

Circa 1492 exhibit: 'Genius stands with Nature in everlasting union'

Part I, by Nora Hamerman

"Circa 1492: Art in the Age of Discovery" is an exposition of the world's art in the 50 years around the year 1492, when Christopher Columbus sailed westward to reach fabled Cathay and instead encountered a new continent. It opened Oct. 12 at Washington's National Gallery of Art and will be on view until Jan. 12, 1992. Pivoted around the two great figures of the "artist/scientists" who flourished around 1492, Leonardo da Vinci (1452-1519) and Albrecht Dürer (1471-1528), the show makes an eloquent case for what the poet Schiller asserted in his epigram, "Columbus," when he wrote: "Genius stands with Nature in everlasting union: What doth promise the one, surely the other fulfills."

The exhibition, as National Gallery director Carter Brown emphasized to the press, is an art show, not a history show, and it therefore deals little with Columbus himself or even with the voyages of discovery. But in the domain of art, it excels. Not only does it celebrate the European art of the Age of Exploration, but it juxtaposes the most esthetically important artifacts of three cultural areas, taking a horizontal band of the whole world (with some notable omissions) around 1492.

The first is Europe and the Mediterranean, including the parts of West Africa touched by Portuguese navigators in the 15th century, and the Islamic empires of the eastern and southern Mediterranean shores. The second, called "Toward Cathay," encompasses the lands Columbus would have reached, had he attained his goal of arriving at the Indies by sailing west around the globe—in the order he would have reached them—Japan, Korea, China, and India. The third section gathers objects from the societies that existed in Mesoamerica (Mexico-Central America), parts of North America, the Caribbean, and the Andes in the period around 1492.

The objects displayed in "Circa 1492" indicate that the essential principles of what is called "western Christian" civilization, premised on the idea of the necessity of progress, are the only principles which can sustain and develop the impulse toward creativity in art and science which is otherwise universal to the human race. What the Spanish found in this hemisphere when they arrived was a culture of genocide and mendicite. Human sacrifice was rampant. The religions were based on "revelations" delivered by means of psychotropic drugs. Because that was the framework, even that

pre-Columbian art which shows a high degree of skill by the maker, is anti-human in its subject matter; these are artifacts of a society which has lost the moral fitness to survive.

As for China, Korea, and Japan, it is evident that well before 1492, at least in China, the ruling powers had deliberately turned their back on the very capabilities which had given them past prosperity and technological superiority, and that an entrenched oligarchy drove the most gifted minds to the margins of society to operate as politically and economically impotent "scholar-recluses." Not accidentally, although the art shows great subtlety and even beauty at times, it is lacking in the mastery of spatial representation, the proportions of the human form, and the expression of individual personality which are the very essence of art in a society which believes in the necessity of progress.

I shall develop these arguments, as well as discuss the parts of the exhibit which deal explicitly with Spain and Portugal in the era when those two countries were sponsoring the great voyages of discovery, in subsequent articles of this series.

Art unified with science

The crux of the civilization that produced Columbus and the evangelization of the Americas is given powerful visual expression in the last five galleries of the first section, including the large room where approximately 20 each of the finest works of Leonardo da Vinci and Albrecht Dürer are hung facing each other.

For example, one gallery of these five is dedicated to the history of perspective, the discovery in early 15th-century Florence of how projective geometry could be applied to the practical problem of representing three-dimensional reality on a two-dimensional surface of a painting, low-relief sculpture, wood inlay, or other such objects. This opened up unprecedented horizons in the expression of the idea of progress in history. Thanks to perspective, it was possible to show an ordered, rationally accessible path from the eye of the individual to knowledge of the universe of creation, indeed, to chart a course from the microcosm to the macrocosm. Man stands as the mean and measure between God and nature. This technical advance in pictorial representation paralleled the progress of scientific map-making so important to the Age of Exploration, and heralded the potential of expanded

mastery of the universe in future centuries, where the judging human mind stands between the telescope and the microscope that human minds have created.

Hanging high on one wall of this gallery in a position like that for which it was originally intended, is a famous fresco, now detached from its original wall, *The Vision of St. Augustine*, from the Church of Ognissanti in Florence, painted by Sandro Botticelli around 1480. Not only is this perhaps the most moving of all portraits of the great 5th-century Father of the Church, who laid the conceptual basis for what we call western Christianity by interpreting the philosophy of Plato through the Gospel; but it has far more to do with the Age of Exploration than most people might suspect.

St. Augustine is the true father of modern scientific thought, and Botticelli clearly saw him in that way. Although this is not mentioned in the catalogue, some scholars conjecture that the picture might even be a psychological, if not literally physical, portrait of a venerable old man of the era, Paolo dal Pozzo Toscanelli, who was closely tied with Ognissanti church and with the family which paid for the painting, the Vespucci. A younger, contemporary member of this family, Florentine explorer Amerigo Vespucci, was the first to realize that the lands touched by Columbus were a new continent; therefore it is perhaps not totally unjust, that the German mapmaker Waldseemüller, whose historic map of 1507 is also in the show, called the new world "America" believing that Vespucci had been the first to find it.

Toscanelli is the link between the greatest artistic and scientific minds of the time and the drive to find new routes to the east, which eventually led to Columbus's trip. His family, the Dal Pozzo, had been involved in the spice trade for many generations, and, like many Florentine merchants, were eager to discover a route to China and India that could evade the control over the ancient trade routes exerted by the Islamic empires and their partners, the unscrupulous Venetian merchant-oligarchs. Toscanelli himself was a physician and mathematician, an astronomer and geographer. He was a university student with the German Cardinal Nicolaus of Cusa, the seminal scientific genius of the century, during the 1420s in Padua, and remained a lifelong friend, becoming one of the executors of Cusa's will in 1464. Early sources assert that he instructed Brunelleschi, the inventor of perspective and architect of the world-famous dome of Florence Cathedral, in formal mathematics.

Toscanelli was close to Leon Battista Alberti, who wrote the first treatise on perspective in painting in 1435. Finally, he made, according to early witnesses, the world map which Columbus used in planning his voyage across the Atlantic.

It is important to keep in mind, that Toscanelli in 1480 would have been one of the few surviving individuals who had been active at the Council of Florence in 1439, the ecumenical council of eastern and western Christian churches. There, leading scholars compared geographical knowledge and laid the basis for the discoveries that occurred later in the

century; the strategic urgency to outflank the encroaching Ottoman Turkish empire was the major practical motivation for the council. The Florentines and their allies at that council successfully fought to win agreement on the much-debated theological principle of the *Filioque*, a clarification on the nature of the Trinity which was recited in the western Creed, which had always been interpreted as demonstrating the necessity of progress.

Even if Botticelli did not literally have in mind a portrayal of Toscanelli, there can be no doubt that he was painting St. Augustine in the image of the scholar-scientists who had shaped the Council of Florence and its cultural aftermath. The portrayal of a saint in a humanistic scholar's studio, with a book of geometric proofs and a modern clock on the shelf behind him, and a carved lectern in front of him, is based on a now-lost picture of St. Jerome painted by the Flemish master Jan Van Eyck for the ruling Medici family of Florence around the time of the council. Using this general model, Botticelli depicted the popular legend according to which Augustine was writing a letter to Jerome asking him about how to describe the bliss of souls in the afterlife, when a sudden vision came to him from the soul of Jerome, who had just died. The heavenly vision which illuminates his face passes through an armillary sphere, an instrument of the day for charting the heavens, shown according to the prevalent astronomy of that time with the earth in the center. Everything in the painting conspires to express the unity of faith and reason, in man's quest to collaborate with God to perfect the universe.

In the same gallery there hangs a second remarkable picture, the only painted portrait of Luca Pacioli, the Franciscan friar whose work connected the generation of the Council of Florence to the generation alive in 1492. He had learned mathematics from Piero della Francesca, a gifted mathematical theorist and superlative painter who had been in Florence for the council in 1439. Piero, a manuscript of whose famous treatise on *Painter's Perspective*, dating ca. 1480, is displayed in this exhibit, had insisted that without the science of perspective, painting is a mere craft. He also wrote a book on the five regular "Platonic" solids, later incorporated into the book *Divine Proportion* by his pupil Pacioli. Pacioli, in turn, taught mathematics to Leonardo da Vinci, and possibly later to Albrecht Dürer. It was Pacioli who first emphasized the importance of the unique ratio essential to the construction of the Platonic solids, the Golden Section, which he called the Divine Proportion. Pacioli and Leonardo had grasped that this self-similar ratio was the basis of all living processes.

In the portrait, Pacioli demonstrates to a young man the construction of an equilateral triangle. A model of the most important Platonic solid, the dodecahedron, sits on the table. The friar looks toward a glass model of a semi-regular solid, the 26-sided rhombicuboctahedron, suspended from the ceiling. The model of this solid (favored by architects) reflects

three different views in its facets, of the Ducal Palace of Urbino.

To appreciate the exceptional experience of standing in a room which contains both the Pacioli portrait and the Botticelli *St. Augustine*, just imagine that to see the former you would have to travel to Naples Capodimonte museum—not exactly your most common tourist stop; while to see the latter, you would have to not only go to Florence, but take the time to find the church of Ognissanti. Even if you are one of the few people with a travel budget, time, and determination to do that, only in this room will you still be able to stand in the midst of Piero della Francesca, Toscanelli, the Vespucci family, Pacioli, Leonardo da Vinci, and Albrecht Dürer as they master the physical universe and turn that mastery into political practice.

Astronomy, geometry, anatomy

The gallery just described lies between two other exhibits devoted to the frontiers of science as they were expressed through objects of surpassing beauty.

First comes a collection of important maps, either printed or manuscript, or incorporated into paintings. Cartography revived the “Ptolemaic” projections of antiquity, but changed them to reflect constantly growing new knowledge. This is followed by gilded astrolabes and other instruments for applying geometry to astronomy and navigation, various maps of the heavens, ranging from Islamic to European sources to the highly artful woodcut *Zodiac* of Albrecht Dürer, and two remarkable tapestries of *Astronomy* and an imaginary view of God making the heavens turn. A detached fresco (mural painting) by Donato Bramante, the architect of St. Peter’s and close friend of both Leonardo and Raphael, shows a globe between two Greek philosophers, reflecting the world as it was conceived before the voyages of Columbus and Vasco da Gama.

After the room on perspective, comes the complementary area of scientific advance of the Florentine artist: the study of the human figure. It was not until the era of Michelangelo (b. 1475) and Leonardo, that artists were actually able to participate in dissections of corpses, but interest in the underlying skeletal and muscular structure, based on the theory that painting should show the “motions of the soul through the motions of the body,” manifested itself in Florence as early as the 1420s and intensified throughout the century. Among the most remarkable witnesses to this process are the small, but justly famous, panel of *Hercules Slaying the Hydra*, by Pollaiuolo, and, of course, the two Michelangelos in the exhibit, the *Madonna of the Stairs*, dating from not long after 1492, while Michelangelo was still a young prodigy; and his nude study of a soldier for the lost *Battle of Cascina* fresco. While artists like Pollaiuolo, preoccupied with showing every bone and muscle, had displayed what Leonardo disparaged as a “sack of nuts,” Michelangelo conveyed his mastery of structure in light and shade, even in his



Courtesy National Gallery of Art

Leonardo da Vinci's "Cecilia Gallerani": Cracow, Czartoryski Museum.

favorite medium of marble, making the hard stone appear to be soft and malleable. Finally, Albrecht Dürer’s engraved “Adam and Eve,” the first of the series of his original prints on view, shows his application of the principles of harmonic proportion in the human body, learned in Italy.

The gallery of Leonardo and Dürer is the grand finale of these explorations, where astronomy, perspective, and anatomy are joined to the subject that makes them possible: the probing of the unique personality of the human individual.

Leonardo and Dürer

Approximately 30 years passed from Christopher Columbus’s first journey to the so-called West Indies to the Conquest of Mexico by Hernan Cortés in 1521. During those three decades, the two great artists featured in this show were making their breathtaking conquests of the natural world and the human mind. While Dürer was a talented youth of 21, just beginning his career in Nuremberg, the Florence of the north, Leonardo at the age of 40 was at the height of his career, having already essayed most of the areas in which he would still produce his highest achievements.

All along the left wall of the large, keyhole-shaped gallery, the viewer follows the stupendous mind of Leonardo from around 1490 onward, as it investigates the world through the constant formation and testing of hypotheses. His drawings explore the hydrodynamic properties of turbulence in water and wind, to form higher orders of self-organization; the marvels of the human body, from the famous study of a human fetus, to the female anatomy, to the investigations of the eye and the proportions of the body in various positions and actions; the “hydrodynamic”-like patterns seen in the growth of a Star of Bethlehem plant and the braided hair of a woman model for *Leda*; the incomparable study of the *Vitruvian Man*, a mature man standing yet walking in a square overlapping a circle. These 21 drawings, each world-famous, lead us to a portrait of *Cecilia Gallerani* from the Czartoryski Museum in Krakow, which is one of only three authentic portraits by the master in existence accepted by all



Courtesy National Gallery of Art

Albrecht Dürer's "Portrait of a Man": Vienna, Albertina.

scholars—the others being the *Mona Lisa* in the Louvre, and the *Ginevra de' Benci* here in Washington's National Gallery. (The *Cecilia* will benefit from technical examination in Washington's superb conservation laboratory while here, but it is not likely to leave Poland again.)

Cecilia Gallerani was a lady and, for a while, the duke's mistress, in the court of Milan, where Leonardo went in 1482 to work in the service of Duke Ludovico Sforza. She holds an ermine or *gallee* in Greek, a typical humanistic pun on her name, not unlike the juniper (*ginepro*) tree behind the head of *Ginevra de' Benci*; but unlike the earlier portrait, dating from the 1470s, this time, the lady turns in an engaging three-quarter pose toward an unseen interlocutor off the right side. Such an "informal" pose was a total innovation in the history of portraiture. It draws our attention to the quality of mind of the sitter, who, after all, is a mere woman, and not even of the highest social rank.

Following her gaze, we encounter a series of interlocutors drawn by the great Dürer only a decade or so after *Cecilia* would have been painted around 1491. First come three chalk studies by Dürer of heads. Two are Africans who are portrayed with great sensitivity as to their personalities and not as "exotic types." The black woman was a servant, at the bottom of the social ladder, yet Dürer immortalizes her as a unique human being who will live in memory beyond many monarchs of the day. This series of drawings continues with figure studies of Irish peasants and Ottoman Turks, and ends with a painting of a young Venetian lady, placed in such a way that she seems to answer Cecilia Gallerani.

As with Leonardo, the Dürer section ranks as a major exhibit in its own right. Included are his accurate renderings of exotic animals; watercolors of landscapes, plants, and birds which display an atmospheric technique usually thought to have been invented in the 18th century; and his major engravings. Both artists are represented by books, Dürer by one of his printed volumes on human proportion, and Leonardo da Vinci by one of the notebooks on optics, which is in the Institut de France.

Bosch: faith and reason against demons

The altarpiece which opens the whole show might seem, at first blush, to come from an opposite end of the universe. Yet Hieronymus Bosch was an exact contemporary of Leonardo da Vinci (ca. 1450-1516) and surely knew some of Leonardo's drawings. Moreover, as the catalogue entry by Jean Michel Massing makes clear, contrary to slanders of the 20th century, Bosch is a great cultural hero of the battle against irrationality and for the same values that Dürer and Leonardo exalted.

Now in Lisbon, the triptych of the *Temptation of St. Anthony* dates from ca. 1500-1505. It is one of the great Bosch pictures, surpassing anything that exists in our hemisphere's museums. Bosch shows the apocalyptic side of the era around 1492 in Europe, on the eve of great upheavals like the foreign conquest of Italy, the Protestant Reformation, and under the direct military threat of the Turkish armies, when many—among them Christopher Columbus and his patrons, Ferdinand and Isabella—believed that the Millennium was at hand and the task of evangelizing the heathen took on especial urgency.

As interpreted by a Spanish writer of the early 17th century, Bosch's *Temptation* paintings show this "Saint, the prince of hermits, with his serene, devout, contemplative face, his soul calm and full of peace; elsewhere he is surrounded by the endless fantasies and monsters that the archfiend [Satan] creates in order to confuse, worry, and disturb that pious soul and his steadfast love." Yet by contemplating a vision of Christ pointing to a crucifix, St. Anthony is able to keep his soul in grace; on the triptych's outer wings are two scenes from the passion of Christ, masterfully painted by Bosch in the monochrome technique called "grisaille."

The visions on the front of the altarpiece include Satan in the form of an alluring nude woman, human-animal transformations, devils who dress in clerical garb to mock the rituals of the Church, and even a group of rat-devils under a bridge, drawing up a list of sins: faked evidence for accusations they will make against St. Anthony in an aerial scene. The fire in the background, and possibly some of the visions themselves, allude to the torment of St. Anthony's Fire, or ergotism, a disease which comes from ingesting a toxic substance whose cause was not understood in Bosch's day, but which produced hallucinations similar to those caused by LSD; the ergot fungus that provoked St. Anthony's Fire is chemically similar to LSD.

Bosch was no "psychedelic" painter. The Antonite order, founded by St. Anthony, was occupied in his day with caring for sick people who suffered from this terrifying affliction; hence the idea of being able to keep one's faith and sanity despite a disease that even attacked the brain as well as the body, becomes the subject of Bosch's extraordinary paintings. This contrasts to the art of the Americas in the same period, where such drug-induced insanity is celebrated.

To be continued.