

VAN GOGH'S *STARRY NIGHT*: A HISTORY OF MATTER AND A MATTER OF HISTORY

ALBERT BOIME



Fig. 1. Vincent van Gogh, *Starry Night* (La Nuit Etoilée), 19 June 1889. Oil on canvas, 29 x 36¼". Museum of Modern Art, Acquired through the Lillie P. Bliss Bequest.

Described so often as a hallucinatory or visionary work, *Starry Night's* theme remains opaque to our benumbed methodologies. We must break this barrier of convention and excessive familiarity by looking at all kinds of evidence.

to George O. Abell

No other Western European painter is more universally familiar to us than Vincent van Gogh; no other work has been more widely reproduced than his *Starry Night* (Fig. 1).¹ We find it in the homes of our friends and in the offices of our dentists—the paradigmatic masterpiece of the avant-garde epoch. This essay attempts to retrieve Van Gogh's work from the popular stereotype of the hallucinating genius, relocate it squarely in the domain of social history, and then return it to its rightful place in the doctor's waiting room, in the kindergarten, and in our neighbor's hallway.

What is it that we see in the picture? There is first of all the sight of a night sky teeming with stellar life: the waning moon with its aureole, a network of white, yellow, orange, and blue stars which seem to rotate and pulsate and throw out cosmic energy, and a spiraling band turning on itself while running parallel to the horizon. Beneath this active sky we glimpse the houses of a hamlet surrounded by wheatfields and olive groves and bounded on the right by foothills whose undulations are repeated by light streaks in the sky. In the center of the hamlet is a church with its spire barely breaking the horizon line, while at the left a cypress tree towers over the entire composition, propelling itself into the animated firmament.

Described so often as a hallucinatory or visionary work, the painting's theme remains opaque to our benumbed methodologies. We must break this barrier of convention and excessive familiarity by looking at different kinds of evidence. Based on the position of the moon and the direction of the horns of the crescent, three of my colleagues in the Department of Astronomy at UCLA agreed that the picture shows us the eastern portion of a pre-dawn sky, approximately 4:00 in the morning. Taking the latitude of Saint-Remy and using the date of June 19, 1889²—the day Vincent wrote excitedly to Theo that at last he had executed his *Starry Night*—the director of the Griffith Park Observatory set back the Zeiss Planetarium Projector to recreate the sky over Saint-Remy at that early morning moment. The result is a view which is striking for two brilliant orbs at an angle approximating the two most luminous objects in van Gogh's picture, and a constellation between them forming a scalene triangle (Figs. 2 and 2a). The radiant white planet of Venus appears close to the horizon, analogously to the notable white disc in the painting, and we can make out the constellation of Aries above it. The significant change in the picture is the variation in the phase of the moon, van Gogh showing a crescent and the planetarium scene a gibbous when the moon's shape appears similar to an American football.³

A close investigation of this detail of van Gogh's painting, however, reveals a curious pattern of indecisiveness and change (Figs. 3 and 4). First of all, the crescent itself is quite ungainly and misshapen, lacking the regularity of his other similar lunar forms (Figs. 5 and 6). Secondly, on the inside of the crescent there is evidence of his having begun with a fuller shape; for example, the scraped-out yellow-orange area around the upper and lower inside horns and the overlapping hooked strokes which seem to dig inside the Pac-Man-like mouth to reduce its width. Thirdly, when we complete the outline of this shape we find that it is not circular but rather conforms to the shape of the gibbous phase. (This is seen most vividly in the drawing done after the composition [Fig. 7].) This might also explain the bright aureole around the moon which is incompatible with a crescent and which has been a source of confusion to many scholars who see it as a sun-moon combination or as some form of eclipse.⁴ It appears that he began with the gibbous shape but felt it to be so clumsy that he reverted to a more traditional image, while yet keeping the general configuration through the aureole. At the same time,



Fig. 2. Projection of the pre-dawn sky over Saint-Remy, 19 June 1889. Photograph by Robert Webb, Griffith Park Observatory, Los Angeles.

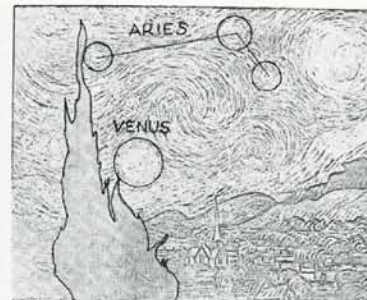


Fig. 2a. Schematic design of *Starry Night* with Venus and Aries.

Fig. 3. Vincent van Gogh, *Starry Night* (detail), 1889.



Fig. 4. Vincent van Gogh, *Starry Night* (detail), 1889.



Fig. 5. Vincent van Gogh, *A Lane of Cypresses with a Couple Walking*, 1888. Pen and ink sketch in Letter 556, October 1888. Rijksmuseum Vincent van Gogh, Amsterdam.



comme Eug Delacroix et meurturer.
 Enfin pour que de ce moment j'ai l'intention
 de ne pas peindre au moins durant 3 jours
 puis si je me reposerai je en l'écrivant et à
 eux en même temps. Car sans que cela
 m'intéresse pas les l'influence qu'aura l'impression
 sur les peintres hollandais et sur les amateurs
 hollandais



Fig. 6. Vincent van Gogh, *Cypresses*, June 1889. Metropolitan Museum of Art.

Fig. 7. Vincent van Gogh, *Starry Night*, 1889. Pen sketch. Destroyed. Formerly Kunsthalle, Bremen.



he retained the accurate phasing of the moon then in its waning period.

Both the data and the high viewpoint of *Starry Night* tally in large part with the actual topographical and astronomical facts at the time the picture was executed. Van Gogh was confined to a cell in the upper story of the Saint-Remy mental asylum housed in the 12th-century monastery of Saint-Paul-de-Mausole.⁵ It was a two-story structure, with van Gogh's room facing east and southeast over a field of

grain and the foothills of the Alps known as the Alpilles directly behind the asylum. By looking at maps of the area as well as several of his studies done from his window, we may easily confirm its easterly orientation. Throughout his life van Gogh often rose before sunrise to study the view from his window, and at Saint-Remy this occurred regularly due to his insomnia. In a letter written in early June he tells Theo: "This morning I saw the country from my window a long time before sunrise, with nothing but the morning star, which looked very big."⁶

The "morning star" referred of course to the planet Venus which was then passing through the end of an eight-year cycle when it attained its maximum brightness. It was a popular subject of astronomical discussion in the period, and the public was advised to take advantage of the moment to get a spectacular view of the planet.⁷ It dominated the pre-dawn sky in the spring of 1889 and Vincent gave it a prominent position next to the twisting cypress. The tree itself rises dramatically to touch Venus with a foliated arm. While this motif has also been seen as an imaginative addition, a look at an advertisement for the asylum shows that tall cypresses did in fact surround the institution and grew past the windows of the inmates (Fig. 8). Indeed, they still do—although now they are neatly clipped and manicured. An examination of a map of the region indicates that Mount Gaussier, visible in the ad at the left, lies due south of Saint-Remy (Fig. 9). Van Gogh's eastern exposure could thus have encompassed one of the lofty cypresses drawn in the ad. Here we may note again that his easterly perspective takes in the Alpilles, seen in a number of painted sketches and drawings executed in his bedroom cell (Figs. 10 and 11).⁸ Although barred, the windows were quite large and could easily have encompassed the panorama both below and above the horizon (Figs. 12, 13, and 14), a fact I confirmed for myself during a visit to Saint-Paul in June, 1984. (Although van Gogh's old space is presently occupied by a patient, I was permitted to enter the room next to it on the same floor.) This is further verified by his letter of 25 May 1889 which states that "through the iron-barred window I see a square field of wheat in an enclosure, a perspective like Van Goyen, above which I can see the morning sun rising in all its glory"—again confirming the easterly direction of his view.⁹

Van Gogh's written comments suggest a more than perfunctory interest in celestial phenomena. His desire to depict accurately such observations is clear from a letter to his sister in September 1888 where he states that close attention to the night sky reveals "that certain stars are citron-yellow, others have a pink glow, or a green, blue and forget-me-not brilliance. And without my expatiating on this theme it will be clear that putting little white dots on a blue-black surface is not enough."¹⁰ This empirical attitude is supported by his other paintings of night skies. The same month he wrote to his sister he painted two major nocturnal studies out-of-doors, *Cafe Terrace by Night* and *Starry Night over the Rhône River* (Figs. 15 and 16). The first was done during the early part of the month, with a view facing due south toward the Hotel de Ville of Arles whose cupola van Gogh traced in silhouette. Judging from the relatively few customers at the cafe and passersby, I place this scene sometime shortly before midnight, perhaps 11:00 p.m. At that moment in the southern sky, just above the horizon, an observer could see the constellation of Aquarius (Fig. 17). It comprises the familiar "Y"-shape of the urn, and in the painting it seems as if we are looking directly into the center of it (Fig. 18). The *Starry Night* of that period was also painted by gaslight and clearly shows the Big Dipper. Van Gogh wrote to his friend Boch that he had painted the starry night with the Great Bear, the northern constellation containing the seven stars that form the Dipper. A comparison of the painting with the planetarium reconstruction of the night sky over Arles at approximately 9:00 p.m. indicates that van Gogh tilted the constellation upward, but in his letter to Boch he seems to have adjusted the angle and also included Polaris (Figs. 19 and 20).¹¹

Thus while he may have exaggerated scale and distance, van Gogh tried to paint the sky as he perceived it from his window at Saint-Remy. The constellation Aries, shaped like a scalene triangle, is in approximately the same relationship to Venus as in the planetarium recreation, although way off in relationship to the moon.¹² But the pattern I see in the van Gogh is also tangential to the cypress tree

and neatly underlined by the spiral band below, making it a key component of his night sky. During my visit to Saint-Remy, I awoke at 3:00 a.m. the mornings of June 18, 19, and 20 and went directly to the asylum; I was gratified to see (except on the 19th when unfortunately the clouds rolled in) that Aries, appearing low over the horizon, dominated the eastern sky. I watched as the sun rose, and observed that Aries appeared to be located directly on the vertical of the sunrise. These three astronomical phenomena—moon, planet, and constellation—stand out prominently in both the picture and the reconstructed night sky. Additionally, it may be noted that Van Gogh was born under the sign of Aries (30 March). Aries the Ram was associated with the biblical sacrifice of Abraham, and among astrologers it was a dreaded sign indicating passionate temper and bodily hurt.¹³ Before I am accused of having totally sold out to the California mindset, let me remind you that in the nineteenth century people regarded their identification with the stars more seriously than we do today.¹⁴ For example, *L'Illustration*—one of van Gogh's favorite magazines—ran a series on the zodiacal signs in 1887 with nary a word about relations with one's spouse or going on a long trip (Fig. 21).¹⁵ It was a question of astronomical lore and history and one's place in the cosmic scheme.¹⁶

We may now identify the silvery streaks echoing the contours of the hills as the light of dawn, and attribute the orangish moon to the fact that the atmosphere reddens astronomical objects close to the horizon. During my pre-dawn excursions to the site in June 1984, I was startled by the orange-red color of the low-hanging moon. As the moon arose toward daybreak it became whiter—a phenomenon I witnessed on three successive mornings. It should be pointed out that the asylum is located in full countryside exactly as in the time of van Gogh, and that the orange-red moon is a peculiarity of this region. At the same time, we must account for two objects van Gogh could not have seen—the curious serpentine movement in the center of the night sky and the human-made church of Saint-Martin which lay to the northwest of the asylum and could not have been viewed through the window. Neither was invented, but they belong more to a conceptual than to a perceptual process. I believe that the serpentine band is either a spiral nebula or the trail of a comet, phenomena which received a good deal of attention in the 1880s and were photographed for the first time (Figs. 22, 23, and 24).¹⁷ One example is the page of various comets published in an 1881 issue of *Harper's Weekly*, a magazine regularly read by van Gogh during that period (Fig. 25).¹⁸

The artist's shifting of the church to the compositional center is the result of an ideological decision and demonstrates the need to comment upon this human construct within the natural context. Both Schapiro and Lövgren, two scholars who have made major contributions to our understanding of the picture, stressed its religious character and sought biblical analogies to clarify it.¹⁹ Indeed, van Gogh himself claimed that he turned to the stars when he felt a "dire" need for religion. But he categorically rejected at the time of the painting all explicit canonical references and even criticized his friends Bernard and Gauguin for "their Christs in the Garden." He added that "of course with me there is no question of doing anything from the Bible."²⁰ Hence it is unlikely that *Starry Night* carries direct or indirect allusions to either biblical or doctrinal thought. Despite his attachment to the Bible and the Church in the previous decade, he progressively followed a positivist line until, by 1889, he could claim that everywhere organized religion was "crashing," and kept warning his brother to flee "the whitewashed wall, which meant hypocrisy and everlasting Pharisaism."²¹

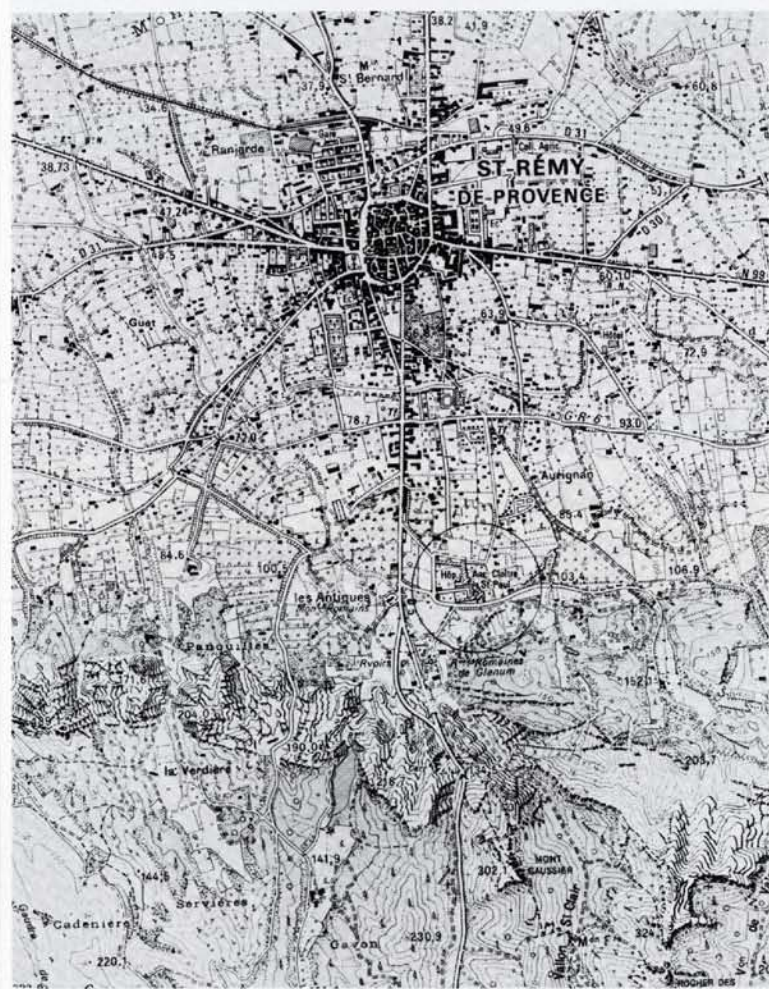
A close examination of the picture shows that the apocalyptic exaltation is not associated with the church but with the movement in the sky. The church is totally overwhelmed by the explosive atmosphere, while the cypress tree, which echoes the shape of the steeple, manages to free itself from its terrestrial confines and establish contact with the celestial zone. The motif of the stunted church recalls a passage from Multatuli's satirical *Max Havelaar*, a popular Dutch work which van Gogh knew. Multatuli tells his reader that "there are no such things as towers," which are only a form of bragging, and he goes on to declare:

The fanaticism which thought it a duty to place towers on edifices erected in honor of this or that saint did not last long



Fig. 8. Advertisement for Saint-Paul-de-Mausole asylum; reproduced in M.E. Tralbaut, *Vincent van Gogh*, p. 274.

Fig. 9. Map detail showing region around Saint-Rémy including Mount Gaussier.



enough to complete them, and the spire which is intended to point the faithful to heaven usually rests a couple of stages too low on its massive base, reminding one of the man without thighs at the fair. Only the little towers, the little steeples on village churches, have ever been completed.²²

In the same ironic vein, van Gogh shifts the church with its puny steeple to point up by way of contrast the authentic locus of divine

experience. As he wrote his brother, *Starry Night* did not signal “a return to romantic or religious ideas,” but rather expressed “the purer nature of a countryside compared with the suburbs and cabarets of Paris.” Van Gogh’s term “purer,” however, is value-laden, and when used to differentiate city from countryside implies an exalted state in an uncorrupted environment.

His involvement in the celestial pageant as a source of moral energy was directed and nourished by the writers he most admired. His abundant references to Hans Christian Andersen, Carlyle, Longfellow, and Whitman often occur in association with astronomical metaphors for religious experience. He echoes their non-theological terms for Divine Reality such as “Infinity,” “Immensity,” and “Force.”²³ Whitman especially came to mind when van Gogh was preoccupied with his night scenes in September-October 1888. He lauded the American poet as one who “sees in the future, and even in the present, a world of healthy, carnal love, strong and frank—of friendship—of work—under the great starlit vault of heaven a something which after all one can only call God—and eternity in its place above the world.”²⁴

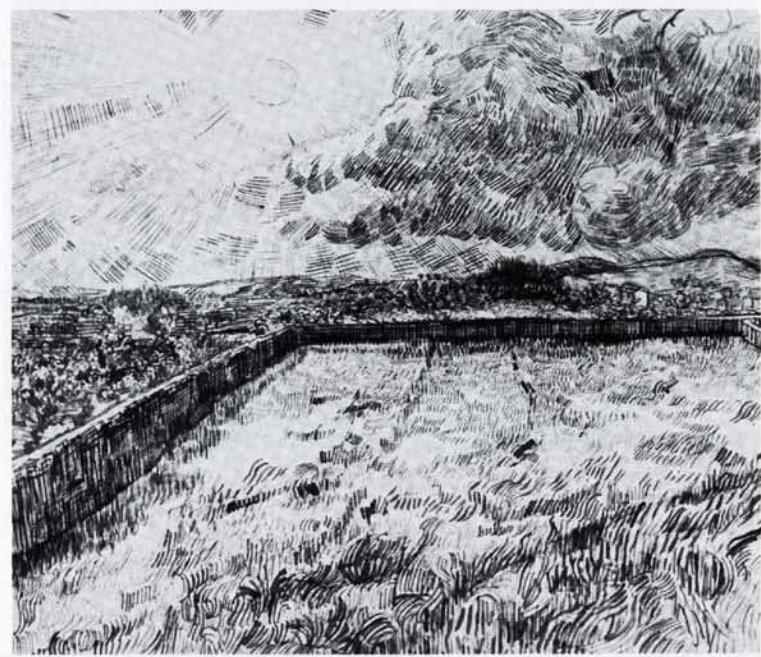


Fig. 10. Vincent van Gogh, Sun over Walled Wheat Field, May 1889. Chalk, pen and ink, heightened with white. Rijksmuseum Kröller-Müller, Otterlo.

Fig. 11. Vincent van Gogh, Mountain Landscape Seen Across the Walls with Rising Sun and Green Field, June 1889. Rijksmuseum Kröller-Müller, Otterlo.

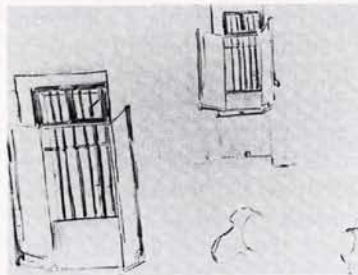


Fig. 12. Vincent van Gogh, Barred Windows, May 1889. Black Chalk. Rijksmuseum Vincent van Gogh, Amsterdam.

Fig. 13. View of landscape from van Gogh's cell window; reproduced in Tralbaut, p. 280.



This fundamental characteristic of van Gogh’s imaginative background is prefigured in the work of the American painter, William Morris Hunt, who, with direct connections to Longfellow and Emerson, and through them to Carlyle and Whitman, produced as one of his last pictorial legacies in 1879 an image strikingly similar to *Starry Night* (Fig. 26). It is a charcoal drawing showing the silhouette of a church spire and a crescent moon. The legend beneath the picture follows from a statement he made to his students, recorded by his monitor Helen Knowlton: “I was thinking of Eternity the other night, when I looked at the moon, and saw before it, a church-spire, a finger pointing upward into space. Next the spire, the moon. Beyond the moon, a fixed star. Next—what? Eternity.” And he closed his reminiscence with the dramatic utterance, “A ripple closes over us”—a sad presentiment of his suicide by drowning not long afterwards.²⁵

Similarly, van Gogh’s outdoor night scenes contain non-theological allusions to universal harmony and eternity, building on the empirical fact. This is what I think he means when he states that *Starry Night* makes no overt religious claim, but rather expresses “the purer nature of a countryside.” This aspect of his thought links him with the scientists and geographers of his time espousing radical social views and who saw in the countryside the possibilities for a regenerated society. The anarchist-geographer Elisée Reclus asserted that social transformation required a salubrious environment, and he devoted his scholarly activities to the study of the earth in order to learn how to ameliorate the human condition. His approach entailed seeing the planet from its relativistic position in the cosmos:

The earth on which we dwell is one of the lowest in rank among the heavenly bodies. If an astronomer in some other planet were exploring the immensity of space, our earth, owing to its small size, might readily elude his intelligent view . . . Beyond our own sky, other skies stretch far away into infinity, and others beyond these, so that light, notwithstanding its prodigious rapidity, takes eternities to cross them. How small the earth seems in this fathomless abyss of stars!²⁶

But if the earth is nothing more than an impalpable grain of dust in the vision of the galactic astronomer, knowledge of it is nevertheless the key to understanding other worlds. It obeys the same Keplerian laws as every other planet, and in studying it, “we study all the heavenly bodies.”

The close connections between geography and astronomy in this period depended upon the increasing capacity of scientists to make topographical generalizations about the surface of the earth, the moon, and the other planets in the solar system.²⁷ This interlocking of the two disciplines and their ideological expression was most vividly seen at the spectacular World’s Fair which opened in May,



and precise telescopes and celestial clocks, demonstration models of the solar system, constellation charts, lunar maps, celestial globes, planispheres, and the latest photographs of the sun's surface. The entire aggregate of astronomical exhibits was impressive enough to warrant a special two-part review by *L'Astronomie*, published by the Société Astronomique de France.³⁷ This group boasted Alexandre Gustave Eiffel himself as a member; Eiffel had only recently de-

Fig. 14. Photograph of van Gogh's cell showing window; reproduced in Gruyter, Elffers, and Andriessse, *De Wereld van van Gogh*, p. 94.

1889, and celebrated French science and technology on the one hand, French colonial conquests on the other.²⁸ The relationship between geographical discovery (on earth as well as in heaven) and geographical conquest was part of the organizers' program to showcase the progress of the moderate Third Republic and to demonstrate its total recovery from the Franco-Prussian War and the civil disorders of 1870-1871.²⁹

Van Gogh paid close attention to the approaching Exposition Universelle whose development he followed in the illustrated journals. He noted the need for the *Indépendants* to make a strong showing in their exhibition to balance what he considered to be a biased national representation in the official display. He hoped to make a great stir personally with a series of special decorations, but this never came to fruition. Instead, he requested Theo in May 1889 to exhibit his *Starry Night Over the Rhône* as an example of his experimental nocturnal effects.³⁰ Thus a month before he painted his *Starry Night* at Saint-Remy he carefully considered a subject appropriate to the thematic emphasis of the World's Fair.

The symbolic linchpin of the 1889 extravaganza was the 1000-foot-high Eiffel Tower which both its partisans and critics compared to a secularized church steeple reaching impudently for the stars. Those mounting to the uppermost platform likened the ascension to a balloon flight.³¹ The notorious group of artists who opposed the tower published a protest against this "barbaric mass" which overwhelmed such Gothic monuments as Notre Dame, Sainte Chapelle, and the Tour Saint Jacques.³² The application of the new technical wonder of electricity turned the tower into a spectacular light show which at night seemed to resemble a new celestial orb. High above the city the tower's crown—a powerful rotating electric beacon—filled the skies with flashing tricolor beams of blue, white, and red (Fig. 27).³³

The topmost platform of the monument was reserved for scientific experiments.³⁴ An observatory was set up to make astronomical observations as well as a laboratory for gathering meteorological data. A large telescope was installed at the summit, permitting astronomers to observe the sky from a much more favorable position than that of the Paris Observatory where low mists, polluted air, and city lights interfered with the view of stars near the horizon.³⁵ The popular journal *L'Astronomie* praised the concept of the tower and derided its critics. It compared its lighthouse to an "artificial moon" soaring high above Paris and replacing "the vanished sun."³⁶

The field of astronomy and its collateral branches were well represented in several displays at the Exposition by new powerful

Fig. 15. Vincent van Gogh, *Cafe Terrace at Night*, September 1888. *Rijksmuseum Kröller-Müller, Otterlo.*



Fig. 16. Vincent van Gogh, *Starry Night over the Rhône River*, September 1888. *Private Collection.*

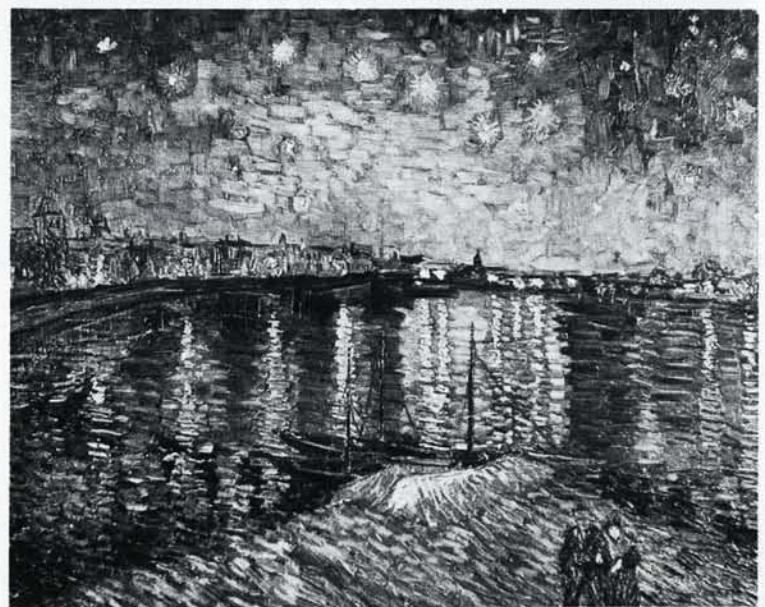


Fig. 17. Projection of southern sky over Arles in early September 1888. Photo by Robert Webb, Griffith Park Observatory, Los Angeles.

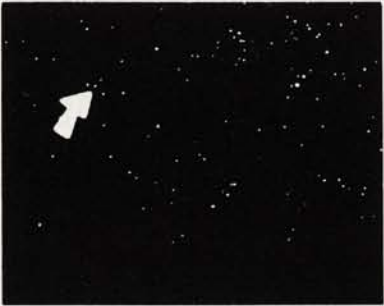


Fig. 18. Vincent van Gogh, Cafe Terrace at Night (detail), 1888.



Fig. 19. Projection of sky over Arles in September 1888 showing the Big Dipper. Photograph by Robert Webb, Griffith Park Observatory, Los Angeles.



Fig. 20. Vincent van Gogh, Starry Night over the Rhône River, 1888. Pen sketch sent with Letter 553b, September 1888. Rijksmuseum Vincent van Gogh, Amsterdam.



signed a monumental light-weight rotating dome for the observatory at Nice.³⁸

Eiffel's good friend, Camille Flammarion, was the founder of the Société Astronomique and its first president.³⁹ Flammarion was then one of the most celebrated astronomers in the world.⁴⁰ His achievements span the entire decade of the 1880s, beginning with the publication of his prodigiously successful *L'Astronomie populaire* in 1880 and ending with his significant role in the organizing of the Exposition of 1889. During the interval, he published *Les étoiles*, a popular survey for amateurs, began publishing the journal *L'Astronomie*, and founded the Société Astronomique de France (Figs. 28 and 29). One of the most colorful writers of science and astrono-

my, he was a combination Buckminster Fuller and Carl Sagan—both of whom he influenced among countless other aspiring scientists all over the world during and after his lifetime. He was a prolific and widely read popularizer of astronomy; most of his books went through dozens of editions and were translated into all the major languages. His interests ranged from extraterrestrial life—the subject of his first book *La pluralité des mondes habités*—to parapsychology and psychical research. He tried to expand the frontiers of both outer space and inner being, and for his labors he enjoyed an international following which often named their astronomical societies after him. His authority and popularity were recognized and celebrated in the unique exhibition of his publications at the 1889 Exposition.⁴¹

Despite his enormous output, Flammarion always limited himself to a few basic ideas and themes which recur in all his publications. Almost invariably he appealed to his readers by reminding them of the awe instilled in them by the starlit skies during a spring or summer evening.⁴² This then leads to a parade of the visible constellations and planets, the “incandescent orbs” which appear as “so many points of interrogation suspended above us in the inaccessible reaches of space.” Flammarion often makes his point through the medium of illustration, regularly showing an observer gazing from a balcony at the starry sky or views of another world to dramatize his astronomical vision (Figs. 30 and 31).⁴³ Next he promotes the science of astronomy with a missionary zeal, emphasizing his future importance as a model of truth for all scientific, philosophical, and religious ideas.⁴⁴ Once we grasp the principles of the universe—which Flammarion promises to teach without causing fatigue—our astronomical knowledge will then enlarge our perspective of the earth and its inhabitants. Astronomy will enable us to push back the limits of the “unfathomable universe” until at last we come to recognize our self-imposed material and political limitations. At that point, our minds will burst through the vault enclosing the universe just like the butterfly that sheds its chrysalis at the invitation of liberating springtime.⁴⁵

According to Flammarion, the first phase of this process must begin by divesting ourselves of the deception imposed on us by the night sky. While the starry night (*la nuit étoilée*) appears as silent, immobile and calm, in fact pandemonium is rife in the heavens. Thanks to modern astronomy there are no longer fixed stars, and our commonly held ideas must undergo a total transformation. The stars have revealed their chemical makeup through spectroscopy; spiral nebulae are now observed in the optical field of high-powered telescopes; vagabond comets are now subject to close scrutiny; the moon and the planets have practically come down to our doorstep, and we know their meteorology, their climatology, and can even draw geographical maps showing their continents and seas.⁴⁶

Flammarion sets up imaginary observers capable of extending their view beyond the limits of the telescopic vision and throwing off the restraints of space and time.⁴⁷ Then the apparent immobility of the heavens is clearly perceived to be an optical illusion. In reality everything flies, falls, rolls, rushes through the void. The stars are seen as projectiles, millions of times heavier than the earth, launched through the unfathomable void with giddy rates of speed, revolving in immensity under the influence of the collective gravitational pull of all the stars in the universe. These billions of suns, planets, star clusters, nebulae, worlds in their infancy, worlds nearing their end, rush with equal velocity toward goals of which they are ignorant, with an energy and cosmic action before which dynamite is like the breath of a sleeping babe.⁴⁸

Thus the celestial bodies which constitute the vast universe rest not on a solid foundation according to the childish and primitive conception, but upon invisible and immaterial *forces* which govern their motions. The imagination that could eliminate time and space would perceive these worlds descending from a limitless sky in every conceivable direction, like the raindrops carried away by the whirlwinds of a gigantic tempest.

This leads to Flammarion's next important ideal, the relation of modern astronomy to a new religion.⁴⁹ Although raised in the Catholic faith, Flammarion early rejected church dogma in favor of a scientifically based philosophy of religion.⁵⁰ Like van Gogh, he remained religious in the humanistic sense, but did not subscribe to

any formalist creed other than his own secularized ideal. In his famous novel *Lumen*, first published in *L'artiste* in 1867, Flammarion expatiated upon his idea of immortality based upon the length of time it takes light to travel through space.⁵¹ Since the light of distant stars takes years (in some cases, millions) to reach us, we never see the state of a particular world as it exists in our present but only in its remote past. What is true for us is also true for observers of earth on distant planets: depending on their position in the universe, they are seeing some former state of earth's history. Thus somewhere in the universe the lives of deceased human beings are being replayed like a videotape for some extraterrestrial witness. Immortality is a function of our eternally unfolding lives in cosmic space.⁵²

In this context, Flammarion believed in reincarnation on other planets and stars throughout the universe. Newton, Copernicus, Galileo, Jesus, Buddha, Confucius, and Socrates live on other spheres continuing the work they began on earth.⁵³ In this stellar Elysium, individuals are even able to see their own lives unfold again across the vast reaches of the Infinite. Flammarion thus appeared on the scientific stage as the Messiah of the Macrocosm. His model was François Arago, the founder of popular astronomy in France, who dedicated his life's work to social and political progress.⁵⁴ Flammarion similarly attempted to appeal to the wider public and to promote an open society. He wanted to divest science and astronomy of its aridity and elitism and lead the way to "sublime conquests" which do not "cost blood or tears." Astronomy freed us from geocentric vanity and that "false patriotism" which disposed us to prefer our country above the others. He projected a moment when humankind would occupy other stars, and this meant moving beyond chauvinistic ambitions to loftier regions of the universe.⁵⁵ Flammarion never lost an opportunity in his works to condemn war and militarism, class rule and exploitation.⁵⁶ He went down into Belgian coal mines to examine for himself the plight of the proletariat, the brutalized multitudes bent over "the soil which they dig with toil and pain to gain their daily bread."⁵⁷ They symbolize the grossness of the capitalist system which amasses gold at the expense of the laboring majority. Social injustice and exploitation will cease when we can look up away from crass materialism to the diviner regions of the universe; hence his insistence that astronomy cease being an abstract science and come within the ken of everyone.⁵⁸

Flammarion's broad social views, his colorful style, and his extravagant speculations influenced the "Father of Science Fiction," Jules Verne. Although Verne was older, their common interests and mutual friends (like Nadar, Reclus, and Charles Cros) drew them together.⁵⁹ They cited each other in their books and shared a profound interest in aeronautical science.⁶⁰ Verne's references to astronomy are laced into nearly all his major works, but the two novels in which they predominate, *From the Earth to the Moon* and *Hector Severdaci*, owe a major debt to Flammarion.

Hector Severdaci, published in 1877, deals with a picture of the solar system as seen by earth-people carried off on a comet (Gallia) that has collided with the earth. It actually mentions Flammarion in the text, and appropriately so since the theme itself was inspired by the astronomer's fictional "History of a Comet" which he published together with "Lumen" in his *Récits de l'infini*. In fact, one of Verne's protagonists owns a copy of Flammarion's book and quotes from it to clarify a question on the comparative age of the planets (Fig. 32). Another character in the story, the Russian Count Timascheff, declares that he esteems Flammarion so highly "that the last time I was in Paris I bought up every book bearing his name."⁶¹

The two parts of Verne's moon saga are a storehouse of astronomical information based in part on Flammarion's findings, especially those in his book *La pluralité des mondes habités*, first published in 1862.⁶² But Verne also knew the young author's steady stream of articles for the journals *Cosmos* and *Magasin pittoresque*. For example, Verne borrowed Flammarion's suggestion that there may be an atmosphere on the face of the moon which is always averted from us, thus holding out the possibility of life among the angular crevices of the lunar landscape.⁶³ Chapter V of *From the Earth to the Moon* narrates a dramatic account of the origins of the universe in a style close to Flammarion:



Fig. 21. Bélier; reproduced in *L'Illustration*, vol. 89, 19 March 1887, p. 196.

An observer imbued with an infinite range of vision, and placed in that unknown center around which the entire world revolves, might have beheld myriads of atoms filling all space during the chaotic epoch of the universe.

When these atoms combined to form molecules, the resulting masses became immediately charged with a rotary motion around their own central point. This center, formed of indefinite molecules, began to revolve around its axis during its gradual condensation; then, . . . following the immutable laws of mechanics, in proportion as its bulk diminished by condensation, its rotary motion became accelerated, and these two effects continuing, the result was the formation of one principle star, the center of the nebulous mass.

Gradually, the other molecules of the mass would likewise condense through accelerated rotation and gravitate around it in the shape of innumerable stars. Then:

Rings of cosmical matter, excited by a rotary motion around the mass, would have been broken up and decomposed into secondary nebulosities, that is . . . into planets . . . Thus . . . advancing from atom to molecule, from molecule to nebulous mass, from that to a principal star, from star to sun, from sun to planet, and hence to satellite, we have the whole series of transformations undergone by the heavenly bodies during the first days of the world.⁶⁴

Here surely is a text that helps us contextualize van Gogh's painting, itself projecting the view of an observer on the threshold of eternity. Not surprisingly, the artist read Verne's work and was steeped in



Fig. 22. Spiral Nebula; reproduced in Flammarion, *Les étoiles*, p. 123.



Fig. 23. Spiral Nebula; reproduced in Flammarion, *Astronomie populaire*, fig. 354.



Fig. 24. Nebula Discovered by Photography; reproduced in *L'Astronomie*, vol. 5, 1886, p. 41.

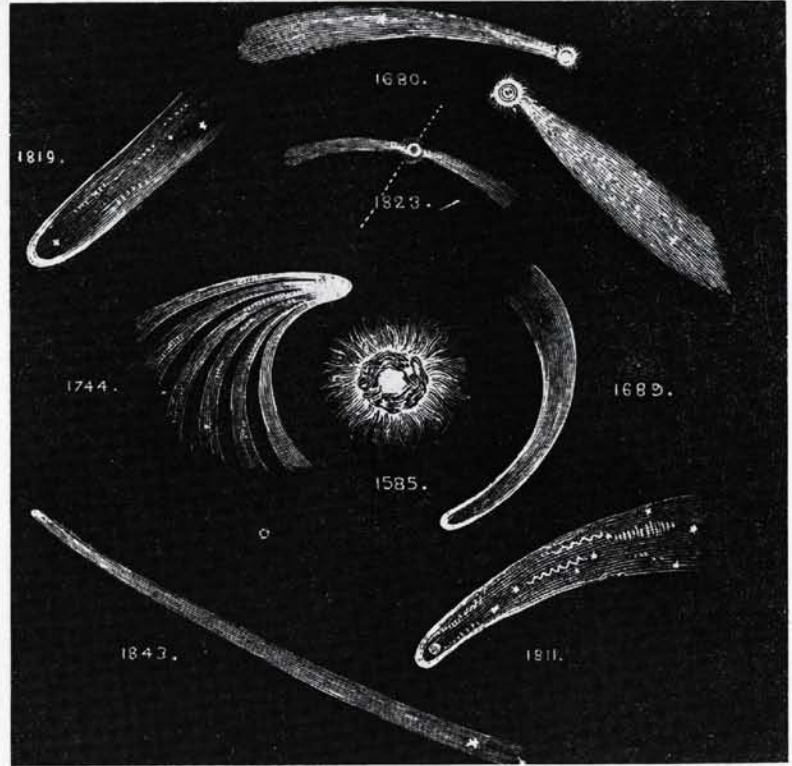


Fig. 25. Group of Various Comets, reproduced in *Harper's Weekly*, vol. 25, 16 July 1881, p. 465.

the astronomical speculations of his time. Recalling a curious motif in a friend's sketch, van Gogh declared: "To the naive spectator it would seem . . . that it must represent a scene on one of those planets visited by Jules Verne's imaginary travelers in a projectile."⁶⁵ And in the same letter of 1883 he referred to Edgar Allan Poe's tale of *The Unparalleled Adventures of One Hans Pfaall*, a Dutchman who journeys to the moon in a balloon to avoid his creditors. Poe's stories had a major impact on the sensibilities of Verne and Flammarion as well, but they wished to provide a more precise scientific foundation for their fictional attempts.⁶⁶ Similarly, van Gogh criticized *Hans Pfaall* for its lack of "contact with reality."

Van Gogh's need for realism was a driving force in his life and work. He shared with Verne and Flammarion their disillusionment with organized religion and their search for a scientific surrogate. Like them, he wanted to reconstitute society along more rational lines; indeed, all three belonged to the moderate left, were pacifists, sympathetic to socialism, and had a horror of violent revolution.⁶⁷ Their love of a stable, ordered environment reveals itself in their impassioned involvement with geography.

All three loved the bird's-eye view of the landscape and had a keen interest in maps. Flammarion designed atlases and mapped out the surfaces of the moon and Mars.⁶⁸ Verne religiously charted the fictitious journeys of all his characters and even published a multi-volumed work on geography.⁶⁹ In the case of van Gogh, it may be said that his interest in landscape was sparked by his love of topography. While living in Amsterdam in 1877 and preparing for his ministry, he systematically began to collect maps.⁷⁰ His teacher, the classical Jewish scholar Mendes da Costa, taught him history and geography by having him copy maps from the historical atlases of Stieler and Spruner-Menke (Fig. 33). Van Gogh was terribly excited by this work and drew extra-curricular maps as gifts for his friends and family.⁷¹

These maps, like his later interest in astronomy, furnished an authentic support for his faltering religious convictions. While engaged in his map-making exercises in December, 1877, he quoted in a letter to Theo the biblical text "One must build the house on a rock." He observed that Scotland, Normandy, and Brittany are rather rocky, "as you will see if you look at that big map of Scotland when you get it" (Fig. 34).⁷² He compared his studies under da Costa to rocks serving as the base of a house. For his father's birthday gift he executed a map of the Holy Land, and for another reverend he

charted St. Paul's travels through Greece and Asia Minor. But perhaps the most dramatic connection between his map-making and religion is seen in his schematic map of Etten and its surroundings, done in the summer of 1878 (Fig. 35). In this work a church is the culminating point in the diagram, with other salient locations marked by the sites of various religious chapels.⁷³

Subsequently, Van Gogh broke entirely with orthodoxy and began searching for a divinity manifested in everyday life. His topographical interests then expressed themselves in secularized or "pure" landscape. We find him mentioning for the first time a "perspective frame," the idea for which he derived from Cassagne's popular manual of perspective.⁷⁴ It consisted of a frame with one horizontal and two diagonal lines or wires which helped him to sight on the natural horizon. His first mention of this instrument finds him in a pre-dawn moment gazing through his window:

Just imagine me sitting at my attic window as early as 4:00 o'clock in the morning, studying with my perspective frame the meadows and the yard when they are lighting the fires to make coffee in the little cottages . . . Behind it all a wide stretch of soft, tender green, miles and miles of flat meadow, and over it a gray sky, as calm, as peaceful, as Corot or Van Goyen.⁷⁵

In August, 1882 he ordered a new and improved perspective frame which he could fix in uneven ground by two poles. He claimed that with the device he could "look through it like a window." He called it his "spy-hole" which he could turn on the sea, green meadows, and stormy sky.⁷⁶

Van Gogh's perspective instrument bolstered his confidence during his early attempts at picture-making. His persistent view of landscape through an open window is not done as a form of romantic yearning for what lies beyond, but as a means of organizing the visual data and helping him get a handle on the myriad of phenomena before him. Thus when he moved into the actual landscape he had to mediate his perception of it by a device that helped him frame it as the window of his attic apartment. He called it his "spy-hole" as if it were a small telescope, and his studio became analogous to an observatory which he eventually turned on the stars like the characters in the writings of Verne and Flammarion (Fig. 36).⁷⁷

The threads of van Gogh's interests in maps, astronomy, and religion entwine in the late 1880s when he contemplates doing his series of starry nights. The catalyst for this development is Flam-

marion whose impact on van Gogh's thought is noticeably felt in his letters of the period. Both thinkers had in common a profound reverence for Victor Hugo whose own interest in astronomy and psychical phenomena eventually drew him to Flammarion.⁷⁸ While van Gogh never mentions Flammarion by name, it is clear that he owes the astronomer more than one of his inspired ideas.⁷⁹ One probable direct contact between the two was Charles Cros, one of Flammarion's closest friends.⁸⁰ Cros is mostly remembered for his poetry and his relationships with the Impressionist and Post-Impressionist painters. He was a major figure in the circles of the cabaret known as Le Chat Noir and the cafe of La Nouvelle Athènes. Cros' writings appeared in the satirical journal published by Le Chat Noir (under the same name) and he attended the notorious Friday literary gatherings at the cabaret. Signac illustrated one of Cros' poems, and Cros' brother Henri, a sculptor, collaborated with Charles Henry. Furthermore, Theo van Gogh's apartment was located on the same street as Le Chat Noir and he was in close touch with its writers and artists. He once submitted Vincent's lithograph of the *Potato Eaters* for publication but it was refused.⁸¹

Flammarion received friends on Wednesdays in his apartment on the rue des Moineaux, including the illustrators Gustave Doré and Karl Girardet who were particularly admired by van Gogh. But his most frequent guest was Cros who was also a revolutionary inventor and scientist.⁸² Cros had actually discovered a process for color photography and invented the phonograph in the 1860s.⁸³ In his *Memoires* Flammarion characterizes Cros as a "misunderstood genius." No doubt he projected a part of his own personality onto Cros since the poet was deeply involved in astronomy, psychical research, and believed in life on other planets. Under Flammarion's influence, Cros wrote an *Etude sur les moyens de communication avec les planètes*, based on the poet's suggestion for light transmissions of a repeated sequence of signals.⁸⁴ By means of electric beams with reflectors and the use of a coded signal, he hoped to create an artificial star which would appear to Martians as a star of the eighth magnitude and therefore be easily seen by their astronomers. Cros' fascination with Mars was further bound up with his belief in reincarnation on the Red Planet. Flammarion actually based the tragic protagonist in his semi-autobiographical novel *Uranie* on Cros, a hero who awakes to immortality in outer space.⁸⁵

It is in the context of Flammarion's oft-stated connection between astronomy, immortality, and life on other worlds that we may piece together several of van Gogh's puzzling statements on the issue of life-after-death in his letters of the late 1880s. In the summer of 1888 he raises what he calls "the eternal question": "Is the whole of life visible to us, or isn't it rather that this side of death we see only one hemisphere?" He contemplates the idea of immortality in astronomical terms which he grounds in the form of a map:

For my own part, I declare I know nothing whatever about it, but looking at the stars always makes me dream, as simply as I dream over the black dots representing towns and villages on a map. Why, I ask myself, shouldn't the shining dots of the sky be as accessible as the black dots on the map of France? Just as we take the train to get to Tarascon or Rouen, we take death to reach a star.⁸⁶

Van Gogh's conversion of the starry sky into his beloved map schema may be understood from the highly publicized attempt of contemporary astronomers to create a photographic map of the skies and even of constellation maps in atlases compiled or edited by Flammarion himself (Fig. 37).⁸⁷ At the same time, it allows a kind of practical entry into the concept of reincarnation on other planets. In his story *From the Earth to the Moon*, Jules Verne envisioned space voyages of the future in the form of an interstellar railway train (Fig. 38). Similarly, van Gogh likens the passage to another star after death to a train on its way to Tarascon or Rouen.

Van Gogh's personal "mapping" of the heavens secures for him a faint glimmer of optimism. After reading Hugo's *L'année terrible*, he concludes that there is hope, but confesses:

. . . that hope is in the stars. I think it is true, and well told, and beautiful, and indeed I should be glad to believe it myself. But don't let's forget that this earth is a planet too, and consequently a star, or celestial orb, and if all the other stars were the same!!!! . . . that would not be much fun; nothing for it but

Fig. 26. William Morris Hunt, *Eternity*, c. 1879. Charcoal drawing. Present whereabouts unknown.

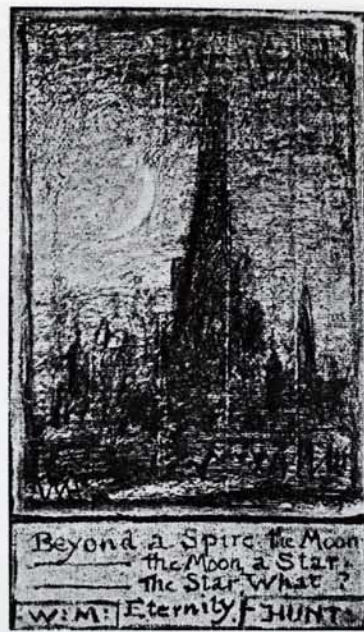
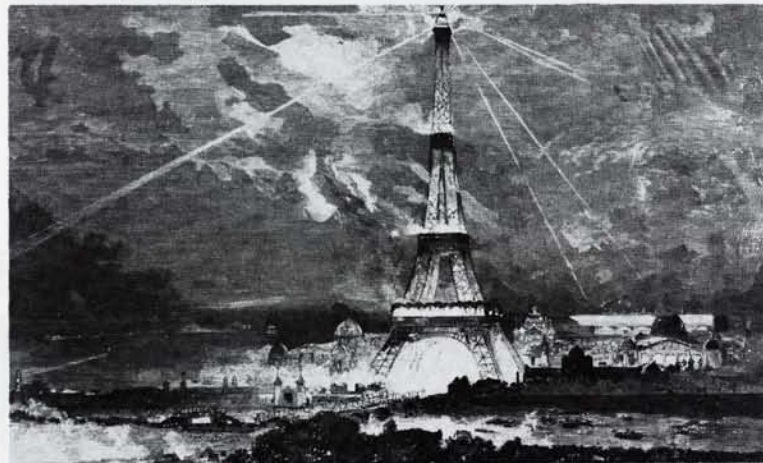


Fig. 27. *Les fêtes du 6 mai. Les illuminations et l'embrasement de la tour Eiffel. Vue prise du Trocadéro*; reproduced in *L'Illustration*, vol. 93, 11 May 1889, pp. 410-411.



to begin all over again. But in art, for which one needs *time*, it would not be so bad to live more than one life. And it is rather attractive to think of the Greeks, the old Dutch masters, and the Japanese continuing their glorious school on other orbs.⁸⁸ This passage may only be understood in the light of similar outbursts of passion by Flammarion:

Nations, countries, beliefs, religion, temples, palaces, all will pass, as well as the earth and the skies—but life, youth, love shall never cease.

Where are Newton, Copernicus, Galileo, Jesus, Buddha, Confucius, and Socrates? Gone forever? No, these stars still glow and exist on other spheres; they continue on finer worlds the work which was interrupted on earth.⁸⁹

But it is his letter to fellow-artist Bernard written during the last week of June, 1888 that we find the clearest demonstration of van Gogh's relationship to Flammarion. He begins by lamenting the career of the artist, an ill-fated profession "on this thankless planet." He derives solace, however, from imagining a future life:

But as there's no proof to the contrary—and presupposing, of course, in the innumerable other planets and suns, the existence of lines, forms, and colors—we are free to maintain a certain cheerfulness with regard to the possibility of painting under better and changed conditions of existence, . . . an existence changed by a phenomenon no more tricky or astonishing than the transformation of a caterpillar into a butterfly, or of a white grub into a cockchafer.

He elaborates on this theme of metamorphosis in the context of astronomy and his favorite map metaphor:

The field of action of our metamorphosed butterfly-painter would be one of the many stars which, after death, are probably no more inaccessible to us than the little black dots on geographical maps which in our terrestrial existence, stand for towns and villages.

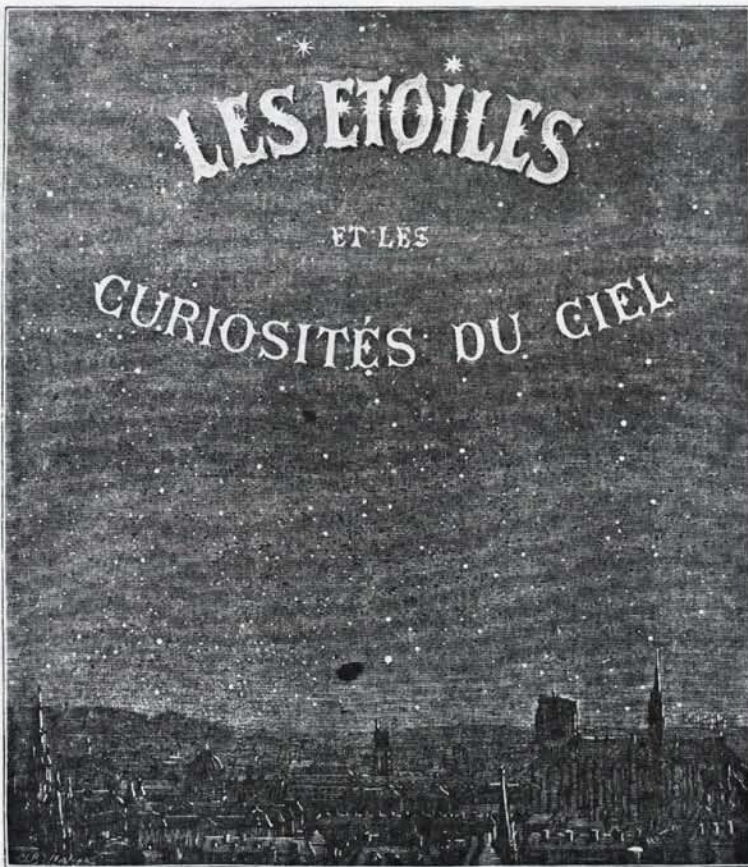


Fig. 28. Les étoiles et les curiosités du ciel; chapter heading reproduced in Flammarion, *Les étoiles*, p. 1.



LIVRE VI
LES ÉTOILES

CHAPITRE PREMIER

La contemplation des cieux

La Terre est oubliée avec son histoire minuscule et éphémère. Le Soleil lui-même, avec tout son immense système, est tombé dans la nuit infinie. Sur l'aile des comètes intersidérales nous avons pris notre essor vers les étoiles, soleils de l'espace. Avons-nous exacte-

Fig. 29. La contemplation des cieux; reproduced in *Les étoiles*, p. 589.

Then he concludes with his own affirmation of science and its justification in astronomical fact, practically echoing the rhetoric of the Société Astronomique:

Science, scientific reasoning, seems to me an instrument with a great future. For look: the earth was thought to be *flat*. Indeed, it is true: between Paris and Asnières, for example, it still is. But that hasn't prevented scientists from proving conclusively that the world is round. And no one contests it. In spite of this there's still an idea that life runs in a *flat progression* from birth to death. But life too is probably *round*, and far greater in extent and capacity than the hemisphere which we know at present. Future generations will probably enlighten us on this interesting subject: then will be the turn of Science . . . to draw conclusions more or less parallel to the sayings of Christ, dealing with the other half of our existence.⁹⁰

Van Gogh, Flammarion, and Verne all looked to science for the solution to humanity's pressing problems. This entailed the dissemination of scientific and aesthetic knowledge to the widest possible community. All three were proud of their ability to popularize their given subject matter. Van Gogh justified making copies at Saint-Remy as an attempt "to make Millet's work more accessible to the great general public."⁹¹ He wanted his picture *La Berceuse* to make sailors "feel the old sense of being rocked . . . and remember their own lullabies." He admitted that his approach would no doubt recall "a chromolithograph from a cheap shop," an attitude recalling Flammarion's dream of bringing astronomy to the doorstep of the world's masses.⁹² Similarly, van Gogh's *Starry Night* incarnates the effort to visualize the reality of Flammarion's ob-

servations and speculations. While based on immediate perception, it expands on the reality to include the latest astronomical discoveries of nebulae, the double and multiple star systems rotating around a common center of gravity, and above all, the new insights into the "unfixed" and dynamic universe.

Naturally, the circumstances of the picture's execution were fraught with the deepest personal meaning for the painter. Incarcerated in both mind and spirit, urged on by a longing for both the security of life after death and the desire to escape his physical limitations, van Gogh painted a motif that put him in touch with the cosmos but in a way that made this connection immediate, real, like the network of black dots on a map of France. The cypress tree alone of all the terrestrial elements breaks through confinement and shoots into the sky like a projectile to touch the stars. It is the symbolic counterpart of van Gogh's own striving for the Infinite through non-orthodox channels. It is the "beanstalk" that permits Vincent-Jack to climb and make contact with another world. The cypress, like the Eiffel Tower humbling the Gothic edifices in Paris, outrivals the puny church, totally overwhelmed by the celestial activity. It points the way to a secularized view of existence without having to surrender the idea of the Godhead. Breaking through the frontier of terrestrial and extra-terrestrial life, van Gogh tried to ensure his union with infinity. The cypress is the tree of death in Mediterranean countries, a tradition that van Gogh acknowledged in his letters of the period.⁹³ At the same time, it is an evergreen tree which the ancient Romans planted around tombs as a symbol of immortality. Thus the cypress tree is Vincent's own secularized version of the Eiffel Tower which enables him to reach the stars.⁹⁴ The starlight and moonlight of that pre-dawn moment glanced into



Fig. 30. Le ciel étoilé, reproduced in *L'Astronomie*, vol. 2, 1883, p. 3.



Fig. 31. Quel peintre pourrait imaginer l'étrange lumière d'un monde illuminé par quatre soleils et quatre lunes? Chromolithograph, reproduced in Flammarion, *Astronomie populaire*, 1881, Plate VII.

Fig. 32. Reading Flammarion; reproduced in Verne, *Off on a Comet*, Philadelphia, 1878, opp. p. 203.



his asylum cell, brightening the sick-chamber, filling him with inspiration, and giving him the temporary sense of dominion over all the earth.

But the social and political underpinnings of this aspiration are far more mundane and must be understood in the context of yet another critical feature of the 1889 Exposition. After the scientific and technological demonstrations, the dominant display was the colonial exhibit and the statement of relations between the new technology and imperialism.⁹⁵ Not surprisingly, it was Jules Ferry who first conceived of a grand Universal Exhibition in the year 1889—the same individual most responsible for French colonial policy during the decade of the 1880s.⁹⁶ At the Exposition, an entire colonial city was built encompassing four major ethnic divisions—Arab, Oceanic, Asian, and African. On parade was a colorful ensemble of exotic structures, products, and even native inhabitants of France's overseas empire.⁹⁷

Van Gogh himself wrote to Bernard from Saint-Remy that the one thing he regretted missing at the Exposition was “the collection of dwellings of all the races.” He requested his friend to send him “an impression of it, and especially a sketch with the colors of the primitive Egyptian dwelling.”⁹⁸ Indeed, all of van Gogh's associates were excited by the colonial exhibits; Gauguin thought of traveling to one of the colonies and purchasing one of the native huts that he had seen.⁹⁹ Under Gauguin's influence, van Gogh became obsessed with the colonial idea during the late 1880s. He heard of a group of Dutch painters planning to found a colorist school in Java, and it reminded him of Gauguin's exhortations to move to a tropical country where life is cheap. He turned over in his mind the many schemes of his friend to go to Madagascar, Tonkin, Martinique and Tahiti, practically the whole of the French colonial empire.¹⁰⁰ His preoccupation with colonial life led him to contemplate joining the East Indian troops and even the French Foreign Legion.¹⁰¹ His fascination for the Zouaves, the North African military elite, is manifested in his paintings of this period and embody his personal fantasies sparked by the imperial policies of his native Holland and

of the Third Republic (Figs. 39 and 40).¹⁰²

Van Gogh predicted that “the future of painting is in the tropics, either in Java or Martinique, Brazil or Australia, and not here.”¹⁰³ His dreams of a colonial paradise related to his desire to form the ideal artist’s community, a fraternity of artists gathered under “the starry sky.”¹⁰⁴ His fantasy about a tropical paradise was thus confounded with Flammarion’s own speculations about cosmic immortality. It is curious that Cecil Rhodes, the paradigm of the 19th-century expansionist mentality, once confessed:

The world is nearly all parcelled out, and what there is left of it is being divided up, conquered, and colonized. To think of these stars that you see overhead at night, these vast worlds which we can never reach. I would annex the planets if I could; I often think of that. It makes me sad to see them so clear and yet so far.¹⁰⁵

This fantasy is captured in the futuristic novel by Albert Robida, *Le vingtième siècle*, published in 1883 and illustrating the “departure of the first scientific and colonial expedition” for the moon (Fig. 41).

In France colonial expansion was promoted as a response to the humiliating defeat in the Franco-Prussian War and as compensation for the loss of the Alsace-Lorraine territories. Largely through the vigorous efforts of Jules Ferry, France gained control of Tunisia, the Niger region, and Madagascar. His perception of the need for France’s economic independence overrode even the sacred principles of 1789, hence the paradox of the Third Republic’s imperialist policies. National greatness, social security, unity, and internal peace depended upon obtaining and exploiting new markets for

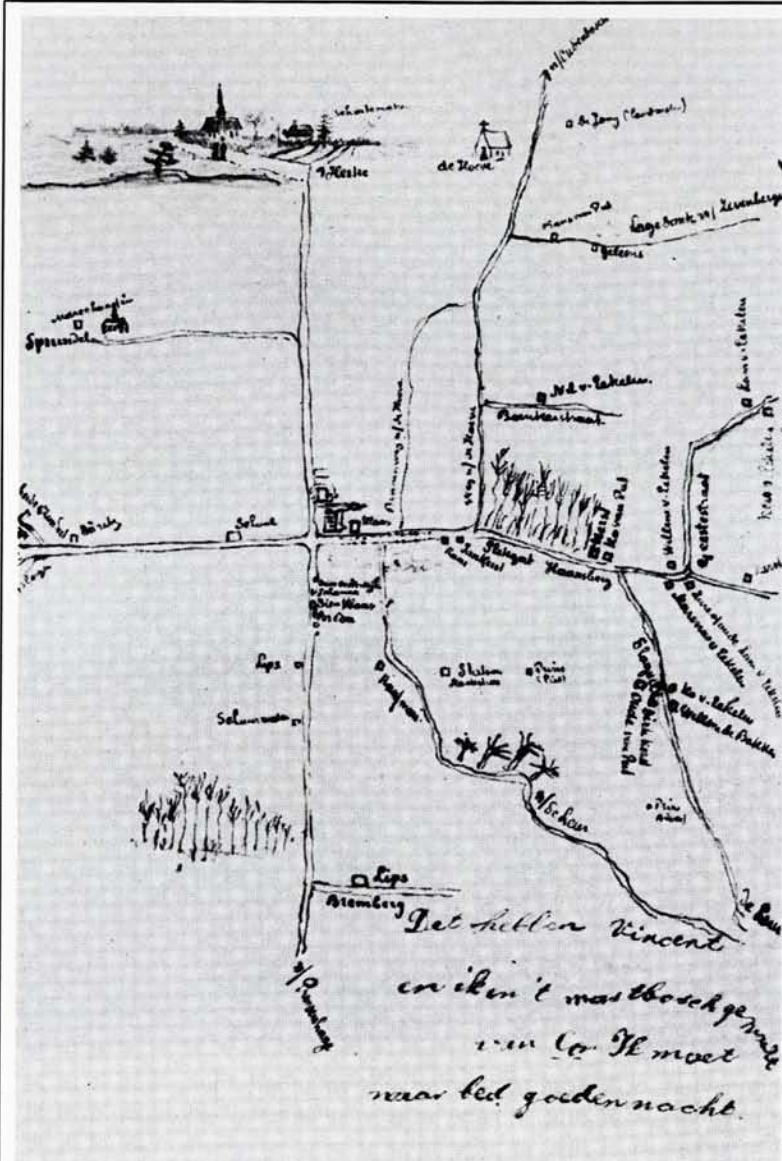
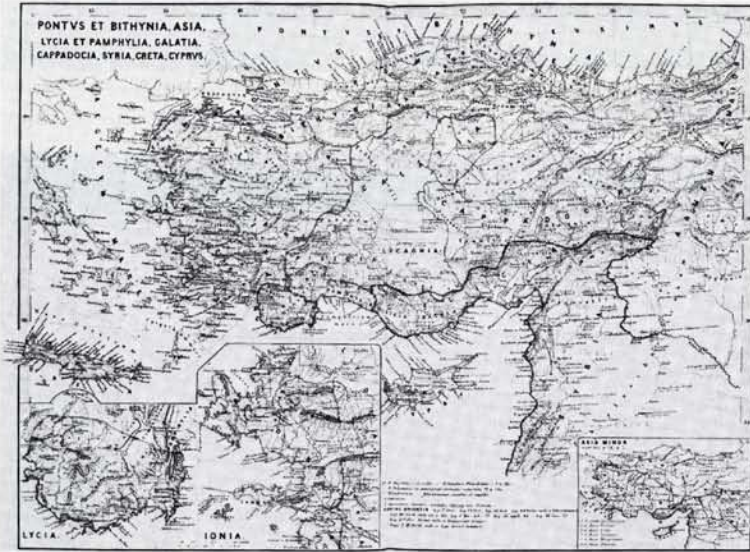
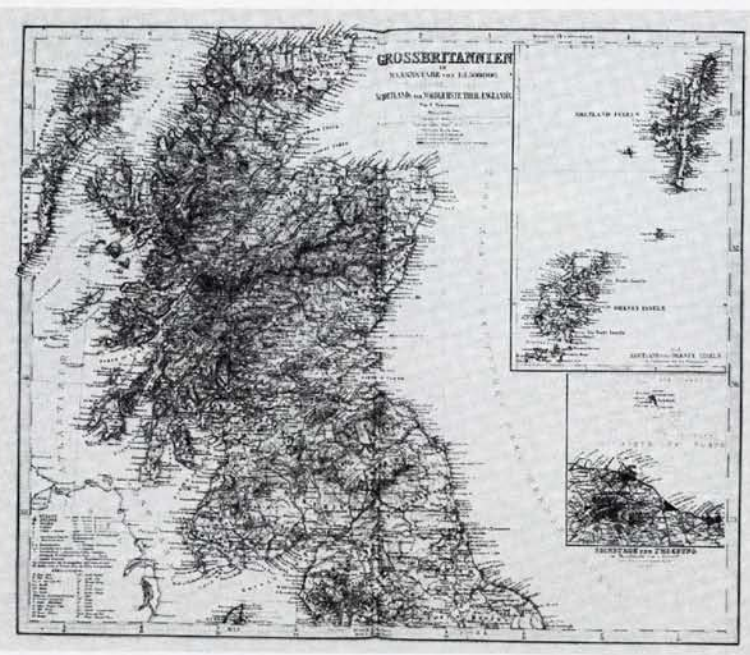


Fig. 35. Vincent van Gogh, Etten and Its Environs, 1878. Pen sketch. Rijksmuseum Vincent Van Gogh, Amsterdam.

Fig. 33. Map of Asia Minor; reproduced in Spruner-Menke, *Atlas Antiquus*, No. 25.

Fig. 34. Map of North England; reproduced in Stieler, *Hand-Atlas*, No. 15C.



French industry. Ferry lauded France’s unique “*génie colonisateur*” which enabled it to compete against “the great European nations” in the “immense steeple-chase sur la route de l’inconnu.”¹⁰⁶

The paradoxical case of the Third Republic as a committed imperial power is revealed in the contradictions of Flammarion, Verne, and even the anarchist Reclus. All accepted colonization as inevitable and even as a necessary component of the *scientific* conquest of the globe.¹⁰⁷ While they opposed nationalism and hoped for the disappearance of territorial boundaries, they seem to see in colonialism a wider projection of civilization beyond the *colon’s* geographical frontier. For them colonization destroyed isolation, making the world larger and more accessible. In this sense, the popularity of Verne’s novels (including the highly successful *Around the World in Eighty Days*) and astronomy during the Third Republic complemented the government’s colonial policies.¹⁰⁸

The desire to insert France in some limitless and even cosmic context arose from the painful outcome of the Franco-Prussian War. Reclus, Verne, and Flammarion were deeply embittered by this conflict—Reclus squeezing in his pain between the lines of his geographical account of Germany, Verne pouring out his feeling in *The Begum’s Fortune*, and Flammarion seizing every opportunity to

Fig. 38. Projectile Trains for the Moon; wood engraving reproduced in Verne, *De la terre à la lune*, 1866, opp. p. 198.

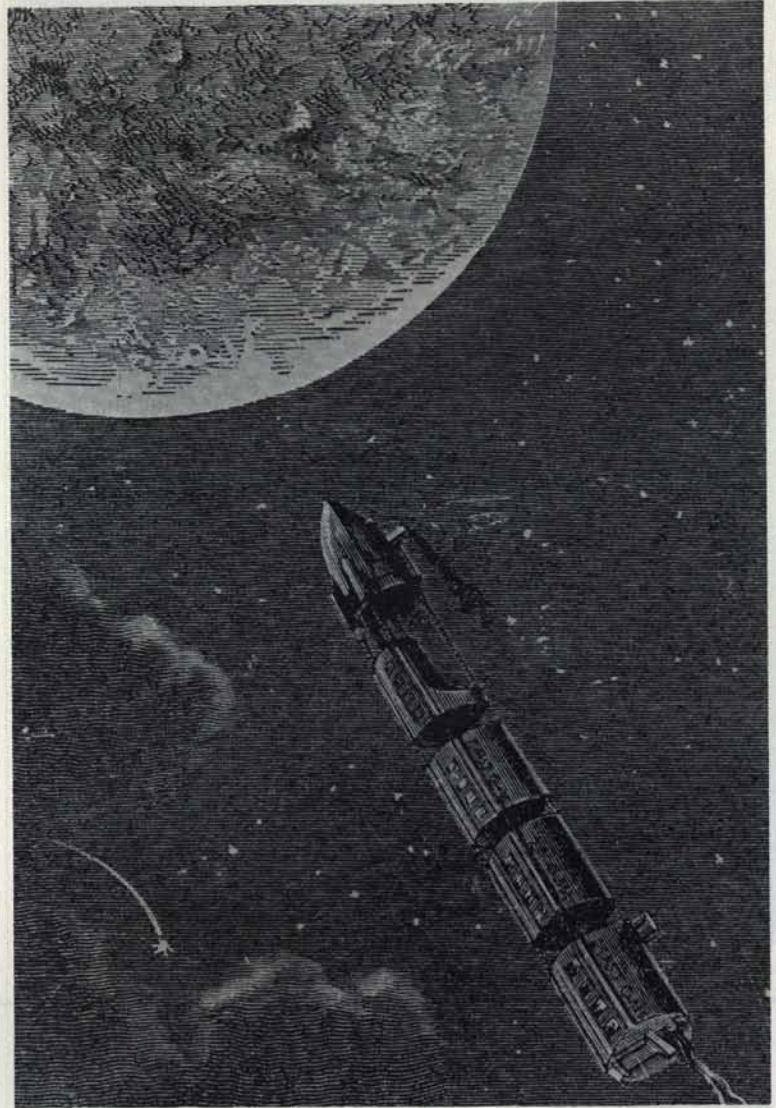
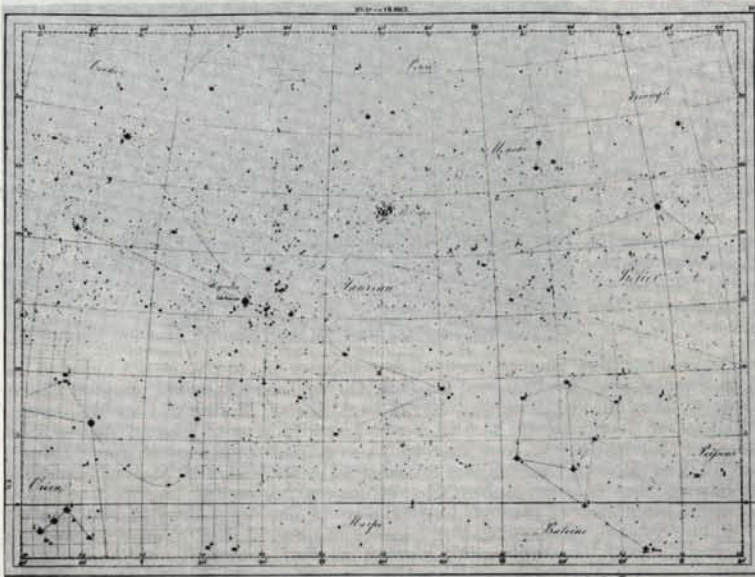


Fig. 36. Night Watching was the Professor's Passion; reproduced in Verne, *Off on a Comet*, opp. p. 86.



Fig. 39. Vincent van Gogh, *Zouave Sitting*, June 1888. *Private Collection*. ▶

Fig. 37. *Le Bélier, Le Taureau, La Mouche*; Constellation Chart reproduced in Flammarion and Dien, *Atlas céleste*, No. 10.



vent his hatred for militarism stimulated by the war (Figs. 42 and 43).¹⁰⁹ By relativizing France's position on the globe and in the universe, they further hoped to remove the sting of defeat and the preoccupation with vengeance that emerged subsequent to the loss of the country's vital territories.

Although van Gogh was Dutch, he certainly identified with the French nation in the 1880s. He wondered after the death of the Kaiser in March, 1889, if Paris was going to remain quiet, and if the French would now speed up plans for revenge.¹¹⁰ Furthermore, the people of The Netherlands sympathized deeply with the French during this war and greatly feared Prussia's growing power.¹¹¹ Multatuli already had warned his fellow citizens in the late 1860s against the danger of the onrushing Prussian juggernaut that threatened to overrun and crush all of Europe.¹¹² His warning became reality with the awesome weaponry and logistics of the Franco-Prussian War which opened a new era in military history.

During the same September in Arles that van Gogh pondered the stars and life after death, he sketched a portrait of his friend Lieutenant Milliet, an officer of the elite Zouave corps (Fig. 44).¹¹³ He aimed at a loud, brash, and vulgar portrait right down to the flashy details of the uniform. Milliet was bound for Africa to do his colonial tour of duty. It is noteworthy that van Gogh painted in the upper right-hand corner of the portrait the insignia of Milliet's regiment—the crescent moon and the five-pointed star co-opted from the world of Islam that once ruled over Algeria. It demonstrates to me that the *Starry Night* owes its power not only to the graphic and painterly qualities of Vincent van Gogh, but also to the same historical forces which shaped the concept of the awesome Exposition of 1889.¹¹⁴

My project called for help from a number of people outside the field of art history and in fact could not have been accomplished without them. My greatest debt is to the late George O. Abell, Professor of Astronomy at UCLA; he was the inspiration and stimulus for my pursuing the project to its exciting finish. A pioneer whose work on clusters and



▲ Fig. 41. A. Robida, *The Moon Brought Nearer: Departure of the First Colonial and Scientific Expedition*; wood engraving reproduced in Robida, *Le Vingtième siècle*, opp. p. 397.



Fig. 40. Zouaves Repatriated to Tonkin; wood engraving reproduced in *L'Illustration*, vol. 90, 10 September 1887, p. 176.

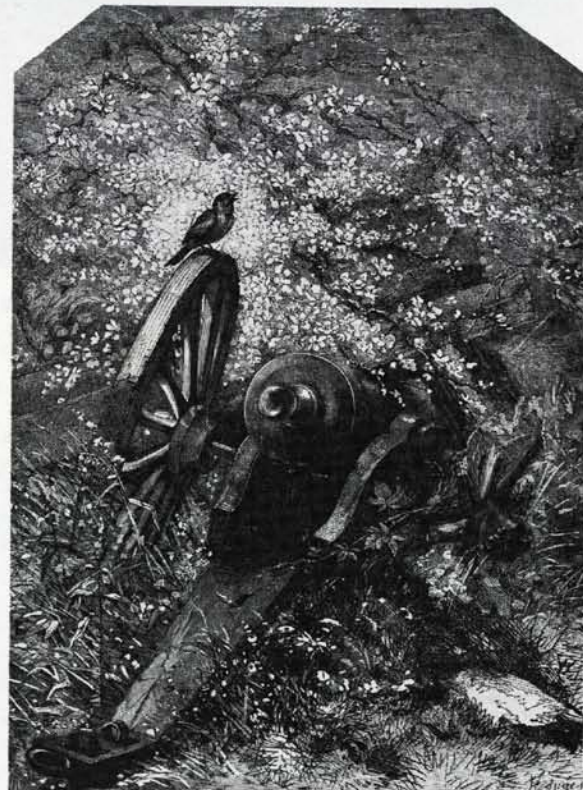


Fig. 42. *Après la Guerre - La Nature reprend toujours ses droits*; wood engraving reproduced in Flammarion, *Astronomie populaire*, p. 385.

superclusters of galaxies expanded our view of the universe, Abell also dared to engage in collaborative studies which carried his work into the realm of everyday life. Both in his teaching and scholarly work he aimed at reaching the largest possible audience. Abell's enthusiasm and insightful observations helped me find fresh evidence of life on van Gogh's world. I fantasize about the meeting on another star of Flammarion, van Gogh and Abell, all of whom shared a rare commitment to the sharing of knowledge without ever considering their work as an exclusivistic occupation. Phyllis Abell, an artist in her own right, was equally instrumental in guiding me through the complexities of the stellar night which appeared to me like an enormously intricate three-dimensional "connect-the-dot" puzzle. Her perception of Aries as a key component of van Gogh's picture required both the skilled eye of the trained observer and the imaginative one of the artist.

Through the Abells I met Edwin C. Krupp, director of the Griffith Observatory, who shared their cross-disciplinary interests as well as their enthusiasm for the project. Krupp is a specialist in archaeoastronomy, and his knowledge of the formulations of the ancient astronomers provided a unique perspective for examining the more recent attempt of van Gogh. He generously undertook to inform me on a wealth of astronomical data and discovered the critical constellation in van Gogh's *Terrace of the Night Cafe*. Above all, the day he used the Zeiss Planetarium Projector to turn the astronomical clock back to the wee hours of June 19, 1889 and recreate the night sky over southern France, he made possible one of the most thrilling experiences of my art historical career.

Actually, the first idea for looking at van Gogh in this way was sparked by a con-

versational exchange among a group of us waiting in line to see the last sequel of the *Star Wars* trilogy, "The Return of the Jedi." On hand were Ron Cobb and Robin Love, Gregory Nava and Anna Thomas, Myra and Al Boime, Martha and Michael Jura, a colleague of George Abell's at UCLA who helped put us in contact. Jura and his colleague, Edward Wright, were instrumental in establishing the orientation of the pre-dawn sky in van Gogh's painting (later confirmed by the empirical data) and computing the phase of the moon (also confirmed by contemporary accounts).

I owe a special debt of gratitude to the Mayor of Saint-Remy, Henri Richaud, and his Secretary-General, Alain Quinsac, who generously answered my queries and sent me enormously helpful illustrations and information. Their generosity and prompt replies gave me a sense of confidence in the project especially in the critical early stages, and

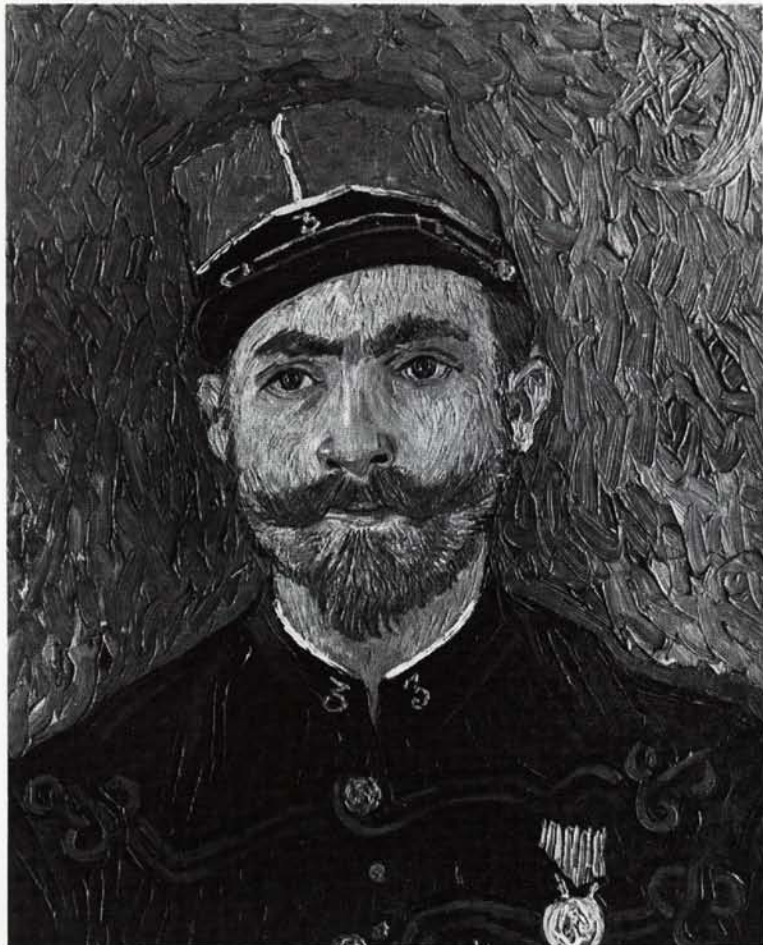


Fig. 44. Vincent van Gogh, Lieutenant Milliet, September 1888. Rijksmuseum Kröller-Müller, Otterlo.

Fig. 43. Le champs d'honneur de l'humanité terrestre; wood engraving reproduced in Flammarion, *Terres du ciel*, opp. p. 440.

they also facilitated my contact with the director and his assistant of the Clinique Saint-Paul. During my visit to Saint-Remy, Sister Raymonde kindly permitted me to enter a room next to the one formerly occupied by van Gogh (a space now inhabited by a patient), both during the afternoon hours and at 4:00 a.m. in the morning. I was thus able to confirm the panoramic view of the eastern sky from the window.

Alain Quinsac also put me in touch with Emile Negre, member of the Société Scientifique Flammarion, Marseilles, an amateur astronomer who induced his colleagues to observe and photograph the eastern sky during the months of June and July, paying particular attention to the constellation Aries and its relationship to the moon. He also undertook to reconstruct the eastern portion of the night sky over Saint-Remy on the 18th of June 1889, and his calculations and findings—allowing for the twenty-four hour difference—are in the main consistent with the planetarium reconstruction at the Griffith Park Observatory. His enthusiasm for the project provided additional moral support during my trip to France. And I cannot overlook the striking coincidence of his institutional affiliation which almost makes the project seem predestined.

I would have been at a loss without the generous support of Antoinette King, Director of Conservation, and Terrence Mahon, Conservator at the Museum of Modern Art, who provided me with extraordinary close-up shots of the moon in van Gogh's painting which yield much valuable information on the execution of this motif. They made the slides under great pressure and I am deeply grateful for their superb effort.

I also want to express my gratitude to various friends and colleagues who contributed in one way or another to the completion of this project: Dr. Jan Hulsker, Victoria, British Columbia; Allan Wallach, Kean College; Petra Ten-Doesschate Chu, Seton Hall University; Louis Hawes, Indiana University; John McCoubrey, University of Pennsylvania; Madeleine Beaufort, American University, Paris; Jean-Maurice Rouquette, Conservateur des Musées d'Arles; David Deckelbaum, Map Librarian, UCLA; Paula A. Baxter, Reference Librarian at MoMA; Kees Bolle, Debora Silverman, Sam Amato, and Elliot Elgart, UCLA.

Finally, I think of a visit with my brother Jerry to the Museum of Modern Art in the early 1960s, when I was a graduate student at Columbia University. I recall very vividly the two of us before *Starry Night*, Jerry standing off to my left with his back partially turned to the picture, and eloquently sharing with me through his rich language, lovely hand gestures, and lively eyes the wonder and love van Gogh inspired in him. I realize now that he planted the seed which ultimately germinated in this paper.

1. For both the reality and the myth of van Gogh's role in the art historical literature, see G. Pollock, "Artists Mythologies and Media Genius, Madness and Art History," *Screen*, vol. 21, 1980-81, pp. 57-96.

2. *The Complete Letters of Vincent van Gogh*, published by the New York Graphic Society, 3 vols., New York, 1958, III, pp. 182-83, Letter 595. The dating of this letter has been challenged and revised to "June 17 or 18" by the renowned van Gogh scholar, Jan Hulsker. See his *Van Gogh door Van Gogh*, Amsterdam, 1973, pp. 180-81; *The Complete van Gogh: Paintings, Drawings, Sketches*, New York, 1980, p. 396.

The date on the original was written in pencil in the Dutch form ("19 Juni") not by Vincent but probably by Theo's wife, Jo van Gogh-Bonger, based either on the postmark

of a discarded envelope or some other kind of evidence (her methods were not always reliable). Dr. Hulsker bases his revision on van Gogh's opening sentence of Letter 595: "Merci de ta lettre d'hier," referring to Theo's letter T 10 which was dated by Theo "le 16 juin 1889." Thus Vincent's line can be taken to mean "the letter you wrote yesterday" or, what is more likely, "the letter I received yesterday." In the first case, Letter 595 would have to be dated 17 June and in the second, 18 June, since mail would normally take one full day from Paris to Saint-Remy. But 16 June was a Sunday, and the last pick-ups that day were 5:00 and 5:30 p.m., depending on the location of the mail box. Assuming that Theo mailed his letter on time, it could have been routed on two different lines. The first would have left Paris at 7:15 p.m. and reached Saint-Remy at 10:30 a.m. the next morning (17 June). The second would have departed at 9:20 p.m. and reached Saint-Remy at 4:12 p.m. the following afternoon, which makes it unlikely that it would have reached the Clinic in time to be distributed that same day to the patients. Hence Van Gogh would have received it on 18 June. (I am grateful to Monsieur J. Dacquet, the Directeur-Général des Postes, Paris, for this information.)

But even if in this instance it arrived during the normal twenty-four hour period, there may be another explanation for van Gogh's opening statement based on the findings of the present paper. If, as I believe, van Gogh was up most of the night of 18-19 June, it is possible that at the time he wrote his letter (presumably in the morning of the 19th) he did not mark the transition from one day to the next, a common experience of insomniacs and workers on the "graveyard shift." In any event, the astronomical data indicate that the "19 Juni" date is the one that most closely approximates the disposition of the night sky in Van Gogh's painting. I wish to express my gratitude to Dr. Hulsker for his generous response to my queries and for painstakingly exploring with me several hypotheses. He is a model of scholarly clarity and thoroughness.

3. The phase of the moon at that time is confirmed by contemporary accounts; see "Astronomical Phenomena for the Week 1889 June 16-22," *Nature*, 13 June 1889, pp. 164-165.

4. M. Schapiro, *Vincent van Gogh*, New York, 1950, pp. 33, 100; M.E. Tralbaut, *Vincent van Gogh*, New York, 1969, p. 280.

5. See Tralbaut, *op. cit.*, pp. 273-280.

6. *Complete Letters, op. cit.*, p. 177, Letter 593.

7. C. Flammarion, "La planète Vénus," *L'Astronomie*, vol. 8, 1889, pp. 81-89; "La planète Vénus," *L'Illustration*, vol. 93, 16 March 1889, p. 218; E. Vimont, "Observations astronomiques à faire du 15 mai au 15 juin 1889," *L'Astronomie, op. cit.*, p. 199; "Observations astronomiques à faire du 15 juin au 15 juillet 1889," *ibid.*, p. 238.

8. See Hulsker, *op. cit.*, Nos. 1706, 1723, 1727, 1728, 1753, 1792, 1839, 1862, 1863.

9. *Complete Letters, op. cit.*, p. 173, Letter 592.

10. *Ibid.*, p. 443, Letter W 7.

11. *Ibid.*, p. 84, Letter 553b. On the other hand, in Letter 543 to Theo, his sketch more or less replicates the painting. See Hulsker, *op. cit.*, p. 367, No. 1593.

12. It is probably not fortuitous that on 19 June 1889 the constellation Aries was in conjunction with Venus; see Vimont, "Observations à faire du 15 juin au 15 juillet 1889," *loc. cit.*

13. R.H. Allen, *Star Names: Their Lore and Meaning*, New York, 1963, pp. 77-79.

14. C. Flammarion, *Histoire du ciel*, Paris, 1872, pp. 14ff., 106ff., 136ff.

15. *L'Illustration*, vol. 89, 1887, 1 January, pp. 4, 16; 12 February, p. 109; 19 March, pp. 196, 200; 9 April, pp. 244, 248; 21 May, pp. 372, 380; vol. 90, 1887, 9 July, pp. 29, 32; 8 October, pp. 237, 248; 17 December, pp. 441, 444.
16. Curiously, the greatest of all modern astrologist-astronomers was a native of Saint-Remy – Michel de Nostredame or Nostradamus. Nostradamus' prophecies were topics of discussion even in the 1880s, and it is certain that his views on the shape of the future would have been on everybody's mind in 1889. See E. Vimont, "Nouvelles de la science – Variétés," *L'Astronomie*, vol. 5, 1886, pp. 112-113.
17. Flammarion, *Astronomie populaire*, Paris, 1881, pp. 3, 814ff.; *Le monde avant la création de l'homme*, Paris, 1886, p. 49 and Fig. 21; P. Henry, "Découverte d'une nébuleuse," *L'Astronomie*, vol. 5, 1886, pp. 41-42; Flammarion, "Les curiosités du ciel. Nouvelle nébuleuse en spirale," *L'Astronomie*, vol. 8, 1889, pp. 41-42. Meyer Schapiro has also characterized the form as a spiral nebula in his *Vincent van Gogh*, New York, 1950, pp. 100.
18. "Our Illustrious Visitor," *Harper's Weekly*, vol. 25, 1881, pp. 465-466. Van Gogh regularly clipped out Thomas Nast cartoons from *Harper's Weekly* in the years 1881-1882. I am grateful to the late Dr. V.W. van Gogh, President of the Vincent van Gogh Foundation, for sending me copies of the Nast clippings. I am presently preparing an article on van Gogh's connection with Nast.
19. Schapiro, *op. cit.*, pp. 33-34; S. Lövgren, *The Genesis of Modernism*, Uppsala, 1959, pp. 148ff. Schapiro, well aware of van Gogh's rejection of scriptural allusion, nevertheless suggests that the picture may have been inspired by the apocalyptic theme in the Book of Revelation.
20. *Complete Letters*, *op. cit.*, p. 233, Letter 615.
21. *Ibid.*, I, p. 433, Letter W 4; II, p. 94, Letter 306.
22. Multatuli (E.D. Dekker), *Max Havelaar*, tr. R. Edwards, London and New York, 1967, p. 64. See also *Complete Letters*, *op. cit.*, III, p. 600.
23. *Complete Letters*, *op. cit.*, I, pp. 47, 96, 126-127, 141, 274; II, 195-96, 273. Andersen's little known *Picture Book without Pictures or What the Moon Saw* is narrated by a struggling author living in a foreign country who is visited on successive evenings by the moon, his "best friend from home." Each evening the moon relates the events it witnessed the day before, including an encounter with a prisoner in a cell with a barred window. See H.C. Andersen, *A Picture Book without Pictures or What the Moon Saw*, New Rochelle, 1929, n.p. (32nd Evening). Lövgren has analyzed extensively the connections with Whitman: *op. cit.*, p. 145ff. See also relevant passages from other works read by van Gogh cited in G. Pollock and F. Orton, *Vincent van Gogh: Artist of his Time*, London, 1978, pp. 66. For an excellent discussion of van Gogh's search for religion through empirical means and his connection with the Northern tradition incarnated in Caspar David Friedrich, see R. Rosenblum, *Modern Painting and the Northern Romantic Tradition*, New York, 1975, pp. 91ff. and *passim*.
24. *Complete Letters*, *op. cit.*, III, p. 445, Letter W 8.
25. W. M. Hunt, *Talks on Art*, ed. H. Knowlton, second series, Boston, 1883, p. 95.
26. E. Reclus, *The Earth: A Descriptive History of the Phenomena of the Life of the Globe*, New York, 1873, p. 13.
27. See C. Flammarion, *Les étoiles et les curiosités du ciel*, Paris, 1882, p. 587, speculating on the future diffusion of astronomical knowledge: "We will no longer be content to live without knowing the geography of the heavens, as we would not live in the present without knowledge of earth's geography. The one is the complement of the other. . . ."
28. See E. Monod, *L'Exposition universelle de 1889*, 3 vols., Paris, 1890, I, pp. ix, xii ff., xvii, II, pp. 139ff.; A. Picard, *Ministère du commerce de l'industrie et des colonies. Exposition universelle internationale de 1889 à Paris. Rapport général*, Paris, 1891-92, I, pp. 330ff.; C. Braibant, *Histoire de la tour Eiffel*, Paris, 1964, p. 32; J. Harriss, *The Tallest Tower: Eiffel and the Belle Epoque*, Boston, 1975, p. 2; D.L. Silverman, "The 1889 Exhibition: the Crisis of Bourgeois Individualism," *Oppositions*, vol. 8, Spring 1977, pp. 71ff.
29. Monod, *op. cit.*, II, pp. 11ff., 16, 444ff. (this last section entitled *Géographie et Colonisation*); Picard, *op. cit.*, IV, pp. 550ff.
30. *Complete Letters*, *op. cit.*, pp. 48, Letter 541; 77, Letter 551; 115, Letter 570; 179, Letter 593; 520-21, Letter B 20; 557, Letter T 21.
31. Un Badaud, "Une ascension de la tour Eiffel," *Le Figaro*, 3 March 1889; "Chronique de l'exposition. Au sommet de la tour Eiffel," *Le Temps*, 31 March 1889.
32. "Les artistes contre la Tour Eiffel," *Le Temps*, 14 February 1887. Addressed to Alphand, the letter has often been reproduced. See, for examples, Picard, *op. cit.*, II, pp. 268-69; N. Evenson, *Paris: A Century of Change, 1878-1978*, London, 1979, pp. 131ff.
33. G. Sciamia, "A travers l'exposition universelle. Chroniques industrielles. La lumière électrique," *L'Illustration*, vol. 93, 8 June 1889, p. 486.
34. Eiffel tried to meet objections to the tower as a "useless" pile of metal by planning early on a variety of scientific applications. See Picard, *op. cit.*, II, p. 315; Braibant, *op. cit.*, p. 126; Harriss, *op. cit.*, pp. 100ff.
35. *Exposition de 1889. Guide bleu du Figaro et du Petit Journal*, Paris, 1889, pp. 68, 81.
36. C. Flammarion, "La tour de 300 mètres," *L'Astronomie*, vol. 5, 1886, pp. 366ff. One Egyptian visitor rhapsodized about it in cosmic terms: "O Sun, which envelops this Tower with your splendor and magnificence! O Moon, which illuminates it with your silvery light! O Constellations, O effulgent stars, O Milky Way, glorify the Eternal who created Eiffel. . . ." Quoted in Braibant, *op. cit.*, p. 159.
37. P. Gérigny, "L'Astronomie à l'exposition," *L'Astronomie*, vol. 8, 1889, pp. 450-56; vol. 9, 1890, pp. 61-68.
38. C. Flammarion, "L'observatoire de Nice et l'astronomie en France," *L'Astronomie*, vol. 4, 1885, pp. 206-212.
39. Flammarion, "La tour de 300 mètres," *op. cit.*, p. 363; "La Société astronomique de France," *L'Astronomie*, vol. 6, 1887, pp. 406-413. Curiously, the award medal the society established displayed the personification of "La nuit étoilée." See "La Société astronomique de France et les progrès de l'astronomie pendant l'année 1887," *L'Astronomie*, vol. 7, 1888, p. 165.
40. The best account of Flammarion's career is his own published memoirs which unfortunately finish around the time of the Franco-Prussian War. See Flammarion, *Mémoires biographiques et philosophiques d'un astronome*, Paris, 1911. Also L. Rouse, "Camille Flammarion, un prédicant du scientisme," *Etudes*, vol. 184, 1925, pp. 68-73; H. Cuny, *Camille Flammarion*, Paris, 1964.
41. Gérigny, *op. cit.*, 9, p. 66.
42. *Les mondes imaginaires et les mondes réels: voyage pittoresque dans le ciel*, Paris, 1866, pp. 148ff.; *Dieu dans la nature*, Paris, 1867, pp. 543ff.; *La pluralité des mondes habités*, Paris, 1866, pp. 15-16, 312ff.; *Astronomie populaire*, Paris, 1881, pp. 404ff., 677ff. It should be understood that his descriptions of the night sky convey the sweep and excitement of van Gogh's image. His own desire to become an astronomer was instilled in him by the sight of "these remote lights" and the tug of "unknown life" and a mysterious force "in the immensity of the skies." See *Mémoires*, *op. cit.*, pp. 93-94.
43. *L'Astronomie*, vol. 2, 1883, p. 3; *Uranie*, Paris, 1889, frontispiece engraving.
44. *Astronomie populaire*, *op. cit.*, p. 4; *L'Astronomie*, vol. 1, 1882, pp. 1-2; *Uranie*, *op. cit.*, pp. 36, 42ff.; *Les Terres du ciel: voyage astronomique sur les autres mondes*, Paris, 1884, p. 4; *Mémoires*, *op. cit.*, pp. 291ff.; *Les étoiles*, *op. cit.*, pp. 586-87.
45. *Mémoires*, *op. cit.*, p. 294. This is from a quote of his article, "Discours sur les destinées de l'astronomie," first published in the *Cosmos* annual of 1863.
46. *Les étoiles*, *op. cit.*, p. 197; *Les terres du ciel*, *op. cit.*, p. 4; *Astronomie populaire*, *op. cit.*, pp. 3, 790, 823; *La pluralité des mondes habités*, *op. cit.*, pp. 199-200.
47. *Astronomie populaire*, *op. cit.*, pp. 798-799; *Uranie*, *op. cit.*, pp. 22ff. In *Uranie* the imaginative onlooker is the author himself, guided through the universe by the Muse of Astronomy.
48. *Urania*, English edition, New York, 1901, pp. 272-273.
49. He enunciated this idea very early in his career in *Dieu dans la nature*, first published in 1867.
50. *Mémoires*, *op. cit.*, pp. 24-25, 94-95, 99, 168-169, 180-182, 186ff., 204.
51. Flammarion, "Les paradoxes de la science. Lumen," *L'artiste*, ser. 8, vol. 10, 1867, 1 February (an issue missing from several copies of the magazine or printed separately, but referenced in the 1 May installment), 1 May, pp. 163-178; 1 June, pp. 338-350. *Lumen* was published in book form, together with other novellas, as *Récits de l'infini* in 1872.
52. *Astronomie populaire*, *op. cit.*, pp. 759-760; *Uranie*, *op. cit.*, pp. 141ff., 150ff.; "La distance des étoiles et la vitesse de la lumière," *L'Astronomie*, vol. 1, 1882, pp. 145-146.
53. *Les terres du ciel*, *op. cit.*, p. 767.
54. Flammarion, "Le centenaire d'Arago," *L'Astronomie*, vol. 5, 1886, pp. 85ff.; *Astronomie populaire*, *op. cit.*, p. 3. Flammarion dedicated his *Popular Astronomy* to Arago, "fondeur de l'astronomie populaire."
55. As he claimed in *Uranie*: "The earth is no longer alone in the universe. The panoramas of the infinite are beginning to open themselves out. Whether we live here or near by, we are not citizens of a country or of a world, but are in reality the Citizens of Space" (p. 204). But this is an essential theme in all his major works, e.g., *Astronomie populaire*, *op. cit.*, p. 400; *Les étoiles*, *op. cit.*, pp. 3-4; *Les terres du ciel*, *op. cit.*, pp. 207-208.
56. His pacifism dated from the time of the Crimean War, but it took a bitter direction following the Franco-Prussian War when his tone became markedly strident on the subject. He even wrote a vitriolic book called *Histoire d'une planète extravagante gravitant entre Mars et Vénus*, but it was so violently anti-patriotic that he decided not to publish it. See *Mémoires*, *op. cit.*, pp. 84, 192, 222, 329, 465, 524ff., 538, 540, 549ff.; *Les Terres du ciel*, *op. cit.*, pp. 314-315 (note), 440-442 (where he remarks in the long note: "When we consider that the first minister of each nation is the Minister of War, is it not shameful to be citizens of such a planet!"); *L'Atmosphère, description des grands phénomènes de la nature*, Paris, 1873, pp. iv-v; *Astronomie populaire*, *op. cit.*, pp. 381, 385; *Uranie*, *op. cit.*, pp. 198, 202. See also Cuny, *op. cit.*, pp. 35ff.
57. *Mémoires*, *op. cit.*, pp. 500ff. Flammarion's experience of the miner's miserable "nocturnal life" recalls van Gogh's own descent into the mines of the Borinage, so deep that when he looked upward from the bottom the daylight looked "about the size of a star in the sky." See *Complete Letters*, *op. cit.*, I, p. 188 (April 1879).
58. *Les étoiles*, *op. cit.*, pp. viii, 4-5.
59. Flammarion's father actually worked for Nadar on the Boulevard des Italiens; see *Mémoires*, *op. cit.*, p. 107. Verne's valiant French protagonist in *From the Earth to the Moon*, Ardan, is an anagram of Nadar.
60. Flammarion, *Les mondes imaginaires et les mondes réels*, 13th ed., Paris, 1874, p. 575, where he signals Verne among a group of writers influenced by his *La Pluralité des mondes habités*, first published in 1862. Also *Astronomie populaire*, *op. cit.*, p. 183.
61. J. Verne, *Hector Severdack*, in *Les oeuvres*, Lausanne, 1967, vol. 14, pp. 390, 392, 394; *Off on a Comet*, tr. E. Roth, Philadelphia, 1878, p. 203.
62. Verne, *De la terre à la lune, Autour de la lune, Les oeuvres*, *op. cit.*, vol. 3, preface by C.-N. Martin, p. xiv.
63. Flammarion, *La pluralité des mondes*, *op. cit.*, 1866 ed., pp. 83-84; Verne, *Autour de la lune*, *op. cit.*, pp. 465-466. Verne may also have derived from Flammarion the idea about the brilliant view of the stars from the moon's surface: Flammarion, *Les mondes imaginaires*, *op. cit.*, p. 16; Verne, *Autour de la lune*, *op. cit.*, pp. 420-421. See also K. Allott, *Jules Verne*, New York, 1941, pp. 108, 152.
64. Verne, *De la terre à la lune*, *op. cit.*, pp. 36-39. I am using the English translation from *Works*, New York and London, 1911, vol. 3, pp. 151-152.
65. *Complete Letters*, *op. cit.*, II, p. 76, Letter 299.
66. Flammarion, *Les mondes imaginaires*, *op. cit.*, p. 549ff.; *Astronomie populaire*, *op. cit.*, p. 183; J. Jules-Verne, *Jules Verne*, Paris, 1973, pp. 104ff.; Allott, *op. cit.*, pp. 82ff.
67. *Complete Letters*, *op. cit.*, I, pp. 206 (Letter 136), 477 (Letter 240); II, pp. 146 (Letter 326), 312 (Letter 379), 319 (Letter 381), 346 (Letter 392), 374 (Letter 405), 403 (Letter 418); III, pp. 166, 433 (Letter W 4); Flammarion, *Mémoires*, *op. cit.*, pp. 478-479; Jules-Verne, *op. cit.*, pp. 361-369.
68. Flammarion, *Mémoires*, *op. cit.*, pp. 31ff., 95-96, 107; Flammarion and C. Dien, *Atlas céleste*, 3rd ed., Paris, 1877.
69. Jules-Verne, *op. cit.*, p. 67; P. Costello, *Jules Verne, Inventor of Science Fiction*, New York, 1978, p. 80; J. Verne and T. Lavallee, *Géographie illustrée de la France et de ses colonies*, 2 vols. 1867-68.
70. *Complete Letters*, *op. cit.*, I, pp. 134 (Letter 105), 141 (Letter 110), 148 (Letter 112).
71. *Ibid.*, pp. 145 (Letter 112), 149-150 (Letter 113), 151 (Letter 114), 154 (Letter 115), 155 (Letter 116), 162 (Letter 119). Van Gogh copied extensively from the atlases of A. Stieler, *Hand-Atlas über alle Theile der Erde und über das Weltgebäude* (many editions, I am using Gotha, 1874), and K. Spruner and T.H. Menke, *Atlas Antiquus* (many editions, I am using Gotha, 1865). Stieler's atlas also included maps of the moon's surface, the constellations of the Northern and Southern hemispheres, and a plan of the solar system.
- It may be recalled that van Gogh lived for part of this time in the house of his uncle, a rear-admiral in charge of the Naval Institute in Amsterdam. Here he would have been surrounded by sea charts and constellation maps. Van Gogh noted that a friend's son stationed at the Naval Institute in Den Helder owned a copy of Stieler's *Atlas*. Van Gogh certainly identified with the Dutch maritime tradition; he often uses nautical analogies like "I have launched my boat" and claims to love his studio "the way a sailor loves his ship." (*Complete Letters*, *op. cit.*, p. 434, Letter 223, 557). The close connection between astronomy and navigation is well known; astronomical progress in the 19th century had much to do with the need to improve navigation. An admiral (Mouchez) ran the Paris Observatory and astronomy was promoted and advanced under the auspices of the Minister of Marine.
72. *Complete Letters*, *op. cit.*, p. 156 (Letter 116).
73. *Ibid.*, pp. 173, 175 (Letter 123).
74. *Ibid.*, pp. 331ff. (Letter 184), 429ff. (Letter 222, August 1882), 432-433 (Letter 223). See also A.S. Wylie, "an Investigation of the Vocabulary of Line in Vincent van Gogh's Expression of Space," *Oud Holland*, vol. 85, 1970, pp. 212ff.; A. Cassagne, *Traité pratique de perspective*, Paris, 1873, p. 20, Fig. 46.

75. *Complete Letters*, op. cit., p. 419 (Letter 219). It is important to note that both at this moment and at Saint-Remy the landscape view recalled for Vincent the work of van Goyen.

76. *Ibid.*, pp. 432-433 (Letter 223, August 1882).

77. The eccentric astronomer of Verne's *Hector Severdac*, Palmyrin Rosette, loved nothing better than to gaze at the stars through his window. Van Gogh could also have found in the prints of his idol Daumier several examples of people studying the stars, and often through an apartment window: see L. Delteil, *Le peintre-graveur illustré (XIXe et XXe siècles)*. Honoré Daumier, 1926, vol. 3, No. 648 (*Effet de lunes*); No. 676 (*Madame Anastasie est de première force . . .*); vol. 4, No. 1114 (*Un astronome satisfait*); No. 1228 (*O Lune! . . . Inspire-moi ce soir quelque petite pensée . . .*); vol. 5, No. 1531 (*Recherche infructueuse de la planète Le Verrier*); vol. 7, No. 2374 (*Astronomes parisiens observant la comète*); vol. 8, No. 2934 (*Croyant l'apercevoir*); No. 2935 (*Adélaïde . . . Il me semble que je vois . . . la comète*); No. 2942 (*La veille du 13 juin*).

78. Flammarion and Hugo were both born on the same day and shared similar interests in astronomy and psychical research. Flammarion regarded Hugo as his intellectual mentor: see *Mémoires*, op. cit., pp. 2, 6, 216, 217, 229, 243-244. Flammarion sent Hugo a copy of *La pluralité des mondes habités* which the older author received with great pleasure. Hugo acknowledged Flammarion in his late work *Post-Scriptum de ma vie*, and the two often participated in spiritual seances. For Hugo's passion for astronomy, see E. Gregoire, *L'astronomie dans l'oeuvre de Victor Hugo*, Paris, 1933, especially pp. 186ff. Flammarion and van Gogh were certainly attuned to Hugo's anticlericalism as well; van Gogh quotes Hugo's saying, "Religions pass away, but God remains," while Flammarion declared, "Religion, yes; religions, no." See *Complete Letters*, op. cit., p. 513, Letter 253; Flammarion, *Mémoires*, op. cit., p. 186. It is curious to observe that an early Daumier caricature shows Hugo contemplating the starry sky, set into a composition strikingly similar to van Gogh's *Café Terrace at Night*. See Delteil, op. cit., vol. 3, No. 1004 (*Hugo lorgnant les voûtes bleues . . .*).

79. Common to both is their continual harping on the insignificance of the human being in the cosmic scheme, and the reign of (to use van Gogh's phrase) "an infinitely powerful force." Elsewhere van Gogh tells Theo: "We see more and more that we are not good, no more than the world in general of which we are but an atom. . . ." Van Gogh's interest in the different colors of the stars corresponds to Flammarion's pioneering observations in this area; see *Complete Letters*, op. cit., II, pp. 195 (Letter 338), 273 (Letter 359), III, p. 588 (Letter 499); Flammarion, *Astronomie populaire*, op. cit., pp. 688, 747, 750-751; *Les étoiles*, op. cit., pp. 197ff.

80. Flammarion, *Mémoires*, op. cit., pp. 479ff. For the details of Cros' career, see L. Forestier, *Charles Cros, l'homme et l'oeuvre*, Paris, 1969; Cros, *L'oeuvre complètes*, eds. L. Forestier and P. Pia, Paris, 1964.

81. *Complete Letters*, op. cit., II, pp. 363, Letter 400; 364, Letter 401.

82. Forestier, *Cros*, op. cit., pp. 41, 48-49, 53; *Complete Letters*, op. cit., II, p. 23, Letter 279, III, p. 329, Letter R 12.

83. Flammarion, *Mémoires*, op. cit., pp. 480, 482-483; Forestier, op. cit., pp. 51ff., 149ff., 155ff. Cros actually worked out his phonographic system before Edison (whose work he was aware of by 1877). But Edison managed to have a working instrument before Cros and got the credit. See A. Allais, "Charles Cros & M. Edison," *Le Chat Noir*, vol. 8, 14 September 1889; *Oeuvres complètes*, op. cit., pp. 618-630, 451-462, 522-534. One of Cros' experiments was a three-color photographic print of Manet's *Le printemps* in 1882. See A. Isler-de Jongh, "Manet, Charles Cros et la photogravure en couleurs," *Nouvelles de l'Estampe*, no. 68, March-April 1983, pp. 6-13.

84. *Oeuvres complètes*, op. cit., pp. 463-477, 622-623; Forestier, op. cit., pp. 63ff. Flammarion actually invited Cros to speak at his regular Saturday lecture series in the Salle des Capucines and probably used his influence to have the essay published in *Cosmos* in August 1869.

85. Cros was the model for Georges Spero, who in the novel dies prematurely in a ballooning accident and is reincarnated on Mars. Cros died of consumption in 1888 (a year before the publication of the novel) at the age of 46, and one of his last projects was a study of the planet Mars. See *Oeuvres complètes*, op. cit., non-paginated chronology.

86. *Complete Letters*, op. cit., II, p. 605, Letter 506. The importance of this association for van Gogh is seen in his careful reading of maps prior to moving to a new region. Considering moving to Drenthe "where life is cheaper," van Gogh let his choice of destination be guided by the look of things "on the map." His cartographic and topographic description is a critical part of his decision-making process, as if he were taking possession of the place through the map: "I have a little map of Drenthe in front of me. On it I see a large white spot without any village names; it is crossed by the Hoozeveen canal, which ends suddenly, and I see the words 'peat fields' on the map, written across the blank space. Around that blank space, a number of black dots with names of villages, a red one for the little town of Hoozeveen." (*Ibid.*, p. 120, Letter 316.)

87. An international congress of celestial photography, announced on 14 June, was organized for the 1889 Exposition and held from 22 August to 3 September. Its origins may be traced to the International Astronomical Congress, organized by Admiral Mouchez, Director of the Paris Observatory, which convened during the week 16-25 April 1887. It was held at the Observatory and opened by the Minister of Foreign Affairs. The main resolution of the Congress was to use the latest photographic techniques to create "une carte photographique générale du ciel pour l'époque actuelle," and to fix the positions and relative sizes of the stars. The theme of stellar photography had a wide appeal, and France offered to take the leading role in the project. Among the foreign delegates present was the noted Dutch astronomer, H.G. van de Sande Bakhuyzen, director of the Leyden Observatory. See Flammarion, "Le congrès astronomique pour la photographie du ciel," *L'Astronomie*, vol. 6, 1887, pp. 161-169; "International Astronomical Congress," *The Observatory*, vol. 10, May 1886, pp. 190-192.

88. *Ibid.*, p. 615, Letter 511.

89. *Les terres du ciel*, op. cit., pp. 207-208, 767.

90. For the English rendition of this letter I am using *Vincent van Gogh Letters to Emile Bernard*, ed. D. Lord, New York, 1938, pp. 45-46. The translation of the letter in the *Complete Letters* (op. cit.) is seriously flawed. For example, the sentence "La science - le raisonnement scientifique - me paraît être un instrument qui ira bien loin dans la suite," has been rendered "Science - scientific reasoning - seems to me an instrument that will lag, far, far behind" - the very opposite of van Gogh's thought! The idiomatic expression "dans la suite" clearly refers to a future time, and even if we accepted a possible interpretation of "la suite" as "behind," the context contradicts it.

91. *Complete Letters*, op. cit., III, p. 247, Letter 623.

92. *Ibid.*, p. 129 (28 January 1889), Letter 574.

93. *Ibid.*, p. 47, Letter 541, where van Gogh refers to a "funeral cypress" towering over oleander bushes.

94. One of the chief propagandists for the 1889 World's Fair described the Eiffel Tower as the symbol of progress, "an unbounded spiral where humanity mounts in an eternal ascension." See Monod, op. cit., I, p. xxv.

95. Picard, *Rapport général*, op. cit., I, p. 335; II, pp. 159ff. The government stated as a basic goal of the Exposition its wish to disseminate "une active propagande" in behalf of

its colonial possessions.

96. Monod, op. cit., I, pp. 1-2; Braibant, op. cit., p. 24; Harriss, op. cit., p. 6. While the project was decreed under his ministry, he fell from power in 1885 and his initial involvement in the project became obscured. For Ferry's colonial policies, see A. Rambaud, *Jules Ferry*, Paris, 1903, Book IV.

97. Silverman, op. cit., pp. 77ff.

98. *Complete Letters*, op. cit., II, pp. 520-521, Letter B 20.

99. *Lettres à Emile Bernard*, éditions de la Nouvelle Revue Belge, Brussels, 1942, p. 92.

100. *Complete Letters*, op. cit., III, p. 99, Letter 558b; p. 252, Letter 625; p. 284, Letter 642; p. 590, Letter 500.

101. *Ibid.*, p. 240, Letter 619: "Sometimes I imagine that if I gave up painting and had to lead a hard life, say, as a soldier in the east, it would cure me . . . I am thinking this half in jest, half in earnest." Also Letter 587 (p. 157) where he writes: "I shouldn't be unhappy or discontented if some time from now I could enlist in the Foreign Legion for five years. . . ."

102. *Ibid.*, II, pp. 542 (Letter 474), 559 (Letter 482), 591 (Letter 501); III, pp. 44 (Letter 539), 50 (Letter 541a), 99 (Letter 558b). Actually, van Gogh's involvement in the colonial process began early in his career and haunted his imagination late in life. This was no doubt encouraged by the fact that he had relatives and friends working for the colonial administrations in both the Dutch East Indies and South Africa. See *ibid.*, II, pp. 21 (Letter 278), 32 (Letter 282), 158, 160 (Letter 330), 254-255 (Letter 351a); III, p. 189, Letter 598.

It is curious to find that van Gogh claims as one source of inspiration for his *Café Terrace at Night* Maupassant's novel *Bel Ami*. While I found no such description in the novel and only the most cursory references to a starry night, the novel is more interesting for its plot in the context of our analysis. Published in 1885, at the height of the North African crises which eventually toppled Ferry's Ministry, *Bel Ami* features a rogue named Georges Duroy who returns from duty in North Africa to climb the Parisian social ladder by ruthlessly exploiting his female admirers and taking advantage of the journalistic mania for colonial adventures in the interest of stock market manipulation. Duroy actually transposes his corrupt colonial mentality to Parisian high society and succeeds.

103. *Complete Letters*, op. cit., III, pp. 284 (Letter 642), 131, Letter 131: "I believe and I shall always believe in the art that is to be created in the tropics, and I think it will be marvellous."

104. *Ibid.*, p. 56, Letter 543.

105. W.T. Stead, *The Last Will and Testament of Cecil John Rhodes*, London, 1902, p. 190. Rhodes shared with numerous other colonial-minded types an obsession with maps and geography as a prelude to territorial conquest. See P. Jourdan, *Cecil Rhodes, His Private Life by his Private Secretary*, London, 1911, pp. 163-164. Part of van Gogh's historical studies consisted of making maps of the sieges of towns that were to be incorporated into the United Netherlands. These were based on the accounts given in John Lathrop Motley's histories of the Dutch Republic. See *Complete Letters*, op. cit., I, p. 145. Indeed, it was often the geographical societies which whipped up enthusiasm for colonial expansion; see P. Guillaume, *Jules Ferry*, Paris, 1980, p. 146.

106. J. Ferry, *Le Tonkin et la Mère-Patrie*, Paris, 1890, p. 37.

107. Flammarion, *Astronomie populaire*, op. cit., p. 109; J. Chesneaux, *Une lecture politique de Jules Verne*, Paris, 1971, pp. 13, 109 (Verne supported Jules Ferry); E. Reclus, *The Earth and Its Inhabitants*, ed. A.H. Keane, London, 1886-95, vol. 2, pp. 199ff. Elsewhere Reclus noted with regret the existence of populations living in uncharted areas: "There are peoples in this world, dwelling in towns, obeying laws, and having customs comparatively polished, but who choose to live in seclusion, and are as little known to us as if they were the inhabitants of some other planet." (*Ibid.*, vol. 1, pp. 1-2.)

108. Monod, anticipating Disney's Epcot Center, wrote that the 1889 Exposition was for many people "a true voyage around the world, more rapid, less tiring and less expensive than the *Voyage in Eighty Days* told by M. Verne." (op. cit., p. 280.) Of course, Verne was widely celebrated in this period, and was invited to publish some of his prophecies of the future in the American periodical, *The Forum*. Mainly written by his son under Verne's name (and presumably his direction), it gives a portrait of a world with interplanetary telecommunications and travel, skyscrapers, rapid underground transportation, moving sidewalks, and television. See J. Verne, "In the Year 2889," *The Forum*, vol. 6, 1888-89, pp. 662-677.

109. Reclus, op. cit., vol. 2, p. 200, vol. 3, pp. 168ff.; Allott, op. cit., pp. 187ff.; Costello, op. cit., pp. 147ff.; Flammarion, *Mémoires*, op. cit., pp. 524-552; *Astronomie populaire*, op. cit., pp. 381, 384; *L'Atmosphère*, op. cit., p. iv; *Les terres du ciel*, op. cit., pp. 213, 314-315 (Note 1), 440-441 (Note 1).

110. *Complete Letters*, op. cit., II, p. 530, Letter 468.

111. B. Landheer, ed., *The Netherlands*, Berkeley and Los Angeles, 1943, p. 79.

112. Multatuli, *Een en ander naar aanleiding van J. Bosscha's Pruisen en Nederland*, Amsterdam, 1867; *En en ander over Pruisen en Nederland*, Amsterdam, 1879.

113. Hulsker, op. cit., p. 362, No. 1588. There can be no doubt that the Milliet portrait and the theme of the starry night were associated in van Gogh's mind: he described the portrait on the back of a drawing sent with Letter 543 which included the sketch and description of the first *Starry Night* (over the Rhône River), and he advised Milliet to read Maupassant's *Bel Ami* which the painter claimed as a major source of inspiration for *Café Terrace at Night*. See *Complete Letters*, op. cit., III, p. 50, Letter 541a. Van Gogh idealized and envied the youth and sexual prowess of Milliet whom he must have identified with the protagonist of Maupassant's novel.

114. Ironically, Albert Camus' *L'étranger* - one of the great modern novels speaking to the 20th-century outlook - is set in French North Africa and ends by making the starry night a metaphor for the protagonist's final understanding of himself in relationship to the cosmos. As he looks up through the window of his cell (where he has been incarcerated for murder), Meursault declares:

And I, too, felt ready to start life all over again. It was as if that great rush of anger had washed me clean, emptied me of hope, and, gazing up at the dark sky spangled with its signs and stars, for the first time, the first, I laid my heart open to the benign indifference of the universe.

Unlike van Gogh, however, Meursault rejects every idea of Christianity, bourgeois morality, and immortality. He had always been indifferent to all except immediate physical sensation, but now the sight of the starry sky makes him realize how much he loved the life - no matter how absurd it seemed - of which he is soon to be deprived for the killing of another human being. This affirmation of his existence, lived previously without enthusiasm, at last jolts him from his apathy. He finds his Kingdom of Heaven in prison, prepared to go to his death, content in the knowledge that there is no afterlife.

It is also noteworthy that Camus' philosophical hero, Nietzsche, conceived of his *Thus Spake Zarathustra* in the same decade as the *Starry Night*, and set out in the prologue an upbeat formula for his New Man emancipated from bourgeois values and religion: "One must . . . have chaos in one, to give birth to a dancing star."