munich, Alte Pinakothek. The work of art depicted in this image and the reproduction thereof are in the public domain worldwide. The reproduction is part of a collection of reproductions compiled by The Yorck Project. The compilation copyright is held by The Yorck Project and licensed under the GNU Free Documentation License.

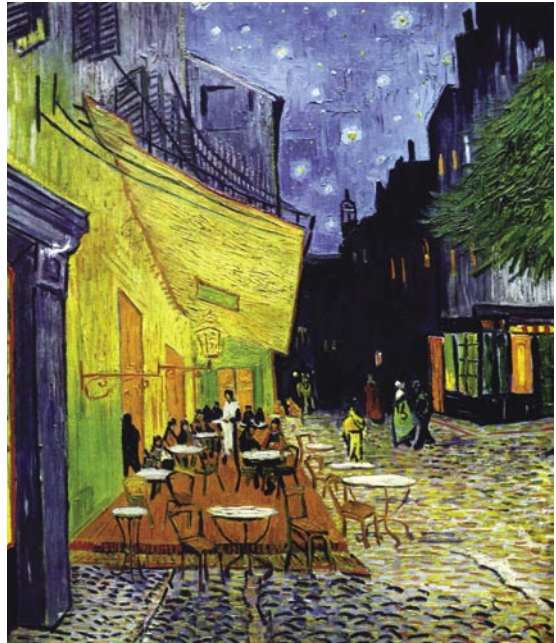


Figure 3. Vincent van Gogh. *Café Terrace at Night*, 1888. Oil on canvas, 81x65.5 cm. Otterlo, Rijksmuseum Kröller-Müller. The work of art depicted in this image and the reproduction thereof are in the public domain worldwide. The reproduction is part of a collection of reproductions compiled by The Yorck Project. The compilation copyright is held by The Yorck Project and licensed under the GNU Free Documentation License.



Figure 4. Vincent van Gogh. *Starry Night Over the Rhone*, 1888. Oil on canvas, 72.5x92 cm. Paris, Musée d'Orsay. This image is in the public domain because its copyright has expired. This applies to the United States, Canada, the European Union and those countries with a copyright term of life of the author plus 70 years. Faithful reproductions of two-dimensional original works cannot attract copyright in the U.S. according to the rule in *Bridgeman Art Library v. Corel Corp.* This photograph was taken in the U.S. or in another country where a similar rule applies. This photographic reproduction is therefore also in the public domain.

Auvers, van Gogh painted his final “starry night,” *Road with Cypress and Star*. This painting (Figure 6) is also in the collection of the Kröller-Müller Museum.

The “starry night” theme was treated by Norwegian Expressionist Edvard Munch in four paintings. The first, which may have been influenced by van Gogh, was painted in Åsgårdstrand in 1893, just three years after van Gogh’s death.⁸ This first *Starry Night* is in the collection of the J. Paul Getty Museum. Munch’s three later “starry nights” were painted in 1923-24, some thirty years later. Two are titled *Starry Night* and the third *Winter: Ekely (Blue Starry Night)*. All three are in the Oslo Kommunes Kunstsamlinger.

Three additional twentieth-century artists painted “starry nights,” although only one of the three used the title. The first, American artist Georgia O’Keeffe painted *The Lawrence Tree* in 1929 in New Mexico, capturing the brilliance and clarity of the desert night sky on a canvas dominated by a single tree. The painting, with perspective chosen by O’Keeffe to allow display with any side up, hangs in the Wadsworth Atheneum (Hartford). The second, probably the most recognized artist of the twentieth century, Spanish painter and sculptor Pablo Picasso painted *Faun and Starry Night* in 1955. The painting, inspired by the artist’s love for a beautiful young woman, is in the collection of the Metropolitan Museum of Art. The third, German painter Anselm Kiefer, painted *Sternenfall (Falling Stars)* in 1995. The privately owned painting, done on a large canvas (230 x

170 cm), depicts a man lying face-up on bare ground with a star-filled sky filling three-fourths of the canvas above him.

Nocturnes and Nocturnal Cityscapes

Nocturne in Blue and Silver: Lagoon, Venice was painted by James McNeil Whistler in 1879. This Venetian nocturne, with its small handful of dim lights, is a visual reminder of the present-day rarity of opportunities to experience the absence of lights. The painting is in the collection of the Museum of Fine Arts (Boston). In the American West of the early twentieth century, Frederick Remington painted the “color of night” in nocturnes that were brought together for the first time in a 2003 exhibition and catalog.⁹ His 1909 *Moonlight, Wolf*, in the collection of the Addison Gallery of American Art, is an example striking in the clarity of its dim light of moon and stars. (This and other Remington nocturnes could easily have been included in the “starry night” category, above).

In the late 1920’s, Georgia O’Keeffe painted a series of nocturnal cityscapes of New York: *New York Street with Moon*, 1925, (Museo Thyssen-Bornemisza); *City Night*, 1926 (Minneapolis Institute of Arts); *The Radiator Building at Night*, 1927 (Carl Van Vechten Gallery of Fine Arts); *East River from the Shelton*, 1928; *New York Night*, 1929. Beyond their aesthetic value, these paintings collectively underscore the diminishing visibility of night sky and stars through the haze of industrial pollution. Comparison with O’Keeffe’s *Lawrence Tree*, painted in New Mexico in 1929 (mentioned above) is unavoidable. Her ground-level perspective of the tree echoes the building perspective in *City Night*, as countless stars shine undimmed in the blackness of the firmament visible between the tree’s branches.

For the sake of greater completeness, two additional artists’ nocturnes bear mention. Pablo Picasso’s body of work reveals scarce examples of nocturnal inspiration. In addition to his *Faun with Starry Night*, previously mentioned, his 1939 painting *Night Fishing at Antibes* (Museum of Modern Art) is also an exception. Similarly, nocturnally-inspired paintings by Dutch-born Abstract Expressionist Willem de Kooning are extremely rare. His abstract works *Night* (1948), *Night Square* (1949), and *Night Square* (1950/51) are de Kooning’s nocturnal exceptions.



Figure 5. Vincent van Gogh. *Starry Night*, 1889. Oil on canvas, 73.7 x 92.1 cm. New York, Museum of Modern Art. This image is in the public domain because its copyright has expired. This applies to the United States, Canada, the European Union and those countries with a copyright term of life of the author plus 70 years. Faithful reproductions of two-dimensional original works cannot attract copyright in the U.S. according to the rule in *Bridgeman Art Library v. Corel Corp.* This photograph was taken in the U.S. or in another country where a similar rule applies. This photographic reproduction is therefore also in the public domain.



Figure 6. Vincent van Gogh. *Road With Cypress and Star*, 1890. Oil on canvas, 92x73 cm. Otterlo, Rijksmuseum Kröller-Müller. The work of art depicted in this image and the reproduction thereof are in the public domain worldwide. The reproduction is part of a collection of reproductions compiled by The Yorck Project. The compilation copyright is held by The Yorck Project and licensed under the GNU Free Documentation License.

Kiefer may have been speaking to or inspired by astronomers when he painted his literal *Everyone Stands Under His Dome of Heaven* in 1970 (Metropolitan Museum of Art).

Constellations, Galaxies, and Starfields

The last group of paintings, from the mid and late twentieth century, represents the inspiration of artists by constellations, galaxies, and star fields. (Wladyslaw Benda's 1918 *Earth, Moon, and Milky Way* (discussed above) also could be included in this category.) The prolific Spanish painter and sculptor Joan Miro, associated with Surrealism, painted a series of twenty-three constellation-inspired paintings in the early 1940's. Examples are *The Morning Star*, painted in 1940 (Kimbell Art Museum) and *The Beautiful Bird Revealing the Unknown to a Pair of Lovers*, painted in 1941 (Museum of Modern Art). In contrast, American Abstract Expressionist Jackson Pollock devoted just one titled painting to the subject. Pollock's drip painting *Galaxy*, itself a luminous galaxy of drips and swirls (1947), is in the collection of the Joslyn Art Museum. Lastly, Latvian-born artist Vija Celmins periodically has produced works inspired by star fields for more than twenty years. Examples of her highly representational work in oil, acrylic, and graphite media include her 1974 *Desert Galaxy*, 1986 *Untitled Galaxy*, 1992 *Night Sky #5* (Museum of Modern Art), and 2000-2001 *Night Sky #16*.

Astronomy Itself

Although uncommon, there are a small number of paintings that may be interpreted as inspired by astronomy itself. French Fauvist painter and sculptor Henri Matisse painted *Icarus* (Metropolitan Museum of Art) for his illustrated book "Jazz" in 1947.¹⁰ (It is not mere coincidence that "ICARUS" is also the title of the official publication of the Division for Planetary Sciences of the American Astronomical Society.) In 1963, the Belgian Surrealist Rene Magritte painted what must be a favorite of all astronomers, *The Telescope* (Menil Collection, Houston). The painting is a simple rendering of a portion of wall in a room with a glass-paned, double-door window. The panes of both doors provide unobstructed views of the blue daytime sky with white clouds. The door on the right is slightly ajar, creating a gap between the framed panes, a gap filled not with blue sky and white clouds, but with the blackness of space. Finally, Anselm

Conclusions

Artists share with astronomers a proprietary interest in preserving the quality of the night sky and nocturnal landscapes as sources of inspiration, as well as in the importance of clean skies. The visual-art world—museums, galleries, schools, residencies; academicians, practitioners and patrons—is a natural and strong potential ally for astrophysicists in defending the quality of the night sky and the right to observe the stars. Contributions to human culture inherent in the works of astrophysicists and artists together reinforce the fundamental universal human experience of the night sky as a continuing source of wonder, knowledge, and aesthetic response.

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