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Picasso At The Lapin Agile

"I am only a public entertainer who has understood his time."

-Pablo Picasso (remark).

he time is 1904 and the place is the Lapin Agile (Nimble Rabbit), a celebrated artists' hangout in the Montmartre section of Paris. This is the story of the imaginary meeting of the budding artistic and scientific geniuses Picasso and Einstein who are shortly to

beautiful thing we can is the mysterious. It is the source of all true art and science."

> —Albert Einstein What I Believe 1930

"The most jump-start the 20th century with their new ways of perceiving the world. These two characters are surrounded by a group of more or less ordinary mortals: Freddy, café owner and the bartender; *experience* Germaine, his lover and waitress; Sagot, an eccentric art dealer; Gaston, an aging Lothario; three female admirers and one Schmendiman, a quasiinventor who believes he will be the century's celebrity.

The debate is about everything: beauty, sex, women, relationships, but mostly about the kinship between art and science and the peculiarity of genius. In the midst of the one-liners, puns, and a host of verbal pratfalls, the scientist and artist come to agree that they're both governed by aesthetic laws. Picasso



and Einstein find a common bond in the realization that they are part of, and even key to, a future that could be full of possibility and promise. The play is a fantasy meeting of the minds that is full of fun—and philosophy. ■



THE PLAYWRIGHT STEVE MARTIN

teve Martin, one of the most versatile performers in the motion picture industry today, has been successful not only as an actor, but also as a writer of and performer in some of the most popular movies in recent years.

Born in Waco, Texas in 1945 and raised in Southern California, Mr. Martin became a television writer in the late 1960s, winning an Emmy Award for his work on "The Smother's Brothers Comedy Hour." By the end of the decade, he was performing his own material in clubs and on television. Launched by frequent appearances on Johnny Carson's "Tonight Show," Mr. Martin went on to host several shows in the "Saturday Night Live" series and to star in and co-write four highly rated TV specials.

His first film project, *The Absent-Minded Waiter*, a short he wrote and starred in, was nominated for an Academy Award. In 1979, he moved into feature films, cowriting and starring in *The Jerk*. He also co-wrote and starred in the send-up of detective thrillers, *Dead Men Don't Wear Plaid* and the science fiction comedy, *The Man with Two Brains*. Other movies have included *All of Me, Little Shop of*

Horrors, Roxanne, Planes, Trains and Automobiles, Parenthood, L. A. Story, Father of the Bride and his most recent, The Spanish

Prisoner. The movie critic, Pauline Kael, praised him as having the "skills of W.C. Fields and Buster Keaton, with some Fred Astaire mingled in."¹ Besides being a thinking man's comedian, he is also a self-proclaimed scientific nerd, art collector and connoisseur of world classics.

In the fall of 1993, Mr. Martin's first play,



"Picasso really did hang out in a Paris bistro called the Lapin Agile, but that is the only factual thing about the story. The rest is a big lie, and I wish you wouldn't tell anyone."

> —Steve Martin, National Public Radio, Morning Edition, 11-09-93.

> > puter, the two worlds meshed and *Picasso at the Lapin Agile* was conceived.

"[The play] is about the romance of early modern ideas, refracted through the atmosphere of all the intervening years: the end of the 20th century looking back, wonderingly, at its beginning."³

Picasso at the Lapin Agile, was presented by Chicago's Steppenwolf Theatre where it inaugurated the facility's new third floor Studio Theater. Following the run in Chicago, the play was presented successfully in Boston and Los Angeles and played off Broadway in New York at the Promenade Theatre. In an interview on National Public Radio in November, 1993, Mr. Martin discussed how he came to write the play. He felt he had said what he wanted to say in comic performing, so he forced himself to think about comedy and how it could be approached in a different manner. He decided that stage plays can explore ideas in the ways that movies cannot, so though he will continue to act in films, he'll write for the stage. "Better ideas come out of me here than ever on a screenplay. In a play, you can digress, you can spend 10 minutes on a monoloque....You can say the strange thing....and people think about it. And as long as it does have a meaning, there's rewards afterwards for the audience."2 After viewing a Picasso masterpiece at the Metropolitan Museum of Art and coincidentally downloading Einstein's biography on his com-

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THE PEOPLE, PLACES AND THE TIME

MONTMARTRE

is a section of Paris located on the Right Bank a mile and a half from the Louvre Museum. It is built on a steep butte or hill, which was the site of a Roman temple dedicated to Mercury or Mars in the eighth century. Its name is derived in part from the temple and from the legends of local martyrs such as St. Denis, Rusticus the Priest and the deacon Eleutherius who were tortured and decapitated there around 250 AD (hence, Mons Martyrium).

Throughout the 19th century, artists and men of letters were drawn to the free and easy lifestyle as lived on the Butte. The composer Berlioz and the writers and poets Nerval, Maurger and Heine were the precursors of the 1871-1914 generation which included Andre Gill, Toulouse-Lautrec, Amedeo Modigliani and Maurice Utrillo, among others.

Today street artists thrive predominantly on the tourist trade, but much of the area still preserves a pre-war village atmosphere. Notable landmarks in the district include: the Sacre-Coeur, a neo-Romanesque church begun in 1870; St. Pierre De Montmartre, a Parisian church with origins in the sixth century; and the Place Pigalle, hang-out of tourists, artistic types and party-seekers. It is the ultimate of "La Vie Boheme."

THE LAPIN AGILE

was founded in 1860 and is still operating. It is housed in a small cottage behind a row of trees in Montmartre. Formerly known as the "Cabaret des Assassins," its current name is a pun, derived from a sign painted by the humorist Andre Gill. His painting of a rabbit escaping from a pot was originally Lapin (rabbit) a Gill—painted by Gill as if in a sauce by Gill. Later the name was modified to be Lapin Agile (the nimble rabbit).

GERMAINE

the waitress, was in real life an attractive artist's model in Paris. Originally, her name was Laura Gargallo. As a teenager, she married a sculptor named Florentin and became Germaine Florentin. Her marriage was short lived and at about the age of 19, she befriended Picasso and his friend, Carlos Casagemas. Casagemas fell madly in love with her, so madly that he shot her at a dinner party and then turned the gun on himself. While she was only slightly wounded, Casagemas died almost immediately.

Picasso painted Germaine into a number of pictures. She appears in *Woman with a Shawl* (1902), as the woman clinging to the male figure in *La Vie* (1904) and in *The Three Dancers* (1925).

FREDDY

or Frede, was the proprietor of the Lapin Agile. He worked under the famous cabaret owner, Aristide Bruant, whom Toulouse-Lautrec painted. In 1905, Picasso gave Frede his painting *At the Lapin Agile* to hang in the café. In it Picasso is Harlequin, Germaine is his companion and Frede plays the guitar.

SAGOT

was Clovis Sagot, an art dealer who introduced Picasso to the wealthy art patrons, Gertrude Stein and her brother Leo in 1905. They bought several of his paintings and Picasso became a frequent visitor at the Steins' salon. Picasso painted portraits of Leo and his nephew Allan, as well as the very famous one of Gertrude, which currently hangs in the Metropolitan Museum of Art in New York City.

PABLO PICASSO

"Nature and art are two different things. In art we express our conception of what is not visible in nature."

—Pablo Picasso

ablo Picasso was arguably the most famous artist of the 20th century. During his artistic career, which lasted more than 75 years, he created thousands of works and employed a variety of materials. His works include not only paintings but sculptures, prints and ceramics. He almost single-handedly created what we think of as modern art and he changed it more profoundly than any other artist of this century.

Picasso was born on October 25, 1881, in Malaga, Spain, to artist José Ruiz and Maria Picasso. Rather than adopt the common name of Ruiz, the young man took the rarer name of his mother. At 14 years of age, this artist prodigy completed the one-month qualifying examination of the Academy of Fine Arts in Barcelona in one day. From there he went to the Academy of San Fernando in Madrid, returning in 1900 to Barcelona, where he frequented the city's famous café of intellectuals and artists, Els Quatre Gats (The Four Cats), a Catalan colloquialism meaning only a few people.

The years of 1901 to 1904, known as Picasso's "blue period" because of the blue tonality of his paintings, were a time of frequent changes of residence between Barcelona and Paris. During this time, he would spend his days in Paris studying the masterworks at the Louvre and his nights enjoying the company of fellow artists at cabarets like the Lapin <u>Aqile.</u>

he years 1905 and 1906 marked a radical change in color and mood for Picasso. He became fascinated with the acrobats, clowns and wandering families of the circus world. He started to paint in subtle pinks and grays, often highlighted with brighter tones. This was known as his "rose period."

In 1907, Picasso painted *Les Demoiselles d'Avignon*, considered the watershed picture of the 20th century. He also met Georges Braque, the other leading figure of the Cubist movement. Cubism was the creation of both Picasso and Braque and from 1911 to 1913; the two men were in frequent contact. However, Picasso continued to develop his art at such a pace and with so much vitality that he encompassed several movements and cultural changes within the 20th century. And each change embodied a radical new idea.

For Picasso the 1920s were years of rich artistic exploration and great productivity. Picasso designed theatre sets and painted in Cubist, Classical and Surreal modes. From 1929 to 1931, he pioneered wrought iron sculpture with his old friend Julio Gonzalez. In the early 1930s, Picasso created a large quantity of graphic illustrations.

n late April of 1937, the world learned the shocking news of the saturation bombing of the civilian target of

■ Guernica, Spain by the Nazi Luftwaffe. Picasso expressed his horror with the great anti-war painting, *Guernica*. During World War II, Picasso lived in Paris, where he produced ceramics. After the war, he pursued new methods of lithography. The 1950s saw the beginning of a number of large retrospective exhibits of his works. During this time Picasso began to paint a series of works conceived as free variations on old master paintings.

In the 1960s, he produced a monumental 50-foot sculpture for the Chicago Civic Center. In 1970, he donated more than 800 of his works to the Berenguer de Aguilar Palace Museum in Barcelona.

Pablo Picasso died on April 8, 1973 in Mougins, France at the age of 91. "Drink to me" were his last words. ■

ALBERT EINSTEIN

Libert Einstein was probably the most famous scientist of the 20th century. He revolutionized and reshaped scientific thinking in the modern world and is acknowledged as the greatest theoretical physicist who ever lived. Best known as the creator of the Theory of Relativity, Einstein would still rank among the greatest scientists for his part in the emergence of quantum mechanics, for his contribution to statistical physics and for his role as a philosopher of science and as a humanitarian. Indeed, his 1921 Nobel Prize was awarded not for Relativity, but for his theory of the Photoelectric Effect.

Albert was born on March 14, 1879, to middleclass Jewish parents in Ulm, Germany. He disliked school because of the mindless drilling that prevailed and preferred to stay at home reading books of geometry and popular science. At the age of 12, these studies came into conflict with his deep religious feelings when he realized that the Bible might not be literally true. To that shocking revelation, he ascribed his lifelong distrust of authority. It may also have contributed to the ease with which he was able to discard long-standing scientific beliefs.

In 1900, he graduated from the Polytechnic Institute of Zurich, Switzerland. Failing to obtain a university assistantship, he was eventually hired by the Swiss Patent Office as a Probability Technical Expert, Third Class. Though he considered each patent application with great care, the work left him with enough time to think and develop the ideas with which his mind was teeming.

The year 1905 saw a flowering of Einstein's creativity and with it, a turning point in the history of physics.

"Imagination is more important than knowledge."

-Albert Einstein, On Science

Space and time would never again be the same (Relativity); the quantum was made respectable (Photoelectric Effect); the atom likewise (Brownian motion); and mass was recognized as a form of energy $(E = mc^2)$. Yet these revolutionary ideas were slow to be accepted by the scientific community, which forced

Einstein to continue working at the patent office until 1909 when he secured an associate professorship at the University of Zurich. From Zurich, he went to spend a year at the German University of Prague and two more years at the Zurich Polytechnic Institute before settling in Berlin in 1914 as a professor at the university and later director of the new Kaiser Wilhelm Institute of Physics.

Beginning in the late 1920s, Einstein tried to combine electromagnetic and gravitational phenomena in a single theory called the Unified Field Theory. Though he spent the rest of his life working on it, he was never able to establish sufficient proof.

In 1933, while Einstein was visiting England and the United States, the Nazi government of Germany took his property and deprived him of his position and his citizenship. Einstein then moved permanently to the United States where he became a member of the newly

"The end comes sometime: Does it matter when?"

-Albert Einstein

created Institute for Advanced Study at Princeton $U\underline{n}iversity. \label{eq:study}$

n 1939, the pacifist Einstein—fearful of Hitler's progress in building an atom bomb—urged President Franklin D. Roosevelt in a now famous letter to engage the United States in uranium research. That Germany, after all, did not develop the bomb and that the first one would fall on Japan could not be foreseen. After the war, Einstein never ceased to work for peace and disarmament.

Although he was not associated with any orthodox religion, Einstein felt that belief in a personal God was too specific a concept to be applicable to the Being at work in this universe, but he never believed that the universe was one of chance or chaos. The universe to him was one of law and order. He once said, "God may be sophisticated, but He is not malicious."

He died peacefully on April 18, 1955 at the age of 76. \blacksquare

THE CONTRIBUTIONS OF EINSTEIN AND PICASSO

n 1905, Einstein published a paper entitled "Does the Inertia of a Body Depend on its Energy Content?" It was in this paper that Einstein presented his famous equation $E = mc^2$ (energy equals mass times the velocity of light squared). When the two masses meet, they would explode into radiation. In 1938, 33 years after Einstein's paper, the discovery of nuclear fission in Lise Meitner's laboratory in Berlin would show how mass could be deliberately converted

not affected by what happened in it. But in 1916, Einstein published his paper on the General Theory of Relativity in which space and time are now dynamic quantities; when a body moves, or a force acts, it affects the curvature of space and time—and in turn the structure of space and time affects the way in which bodies move and forces act. Space and time not only affect, but also are affected by everything that happens in the universe. Stephen Hawking says "this new under-

"Make everything as simple as possible, but not simpler." tionize our view of the uni-

—Albert Einstein

to energy in microgram quantities. In 1942, during World War II, experiments by Enrico Fermi and Leo Szilard confirmed that a self-sustaining chain reaction would produce enough energy to annihilate a city. Szilard's fear was that Germany would develop an atomic bomb first, so he composed a letter that Einstein signed urging President Roosevelt to develop an atom bomb, as well as to fund research in the development of nuclear energy.

In another paper written in 1905, Einstein wrote that when "quanta" (tiny definite units) of light energy strike metal, they force it to release electrons. These electrons form an electric current, as in a photoelectric cell. This helped justify the quantum theory and explained the photoelectric effect in a way that could not be done while scientists assumed that light travels only in waves. One result of this work was the photoelectric cell or "electric eye," which made possible motion pictures with sound, TV and many other inventions.

A third paper of 1905 concerned the Brownian movement, an irregular motion of ultramicroscopic particles suspended in liquid or gas. It confirmed the atomic theory of matter. Before 1915, space and time were thought of as a fixed arena in which events took place, but which was

standing of space and time was to revoluverse."4 The old idea of an essentiallv

unchanging universe was replaced by a notion of a dynamic, expanding universe that seemed to have begun a finite time ago and might end at a finite time in the future. "Roger Penrose and I showed that Einstein's General Theory of Relativity implied that the universe must have a beginning, and possibly, an end."⁵

While Einstein's best work was done before he was 40, Picasso continued to be an innovator beyond the age of 90. Because his art from the time of the Les Demoiselles D'Avignon was radical in nature and he responded to changing moods and conditions so rapidly, virtually no 20th century artist escaped his influe<u>nc</u>e.

n association with Georges Brague, Picasso began experimenting with Cubism, an accentuation and description of planes. The great Cubist pictures were meditations on the intrinsic character of detached facets and contours, out of which almost unidentifiable images were produced. Called Analytical Cubism, the objects were not so much depicted as denoted by linear signs; i.e., a spiral for the scrolled head of a violin or a trademark from a label that was superimposed on the shifting shapes. This kind of art had a profound effect not only on painting and sculpture, but also on the intellectual climate of the age.

Then the Cubists began to insert real

material from the actual world within the pictures. This included stencilled lettering, pasted paper and solid objects. This assemblage of material called "collage" led to Synthetic Cubism in 1912. The textured and patterned planes were composed into forms more like pictorial objects. In Picasso's collages, he hoped to break down the distinction between art and non-art and make the viewer rethink his or her relationship to art.

The identity of a work of art as a thing in itself was on its way to recognition when World War I began. The disorientation and disillusion of the time was reflected in the movement called Dada. which owed much to the Cubists. They felt the need to "shock the bourgeois" and claimed that anything was a work of art if the artist proclaimed it so. Thus, wine racks and toilet seats were submitted to exhibitions. Similarly, the Dadaists explored such elements as incongruity and disassociation, a process that led the way to Surrealism.

he word Surrealism was coined by Guillaume Appolinaire when he saw the sets that Picasso had painted for the ballet Parade by Erik Satie. A common feature was the combining of the fantastic and irrational, the nightmare and imagination. Surrealism achieved a kind of "fantastic realism" —a prosaic rendering of the forms from dreams that found its apex in the works of Yves Tanguy, Salvador Dali and Rene Magritte.

In the years after 1918, a mood of classical consolidation affected some painters and art became a matter of expression. Expressionism, as it was called, showed extreme distortion by some painters and pictorial fancy in others. There is an emotional quality to these works and in Picasso's case, a political statement. With his powerful Guernica, he responded with horror to the Nazi bombing of a Spanish village.

In later years Picasso turned toward the history of art for his themes and created variations on the works of earlier artists. Because he had become a sort of myth, his work moved beyond criticism.

LES DEMOISELLES D'AVIGNON

es Demoiselles D'Avignon, painted in 1907, is a landmark in art. The picture marks a decisive break with traditional notions of beauty and harmony. Five huge female figures pose in a convulsive, jagged array—distorted, shaken and savagely transincluding a sailor in the act of rolling a cigarette. The faces show the influence of primitive art on Picasso: the eyes are large and staring, the noses flattened, the ears seen frontally and a twisting motion of the bodies. On the right side of the canvas, the hatching and disassoci-

"Look closely at Picasso's great figures. Everything moves. I might call this a kind of cinemascope."

-Edouard Pignon

formed. Picasso was not looking for beauty, but a means to understanding his own time—and the future.

The subject of the painting is a brothel parlor and the Avignon referred to is an alley of ill repute in Barcelona close to where Picasso lived. There were seven figures in the original composition, five women and two men, ated flat planes create a feeling of tension, which conflicts with the pose of the main figures, creating a sense of movement and power. Tension is also caused by breaks in the outline of the figures.

What was so disturbing about this picture in the early 20th century was the fact that Picasso had attacked the human figure and discarded the representation of man/woman made in the image or likeness of God. Picasso affirmed that the age of science had arrived, and in order to represent physical phenomena correctly, scientists (and artists) had to disregard physical appearance and break

with perceptions of the past. "The fact remains that the generally accepted vision of the world was convulsed simultaneously both by physics and by modern painting; a physicist of 27 and a painter of 25 both found courage to oppose ideas which were so solidly established....."

Notes

1. Gopnik, p. 100 2. Martin, National Public Radio Morning Edition, Nov. 9, 1993 3. Gopnik, p. 106 4. Hawking, p. 33 5. Hawking, p. 34 6. Daix, p. 68 7. Gardner, p. 6 8. Gardner, p. 140 9. Gardner, p. 103 10. Gardner, Frames of Mind, p. 148 11. Frank, p. 4812. Gardner, p. 157 12. Gardner, p.157 13. Daix, p. 244

Sources

Daix, Pierre. Picasso. New York: Frederick A. Praeger, 1965 Encyclopedia Britannica. "The History of Art." 1992 Everdell, William R. The First Moderns. Chicago: The University of Chicago Press, 1997 Eyewitness Travel Guide. France. London: Dorling-Kendersley, 1997 Frank, Phillip. Einstein: His Life and Times. New York: Alfred A. Knopf, 1947 Gardner, Howard. Creating

Minds. New York: Basic Books, 1993 Gardner, Howard. Frames of Mind. New York: Basic Books, 1983 Guide Michelin. Paris. 1998 Gopnik, Adam. "Steve Martin: the Late Period." The New Yorker. November 29, 1996 Hawking, Stephen. A Brief History of Time. New York: Bantam Books, 1990 Martin, Steve. Picasso at the Lapin Agile, website, 1997-1998

Rubin, William, ed. Pablo Picasso: a Retrospective. New York: Museum of Modern Art, 1980 World Book Encyclopedia. Vol. 6. "Albert Einstein." Chicago: Field Enterprises Educational Corporation, 1979 World Wide Web Site Directory. Albert Einstein. 1997

THE NATURE OF CREATIVITY OF EINSTEIN AND PICASSO

PICASSO: So you're saying you bring a beautiful idea into being? **EINSTEIN:** Yes. We create a system and see if the facts can fit it.

PICASSO: So you're not just describing the world as it is? **EINSTEIN:** No! We are creating a new way of looking at the world! **PICASSO:** So you're saying you dream the impossible and put it into effect?

EINSTEIN: Exactly. PICASSO: Brother! EINSTEIN: Brother!

—Steve Martin, Picasso at the Lapin Agile, p. 49

n his book, Creating Minds: an Anatomy of Creativity Seen Through the Lives of Freud, Einstein, Picasso, Stravinsky, T. S. Eliot, Martha Graham, and Gandhi, Howard Gardner "illuminates the nature of these individuals' intellectual capacities, personality configurations, social arrangements, and creative agen-

das, struggles, and accomplishments."⁷ He looks for patterns, both similarities and differences, by organizing his book around three elements: 1) the relationship between the child and the master, 2) the relationship between the individual and other persons in his/her world and 3) the relationship between the individual and the work in which he/she was engaged.

Albert Einstein was born into a upwardly mobile Jewish family; his father, Hermann, manufactured electrical appliances. From an early age, Albert was preoccupied with the world of objects, wheels, puzzles, cards and especially a compass. He did not begin speaking until relatively late, but this delay may have allowed him the time to view and conceptualize the world in a less conventional way. He disliked school and performed poorly and acted defiantly in class. Only when he was introduced to algebra and geometry did he devour these topics on his own. In later life, Einstein pointed out that the problems he pondered were those that children spontaneously raise, but most adults have stopped

thinking about long ago.

In Picasso's case, he was born the son of an academic painter of modest talent. He began drawing at the time he began talking and, as Gertrude Stein observed, "drawing was his only way of talking."8 From early on he was fascinated by human beings and his drawings show an unusual emphasis on the human form and the range of human emotions. Though gifted visually, Picasso, too, hated school; he had difficulty learning to read and write and treated numbers as if they were visual patterns rather than symbols for quantities. When he was nine, his family began to save virtually every drawing he made. By observing this record we can see Picasso's compulsion to experiment: drawing the same object from different angles, capturing contrasting emotions, distorting form and scale. It is Gardner's assumption that Picasso drew on this reservoir of youthful experimentation, at least at an unconscious level, later in his career.

n Zurich, at the Polytechnic Institute, Einstein formed an enduring friendship with Marcel Grossman, a mathematician; Mileva Maric, a classmate he later married and divorced after 15 years. In Bern, where he worked at the patent office, he

"Picasso is the painter of the century—of Einstein, wave mechanics, and nuclear physics. He is the painter of the period in which physics is radically probing all tangible appearances....

His painting is that of an artist humanly responsible to his fellow men, just as the physicist (Einstein) is for the implications of science."¹³ befriended Michelangelo Besso, a young engineering colleague, and joined a group called the Olympiad. The Olympiad members pursued a program of reading works in philosophy, mathematics and science. Einstein appreciated the opportunity to try out his ideas on others, but he was very able to work alone also. This lack of craving for another person may explain why neither of his marriages was a success and why his relations with his two sons were unsatisfactory. Einstein once recalled, "I lived in solitude in the country and noticed how the monotony of quiet life stimulates the creative mind."9

hen he was 17, Picasso lived in Barcelona where he met older painters, such as Isidre Nonell and Roman Cases, and joined a circle of intellectuals that included the painter Carlos Casagemas and the poet Jaime Sabartes. At 19, he migrated to Paris, the center of art in the Western world. After a few years of lonely struggle, he gravitated to the world of writer Guillaume Appolinaire, the critic Andre Salmon and the poet Max Jacob. Picasso appreciated the companionship of these poets and writers who helped him articulate what he was trying to accomplish, gave him suggestions, informed him about the world of ideas and promoted his work to the rest of the world. Around 1908, Picasso met Georges Braque and their collaboration produced the artistic style called Cubism. Though he did paint solo, Picasso had a need to be involved with supportive individuals that may have dated back to dependencies on his parents.

Like any other individual, Einstein had to pass through phases of development until he was a mature thinker. Yet from very early on he demonstrated a definite scientific style. He had great faith in his own intuitions; he believed that the greatest progress is made when "disparate elements are linked and a few simple rules can explain observed interac-

tions."10 Beginning with an absorbing interest in the objects of the world, Einstein entered a search for a limited set of rules, which could help explain the behavior of the objects. He seemed to have the gift of envisioning problems, carrying out vivid and revealing mental puzzlements, or thought experiments, on these problems. Then he had the ability to keep these "experiments" in mind and to operate on them in different ways. He also emphasized the importance of imaqining and fantasizing, but these were governed by the principles of physical reality. His genius sprang out of his capacity to integrate spatial imagery, mathematical formulas, empirical phenomena and basic philosophical issues. Then, as Philipp Frank described it: "When Einstein had thought through a problem, he-formulated this subject in as many different ways—and presented it so that it would be comprehensible to people accustomed to different modes of thought and with different educational preparations."¹¹

other artists. We can see the thinking at work—the symbol-suffused problem finding and problem solving, the use of symbols which yield a mine of meanings, and finally, the ultimate product. The notebooks also present a running notational record of the issues and problems that concerned him; in a way they serve as a pictorial representation of the images that were whirling around in his head. Picasso once said succinctly: "My work is like a diary."¹²

What we see at work in Einstein's formulation of the Relativity Theory is thought of as system building. He demonstrated the inadequacy of earlier efforts to explain notions of simultaneity, time, space and motion, and so he introduced a set of new propositions, argued for their logic and then considered the implications that followed from these propositions. Picasso, on the other hand, mastered the symbol system of his domain at a young age and then went on to stretch the system in new ways that had not been explored before. ■

"There's a wonderful family named Stein, There's Ep, there's Gert, and there's Ein. Ep's statues are junk, Gert's poems are bunk, And nobody understands Ein."

-Anonymous

he discovery of 175 notebooks kept by Picasso from 1894 to 1967 gives us great insight into his mode of thinking. Themes can be followed for years and even decades, as Picasso attempted variations on different subject matter: bulls, horses, women, household objects and transformations of his own past works as well as those of

Activities

What do you see in the future?

"Germaine: I see air travel becoming common, with hundreds of people being carried in giant airplanes. I think we'll see images sent through the air, and the receivers will become so popular that mass taste will diminish their potential. The city of Hiroshima will be completely modernized. There will be a brief craze for lawn flamingos. Vast quantities of information will be stored in very small spaces. Cruelty will be perfected. By the end of the century, smoking in restaurants will be banned. Music by four lads from Liverpool.

Suzanne; I think a yo-yo will be a wonderful thing to play with and a terrible thing to be.

Freddy: Here's mine. Led by Germany, this will be known as the century of peace. Clothes will be made of wax. There will be a craze for automobiles, but it will pass. The French will be the military might of Europe. Everyone will be doing a new dance called the Toad. A carton of cigarettes will be one of the most thoughtful get-well gifts. And the Wright brothers will be long remembered for the invention and manufacture of a low-calorie fudge." From *Picasso at the Lapin Agile*

Predict the trends of the 21St century in the following categories.

Art, literature, theatre, music History and politics Philosophy Science, technology Travel Daily life, clothes, architecture, structure of our communities, food, work, school. Activity: Now that you have predicted the future, describe the daily life of one of your descendants in 2098.

A Toast to the 21st Century

At the end of the play the characters toast the 20th century.

"Freddy: ...The pendulum swings to the left...

Countess: The pendulum swings to the right.



Gaston: The past was driven by horses...

Einstein: The future is driven by light. Freddy: The mistakes of the past are over...

Picasso: The Modern waits to be met... Sagot: Say good-bye to the age of indifference...

Visitor: And say hello... ...to the age ... of regret." *Picasso at the Lapin Agile*.

Since you have predicted the future, ask the class contribute a lines that sums up their predictions in a toast to the new century. Write the lines on the board.

Think Tank

You are a member of a think tank that has to provide pathways for the next century. How do you need to change the way people think and behave in order to prepare them to survive and accept the future? How do we implement this social conditioning?

How do we make these changes:

Example: create movies, TV programming, songs, books, games and game shows, toys, other reward systems.

Who's Who

Picasso and Einstein are not the only people to make significant contributions to the 20th century. Compile an international list of people who have made contributions. Limit your list, and ask students to debate and vote for the people. In other words, hone your list until you decide that you have made the best possible choices.

What do you think this means?

Subjects for essays:

1. In the first quote on the activities page Germains states that: "... receivers will become so popular that mass taste will diminish their potential." What does she mean? Are we being homogenized? Are we able to have individual ideas when we all experience the same or similar things.

Are we socially conditioned already? If so, how?

2. In the play, Continued on page 11

Einstein says: "Here's the way I look at it. We're not so much going to change the century as bend it. Let's say Picasso here is a genius. The century is just flying along in space an it whizzes by Picasso here and it picks up speed and it flings itself off in a new direction. Like a comet veering left at the sun. The century is just zig-zagging along, bending and curving, influenced by the powerful gravity of people like Picasso."

What does Einstein mean? Do you think that Einstein or Picasso changed the direction of humanity and the way it thinks.

3. "Picasso: So you're saying you bring a beautiful idea into being? Einstein: Yes. We create a system and see if the facts can fit it. Picasso: So you're not just describing the world as it is? Einstein: No! We are creating a new way of looking at the world! Picasso: So you're saying you dream the impossible and put it into effect? Einstein: Exactly. Picasso: Brother! Einstein: Brother!"

Einstein and Picasso have discovered a common bond. Explain.

"Meeting of the minds"

Picasso and Einstein never met. Steve Martin invented the meeting for this play. Invent your own "meeting of the minds."

Background

Select a date.

Assign historical characters to different students. They must research their backgrounds? How old are they on this date? What have they accomplished so far? What do we know of their future accomplishments? How do they think? Select a meeting place, a centralized place where paths might cross? airport, train station, hotel, hospital, convention, bar, church, restaurant, coffee house, etc.

Invent a reason for the students to begin talking, i.e., asking directions, stuck in a snow storm or hurricane, accident victims, etc. Select a topic for them to discuss. Begin.

Alternative to this activity is to have them interviewed by the class. They are to respond from their research as they believe that their character would respond.

Both Einstein and Picasso were artists in their fields. They honed their perceptions and trusted their intuitions. Consequently they were able to step outside the lines, or outside the known and accepted parameters. In the following exercises, trust your instincts and intuitions and explore your creative boundaries.

Negative/Positive Space

Divide the class into two groups (A and B). Have group A Move in to an open space and create any shape they wish with their bodies. Have group B then examine the human sculp-ture. Now

Assembly Line Drawing

Before the class. Create a number of pages of paper that have one item drawn or glued onto them. (Examples: A red line, blue circle, small picture from a magazine. Create an assembly line with the desks. Ask the students to select a marker or colored pencil. Start the pictures at one end of the line. The students are to add to the picture in any way they want and pass it to the next person who does the same. Start a second and a third, etc. Do not allow the students to hesitate. They should act on their first impulse. When all the pictures are routed through the assembly line, stop and discuss them. Is this what you expected them to look like when finished? Is there a common thought through all the drawing? What did it feel lie to act on you first impulse?

they must fill in the negative space with out touching A. At your command (Or use a drum), Group A will release their pose and fill in the negative space left by Group B. Repeat with Group B.

Variation: Give each group an emotion or feeling to express and hold as they fill the negative space.

THE MODERN ERA BEGINS

"Scores of artists-sculptors and painters, poets and dramatists, workers in gems and metals, designers in stuffs and furniture—hundreds of chemists, physicists, even philosophers, philologists, physicians, and historians were at work, a thousand times as actively as ever before, and the mass and originality of their product would have swamped any previous age, as it very nearly swamped its own." —Henry Adams The Education of Henry Adams. 1907. p. 1088.

Picture is a possible of the set of the set

entific circles, and experienced a period of intellectual gestation that finally led to creative breakthroughs.

Paris, particularly, was a destination for creative young minds. The city formed a balance between old and new, between national and foreign. France's leadership was opened to the unique kinds of creative ambition, and Parisians, in turn, were fascinated by

the foreign cultures of Italy, Russia, Africa, Germany and the Far East. To the city came the poet impresario Guillaume

Appolinaire (originally a Pole named Kostrowitsky), the novelists Marcel Proust and Andre Gide, the playwrights August Strindberg and Anton Chekhov, the composers Claude Debussey and Gabriel Faure, the dancers Isadora Duncan and Ruth St. Denis, and the numerous artists including Cezanne, Matisse, Braque, Dufy and Picasso. The political types included Vladimir Ilyich Lenin and W.E.B. DuBois. Finally, the International Conference of Mathematics of 1900 attracted the scientists Henri Poincare and Max Plank (whose works Einstein read). Other intellectually active cities of this period were London, Berlin, Zurich, Vienna and Budapest.

he talented young minds who came to these cities felt that dramatic change, possibly apocalypse, was in the air; they felt it was time to reject the weight of the past and address the tensions and uncertainties of the present. Once the First World War erupted, all lives changed. A part of the world that had considered itself the most civilized and advanced was splitting apart. Thus, most of the wunderkind were severely shaken in a personal sense. Even if their lives were not physically dislocated, the lives of those around them

"Look at who Picasso's contemporaries were—Freud, Einstein. Picasso wanted to compete with the greatest men alive and he really had some competition."

—Norman Mailer

were. The assumptions that underlay their professional work were being scrutinized. Without World War I and its aftermath, we might not have had Picasso's Surrealism, T. S. Eliot's *Wasteland*, Einstein's application of atomic theory, or Freud's *Civilization* and Its Discontents.

For the first time in human history, individuals drawn from disparate cultures considered themselves to be members of the same world community. The rise of industrialism, the growth of cities, the improving access to information, the growing uneasiness before the war and the unbelievable carnage of it, influenced the consciousness of these modern minds. They questioned the artistic, scientific and political dogmas of the past and sought new methods or theories to replace those that had failed. ■

Inside Out is intended for students and teachers but may be enjoyed by audiences of all ages.





Denver Center Theatre Company

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