In 1913, the French writer Charles Péguy remarked that “the world has changed less since the time of Jesus Christ than it has in the last thirty years.” He was speaking of all the conditions of Western capitalist society: its idea of itself, its sense of history, its beliefs, pieties, and modes of production—and its art. In Péguy’s time, the time of our grandfathers and great-grandfathers, the visual arts had a kind of social importance they can no longer claim today, and they seemed to be in a state of utter convulsion. Did cultural turmoil predict social tumult? Many people thought so then; today we are not so sure, but that is because we live at the end of modernism, whereas they were alive at its beginning. Between 1880 and 1930, one of the supreme cultural experiments in the history of the world was enacted in Europe and America. After 1940 it was refined upon, developed here and exploited there, and finally turned into a kind of entropic, institutionalized parody of its old self. Many people think the modernist laboratory is now vacant. It has become less an arena for significant experiment and more like a period room in a museum, a historical space that we can enter, look at, but no longer be part of. In art, we are at the end of the modernist era, but this is not—as some critics apparently think—a matter for self-congratulation. What has our culture lost in 1980 that the avant-garde had in 1890? Ebulience, idealism, confidence, the belief that there was plenty of territory to explore, and above all the sense that art, in the most disinterested and noble way, could find the necessary metaphors by which a radically changing culture could be explained to its inhabitants.

For the French, and for Europeans in general, the great metaphor of this sense of change—its master-image, the one structure that seemed to gather all the meanings of modernity together—was the Eiffel Tower. The Tower was finished in 1889, as the focal point of the Paris World’s Fair. The date of the Fair was symbolic. It was the centenary of the French Revolution. The holding of World’s Fairs, those festivals of high machine-age capitalism in which nation after nation showed off its industrial strength and the breadth of its colonial resources, was not, of course, new. The fashion had been set by Victoria’s Prince Albert, in the Great Exhibition of 1851. There, the greatest marvel on view had not been the Birmingham stoves, the reciprocating engines, the looms, the silverware, or even the Chinese exotica; it had been their
showplace itself, the Crystal Palace, with its vaults of glittering glass and nearly invisible iron tracery. One may perhaps mock the prose in which some of the Victorians recorded their wonder at this cathedral of the machine age, but their emotion was real.

The planners of the Paris World’s Fair wanted something even more spectacular than the Crystal Palace. But Paxton’s triumph could not be capped by another horizontal building, so they decided to go up: to build a tower that would be the tallest manmade object on earth, topping out – before the installation of its present-day radio and TV masts – at 1056 feet. No doubt a biblical suggestion was at work, consciously or not. Since the Fair would embrace all nations, its central metaphor should be the Tower of Babel. But the Tower embodied other and socially deeper metaphors. The theme of the Fair was manufacture and transformation, the dynamics of capital rather than simple ownership. It was meant to illustrate the triumph of the present over the past, the victory of industrial over landed wealth that represented the essential economic difference between the Third Republic and the Ancien Régime. What more brilliant centrepiece for it than a structure that turned its back on the ownership of land – that occupied unowned and previously useless space, the sky itself? In becoming a huge vertical extrusion of a tiny patch of the earth’s surface, it would demonstrate the power of process. Anyone could buy land, but only la France moderne could undertake the conquest of the air.

The Fair’s commissioners turned to an engineer, not an architect, to design the Tower. This decision was in itself symbolic, and it went against the prestige of Beaux-Arts architects as the official voice of the State; but Gustave Eiffel, who was fifty-seven and at the peak of his career when he took the job, managed to infuse his structure with what now seems to be a singular richness of meaning. Its remote inspiration was the human figure – the Tower imagined as a benevolent colossus, planted with spread legs in the middle of Paris. It also referred to the greatest permanent festive structure of the seventeenth century, Bernini’s Fountain of the Four Rivers in the Piazza Navona in Rome, which (like the Tower) was a spike balanced over a void defined by four arches and (like the Fair itself) was an image of ecumenical domination of the four quarters of the world.

You could not escape the Tower. It was and is the one structure that can be seen from every point in the city. No metropolis in Europe had ever been so visually dominated by a single structure, except Rome by St. Peter’s; and even today, Eiffel’s spike is more generally visible in its own city than Michelangelo’s dome. The Tower became the symbol of Paris overnight, and in doing so, it proclaimed la ville lumière to be the modernist capital – quite independently of anything else that might be written, composed, produced, or painted there. As such, it was praised by Guillaume Apollinaire, the cosmopolitan poet who had once been a Catholic and imagined, in a tone of mingled irony and delight, the Second Coming of Christ enacted in a new Paris whose centre was the Tower, at the edge of the coming millennium, the twentieth century:
At last you are tired of this old world.
O shepherd Eiffel Tower, the flock of bridges bleats this morning
You are through with living in Greek and Roman antiquity
Here, even the automobiles seem to be ancient
Only religion has remained brand new, religion
Has remained simple as simple as the aerodrome hangars
It's God who dies Friday and rises again on Sunday
It's Christ who climbs in the sky better than any aviator
He holds the world's altitude record
Pupil Christ of the eye
Twentieth pupil of the centuries he knows what he's about,
And the century, become a bird, climbs skywards like Jesus.

The important thing was that the Tower had a mass audience; millions of people, not the thousands who went to the salons and galleries to look at works of art, were touched by the feeling of a new age that the Eiffel Tower made concrete. It was the herald of a millennium, as the nineteenth century made ready to click over into the twentieth. And in its height, its structural daring, its then-radical use of industrial materials for the commemorative purposes of the State, it summed up what the ruling classes of Europe conceived the promise of technology to be: Faust's contract, the promise of unlimited power over the world and its wealth.

For the late nineteenth century, the cradle of modernism, did not feel the uncertainties about the machine that we do. No statistics on pollution, no prospect of melt-downs or core explosions lay on the horizon; and very few of the visitors to the World's Fair of 1889 had much experience of the mass squalor and voiceless suffering that William Blake had railed against and Friedrich Engels described. In the past the machine had been represented and caricatured as an ogre, a behemoth, or – due to the ready analogy between furnaces, steam, smoke, and Hell – as Satan himself. But by 1889 its "otherness" had waned, and the World's Fair audience tended to think of the machine as unqualifiedly good, strong, stupid, and obedient. They thought of it as a giant slave, an untiring steel Negro, controlled by Reason in a world of infinite resources. The machine meant the conquest of process, and only very exceptional sights, like a rocket launch, can give us anything resembling the emotion with which our ancestors in the 1880s contemplated heavy machinery: for them, the "romance" of technology seemed far more diffused and optimistic, acting publicly on a wider range of objects, than it is today. Perhaps this had happened because more and more people were living in a machine-formed environment: the city. The machine was a relatively fresh part of social experience in 1880, whereas in 1780 it had been exotic, and by 1980 it would be a cliché. The vast industrial growth of European cities was new. In 1850, Europe had still been overwhelmingly rural. Most Englishmen, Frenchmen, and Germans, let alone Italians, Poles, or Spaniards, lived in the country or in small villages. Forty years later the machine, with its imperative centralizing of process and product, had tipped the balance of population towards the towns. Baudelaire's *fourmillante cité* of alienated souls – "ant-swarming City, City full of
dreams/Where in broad day the spectre tugs your sleeve” – began to displace the pastoral images of nature whose last efflorescence was in the work of Monet and Renoir. The master-image of painting was no longer landscape but the metropolis. In the country, things grow; but the essence of manufacture, of the city, is process, and this could only be expressed by metaphors of linkage, relativity, interconnectedness.

These metaphors were not ready to hand. Science and technology had outstripped them, and the rate of change was so fast that it left art stranded, at least for a time, in its pastoral conventions. Perhaps no painting of a railway station, not even Monet’s Gare Saint-Lazare, could possibly have the aesthetic brilliance and clarity of the great Victorian railroad stations themselves – Euston, St. Pancras, Penn Station, those true cathedrals of the nineteenth century. And certainly no painting of a conventional sort could deal with the new public experience of the late nineteenth century, fast travel in a machine on wheels. For the machine meant the conquest of horizontal space. It also meant a sense of that space which few people had experienced before – the succession and superimposition of views, the unfolding of landscape in flickering surfaces as one was carried swiftly past it, and an exaggerated feeling of relative motion (the poplars nearby seeming to move faster than the church spire across the field) due to parallax. The view from the train was not the view from the horse. It compressed more motifs into the same time. Conversely, it left less time in which to dwell on any one thing.

At first, only a few people could have this curiously altered experience of the visual world without taking a train: the crackpots and inventors with their home-made cars, and then the adventurous rich, veiled and goggled, chugging down the country lanes of Bellosguardo or Normandy. But because it promised to telescope more experience into the conventional frame of travel, and finally to burst the frame altogether, the avant-garde of engineering seemed to have something in common with the avant-garde of art.

As the most visible sign of the Future, the automobile entered art in a peculiarly clumsy way. The first public sculpture ever set up in its praise stands in a park at the Porte Maillot in Paris. It commemorates the great road race of 1895, from Paris to Bordeaux and back, which was won by an engineer named Émile Levassor in the car he designed and built himself, the Panhard-Levassor 5 – which could go at about the same speed as a jumping frog. Nevertheless, Levassor’s victory was of great social consequence, and worth a memorial, since it persuaded Europeans – manufacturers and public alike – that the future of road transport lay with the internal combustion engine and not with its competitors, electricity or steam. In all justice there should be a replica of the Levassor Monument set up in every oil port from Bahrain to Houston. Yet it looks slightly absurd to us as sculpture today, suggesting the difficulties artists faced in transposing the new category of the machine into the conventions of traditional sculpture (plate 1).

It is a stone car – an idea that seems Surrealist to a modern eye, almost as wrong as a teacup made of fur. Marble is immobile, silent, mineral, brittle, white, cold. Cars are fast, noisy, metallic, elastic, warm. A human body is warm, too, but we do not think of statues as stone men because we are used to the conventions of depicting flesh with

1 Camille Lefebvre Monument to Levassor, Porte Maillot, Paris 1907
Marble relief after Jules Dalou 1838–1902 (photo Roger Viollet, Paris)
stone. (When these conventions are violated, as in the second act of *Don Giovanni* when the statue of the **Commendatore** comes alive, the effect is always spectral or comic.) The problem for Jules Dalou, who designed the Levassor Monument, was the lack of agreed conventions for depicting a headlamp or a steering wheel. Such motifs were too new, like the machine itself, so no exact representation of a car in stone could be as visually convincing as the car itself.

Yet the cultural conditions of seeing were starting to change, and the Eiffel Tower stood for that too. The most spectacular thing about it in the 1890s was not the view of the Tower from the ground. It was seeing the ground from the Tower. Until then, the highest manmade point from which Paris could be seen by the public was the gargoyle gallery of Notre Dame. Most people lived entirely at ground level, or within forty feet of it, the height of an ordinary apartment house. Nobody except a few intrepid balloonists had ever risen a thousand feet from the earth. Consequently, the bird’s-eye view of nature or townscape was an extreme and rare curiosity, and when the photographer Nadar took his camera up in a balloon in 1856, his daguerreotypes were not only snapped up by the public but also commemorated, in a spirit of friendly irony, by Honoré Daumier. But when the Tower opened to the public in 1889, nearly a million people rode its lifts to the top platform; and there they saw what modern travellers take for granted every time they fly – the earth on which we live seen flat, as pattern, from above. As Paris turned its once invisible roofs and the now clear labyrinth of its alleys and streets towards the tourist’s eye, becoming a map of itself, a new type of landscape began to seep into popular awareness. It was based on frontality and pattern, rather than on perspective recession and depth.

This way of seeing was one of the pivots in human consciousness. The sight of *Paris vu d'en haut*, absorbed by millions of people in the first twenty years of the Tower’s life, was as significant in 1889 as the famous NASA photograph of the earth from the moon, floating like a green vulnerable bubble in the dark indifference of space, would be eighty years later. The characteristic flat, patterned space of modern art – Gauguin, Maurice Denis, Seurat – was already under development before the Tower was built. It was based on other art-historical sources: on the flatness of “primitive” Italian frescoes, on Japanese woodblock prints, on the coiling and distinct patterns of *cloisonné* enamel. When Gauguin’s friend Maurice Denis wrote his manifesto *The Definition of Neo-Traditionalism* in the summer of 1890, it began with one of the canonical phrases of modernism: that “a picture – before being a warhorse, a nude woman, or some sort of anecdote – is essentially a surface covered with colours arranged in a certain order.” Denis was invoking this principle in order to bring painting back to a kind of heraldic flatness, the flatness of banners and crusaders’ tombslabs and the Bayeux Tapestry, in which his ambition to cover the new churches of France with Christian frescoes might prosper. The Eiffel Tower had nothing to do with his interests; but the idea of space that it provoked, a flatness that contained ideas of dynamism, movement, and the quality of abstraction inherent in structures and maps, was also the space in which a lot of the most advanced European art done between 1907 and 1920 would unfold.
The speed at which culture reinvented itself through technology in the last quarter of the nineteenth century and the first decades of the twentieth, seems almost preternatural. Thomas Alva Edison invented the phonograph, the most radical extension of cultural memory since the photograph, in 1877; two years later, he and J. W. Swan, working independently, developed the first incandescent filament light-bulbs, the technical sensation of the Belle Époque. The first twenty-five years of the life of the archetypal modern artist, Pablo Picasso—who was born in 1881—witnessed the foundation of twentieth-century technology for peace and war alike: the recoil-operated machine gun (1882), the first synthetic fibre (1883), the Parsons steam turbine (1884), coated photographic paper (1885), the Tesla electric motor, the Kodak box camera and the Dunlop pneumatic tyre (1888), cordite (1889), the Diesel engine (1892), the Ford car (1893), the cinematograph and the gramophone disc (1894). In 1895, Roentgen discovered X-rays, Marconi invented radio telegraphy, the Lumière brothers developed the movie camera, the Russian Konstantin Tsiolkovsky first enunciated the principle of rocket drive, and Freud published his fundamental studies on hysteria. And so it went: the discovery of radium, the magnetic recording of sound, the first voice radio transmissions, the Wright brothers' first powered flight (1903), and the \textit{annus mirabilis} of theoretical physics, 1905, in which Albert Einstein formulated the Special Theory of Relativity, the photon theory of light, and ushered in the nuclear age with the climactic formula of his law of mass-energy equivalence, \( E = mc^2 \). One did not need to be a scientist to sense the magnitude of such changes. They amounted to the greatest alteration in man’s view of the universe since Isaac Newton.

The feeling that this was so was widespread. For the essence of the early modernist experience, between 1880 and 1914, was not the specific inventions—nobody was much affected by Einstein until Hiroshima; a prototype in a lab or an equation on a blackboard could not, as such, bear on the man in the street. But what did emerge from the growth of scientific and technical discovery, as the age of steam passed into the age of electricity, was the sense of an accelerated rate of change in all areas of human discourse, including art. From now on the rules would quaver, the fixed canons of knowledge fail, under the pressure of new experience and the demand for new forms to contain it. Without this heroic sense of cultural possibility, Arthur Rimbaud’s injunction to be \textit{absolument moderne} would have made no sense. With it, however, one could feel present at the end of one kind of history and the start of another, whose emblem was the Machine, many-armed and infinitely various, dancing like Shiva the creator in the midst of the longest continuous peace that European civilization would ever know.

In 1909, a French aviator named Louis Blériot flew the English Channel, from Calais to Dover. Brought back to Paris, his little wooden dragonfly of a plane was carried through the streets in triumph—like Cimabue’s \textit{Madonna}, Apollinaire remarked—and installed in a deconsecrated church, now part of the Musée des Arts et Métiers. It still hangs there, under the blue shafts of light from the stained-glass windows, slightly dilapidated, looking for all the world like the relic of an archangel. Such was the early apotheosis of the Machine. But the existence of a cult does not
mean that images appropriate to it automatically follow. The changes in capitalist man's view of himself and the world between 1880 and 1914 were so far-reaching that they produced as many problems for artists as they did stimuli. For instance: how could you make paintings that might reflect the immense shifts in consciousness that this altering technological landscape implied? How could you produce a parallel dynamism to the machine age without falling into the elementary trap of just becoming a machine illustrator? And above all: how, by shoving sticky stuff like paint around on the surface of a canvas, could you produce a convincing record of process and transformation?

The first artists to sketch an answer to all this were the Cubists.

Even today, seventy years after they were painted, the key Cubist paintings can be obscure. They seem hard to grasp; in some ways they are almost literally illegible. They do not present an immediately coherent view of life, in the way that Impressionism set forth its images of mid-bourgeois pleasure and boulevard manners. They have very little to do with nature; almost every Cubist painting is a still-life, and one in which manmade objects predominate over natural ones like flowers or fruit. Cubism as practised by its inventors and chief interpreters – Picasso, Braque, Léger, and Gris – does not woo the eye or the senses, and its theatre is a cramped brown room or the corner of a café. Beside the peacocks of the nineteenth century – the canvases of Delacroix or Renoir – their paintings look like owls. A pipe, a glass, a guitar; some yellowed newsprint, black on dirty white when it was glued on two generations ago, now the colour of a bad cigar, irrevocably altering the tonal balance of the piece. Nevertheless, Cubism was the first radically new proposition about the way we see that painting had made in almost five hundred years.

Since the Renaissance, almost all painting had obeyed a convention: that of one-point perspective. It was a geometrical system for depicting the illusion of reality, based on the fact that things seem to get smaller as they go further from one’s eye. Once the construction for setting up a perspective scene is known, things can be represented on a flat sheet of paper as though they were in space, in their right sizes and positions. To fifteenth-century artists, perspective was the philosopher’s stone of art; one can hardly exaggerate the excitement they felt in the face of its ability to conjure up a measurable, precise illusion of the world. In some perspective studies of Ideal Towns or Uccello’s mazzocchi, this excitement almost becomes poetry, taking on the clarity and finality of a mathematical model. A few years ago, every art student knew the chestnut in Vasari’s Lives, which told how Uccello would labour all night at these exercises and, when called to bed by his fretful wife, could only answer, “O, che dolce cosa è questa prospettiva!” (“How delightful perspective is!”). And in fact it was, since no more powerful tool for the ordering of visual experience in terms of illusion had ever been invented; indeed, perspective in the fifteenth century was sometimes seen not only as a branch of mathematics but as an almost magical process, having something of the surprise that our grandparents got from their Kodaks. Apply the method and the illusion unfolds; you press the button, we do the rest.

Nevertheless, there are conventions in perspective. It presupposes a certain way of
A word of caution is due here. Great artists have many sides, and different ages – or
even different cultures at the same moment – extract different things from them. As
Lawrence Gowing has remarked, the relation between late Cézanne and Cubism is
quite one-sided: he would not have imagined a Cubist painting, for his work “was
reaching out for a kind of modernity that did not exist, and still does not.” He would
not have liked Cubist abstraction, that much is sure. For Cézanne’s whole effort was
directed towards the physical world – the shapes of Mont Ste-Victoire, of the tumbled
inchoate rocks of the Bibémus quarry, of six dense red apples or his gardener’s face.
The idea of Cézanne as the father of abstract art is based on his remark that one must
detect in Nature the sphere, the cone, and the cylinder. What he meant by that is
anyone’s guess, since there is not a single sphere, cone, or cylinder to be seen in
Cézanne’s work. What is there, especially in the work of the last decade and a half of
his life – from 1890 onwards, after he finally abandoned Paris and settled in solitude in
Aix – is a vast curiosity about the relativity of seeing, coupled with an equally vast
doubt that he or anyone else could approximate it in paint. In 1906, a few weeks before
he died, he wrote to his son in Paris:
I must tell you that as a painter I am becoming more clear-sighted before Nature, but with me
the realization of my sensations is always painful. I cannot attain the intensity that is unfolded
before my senses. I do not have the magnificent richness of colouring that animates Nature.
Here on the bank of the river the motifs multiply.

These “motifs” were not merely rocks and grasses; they were the relationships
between grass and rock, tree and shadow, leaf and cloud, which blossomed into an
infinity of small but equally worthy and interesting truths each time the old man
moved his easel or his head. This process of seeing, this adding up and weighing of
choices, is what Cézanne’s peculiar style makes concrete: the broken outlines, strokes
of pencil laid side by side, are emblems of scrupulousness in the midst of a welter of
doubt. Each painting or watercolour is about the motif. But it is also about something
else – the process of seeing the motif (plate 2). No previous painter had taken his
viewers through this process so frankly. In Titian or Rubens, it is the final form that
matters, the triumphant illusion. But Cézanne takes you backstage; there are the ropes
and pulleys, the wooden back of the Magic Mountain, and the theatre – as distinct
from the single performance – becomes more comprehensible. The Renaissance
admired an artist’s certainty about what he saw. But with Cézanne, as the critic
Barbara Rose remarked in another context, the statement: “This is what I see,”
becomes replaced by a question: “Is this what I see?” You share his hesitations about
the position of a tree or a branch; or the final shape of Mont Ste-Victoire, and the trees
in front of it (plate 3). Relativity is all. Doubt becomes part of the painting’s subject.
Indeed, the idea that doubt can be heroic, if it is locked into a structure as grand as that
of the paintings of Cézanne’s old age, is one of the keys to our century, a touchstone of
modernity itself. Cubism would take it to an extreme.

The idea began in 1907, in a warren of cheap artists’ studios known as the “Bateau-
Lavoir” or “Laundry Boat,” at 13 Rue Ravignan in Paris. It was touched off by a
Spaniard, Pablo Picasso, then aged twenty-six. His partner in inventing Cubism was a
2. Paul Cézanne *Mont Ste-Victoire* 1904–6
Oil on canvas 29 × 36½ ins
Philadelphia Museum of Art, George W. Elkins Collection

3. Paul Cézanne *Mont Ste-Victoire* 1906
Oil on canvas 25 × 32½ ins
Kunsthaus, Zurich
younger and rather more conservative Frenchman, Georges Braque, the son of a housepainter in Normandy. Picasso already had a small reputation, based on the wistful, etiolated nudes, circus folk, and beggars he had been painting up to 1905—the so-called Blue and Rose periods of his work. But he was so little known, and Braque so wholly unknown, that in the public eye neither artist existed. The audience for their work might have been a dozen people: other painters, mistresses, an obscure young German dealer named Daniel-Henry Kahnweiler, and one another. This might seem like a crushing isolation, but it meant that they were free, as researchers in some very obscure area of science are free. Nobody cared enough to interfere. Their work had no role as public speech, and so there was no public pressure on it to conform. This was fortunate, since they were engaged in a project which would presently seem, from the point of view of normal description, quite crazy. Picasso and Braque wanted to represent the fact that our knowledge of an object is made up of all possible views of it: top, sides, front, back. They wanted to compress this inspection, which takes time, into one moment—one synthesized view. They aimed to render that sense of multiplicity, which had been the subtext of Cézanne’s late work, as the governing element of reality.

One of their experimental materials was the art of other cultures. With their appropriation of forms and motifs from African art, Picasso and then Braque brought to its climax a long interest which nineteenth-century France had shown in the exotic, the distant, and the primitive. The French colonial empire in Morocco had given the exotic images of Berber and soukh, dancing girl and war camel, lion-hunt and Riff warrior to the imagery of Romanticism, through Delacroix and his fellow Romantics. By 1900, technology in the form of the gunboat and the trading steamer had created another French empire in equatorial Africa, whose cultural artefacts were ritual carvings, to which the French assigned no importance whatsoever as art. They thought of them as curiosities, and as such they were an insignificant part of the flood of raw material that France was siphoning from Africa. Picasso thought they did matter—but as raw material. Both he and Braque owned African carvings, but they had no anthropological interest in them at all. They didn’t care about their ritual uses, they knew nothing about their original tribal meanings (which assigned art a very different function to any use it could have in Paris), or about the societies from which the masks came. Probably (although the art historian piously hopes it was otherwise) their idea of African tribal societies was not far from the one most Frenchmen had—jungle drums, bones in the noses, missionary stew. In this respect, Cubism was like a dainty parody of the imperial model. The African carvings were an exploitable resource, like copper or palm-oil, and Picasso’s use of them was a kind of cultural plunder.

But then, why use African art at all? The Cubists were just about the first artists to think of doing so. One hundred and thirty years before, when Benjamin West admired the tapa cloths, war-clubs, and canoe carvings that had come back from the Pacific with Captain Cook and Joseph Banks—relics of a new world that had the strangeness of moon rocks—no Royal Academicians took the cue and started painting Tahitian-
style or Maori-fashion. To depict the monuments of Easter Island, as William Hodges did, was one thing; to imitate their style, quite another. Yet this was what Picasso did with his African prototypes, around 1906–8. When he began to parody black art, he was stating what no eighteenth-century artist would ever have imagined suggesting: that the tradition of the human figure, which had been the very spine of Western art for two and a half millennia, had at last run out; and that in order to renew its vitality, one had to look to untapped cultural resources – the Africans, remote in their otherness. But if one compares a work like Picasso’s *Les Demoiselles d’Avignon*, 1907, with its African source material (plates 4, 5), the differences are as striking as the similarities. What Picasso cared about was the formal vitality of African art, which was for him inseparably involved with its apparent freedom to distort. That the alterations of the human face and body represented by such figures were not Expressionist distortions, but conventional forms, was perhaps less clear (or at least less interesting) to him than to us. They seemed violent, and they offered themselves as a receptacle for his own panache. So the work of Picasso’s so-called “Negro Period” has none of the aloofness, the reserved containment, of its African prototype: its lashing rhythms remind us that Picasso looked to his masks as emblems of savagery, of violence transferred into the sphere of culture.

With its hacked contours, staring interrogatory eyes, and general feeling of instability, *Les Demoiselles* is still a disturbing painting after three quarters of a century, a refutation of the idea that the surprise of art, like the surprise of fashion, must necessarily wear off. No painting ever looked more convulsive. None signalled a faster change in the history of art. Yet it was anchored in tradition, and its attack on the eye would never have been so startling if its format had not been that of the classical nude; the three figures at the left are a distant but unmistakable echo of that favourite image of the late Renaissance, the Three Graces. Picasso began it the year Cézanne died, 1906, and its nearest ancestor seems to have been Cézanne’s monumental composition of bathers displaying their blockish, angular bodies beneath arching trees (plate 7). Its other line of descent is Picasso’s Spanish heritage. The bodies of the two caryatid-like standing nudes, and to a lesser degree their neighbour on the right, twist like El Greco’s figures. And the angular, harshly lit blue space between them closely resembles the drapery in El Greco’s Dumbarton Oaks *Visitation*.

That Picasso could give empty space the same kind of distortion a sixteenth-century artist reserved for cloth with a body inside it points to the newness of *Les Demoiselles*. What is solid, and what void? What is opaque, and what transparent? The questions that perspective and modelling were meant to answer are precisely the ones Picasso begs, or rather shoves aside, in this remarkable painting. Instead of solids (nude and fruit) in front of a membrane (the curtain) bathed in emptiness and light, Picasso conceived *Les Demoiselles* as though it were made of a continuous substance, a sort of plasma, thick and intrusive. If the painting has any air in it at all, it comes from the colours – the pinks and blues that survive from the wistful miséraliszme of his earlier work, lending *Les Demoiselles* a peculiarly ironic air: whatever else these five women may be, they are not victims or clowns.
4 Pablo Picasso  *Les Demoiselles d'Avignon*  Paris (begun May, reworked July 1907)
Oil on canvas 96 × 92 ins: Collection, The Museum of Modern Art, New York, Acquired through the Lillie P. Bliss Bequest

5 *Gabon Mahongwe Mask*
Wood and pigments 14 × 6 ins
Brooklyn Museum, Frank L. Babbott Fund

7 Paul Cézanne  *Les Grandes Baigneuses I*  1894–1905
Oil on canvas 60 × 75½ ins: National Gallery, London
6 Pablo Picasso Study for Les Demoiselles d’Avignon 1907
Crayon drawing 18\(\frac{1}{2}\) \(\times\) 30 ins: Kupferstichkabinett, Kunstmuseum, Basle (photo Hans Hinz)
They were, as every art student knows, whores. Picasso did not name the painting himself, and he never liked its final title. He wanted to call it The Avignon Brothel, after a whorehouse on the Carrer d’Avinyo in Barcelona he had visited in his student days. The painting was originally meant to be an allegory of venereal disease, entitled The Wages of Sin, and in one of the original studies for it (plate 6), the narrative is quite clear: at the centre, a sailor carousing in a brothel, and on the left, another man, a medical student, whom Picasso represented in other studies with a self-portrait, entering with a skull, that very Spanish reminder of mortality. *Vanitas vanitatvm, omnia vanitas sunt.*

In the final painting, however, only the nudes are left. Their formal aspect was a favourite of 1890s’ painting, memorably captured by Degas and Toulouse-Lautrec; it is the parade, the moment when the prostitutes of the house display themselves to the client and he picks one.

By leaving out the client, Picasso turns viewer into *voyeur*; the stares of the five girls are concentrated on whoever is looking at the painting. And by putting the viewer in the client’s sofa, Picasso transmits, with overwhelming force, the sexual anxiety which is the real subject of Les Demoiselles. The gaze of the women is interrogatory, or indifferent, or as remote as stone (the three faces on the left were, in fact, derived from archaic Iberian stone heads that Picasso had seen in the Louvre). Nothing about their expressions could be construed as welcoming, let alone coquettish. They are more like judges than houris. And so Les Demoiselles announces one of the recurrent subthemes of Picasso’s art: a fear, amounting to holy terror, of women. This fear was the psychic reality behind the image of Picasso the walking scrotum, the inexhaustible old stud of the Côte d’Azur, that was so devoutly cultivated by the press and his court from 1945 on. No painter ever put his anxiety about impotence and castration more plainly than Picasso did in Les Demoiselles, or projected it through a more violent dislocation of form. Even the melon, that sweet and pulpy fruit, looks like a weapon.

This combination of form and subject alarmed the few people who saw Les Demoiselles. Georges Braque was horrified by its ugliness and intensity – Picasso, he said, had been “drinking turpentine and spitting fire,” more like a carny performer than an artist – but in 1908 he painted a rather timid and laborious response to it. In Braque’s *Grand Nu* (plate 8), the brusque palm-frond hatching of Picasso’s faces is much softened; but from then on, Braque and Picasso would be locked in a partnership of questions and responses, “roped together like mountaineers,” as Braque memorably said. It was one of the great partnerships in the history of art: Picasso’s impetuous anxiety and astonishing power to realize sensation on canvas, married off to Braque’s sense of order, *mesure*, and visual propriety. Some ideas are too fundamental, and contain too great a cultural loading, to be the invention of one man. So it was with Cubism.

Picasso cleared the ground for Cubism, but it was Braque who did most to develop its vocabulary over the next two years, 1908–9. The fox, as Isaiah Berlin has said, knows many things, but the hedgehog knows one big thing. Picasso was the fox, the virtuoso. Braque was the hedgehog, and the one big thing he knew was Cézanne, with
8 Georges Braque  *Grand Nu* 1908
Oil on canvas 55 × 39 ins
Private Collection, Paris
9 Georges Braque *Houses at L’Estaque* 1908
Oil on canvas $28\frac{1}{2} \times 23$ ins Kunstmuseum, Berne, Hermann and Margrit Rupf Foundation

10 D. H. Kahnweiler *Photograph of Houses at L’Estaque* 1909
whom he identified almost to the point of obsession. He admired Cézanne, as he put it, for “sweeping painting clear of the idea of mastery.” He loved Cézanne’s doubt, his doggedness, his concentration on the truth of the motif, and his lack of eloquence. These, he knew, were expressed in the very structure of Cézanne’s paintings, with its accumulated fusing of little tilted facets. And so he wanted to see if that solidity of construction and ambiguity of reading could be pushed further while a painter remained in the actual presence of his motif; Braque was not yet interested in the abstractions of the studio, and he felt a need to be on the spot. Specifically, he needed Cézanne’s own motifs, and in the summer of 1908 he went off to paint in L’Estaque, in the South of France, where Cézanne had worked. His work there began as almost straight Cézanne. How it developed can best be seen by comparing a slightly later Estaque painting with a photo of the view Braque was painting: a country house seen over a bushy slope, with a tree sloping away to the left (plates 9, 10). Braque turned this simple motif into a curious play of ambiguities. Every scrap of detail is edited out of the view. One is left with an arrangement of prisms and triangles, child’s-block houses, the scale of which is hard to judge: relative size was one of the first casualties of the Cubist war against perspective. Despite the bush on the right, whose branches have taken on a sprightly, emblematic quality like palm-fronds, the rest of the landscape is static, almost mineralized. In his wish to see behind the tree on the left, Braque abolished its foliage and brought into view more houses, whose planes connect into the branches and trunk of the tree, immovably locking foreground and background in the top left quarter of the painting together. Yet the houses give no feeling of solidity; their shading is eccentric, and some of their corners—notably the one of the large house at the centre of the composition, closest to the eye—could be either sticking out of the canvas or pointing back into it. The Cubist “look,” of forms stacked up the canvas in a pile, as though the ground had rotated through 90 degrees to greet one’s eye, was now fully fixed in Braque’s work.

The second place to which Braque followed Cézanne was the village of La Roche-Guyon, in the Seine Valley some miles outside Paris. By coincidence or design, it gave him a landscape that embodied, ready-made in nature, the frontality towards which his art was moving. The valley in which La Roche-Guyon stands is lined with tall chalk cliffs, greyish-white and sown with flints. The town is built between the river and the cliffs, and its main building is a sixteenth-century castle—the château of the de la Rochefoucauld family. This castle is built up against the chalk cliff, and Braque made it his motif: that jumble of conical spires and triangular gables, vertically stacked. On top, there is a thirteenth-century Norman tower—the roche itself, a ruin in 1909, still deserted today, capping the view with a big strong cylinder. Braque first painted it from what is now the parking lot of the village hotel (plate 11). The face of the cliff blocked the perspective; the shapes of the castle ascended the hill already flattened, as it were, against the canvas. He then scrambled up the chalk bluff to the side and looked at the castle from an angle that gave him an even more complicated geometry of gables and turrets, cascading musically down into the valley (plate 12).

So could Braque have invented Cubism on his own? Quite possibly; but it would
11 Georges Braque  *Château de La Roche-Guyon* 1909
Oil on canvas 31 1/2 × 23 1/2 ins
Moderna Museet, Stockholm

12 Georges Braque  *La Roche-Guyon* 1909
Oil on canvas 36 × 28 1/2 ins
Van Abbemuseum, Eindhoven
have lacked the power and tension that Picasso brought to it. For Picasso, more than any other painter of the twentieth century – and certainly more than the conceptually inclined Braque – predicated his art on physical sensation. He had an unequaled ability to realize form: to make you feel the shape, the weight, the edginess, the silence of things. This is clear from his handling of a motif similar to Braque’s paintings at La Roche-Guyon. In 1909, Picasso went painting in northern Spain, in the village of Horta de Ebro. His canvas of The Factory, Horta de Ebro, 1909 (plate 13), has the grey impacted solidity of a galena crystal, and despite the irrationality of the shading – for the treatment of the buildings is very similar to Braque’s house at Estaque – one feels that the whole image could almost be picked, like sculpture, off the canvas, including the hills in the distance behind the palm trees. And indeed, within a few years Picasso would be turning this predilection into real sculpture, so commencing a parallel career as the most succinctly inventive sculptor of the twentieth century. His Cubist constructions of around 1912, such as the metal Guitar (plate 51), attest to Picasso’s extraordinary gift for thinking laterally, beyond the given categories. For the first time in the history of art, sculpture is conceived not as a solid mass (modelled clay, cast bronze, carved stone or wood), but as an open construction of planes. It is doubtful whether any single sculpture has ever had, by such deceptively humble means, a comparable effect on the course of its own medium. This rusty tin guitar is the point from which Russian Constructivism, via Tatlin, begins its course; in the West, it initiates a tradition which runs to David Smith and Anthony Caro, that of assembled, welded metal sculpture.

But in the meantime, the paintings of Braque and Picasso were moving rapidly towards abstraction – or rather, to that point where only enough signs of the real world remained to supply a tension between the reality outside the painting and the complicated meditations on visual language within the frame. As this happened, their styles moved together and became, at least to the casual eye, almost indistinguishable. (It goes without saying that close looking dispels this: there is a great deal of difference between the open, almost impressionistic brushmarks and gentle shading of Braque and Picasso’s tighter, harsher facture, jagged and compressed.) By 1911 they were painting like Siamese twins, as a comparison of two images of guitarists, Braque’s The Portuguese and Picasso’s “Ma Jolie,” will show (plates 15, 14). There is no way of reassembling a view from these paintings. Solid, apprehensible reality has vanished. They are metaphors of relativity and connection; in them, the world is imagined as a network of fleeting events, a twitching skin of nuances. Fragments of lettering (BAL, MA JOLIE, a bar bill reading 10.40, a musical clef) and clues to real things (the strings and sound-hole of the guitar in Braque’s Portuguese) materialize briefly in this flux, the way the backs of carp seen in a brown pond, flicking away from the surface, shimmer in the water. This stage of Cubism had something in common with the molecular view of the world that found its grandest modern realization in Seurat’s Grande Jatte and Monet’s waterlilies. But neither Picasso nor Braque was interested, as Monet supremely was, in the effects of light. Their paintings of 1911 have very little air in them, and the continuous vibration and twinkling of brush-strokes against the
13 Pablo Picasso  *The Factory, Horta de Ebro*  1909
Oil on canvas 20½ × 23½ ins
Hermitage, Leningrad (photo Giraudon)

14 Pablo Picasso  *Ma Folie*  Paris (winter 1911–12)
Oil on canvas 39½ × 25½ ins
Collection, The Museum of Modern Art, New York,
Acquired through the Lillie P. Bliss Bequest

15 Georges Braque  *The Portuguese*  1911
Oil on canvas 46½ × 32½ ins
Kunstmuseum, Basel (photo Giraudon)
13 Pablo Picasso *The Factory, Horta de Ebro* 1909
Oil on canvas 20½ x 23½ ins
Hermitage, Leningrad (photo Giraudon)

14 Pablo Picasso *Ma Jolie* Paris (winter 1911-12)
Oil on canvas 39½ x 25½ ins
Collection, The Museum of Modern Art, New York,
Acquired through the Lillie P. Bliss Bequest

15 Georges Braque *The Portuguese* 1911
Oil on canvas 46½ x 32½ ins
Kunstmuseum, Basle (photo Giraudon)
discontinuous geometry of their structure is set forth, not as light, but as a property of matter – that plasma, the colour of guitar backs, zinc bars, and smokers’ fingers, of which the Cubist world was composed.

No painter had ever produced more baffling images. As description of a fixed form, they are useless. But as a report on multiple meanings, on process, they are exquisite and inexhaustible: the world is set forth as a field of shifting relationships that includes the onlooker. Braque and Picasso were not mathematicians. There is nothing Euclidean about the “geometry” that underlies these works of 1911; to the extent that their broken lines and altering angles are geometrical at all, they represent a geometry of allusion, incompleteness, and frustration. Still less were they philosophers. But to study works like Braque’s *Soda*, 1911 (plate 16), is to sense that they, in the sphere of painting, are part of that great tide of modernist thought which included Einstein and the philosopher Alfred North Whitehead. “The misconception which has haunted philosophic literature throughout the centuries,” Whitehead wrote, “is the notion of independent existence. There is no such mode of existence. Every entity is only to be understood in terms of the way in which it is interwoven with the rest of the universe.” One would be surprised to learn that either Braque or Picasso had read these lines; nevertheless, they are a useful subtext to this phase of Cubism.

Painting could not have gone much further in this direction without shedding all clues to the real world. This, neither Braque nor Picasso wanted to do. “I paint forms as I think them, not as I see them,” Picasso once remarked, but he strenuously denied that he had ever painted an abstract picture in his life; the demands of sensuous reality were always too strong. So the next stage of Cubism recoiled from the abstractness of those paintings of 1911. Braque had already begun to stress the material density of his paintings with “ordinary,” non-art materials, mixed with the paint to produce a gritty, sandpapery surface – sand, sawdust, or iron filings. Characteristically, Picasso pushed this to an extreme by taking an identifiable slice of the real world, a piece of oilcloth printed with a design of caning and meant to cover a café table, and sticking it in one of his still-lives (plate 17). And so collage – “glueing” – was born. The idea of making a picture by cutting and pasting was not new. It had existed in folk art throughout the nineteenth century, and many middle-class nurseries had their decorative screens covered in cherubs, animals, flowers, and the like, cut from patterns and magazines. Picasso’s originality lay in introducing collage techniques into an easel painting. If he had used real chair-caning, the effect might not have been so startling. By using a printed image of caning, Picasso was placing a product of mass manufacture in the midst of its traditional opposite, the hand-made object. Real chair-caning was at least a craft product, and came from the same order of things as a painting. But the oilcloth in this still-life of 1912 opened art to the industrial present in a quite unprecedented way.

In linking Cubism back to the real world that it had almost quit in 1911, collage gave Picasso and Braque bolder and clearer shapes to play with; and these things were emblems of modernity based on industrial mass production – newsprint, product packaging, department store wallpaper, and so forth. Occasionally they were mildly
16 Georges Braque *Soda*
Spring 1911
Oil on canvas 14⅜ ins diameter
Collection, The Museum of Modern Art, New York, Acquired through the Lillie P. Bliss Bequest

17 Pablo Picasso *Still Life with Chair Caning* 1912
Collage 10¼ × 13¾ ins
Musée Picasso, Paris (photo Giraudon)
ironic allusions to a craft past that had been rendered less accessible by mechanization and the growing cost of labour: Braque, who had been a housepainter’s apprentice in Normandy, thus “quoted” the techniques of painting fake wood grain and imitation marble in his own paintings. Their paintings and collages now assumed a broader, more cogent, almost classical air; and in this they were joined by Juan Gris, in whom Cubism found its Piero della Francesca — a mind of the coolest analytical temper. Gris did not like to use found objects. They were too chancy for him; they could not possibly have the deductive finality of a painted shape, whose exact profile, hue, and tone had been arrived at through long reflection. Nevertheless, he saw the world of cheap production and mass production as a sort of Arcadia, a pastoral landscape that could be contained on the top of a studio table. A painting like Still-Life (Fantomas), 1915 (plate 18), is a veritable anthology of his predilections: the calm shifts between opacity and transparency in the overlapping planes, the catalogue of peintre-décorateur effects — wood grain, wallpaper dado, fake marble; the newspaper, the pipe, and the paperback thriller. With Gris’s desire to extract a measured poetry from ordinary modern things, one is again in the world of Apollinaire’s Zone:

You read handbills, catalogues, posters that shout out loud:
Here’s this morning’s poetry, and for prose you’ve got the newspapers,
Sixpenny detective novels full of cop stories,
Biographies of big shots, a thousand different titles,
Lettering on billboards and walls,
Doorplates and posters squawk like parrots.

Cubist Paris is receding today. It died even faster than Matisse’s Côte d’Azur, buried under high rises and drugstores, bulldozed flat to make way for Beaubourg and the Halles developments, the victim of sixties chic and the relentless kitsch-modernism of le style Pompidou. It is still there, only in pockets: the glass and iron city of small arcades, the marble city of café tables, the place of zinc bars, dominoes, dirty chessboards, and crumpled newspaper; the brown city of old paint and pipes and panelling; history to us now, but once the landscape of the modernist dream. It was an inward city, whose main product was reverie. Only one major Cubist wanted to make a public style of his work. He was Fernand Léger (1881–1955), and his work was a sustained confession of modernist hope. Léger believed, as one cannot imagine Braque doing, that he could make images of the machine age that would cut across the barriers of class and education — a didactic art for the man in the street, not highly refined, but clear, definite, pragmatic, and rooted in everyday experience.

Léger was the son of a Normandy farmer, an instinctive socialist who became a practising one in the trenches of World War I.

I found myself [he wrote of his military service] on a level with the whole of the French people; my new companions in the Engineer Corps were miners, navvies, workers in metal and wood. Among them I discovered the French people . . . their exact sense of useful realities, and of their timely application in the middle of the life-and-death drama into which we had been plunged. More than that: I found them poets, inventors of everyday poetic images — I am
18 Juan Gris  Fantomas  1915
Oil on canvas 23\(\frac{1}{2}\) \(\times\) 28\(\frac{1}{2}\) ins
National Gallery of Art, Washington DC, Chester Dale Fund
thinking of their colourful and adaptable use of slang. Once I had got my teeth into that sort of reality, I never let go of objects again.

He painted his fellow soldiers, in *The Cardplayers*, 1917 (plate 19), as though they were automata, made from tubes, barrels, and linkages; the forms of mechanized warfare – Léger confessed that his great visual epiphany in the trenches had been “the breech of a 75-millimetre gun in the sunlight, the magic of light on white metal” – are applied to the human body, and even the insignia and medals on these robots might as well be factory brands. It may all look more austere to us than it was meant to. What interested Léger about the machine was not its inhumanity – he was not a Kafka or a Fritz Lang – but its adaptability to systems, and this is the underlying theme of his grandest social image, *Three Women*, 1921 (plate 20). With its geometrically simplified bodies and furniture, as deliberate as an Alexandrine, it is one of the supreme didactic paintings of French classicism, embodying an idea of society-as-machine, bringing harmony and an end to loneliness. This philosophical harem, though dealing with a subject not unlike that of Picasso’s *Demoiselles*, is far from it in spirit. Instead of Picasso’s fragmented vision of *les belles dames sans merci*, we are offered a metaphor of human relationships working as smoothly as a clock, all passion sublimated, with the binding energy of desire transformed into rhymes of shape.

There were some artists to whom this mechanical age was more than a context, and very much more than a pretext. They wanted to explore its characteristic images of light, structure, and dynamism as subjects in their work. The most gifted of them in the École de Paris, and still the least appreciated today, was Robert Delaunay (1885–1941). For him, the master-image of culture was the Eiffel Tower, which he viewed with real ecstasy as an ecumenical object, the social condenser of a new age. He was not the only one to think so. The first regular radio broadcast system had been installed on the Tower in 1909—“*La tour à l’Univers s’adresse,*” Delaunay noted on his first study of it, dedicated to his wife and fellow painter Sonia Terk, in that year – and something of the spirit of Delaunay’s renderings of the structure finds its way into Vincente Huidobro’s *Eiffel Tower*, written in 1917 and dedicated to Delaunay:

Eiffel Tower
Guitar of the sky
Your wireless telegraphy
Draws words to you
As a rose-arbou draws bees

In the night the Seine
No longer flows
Telescope or bugle
Eiffel Tower

And a beehive of words
Or the night’s inkwell
At the dawn’s base
A spider with wire feet
Spins its web with clouds
19 Fernand Léger **The Cardplayers** 1917
Oil on canvas $50 \times 76$ ins
Kröller-Müller Museum, Otterlo

20 Fernand Léger **Three Women (Le Grand Déjeuner)** 1921
Oil on canvas $72 \frac{1}{2} \times 99$ ins: Collection, The Museum of Modern Art, New York, Mrs. Simon Guggenheim Fund
Do 
re 
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We are high up:
A bird calls
In the antennae
Of the wireless

It is the wind
The wind from Europe
The electric wind

Something of his spirit; but not all. For Delaunay avoided the pastoral imagery that colours Huidobro's lines: the rose-arbour, the beehive, the bird in the thicket of antennae. He wanted a pictorial speech that was entirely of this century, based on rapid interconnection, changing viewpoints, and an adoration of "good" technology, and the Tower was the supreme practical example of this in the daily life of Paris. His friend and collaborator, the poet Blaise Cendrars, remarked in 1924 that

No formula of art known up to now can pretend to give plastic resolution to the Eiffel Tower. Realism shrank it; the old laws of Italian perspective diminished it. The Tower rose over Paris, slender as a hatpin. When we retreated from it, it dominated Paris, stark and perpendicular. When we came close, it tilted and leaned over us. Seen from the first platform it corkscrewed around its own axis, and seen from the top it collapsed into itself, doing the splits, its neck pulled in . . . .

Delaunay must have painted the Tower thirty times, and he was almost the only artist to paint it at all – although it makes a modest appearance in an oil sketch by Seurat, and crops up now and again in the backgrounds of the Douanier Rousseau. *The Red Tower*, 1911–12 (plate 21), shows how fully Delaunay could realize the sensations of vertigo and visual shuttling that Cendrars described. The Tower is seen, almost literally, as a prophet of the future – its red figure, so reminiscent of a man, ramping among the silvery lead roofs of Paris and the distant puffballs of cloud. That vast grid rising over Paris with the sky reeling through it became his fundamental image of modernity: light seen through structure.

Delaunay extended this image into almost pure abstraction with a series of *Windows* – the sky seen through another kind of grid, an ordinary casement, with glimpses of the Tower appearing briefly to locate the scene in Paris. Guillaume Apollinaire illustrated these melting, lyrical images with words:

Raise the blind
And see how the window opens
21 Robert Delaunay  *The Red Tower*  1911–12
Oil on canvas $49 \frac{1}{2} \times 36$ ins
Solomon R. Guggenheim Museum, New York
If hands could weave light, this was done by spiders
Beauty pallor unfathomable indigos

From the red to the green all the yellow dies
Paris Vancouver Hyères Maintenon
New York and the West Indies
The window opens like an orange
The beautiful fruit of light.

For both Robert and Sonia Delaunay, the emblem of this "beautiful fruit," this suffusing energy that simultaneously irradiated all objects, was the disc. This was the basic unit of Robert Delaunay's ambitious allegory of modernity, his *Homage to Blériot, 1914* (plate 22). In it, all his favourite emblems of newness (Tower, radio telegraphy, aviation) are swept together into a paean to the man he called, significantly, *le grand Constructeur* – the great Constructor – a phrase meant to suggest not only that pioneer flyers had to scratch-build their craft but that a new conception of the world, a different network of ideas, was being assembled from their flights. By flying the Channel, Blériot had "constructed" a bridge more imposing than any physical structure could be. *Homage to Blériot* is almost a religious painting, an angelic conception of modernism, with its box-kite biplane floating past the Eiffel Tower in a glowing mandorla of colour and the smaller, Blériot-type monoplane rising to meet it, like a cherub; while the discs that stood for *luce intellettuale*, *pier d'amore* in Delaunay's symbolism become assimilated to the circles of aircraft propellers, radial engines, French air-force *cocardes*, and spiked wire wheels.

Nothing dates more visibly than images drawn from technology or fashion, and the fact that Delaunay's enthusiasm for the new embodied itself in objects now so obviously old reminds us of the age, almost the antiquity, of high early modernism. Museums, with their neutral white walls (the clean box is the Aleph of art history, containing all possibilities simultaneously) and their feeling of a perpetual present, tend to make art seem newer than it is. You have to pinch yourself to remember that when the paint was fresh on the Delaunays and Cubist Picassos, women wore hobble skirts and rode around in Panhards and Bedelias. That feeling of disjunction – the sense of the oldness of modern art – becomes acute when you reflect on the only major art movement (apart from *la pittura metafisica*, which was not so much a movement as the shortlived stylistic meeting of de Chirico and Carrà) that came out of Italy in the twentieth century.

Futurism was the invention of Filippo Tommaso Marinetti (1876–1944), part lyrical genius, part organ grinder, and, in later years, part Fascist demagogue. He was by his own account the most modern man in his own country. By any imaginable standards he was a singular creature, sired, as it were, by Gabriele d'Annunzio out of a turbine, inheriting the tireless and repetitive energy of the latter and the opportunistic dandyism of the former. For Marinetti was the first international *agent-provocateur* of modern art. His ideas affected the entire European avant-garde: not only in Italy, but as far afield as Russia, where the Futurist worship of the machine and
22 Robert Delaunay *Homage to Blériot* 1914
Oil on canvas 76½ x 50½ ins: Kunstmuseum, Basle, Emanuel Hoffmann Foundation (photo Hans Hinz)
its Promethean sense of technology as the solvent of all social ills became a central issue for the Constructivists after 1913, and as near as Switzerland, where the Futurist techniques of simultaneous sound-poems, nonsense verse, confrontation, and pamphleteering were incorporated into Dada during the war. Much of the myth of modern art was created by packaging, and Marinetti was an expert at packaging. He devised a scenario of confrontation in which every kind of human behaviour could eventually be seen as “art,” and in this way he became the Italian godfather of all later performance pieces, happenings, and actes gratuits. He proposed a film to be called Futurist Life, which would include such sequences as “How a Futurist sleeps,” and a “futurist stroll – study of new ways of walking,” featuring the “neutralist walk,” the “interventionist walk,” and the “Futurist march.” In 1917, he wrote sketches for one-act ballets in which a girl executed the “Dance of the Machine-Gun” and the “Dance of the Aviatrix.”

The danseuse must form a continual palpitation of blue veils. On her chest, like a flower, a large celluloid propeller . . . her face dead white under a white hat shaped like a monoplane . . . she will shake a sign printed in red: 300 meters — 3 spins — climb . . . The danseuse will heap up a lot of green cloth to simulate a green mountain, and then will leap over it.

He conceived a “Variety Theatre,” “born as we are from electricity . . . fed by swift actuality,” whose purpose would be to wrap the audience in a thunderous sensorium, “a theatre of amazement, record-breaking, and body-madness,” erotic and nihilist, whose hero would be “the type of the eccentric American, the impression that he gives of exciting grotesquerie, of frightening dynamism, his crude jokes, his enormous brutalities . . .” Such fantasies of absolute modernity would go deep into the stream of the avant-garde in the 1920s, affecting Francis Picabia, George Grosz, Vladimir Tatlin, John Heartfield, and, in fact, nearly everyone who was interested in projecting violent, ironic, and cinematic images of that great condenser of moral chaos, the City. Marinetti’s verbal images of it predict what collage would later do in the realm of the eye, summoning up a demented continuum of movement, noise, imperious ads, flashing lights at nightfall:

. . . nostalgic shadows besiege the city brilliant revival of streets that channel a smoky swarm of workers by day two horses (30 metres tall) rolling golden balls with their hoofs Gioconda purgative waters crisscross of terror terror Elevated terror terror overhead trombone whistle ambulance sirens and firetrucks transformation of the streets into splendid corridors to guide push logic necessity the crowd toward trepidation + laughter + music-hall uproar Folies-Bergeres Empire Crème-Eclipse tubes of mercury red red red blue violet huge letter-eels of gold purple diamond fire Futurist defiance to the weepy night . . .

Marinetti, The Variety Theatre, 1913.

Marinetti’s enemy was the past. He attacked history and memory with operatic zeal, and a wide range of objects and customs fell under his disapproval, from Giovanni Bellini altarpieces (old) to tango-teas (insufficiently sexy), from Wagner’s Parsifal (moonshine) to the ineradicable Italian love of pasta — which Marinetti condemned as passeisté in 1930, on the grounds that “it is heavy, brutalizing, and gross
... it induces scepticism and pessimism. Spaghetti is no food for fighters.” Even the image of the GIOCONDA PURGATIVE WATERS in the passage quoted above is proto-Dada, in which a brand name (the Mona Lisa has been used to advertise all sorts of products from Italian hairpins to Argentinian jam) is pressed into service to indicate that Leonardo’s portrait, along with the rest of the Renaissance, gives Marinetti the shits – this, six years before Marcel Duchamp’s scurrilous LHOOQ, the moustache on the Mona Lisa.

With every reason, Marinetti called himself la caffeina dell’Europa, “the caffeine of Europe.” The name “Futurism” was a brilliant choice, challenging but vague; it could stand for any anti-historical caper, but its central idea – trumpeted forth over and over again by Marinetti and his group – was that technology had created a new kind of man, a class of machine visionaries, composed of Marinetti and anyone else who wanted to join. The machine was about to redraw the cultural map of Europe (as indeed it was, though not in the way the Futurists hoped). Machinery was power; it was freedom from historical restraint. Perhaps the Futurists would not have loved the future so much if they did not come from a country as technologically backward as Italy. “Multicoloured billboards on the green of the fields, iron bridges that chain the hills together, surgical trains that pierce the blue belly of the mountains, enormous turbine pipes, new muscles of the earth, may you be praised by the Futurist poets, since you destroy the old sickly cooing sensitivity of the earth!” This would become the credo of every Italian property developer of the seventies, and the progressive destruction of the Italian countryside and the annihilation of Italy’s coastline are the prose expression of that Oedipal brutality whose poetry was Futurism.

Of all machines, the car was the most poetically charged. It formed the central image of the First Futurist Manifesto, published in Le Figaro in 1909:

We intend to sing the love of danger, the habit of energy and fearlessness.  
Courage, audacity and revolt will be essential ingredients of our poetry.  
We affirm that the world’s magnificence has been enriched by a new beauty; the beauty of speed. A racing car whose hood is adorned by great pipes, like serpents of explosive breath – a roaring car that seems to run on shrapnel – is more beautiful than the Victory of Samothrace.  
We will glorify war – the world’s only hygiene. . . .

We will sing of great crowds excited by work, by pleasure, and by riot; we will sing of the multicoloured, polyphonic tides of revolution in the modern capitals. . . .

The problem for the artists who gathered around Marinetti before World War I was how to translate this kind of vision into paint. The first possibility seemed to be the technique of breaking light and colour down into a field of stippled dots, which derived from French neo-Impressionism and had been worked into a system under the name of Divisionism by Italian painters in the nineties. Divisionism, for young artists of the Futurist temper, had two commendable features. First, it offered a means of analyzing energy and so skirting the inherent immobility of paint on canvas. Second, it was loaded (surprisingly enough) with political implications, being widely
regarded as the style of anarchists and social reformers. Paul Signac, Seurat’s closest follower, had been a committed, though non-violent, anarchist. For a painter at work in the 1900s in Italy, Divisionism was the radical styleailor excell. The most gifted of the young Futurist artists, Umberto Boccioni — soon to fall off his horse and die during a cavalry exercise in Verona in 1916, in the war that he and Marinetti had praised as the hygiene of civilization — resorted to it on a heroic scale in The City Rises, 1910–11 (plate 23), his paean of joy to industry and heavy construction. Boccioni had frequented the outskirts of Milan, where new industrial construction was in full swing: “I am nauseated by old walls and old palaces,” he wrote in 1907. “I want the new, the expressive, the formidable.” Formidable is the word for The City Rises, with its muscular red horse dissolving under the power of its own energy, in a shimmer of lambent brush-strokes; the straining cables and twisting, mannered figures of workmen contain more than a memory of its apparent source, Tintoretto’s Raising of the Cross in the Scuola di S. Marco, Venice.

But the problem of painting movement remained; and to solve it, the Futurists resorted to Cubism and to photography. They were intrigued by the new technique of X-ray photography, which saw through opaque bodies and so looked like Cubist transparency and overlap. But especially they drew on primitive cinematography, and on the sequential photos which had been taken in the 1880s by two pioneers, Eadweard Muybridge in England and Étienne-Jules Marey in France. By giving the successive positions of a figure on one plate, these images introduced time into space. The body left the memory of its passage in the air. Four centuries before, Leonardo had bought birds in the Florentine market and let them go in order to observe the beat of their wings close up for a few seconds. Now the cameras of Muybridge and Marey could describe this world of unseen movement; in fact, Marey went so far as to make what might now be seen as a precursor of Futurist sculpture, a bronze model of a bird’s successive wing positions — long since lost. Some of Giacomo Balla’s paintings were almost literal transcriptions of these photographs. Dynamism of a Dog on a Leash, 1912 (plate 24), was a glimpse of boulevard life, possibly derived from a photographic close-up, with a fashionable lady (or at least, her feet) trotting her dachshund — that low-slung, modern animal, the sports car of the dog world — along the pavement. Its modesty and humour were not to be repeated in the more ambitious paintings of moving cars that Balla made from 1913 (plate 25). In them, the boxy bug-eyed old cars — which seem so inappropriate to Marinetti’s Mr. Toad-like rantings about speed and cosmic power — are merged into a general imagery of rapid transit, of glints and spirals, perspectives with staccato interruptions, Cubist transparencies, and thrusting inexorable diagonals.

The spectator, Boccioni declared in one of the Futurist manifesti (1912), “must in future be placed in the centre of the picture,” exposed to the whole surrounding jabber of lines, planes, light, and noise that Futurism extracted from its motifs. This meant doing away with the painting as proscenium, “the small square of life artificially compressed.” Boccioni thus described the aims of one of his paintings, The Noise of the Street Penetrates the House, 1911:
23 Umberto Boccioni *The City Rises* 1910
Oil on canvas 6 ft 6\(\frac{1}{2}\) ins \(\times\) 9 ft 10\(\frac{1}{2}\) ins: Collection, The Museum of Modern Art, New York, Mrs. Simon Guggenheim Fund
26 Gino Severini *Dynamic Hieroglyphic of the Bal Tabarin* 1912
Oil on canvas with sequins 65 1/8 x 61 1/4 ins
Collection, The Museum of Modern Art, New York,
Acquired through the Lillie P. Bliss Bequest

24 Giacomo Balla *Dynamism of a Dog on a Leash* 1912
Oil on canvas 35 1/2 x 43 1/2 ins: Albright-Knox Gallery,
Buffalo, Bequest of A. Conger Goodyear

25 Giacomo Balla *Speeding Auto (Auto en course, étude de vitesse)* 1913
Oil on card 23 1/2 x 38 1/2 ins: Gallery of Modern Art, Milan
In painting a person on a balcony, seen from inside the room, we do not limit the scene to what the square frame of the window renders visible; but we try to render the sum total of visual sensations which the person on the balcony has experienced: the sunbathed crowd on the street, the double row of houses that stretch to right and left, the beflowered balconies, etc. This implies the simultaneousness of the environment and, therefore, the dislocation and dismemberment of objects, the scattering and fusion of details, freed from accepted logic.

That Futurism could not have realized itself without a Cubist vocabulary of "dislocation and dismemberment" is beyond doubt. Boccioni's leaning houses come straight from Delaunay's Eiffel Towers. But the difference between the emotional temperature of Cubism and Futurism was extreme, and one painting that sums it up is Gino Severini's *Dynamic Hieroglyphic of the Bal Tabarin, 1912* (plate 26), which is filled with a kind of louche frenzy.

Painted from memory in Italy, Severini's big canvas is not so much a scene as a node of associations, fragmentary but charged with intense evocative power. Severini attempted to set forth the jerky, swooping rhythms of Edwardian pop music in these jagged shapes – the nervous pink petticoats, the tossing wedges of purple skirt (each stiffly embroidered with sequins to catch the light), the crumpled face of a presumably drunk milord in monocle and boiled shirt, the snatches of lettering, the gay, twinkling national pennants (American, French, Japanese, and, of course, Italian) slung in the background, and the Boschian sexual joke of the naked girl, an otherwise unrecorded cabaret act at the Tabarin, descending on wires, sitting astride a huge pair of emasculating scissors. It all looks like a machine, slightly out of control: a *machine à plaisir*, reflecting the frenetic and marionette-like quality of public entertainment that other artists were beginning to discern in mass culture.

For by no means all European artists before World War I felt the simple optimism about the machine that the Futurists clung to. Some saw it as threatening and dehumanizing. The idea that man's creations could rise against him and eventually destroy him was one of the fundamental myths generated by the Industrial Revolution, and given early memorable form as fiction by Mary Shelley in *Frankenstein*, 1818. Almost a century later, it gave Jacob Epstein the idea for his Vorticist sculpture, *The Rock Drill, 1913–14* (plate 27): a sort of bronze arthropod, mounted on the legs and bit (or penis) of a pneumatic drill. "This," Epstein later wrote, "is the sinister armoured figure of today and tomorrow. Nothing human, only the terrible Frankenstein's monster into which we have transformed ourselves." Epstein never developed the possibilities of this image in other sculptures, and he performed a symbolic castration on *The Rock Drill* by discarding its machine section – legs, penis, and mechanical torso – and keeping only its thorax and masked head. Nevertheless, the analogies between machine action and sexuality were, around this time, being explored by two other artists, very distant in temperament from Epstein: Francis Picabia and Marcel Duchamp. Having been made by man, the machine had in their view become a perverse but substantially accurate self-portrait.

The machine, as Picabia put it in one of his titles (plate 28), was *La Fille Née Sans Mère, 1916–17*, the Daughter Born without a Mother – a modern counterpart to the
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28 Francis Picabia  *La Fille Née Sans Mère*  1916–17
Watercolour, metallic paint and oil on board 30 × 20 ins
Private Collection, London

29 Francis Picabia  *I See Again in Memory My Dear Udnie*  1914, perhaps begun 1913
Oil on canvas 8 ft 2½ ins × 6 ft 6½ ins
Collection, The Museum of Modern Art, New York, Hillman Periodicals Fund
myth of the Virgin Birth, in which Christ, the son, was born without a father. Machinery not only parodied the Virgin Birth but other attributes of Catholicism as well: the rituals of tending it, for instance, suggested a Mass. But its main field of mimicry was sex. There was already a powerful, though obscure, undercurrent of mechano-sexual images in French experimental writing. Thus Alfred Jarry (1873–1907), author of the Ubu trilogy, wrote a fantasy of mechanical power in 1902 in which the hero, Le Surrâle or Superman, wins an impossible race from Paris to Siberia, pedalling his bicycle non-stop against a five-seater cycle whose five riders have their legs all linked together with metal rods (a probable source for the mutually linked, mechanical Bachelors in Duchamp’s Large Glass). Both machines are racing against a locomotive. Le Surrâle wins both the race and the girl, daughter of an American industrialist, who is riding in the train. But he cannot love the girl; he is already too mechanical for that; and so a scientist builds Superman a fauteuil électrique, literally an electric chair, to inspire love in him by means of jolts from an immensely powerful magneto. (The electric chair had been brought into service in America in the late nineteenth century, and it was still an object of wonder and curiosity to the French: philosophy made concrete.) Strapped in, zapped by 11,000 volts, the Superman falls in love with the chair and the magneto falls in love with him. The mechanics of sex have prevailed over sentiment.

Picabia and Duchamp knew Jarry’s work intimately. Picabia was obsessed by machines, partly because their efficiency and predictability were in such soothing contrast to the neurotic vagaries of his own life, but mainly because he saw myth in them. In 1915, on a visit to New York, he declared that “upon coming to America it flashed on me that the genius of the modern world is in machinery and that through machinery art ought to find a most vivid expression . . . I mean simply to work on and on until I attain the pinnacle of mechanical symbolism.” Picabia wanted to laugh the idea of traditional painting to death: he even exhibited a stuffed monkey labelled Portrait of Cézanne, Portrait of Rembrandt, Portrait of Renoir — but painting was the only objective outlet he could find for his machine fantasies. (The subjective one was ostentatious consumption of machines. Picabia was rich and owned, at one time or another, scores of cars and at least a dozen yachts, as though he were trying to convert himself into a mechanical centaur. He even had a racing car installed on top of a tower he owned in the South of France, and attached the chassis to a radial arm, so that he could whiz round and round like a man in a centrifuge, admiring the landscape.)

In 1914, Picabia painted a large image of a sexual encounter he had had on a transatlantic liner with a ballet dancer named Udnie Napierkowska, called I See Again in Memory My Dear Udnie (plate 29). In it, the memory of sexual pleasure, expressed in the blossoming, petal-like forms, is inextricably fused with machine symbolism, and its proper subtext was written by the novelist Joris Huysmans in Là-Bas, 1891: “Look at the machine, the play of pistons in the cylinders: they are steel Roméos inside cast-iron Juliets. The ways of human expression are in no way different to the back-and-forth of our machines. This is a law to which one must pay homage, unless one is either impotent or a saint.”
Picabia was neither: he had, as little Alex in *A Clockwork Orange* would say, a flair for the old in-out. Mechanical sex, mechanical self. No wonder Picabia's machine-portraits still look so very sardonic. A large gear is labelled *man*, a small one *woman*; by the inexorable meshing of cogs, one dictates the movement of the other. The machine is amoral. It can only act; it cannot reflect. Nobody wants to be compared to a mechanical slave. In order to realize the shock value of Picabia's images, in all their debunking and elliptical cynicism, one needs to see them in the context of a vanished society. Today there is nothing about sex that cannot be said or represented; the public is all but shockproof. In Picabia's time, however, it was not. Most sexual imagery outside plain pornography (which, by definition, was not "art") was based on the vaguest kind of "natural" metaphors—butterflies, grottoes, moss, and so forth. Victorian pornography had been the first kind of discourse to assimilate the imagery of the Industrial Revolution to the description of sex. "Believe me," exclaims the narrator of *The Lustful Turk* by "Emily Barlow," "I had not now the power to resist the soft pleasure he now caused me to taste by the sweet to-and-fro friction of his voluptuous engine... that terrible machine which had so furiously agitated me with pain." Machines were the ideal metaphor for that central pornographic fantasy of the nineteenth century, rape followed by gratitude. But to bring machines into the realm of art was another thing, and Picabia's effort to set forth human relationships as mechanical processes, with its sardonic accompanying imagery of poking, stiffness, reciprocation, cylindricality, thrusting, and, above all, "meaningless" repetition, was very daring.

The definitive mechano-sexual metaphor, however, was created by Marcel Duchamp (1887–1968). In the years before he gave up the public production of art in favour of chess (and the secret construction of his last work, *Étant Données*, 1946–66), Duchamp ran variations on the available styles of the French avant-garde, without contributing much to them: his Fauve works are clumsy and derivative, his Cubist paintings not much more than formal exercise. His celebrated *Nude Descending a Staircase No. 2*, 1912 (plate 30), based on Marey's sequential photos, is no more advanced as either idea or form than any other Cubo-Futurist painting of the time, and if it had not been the passive focus of the public hoo-ha over the Armory Show in New York in 1913 (where it became the butt of cartoonists and was guyed as "an explosion in a shingle factory"), it might never have been thought one of the canonical images of modernism. But it did open the way to the *Large Glass*, or, to give it its full name, *The Bride Stripped Bare by Her Bachelors, Even*, which Duchamp worked on for eight years and left unfinished in 1923 (plate 31).

One might suppose, from reading what has been written about it, that the *Large Glass* was the Grand Arcanum of modern art: it may be that no single work in the entire history of painting has evoked more cant, jargon, gibberish, and Jungian psycho-babble from its interpreters. Manifestly, the *Glass* must be a rich field for interpretation, because nothing on its surface is accidental (apart from the accepted accidents, like the dust that Duchamp allowed to accumulate there and then preserved with fixative, or the network of cracks that appeared in the twin panes after a trucking accident).
accident). Everything is there because Duchamp wanted, or put, it there. "There was nothing spontaneous about it," he remarked in 1966, "which of course is a great objection on the part of aestheticians. They want the subconscious to speak by itself. I don't. I don't care. So the Glass was the opposite of all that."

So what is the Glass? A machine: or rather, a project for an unfinished contraption that could never be built because its use was never fully clear, and because (in turn) it parodies the language and the forms of science without the slightest regard for scientific probability, sequence, cause and effect. The Large Glass, carefully painted and outlined in lead wire on its transparent panes, looks explicit. But if an engineer were to use it as a blueprint he would be in deep trouble since, from the viewpoint of technical systems, it is simply absurd: a highbrow version of the popular "impossible machines" that were being drawn, at the time, by Rube Goldberg. The notes Duchamp left to go with it, collected out of order in the Green Box, are the most scrambled instruction manual imaginable. But they are deliberately scrambled. For instance, he talked about the machine in the Glass running on a mythical fuel of his own invention called "Love Gasoline," which passed through "filters" into "feeble cylinders" and activated a "desire motor" – none of which would have made much sense to Henry Ford. But the Large Glass is a meta-machine; its aim is to take one away from the real world of machinery into the parallel world of allegory. In the top half of the Glass, the naked Bride perpetually disrobes herself; in the bottom section, the poor little Bachelors, depicted as empty jackets and uniforms, are just as perpetually grinding away, signalling their frustration to the girl above them. It is a sardonic parody of the eternally fixed desire Keats described in his Ode on a Grecian Urn—

Bold Lover, never, never canst thou kiss,
Though winning near the goal – yet, do not grieve;
She cannot fade, though thou hast not thy bliss,
For ever wilt thou love, and she be fair!

In fact, the Large Glass is an allegory of Profane Love – which, Marcel Duchamp presciently saw, would be the only sort left in the twentieth century. Its basic text was written by Sigmund Freud in The Interpretation of Dreams, 1900: "The imposing mechanism of the male sexual apparatus lends itself to symbolization by every sort of indescribably complicated machinery." But to Duchamp, who had reason to know, the male mechanism of the Large Glass was not a bit imposing. The Bachelors are mere uniforms, like marionettes. According to Duchamp's notes, they try to indicate their desire to the Bride by concertedly making the Chocolate Grinder turn, so that it grinds out an imaginary milky stuff like semen. This squirts up through the rings, but cannot get into the Bride's half of the Glass because of the prophylactic bar that separates the panes. And so the Bride is condemned always to tease, while the Bachelors' fate is endless masturbation.

In one sense the Large Glass is a glimpse into Hell, a peculiarly modernist Hell of repetition and loneliness. But it is also possible to see it as a declaration of freedom, if one remembers the crushing taboos against masturbation that were in force when

31 Marcel Duchamp The Bride Stripped Bare by Her Bachelors, Even (Large Glass) 1915–23
Oil and lead wire on glass 109 ¼ x 69 ins
Philadelphia Museum of Art, Bequest of Katherine S. Dreier
Duchamp was young. For all its drawbacks, onanism was the one kind of sex that could not be controlled by the State or the Parent. It freed people from the obligation to be grateful to someone else for their pleasures. It was a symbol of revolt against the family and its authority. Its sterile and gratuitous functioning has made it a key image for an avant-garde that tended, increasingly, towards narcissism. “Frigid people really make it,” remarked Andy Warhol, the Dali of the seventies. So did this frigid work of art. The Large Glass is a free machine, or at least a defiant machine; but it was also a sad machine, a testament to indifference – that state of mind of which Duchamp was the master. Indeed, his finely balanced indifference was the divide between the late machine age and the time in which we live. The Large Glass was very remote from the optimism that accompanied the belief that art still had the power to articulate the plenitude of life, with which greater artists but less sophisticated men than Duchamp greeted the machine in those lost days before World War I. “When I looked at the earth,” Gertrude Stein recalled of her first flight in an aircraft,

...all the lines of cubism made at a time when not any painter had ever gone up in an airplane. I saw there on the earth the mingling lines of Picasso, coming and going, developing and destroying themselves, I saw the simple solutions of Braque, yes I saw and once more I knew that a creator is contemporary, he understands what is contemporary when the contemporaries do not yet know it, but he is contemporary and as the twentieth century is a century which sees the earth as no-one has ever seen it, the earth has a splendor that it never has had, and as everything destroys itself in the twentieth century and nothing continues, so then the twentieth century has a splendor which is its own.

That splendour of the new age would soon be less evident. After 1914, machinery was turned on its inventors and their children. After forty years of continuous peace in Europe, the worst war in history cancelled the faith in good technology, the benevolent machine. The myth of the Future went into shock, and European art moved into its years of irony, disgust, and protest.