



SATHYABAMA

**INSTITUTE OF SCIENCE AND TECHNOLOGY
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SCHOOL OF BUILDING & ENVIRONMENT

DEPARTMENT OF FASHION DESIGN

UNIT – I - History of Art & Fashion– SFDA1303

Introduction to Art and Design History - Basic parameters

The history of art focuses on objects made by humans in visual form for aesthetic purposes. Visual art can be classified in diverse ways, such as separating fine arts from applied arts; inclusively focusing on human creativity; or focusing on different media such as architecture, sculpture, painting, film, photography, and graphic arts. In recent years, technological advances have led to video art, computer art, performance art, animation, television, and videogames. The history of art is often told as a chronology of masterpieces created during each civilization. It can thus be framed as a story of high culture, epitomized by the Wonders of the World. On the other hand, vernacular art expressions can also be integrated into art historical narratives, referred to as folk arts or craft. The more closely that an art historian engages with these latter forms of low culture, the more likely it is that they will identify their work as examining visual culture or material culture, or as contributing to fields related to art history, such as anthropology or archaeology. In the latter cases, art objects may be referred to as archeological artifacts.

Types

Archeologists have identified 4 basic types of Stone Age art, as follows: petroglyphs (cupules, rock carvings and engravings); pictographs (pictorial imagery, ideomorphs, ideograms or symbols), a category that includes cave painting and drawing; and prehistoric sculpture (including small totemic statuettes known as Venus Figurines, various forms of zoomorphic and therianthrope ivory carving, and relief sculptures); and megalithic art (petroforms or any other works associated with arrangements of stones). Artworks that are applied to an immovable rock surface are classified as parietal art; works that are portable are classified as mobiliary art.

Types of prehistoric periods

- ✦ Paleolithic age
- ✦ Neolithic age
- ✦ Metal age²¹⁷²
- ✦ Types of metal age
- ✦

Characteristics

The earliest forms of prehistoric art are extremely primitive. The cupule, for instance - a mysterious type of Paleolithic cultural marking - amounts to no more than a hemispherical or cup-like scouring of the rock surface. The early sculptures known as the Venuses of Tan-Tan and Berekhat Ram, are such crude representations of humanoid shapes that some experts doubt whether they are works of art at all. It is not until the Upper Paleolithic (from roughly 40,000 BCE onwards) that anatomically modern man produces recognizable carvings and pictures. Aurignacian culture, in particular, witnesses an explosion of rock art, including the El Castillo cave paintings, the monochrome cave murals at Chauvet, the Lion Man of Hohlenstein-Stadel, the Venus of Hohle Fels, the animal carvings of the Swabian Jura, Aboriginal rock art from Australia, and much more. The later Gravettian and Magdalenian cultures gave birth to even more sophisticated versions of prehistoric art, notably the polychrome Dappled Horses of Pech-Merle and the sensational cave paintings at Lascaux and Altamira.

Dating and Chronology of Prehistoric Art

A number of highly sophisticated techniques - such as radiometric testing, Uranium/Thorium dating and thermoluminescence - are now available to help establish the date of ancient artifacts from the Paleolithic era and later. However, dating of ancient art is not an exact science, and results are often dependent on tests performed on the 'layer' of earth and debris in which the artifact was lying, or - in the case of rock engraving - an analysis of the content and style of the markings. (Animal drawings using regular side-profiles, for instance, are typically older than those using three-quarter profiles.) For a chronological list of dates and events associated with Stone Age culture, see: Prehistoric Art Timeline.

Prehistoric Culture

The longest phase of Stone Age culture - known as the Paleolithic period - is a hunter-gatherer culture which is usually divided into three parts:

- (1) Lower Paleolithic (2,500,000-200,000 BCE)**
- (2) Middle Paleolithic (200,000-40,000 BCE)**
- (3) Upper Paleolithic (40,000-10,000 BCE).**

After this comes a transitional phase called the Mesolithic period (sometimes known as epipaleolithic), ending with the spread of agriculture, followed by the Neolithic period (the New Stone Age) which witnessed the establishment of permanent settlements. The Stone Age ends as stone tools become superseded by the new products of bronze and iron metallurgy, and is followed by the Bronze Age and Iron Age.

Paleolithic Era (c.2,500,000 - 10,000 BCE)

Characterized by a Stone Age subsistence culture and the evolution of the human species from primitive australopiths via Homo erectus and Homo sapiens to anatomically modern humans. See: Paleolithic Art and Culture.

Lower Paleolithic (2,500,000 - 200,000 BCE)

- Olduwan culture (2,500,000 - 1,500,000 BCE)
- Acheulean culture (1,650,000 - 100,000 BCE)
- Clactonian culture (c.400,000 – 300,000 BCE)

Middle Paleolithic (200,000 - 40,000 BCE)

- Mousterian culture (300,000 - 30,000 BCE)
- Levallois Flake Tool culture (dominant c.100,000 - 30,000 BCE)

Upper Paleolithic (40,000-8,000 BCE)

- Aurignacian culture (40,000 - 26,000 BCE)
- Perigordian (Chatelperronian) culture (35,000-27,000 BCE)
- Gravettian culture (26,000 - 20,000 BCE)
- Solutrean culture (19,000 – 15,000 BCE)
- Magdalenian culture (16,000 - 8,000 BCE)

Mesolithic Era

(From 10,000 BCE)

This era joins the Ice Age culture of the Upper Paleolithic with the ice-free, farming culture of the Neolithic. It is characterized by more advanced hunter-gathering, fishing and rudimentary forms of cultivation.

Neolithic Era

(From 8,000-4,000 BCE to 2000 BCE)

This era is characterized by farming, domestication of animals, settled communities and the emergence of important ancient civilizations (eg. Sumerian, Egyptian). Portable art and monumental architecture dominate.

Human Evolution: From Axes to Art

How did prehistoric man manage to leave behind such a rich cultural heritage of rock art? Answer: by developing a bigger and more sophisticated brain. Brain performance is directly associated with a number of "higher" functions such as language and creative expression.

The consensus among most paleontologists and paleoanthropologists, is that the human species (Homo) split away from gorillas in Africa about 8 million BCE, and from chimpanzees no later than 5 million BCE. (The discovery of a hominid skull [Sahelanthropus tchadensis] dated about 7 million years ago, may indicate an earlier divergence). The very early hominids included species like Australopithecus afarensis and Paranthropus robustus (brain capacity 350-500 cc).

About 2.5 million years BCE, some humans began to make stone tools (like very crude choppers and hand-axes), and newer species like Homo habilis and Homo rudolfensis emerged (brain capacity 590-690 cc). By 2 million years BCE more species of humans appeared, such as Homo erectus (brain capacity 800-1250 cc). During the following 500,000 years, Homo erectus spread from Africa to the Middle East, Asia and Europe.

Between 1.5 million BCE and 500,000 BCE, Homo erectus and other variants of humans engendered more highly developed types of Homo, known as Archaic Homo sapiens. It was a group of artists from one of these Archaic Homo sapiens species that created the Bhimbetka petroglyphs and cupules in the Auditorium cave situated at Bhimbetka in India, and at Daraki-Chattan. These cupules are the oldest art on earth.

From 500,000 BCE onwards, these new types morphed into Homo sapiens, as exemplified by Neanderthal Man (from 200,000 BCE or earlier). Neanderthals had a brain size of about 1500 cc, which is actually greater than today's modern man, so clearly cranial capacity is not the only guide to intellect: internal brain architecture is important too. In all probability Neanderthal sculptors (or their contemporaries) created the famous figurines known as the Venus of Berekhat Ram and the Venus of Tan-Tan, as well as the ochre stone engravings at the Blombos cave in South Africa, and the cupules at the Dordogne rock shelter at La Ferrassie.

Finally, about 100,000 BCE, "anatomically modern man" emerged from somewhere in sub-Saharan Africa, and, like his predecessors, headed north: reaching North Africa by about 70,000 BCE and becoming established in Europe no later than the beginning of the Upper Paleolithic (40,000 BCE). Painters and sculptors belonging to modern man (eg. Cro-Magnon Man, Grimaldi Man) were responsible for the glorious cave painting in France and the Iberian peninsular, as well as the miniature "venus" sculptures and the ivory carvings of the Swabian Jura, found in the caves of Vogelherd, Hohle Fels, and Hohlenstein-Stadel.

Note: Traditionally, prehistoric painting and sculpture is not classified as primitivism/primitive art - a category which is usually reserved for later tribal art.

Paleolithic Period

(2,500,000 - 10,000 BCE)

Traditionally, this period is divided into three sub-sections: the Lower Paleolithic, Middle Paleolithic and Upper Paleolithic, each marking advances (especially in tool technology) among different human cultures. In essence, Paleolithic Man lived solely by hunting and gathering, while his successors during the later Mesolithic and Neolithic times developed systems of agriculture and ultimately permanent settlements. Survival wasn't easy, not least because of numerous adverse climatic changes: on four separate occasions the northern latitudes experienced ice ages resulting in successive waves of freezing and thawing, and triggering migrations or widespread death. In fact, the development of human culture during Paleolithic times was repeatedly and profoundly affected by environmental factors. Paleolithic humans were food gatherers, who depended for their subsistence on hunting wild animals, fishing, and collecting berries, fruits and nuts. It wasn't until about 8,000 BCE that more secure methods of feeding (agriculture and animal domestication) were adopted.

Stone Tools – The Key to Civilization, Culture and Art

Stone tools were the instruments by which early Man developed and progressed. All human culture is based on the ingenuity and brainpower of our early ancestors in creating ever more sophisticated tools that enabled them to survive and prosper. After all, fine art is merely a reflection of society, and prehistoric societies were largely defined by the type of tool used. In fact, Paleolithic culture is charted and classified according to advancing tool technologies. Incidentally, many of the earliest archeological finds of Stone Age artifacts were made in France, thus French place-names have long been used to chart the various Paleolithic subdivisions, despite the huge regional differences that exist.

Stone Age Tool Technology

The first stone tools, (eoliths) were made more than two million years ago - not just from stone but from all types of organic materials (wood, bone, ivory, antler). However, most archeological finds comprise the more durable stone variety. The oldest human tools were simple stone choppers, such as those unearthed at Olduvai Gorge in Tanzania. According to paleoanthropologists, Paleolithic Man produced four types of better and better tools. These were: (1) Pebble-tools (with a single sharpened edge for cutting or chopping); (2) Bifacial-tools (eg. hand-axes); (3) Flake-tools; and (4) Blade-tools. All types eventually came into use, and new tool techniques were created to produce them, with the older technique persisting as long as it was needed for a given purpose.

The Lower Paleolithic Era
(2,500,000 - 200,000 BCE)

This is the earliest period of the Paleolithic Age. It runs from the first appearance of Man as a tool-making mammal to the advent of important evolutionary and technological changes which marked the start of the Middle Paleolithic. It witnessed the emergence of three different tool-based cultures: (1) Oldowan culture (2,500,000-1,500,000 BCE); (2) Acheulean culture (1,650,000-100,000 BCE); and (3) Clactonian culture (c.400,000–300,000 BCE). In a sense, stone tools represented the "art" of this period - the key form of creative human expression.

Lower Paleolithic Tool Cultures

Oldowan Culture (2,500,000 - 1,500,000 BCE)

Oldowan describes the first stone tools used by prehistoric Man of the Lower Paleolithic. Oldowan culture began about 2.5 million years ago, appearing first in the Gona and Omo Basins of Ethiopia. The key feature of Oldowan tool manufacture was the method of chipping stones to create a chopping or cutting edge. Most tools were fashioned using a single strike of one rock against another to create a sharp-edged flake.

Acheulean Culture and Art (1,650,000 - 100,000 BCE)

Acheulean culture was the most important and dominant tool-making tradition of the Lower Palaeolithic era throughout Africa and much of Asia and Europe. Named after the type-site village of Saint Acheul in northern France, and associated with *Homo ergaster*, *Homo heidelbergensis* and western *Homo erectus*, Acheulean tool users with their signature style oval and pear-shaped hand-axes were the first humans to expand successfully across Eurasia. Judging by the sophisticated design of these implements, it is no surprise that the earliest art by Stone Age man dates from Acheulean Culture. Also, archeologists now believe that Acheulean peoples were the first to experience fire, (around 1.4 million years BCE), as a result of lightning, although amazingly it wasn't until about 8,000 BCE that man learned exactly how to control it.

Clactonian Culture (c.400,000 – 300,000 BCE)

Clactonian describes a culture of European flint tool manufacture or "art", associated with *Homo erectus*, dating from the early period of the interglacial period known as the Hoxnian, the Mindel-Riss or the Holstein interglacial (approx 300,000 – 200,000 BCE).

It was named after type-sites located at Clacton-on-Sea, on the SE coast of England and at Swanscombe in Kent. The latter also provided evidence for the existence of a sub-species of *Homo erectus* known as Swanscombe Man. Clactonian tools were sometimes notched, indicating they were attached to a handle or shaft.

Lower Paleolithic Rock Art

The earliest recorded examples of human art were created during the Lower Paleolithic in the caves and rock shelters of central India. They consisted of a number of petroglyphs (10 cupules and an engraving or groove) discovered during the 1990s in a quartzite rock shelter (Auditorium cave) at Bhimbetka in central India. This rock art dates from at least 290,000 BCE. However, it may turn out to be much older (c.700,000 BCE). Archeological excavations from a second cave, at Daraki-Chattan in the same region, are believed to be of a similar age.

The next oldest prehistoric art from the Lower Paleolithic comes almost at the end of the period. Two primitive figurines - the Venus of Berekhat Ram (found on the Golan Heights) and the Venus of Tan-Tan (discovered in Morocco) were dated to between roughly 200,000 and 500,000 BCE (the former is more ancient).

Middle Paleolithic Era
(200,000 - 40,000 BCE)

The Middle Paleolithic period is the second stage of the Paleolithic Era, as applied to Europe, Africa and Asia. The dominant Paleolithic culture was Mousterian, a flake tool industry largely characterized by the point and side scraper, associated (in Europe) with *Homo neanderthalensis*. This was not a period of great invention - plain hand-axes, for instance, were still regularly employed - but major improvements were made in the basic process of tool-making, and in the range and proper utilization of manufactured implements. Towards the end of the period, Mousterian tool technology was enhanced by another culture known as Levallois, and practised in North Africa, the Middle East and as far afield as Siberia.

Mousterian Culture (300,000 - 30,000 BCE)

The name Mousterian derives from the type-site of Le Moustier, a cave in the Dordogne region of southern France, although the same technology was practised across the unglaciated zones of Europe and also the Middle East and North Africa. Tool forms featured a wide variety of specialized shapes, including barbed and serrated edges. These new blade designs helped to reduce the need for humans to use their teeth to perform certain tasks, thus contributing to a diminution of facial and jaw features among later humans.

The Tool-Making Process

Mousterian Man was able to standardize the tool-making process and thus introduce greater efficiency, possibly through division and specialization of labour. Tool-makers went to great efforts to create blades that could be regularly re-sharpened, thus endowing tools with a greater lifespan. Their production of serrated edge blades, special animal-hide scrapers and the like, together with a range of bone instruments such as needles (suggesting the use of animal furs and skins as body coverings and shoes) reveal a growing improvement in cognitive ability - something illustrated by Neanderthal Man's success in hunting large mammoths, an activity which required much greater social organization and cooperation.

Levallois Flake-Tool Culture (c.100,000 - 30,000 BCE)

Named after a suburb of Paris, the Levalloisian is an important flint-knapping culture characterized by an enhanced technique of producing flakes. This involved the preliminary shaping of the core stone into a convex tortoise shape in order to yield larger flakes. Levallois culture influenced many other Middle Paleolithic stone tool industries.

Middle Paleolithic Art

One of the few works of art dating from the Middle Paleolithic, is the pair of ochre rocks decorated with abstract cross-hatch patterns found in the Blombos Caves east of Cape Town. (See also: Prehistoric Abstract Signs.) They are one of the oldest examples of African art, and have been dated to 70,000 BCE. After Blombos, comes the Diepkloof eggshell engravings, dated to 60,000 BCE. It is probable that towards the end of the Upper Paleolithic, human artists began producing primitive forms of Oceanic art in the SW Pacific area, and very early types of Tribal art throughout Africa and Asia, although little has survived. See also the cupules at the La Ferrassie Neanderthal cave in France.

Upper Paleolithic Era (40,000 - 8,000 BCE)

The Upper Paleolithic is the final and shortest stage of the Paleolithic Age: less than 15 percent of the length of the preceeding Middle Paleolithic. When referring to Africa it is more commonly known as the late Stone Age. In addition to more specialized tools and a more sophisticated way of life, Upper Paleolithic culture spawned the first widespread appearance of human painting and sculpture, which appeared simultaneously in almost every corner of the globe. Also, from the start of the Upper Paleolithic period, the Neanderthal Man sub-species of *Homo sapiens* was replaced by "anatomically modern humans" (eg. Cro-Magnon Man, Chancelade Man and Grimaldi Man) who became the sole hominid inhabitants across continental Europe. But see for instance the Neanderthal engraving at Gorham's Cave, Gibraltar (37,000 BCE).

Stone Tool Cultures

The five main tool cultures of the Upper Paleolithic were (1) Perigordian (aka Chatelperronian; (2) Aurignacian; (3) Gravettian; (4) Solutrean; and (5) Magdalenian.

Upper Paleolithic Society

The era saw the construction of the earliest man-made dwellings (mostly semi-subterranean pit houses), while the location of settlements indicates a more complex pattern of social interreaction, involving collective hunting, organized fishing, social stratification, ceremonial events, supernatural and religious ritual. Other developments included the beginning of private property, the use of needle and thread, and clothing.

Upper Paleolithic Art

The Upper Paleolithic period witnessed the beginning of fine art, featuring drawing, modelling, sculpture, and painting, as well as jewellery, personal adornments and early forms of music and dance. The three main art forms were cave painting, rock engraving and miniature figurative carvings.

Upper Paleolithic Cave Painting

During this period, prehistoric society began to accept ritual and ceremony - of a quasi-religious or shaman-type nature. As a result, certain caves were reserved as prehistoric art galleries, where artists began to paint animals and hunting scenes, as well as a variety of abstract or symbolic drawings.

Cave art first appeared during the early Aurignacian culture, as exemplified by the dots and hand stencils of the El Castillo Cave paintings (c.39,000 BCE), the stencils and Middle Paleolithic Era (200,000 - 40,000 BCE)

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Examples of Gravettian art include the prehistoric hand stencils at the (now underwater) Cosquer Cave (c.25,000 BCE) and Roucadour Cave (24,000 BCE), and the polychrome charcoal and ochre images at Pech-Merle (c.25,000 BCE) and Cougnac Cave (c.23,000 BCE). But without doubt, the most evocative art of the period is the Gargas Cave hand stencils (25,000 BCE), featuring a chilling array of mutilated fingers.

During the Solutrean period, prehistoric painters (influenced by late Gravettian traditions) began work on their magnificent polychrome images of horses, bulls and other animals in the Lascaux Cave (from 17,000 BCE), and the Spanish Cantabrian Cave of La Pasiega (from 16,000 BCE).

Magdalenian cave painting is well represented by the polychrome images of bison and deer at Altamira Cave in Spain (from 15,000 BCE), the reindeer pictures on antlers found at the French Lortet Cave (from 15,000 BCE), the painted engravings at Font de Gaume Cave (14,000 BCE), the black paintings of mammoths at Rouffignac Cave (14,000 BCE), the red and black paintings in the Tito Bustillo Cave (14,000 BCE) and the Russian Kapova Cave paintings (c.12,500 BCE) in Bashkortostan.

In Australia, the oldest cave art is the Nawarla Gabarnmang charcoal drawing in Arnhem Land, Northern Territory, which is carbon-dated to 26,000 BCE. The Koonalda Cave Art (finger-fluting) dates to 18,000 BCE, while the figurative Bradshaw paintings have been carbon-dated to 15,500 BCE. In Africa, the animal figure paintings in charcoal and red ochre on the Apollo 11 Cave Stones in Namibia date from 25,500 BCE, while in the Americas the hand stencil images at the Cueva de las Manos (Cave of the Hands) in Argentina, date from around 9,500 BCE.

For details of the colour pigments used by Stone Age cave painters, see: Prehistoric Colour Palette.

Upper Paleolithic Rock Engraving

Upper Paleolithic rock engraving is exemplified by the following sites: Abri Castanet (35,000 BCE), Grotte des Deux-Ouvertures (26,500), Cussac Cave (25,000), Cosquer Cave (25,000) Le Placard Cave (17,500), Roc-de-Sers Cave (17,200), Lascaux Cave (17,000), Rouffignac Cave (14,000), Trois Freres Cave (13,000) and Les Combarelles Cave (12,000).

Further afield, Aboriginal rock art began in the north of Australia, where the first 'modern' humans arrived from SE Asia. Ubirr rock art and Kimberley rock art are both believed to date from as early as 30,000 BCE, as are the ancient Burrup Peninsula rock engravings in the Pilbara, Western Australia. All these Australian Paleolithic sites are famous for their open air engraved drawings, whereas almost all the European engravings were created inside caves: the leading exception being the Coa Valley Engravings, Portugal (22,000 BCE).

Upper Paleolithic Sculpture

Upper Paleolithic artists produced a vast number of small sculptures of female figures, known as Venus Figurines. During Aurignacian times, they included: the Venus of Hohle Fels (ivory, 35,500 BCE), and the Venus of Galgenberg (also known as the Stratzing Figurine) (c.30,000 BCE). During the following Gravettian culture, more appeared, such as: the Venus of Dolni Vestonice (ceramic clay figurine: c.26,000 BCE); the Venus of Monpazier (limonite carving: c.25,000 BCE); the Venus of Willendorf (oolitic limestone sculpture: c.25,000 BCE); the Venus of Savignano (serpentine sculpture: c.24,000 BCE); the Venus of Moravany (mammoth ivory carving: c.24,000 BCE); the Venus of Laussel (limestone sculpture: c.23,000 BCE); the Venus of Brassempouy (mammoth ivory: c.23,000 BCE); the Venus of Lespugue (mammoth ivory: c.23,000 BCE); the Venus of Kostenky (mammoth ivory carving: 22,000 BCE), the Venus of Gagarino (volcanic rock: c.22,000 BCE), the Avdevo Venuses (ivory: c.20,000 BCE), the Zaraysk Venuses (ivory: c.20,000 BCE) and the Mal'ta Venuses (ivory: 20,000 BCE), to name but a few. Other non-female examples include the ivory Lion Man of Hohlenstein-Stadel (c.38,000 BCE). For later sculptures from the Magdalenian period, please see: Venus of Eliseevichi (14,000 BCE), the German Venus of Engen ("Petersfels Venus") (13,000 BCE) and the Venus of Monruz-Neuchatel (c.10,000 BCE), the last of the Upper Paleolithic figurines.

Upper Paleolithic Relief Sculpture

Stone Age relief sculpture is exemplified by the Dordogne limestone relief known as the Venus of Laussel (c.23,000-20,000 BCE); the beautiful Perigord carving of a salmon/trout in the Abri du Poisson Cave (c.23,000-20,000 BCE); the exceptional frieze at Roc-de-Sers Cave (17,200 BCE) in the Charente; the Cap Blanc Frieze (15,000 BCE) in the Dordogne; the Tuc d'Audoubert Bison reliefs (c.13,500 BCE) found in the Ariège; and the limestone frieze at Roc-aux-Sorciers (c.12,000 BCE), uncovered at Angles-sur-l'Anglin in the Vienne

Upper Paleolithic Tool Technology

Tool-making received something of an overhaul. Out went the old hand axes and flake tools, in came a wide range of diversified and specialized tools made from specially prepared stones. They included spear and arrow points, and a signature figure-eight shaped blade. Hafted tools appeared, as did the harpoon, specialist fishing equipment and a range of gravers (or burins) and scrapers. In addition to flint, materials like bone, ivory, and antlers were utilized extensively.

Art and Tool Cultures During the Upper Paleolithic

Aurignacian Culture (about 40,000 - 26,000 BCE)

One of several cultures which co-existed in Upper Paleolithic Europe, it was also practised as far away as south west Asia, its name derives from the type-site near the village of Aurignac in the Haute Garonne, France. Its tools included sophisticated bone implements like points with grooves cut in the bottom for attachment to handles/spears, scrapers (including nose-scrapers), burins, chisels, and military-style batons.

Aurignacian art also witnessed the first significant manifestations of fine art painting and sculpture: a phenomenon which continued throughout the rest of the Upper Paleolithic era. Notable examples include the red abstract symbols at El Castillo, the monochrome cave murals at Chauvet and Coliboaia, and the early venus figurines from across Europe. Other Aurignacian rock art included hand stencils, finger tracings, engravings, and bas-reliefs.

In addition, Aurignacian humans produced the first personal ornaments made from decorated bone and ivory, such as bracelets, necklaces, pendants and beads. This growing self-awareness, together with the birth of fine art, marks the Aurignacian as the first modern culture of the Stone Age.

Perigordian/Chatelperronian Culture: (about 33,000-27,000 BCE)

Châtelperronian was an important Upper Paleolithic culture of central and southern France. Derived from the earlier Mousterian, practised by *Homo neanderthalensis*, it employed Levallois flake-tool technology, producing toothed and serrated stone tools as well as a signature flint blades (possibly used to make jewellery) with blunted backs known as "Châtelperron points". No particular art is associated with this culture.

Gravettian Culture (about 26,000 - 20,000 BCE)

The Gravettian was a European Upper Palaeolithic culture whose name derives from the type-site of La Gravette in the Dordogne department of France. Practised in eastern, central and western Europe, its signature tool (derived from the Châtelperron point) was a small pointed blade with a blunt but straight back - called a Gravette Point. Personal jewellery continued to be manufactured, and more personal property is evident, indicating an increasing degree of social stratification.

Gravettian art is immensely rich in both cave painting and portable sculptural works. The former is exemplified by the wonderful stencil art at Cosquer cave and the coloured charcoal and ochre pictures at Pech-Merle cave. The most famous Gravettian sculpture consists of venus figurines, such as the Venuses of Dolni Vestonice (Czech Republic), Willendorf (Austria), Savignano (Italy), Kostenky (Russia), Moravany (Slovakia), Laussel (France), Brassempouy (France), Lespugue (France), and Gagarino (Russia).

Solutrean Culture (about 20,000 – 15,000 BCE)

This culture comes from the type-site of Solutré in the Mâcon district of eastern France. Curiously, Solutrean tool-makers appear to have developed a number of uniquely advanced techniques, some of which were not seen for several thousand years after their departure. In any event, Solutrean people produced the finest Paleolithic flint craftsmanship in western Europe.

However, around 15,000 BCE, Solutrean culture mysteriously vanishes from the archeological record. Some paleoanthropologists believe there are affinities between Solutrean and the later North American Clovis culture (as evidenced by artifacts found at Blackwater Draw in New Mexico, USA), indicating that Solutreans migrated across the frozen Atlantic to America. Other experts believe that Solutrean culture was overcome by a wave of new invaders.

Solutrean Art

Perhaps because of its focus on tool technology, Solutrean art is noted above all for its achievements in engraving and relief sculpture - see, for instance the fabulous rock engravings and frieze at the Roc-de-Sers Cave (c.17,200 BCE) - even though the glorious Lascaux cave paintings date from the period. Experts believe that the artists who created the cave murals at Lascaux and La Vache were influenced either by late Gravettian or early Magdalenian culture.

Ancient pottery also appeared at this time in East Asia. The oldest known sherds come from the Xianrendong Cave Pottery (c.18,000 BCE), discovered in northeast Jiangxi Province, China. After this comes Yuchanyan Cave Pottery (c.16,000 BCE) from China's Hunan province, and Amur River Basin Pottery (14,300 BCE). Meanwhile, in Japan, ceramics began with Jomon Pottery (from 14,500 BCE). For more chronological details, see: Pottery Timeline.

Magdalenian Culture (about 15,000 - 8,000 BCE)

Magdalenian is the final culture of the period and the apogee of Paleolithic art, of the Old Stone Age. Its name comes from the type-site of La Madeleine near Les Eyzies in the French Dordogne. Magdalenian tool technology is defined by the production of smaller and more sophisticated tools (from barbed points to needles, well-crafted scrapers to parrot-beak graters) made from fine flint-flakes and animal sources (bone, ivory etc), whose specialized functions and delicacy testify to the culture's advanced nature.

Mesolithic Culture

c. 10,000 - 4,000 BCE - Northern and Western Europe

c. 10,000 - 7,000 BCE - Southeast Europe

c. 10,000 - 8,000 BCE - Middle East and Rest of World

The Mesolithic period is a transitional era between the ice-affected hunter-gatherer culture of the Upper Paleolithic, and the farming culture of the Neolithic. The greater the effect of the retreating ice on the environment of a region, the longer the Mesolithic era lasted. So, in areas with no ice (eg. the Middle East), people transitioned quite rapidly from hunting/gathering to agriculture. Their Mesolithic period was therefore short, and often referred to as the Epi-Paleolithic or Epipaleolithic. By comparison, in areas undergoing the change from ice to no-ice, the Mesolithic era and its culture lasted much longer.

NOTE: The term "Mesolithic" is no longer used to denote a worldwide period in the evolution of European cultural evolution. Instead, it describes only the situation in northwestern Europe - Scandinavia, Britain, France, Netherlands, Denmark, Germany - and central Europe.

European Mesolithic Humans

Archeological discoveries of Mesolithic remains bear witness to a great variety of races. These include the Azilian Ofnet Man (Bavaria); several later types of Cro-Magnon Man; types of brachycephalic humans (short-skulled); and types of dolichocephalic humans (long-skulled).

European Mesolithic Cultures

As the ice disappeared, to be replaced by grasslands and forests, mobility and flexibility became more important in the hunting and acquisition of food. As a result, Mesolithic cultures are characterized by small, lighter flint tools, quantities of fishing tackle, stone adzes, bows and arrows. Very gradually, at least in Europe, hunting and fishing was superseded by farming and the domestication of animals. The three main European Mesolithic cultures are: Azilian, Tardenoisian and Maglemosian. Azilian was a stone industry, largely microlithic, associated with Ofnet Man. Tardenoisian, associated with Tardenoisian Man, produced small flint blades and small flint implements with geometrical shapes, together with bone harpoons using flint flakes as barbs. Maglemosian (northern Europe) was a bone and horn culture, producing flint scrapers, borers and core-axes.

Mesolithic Rock Art

Mesolithic art reflects the arrival of new living conditions and hunting practices caused by the disappearance of the great herds of animals from Spain and France, at the end of the Ice Age. Forests now cloaked the landscape, necessitating more careful and cooperative hunting arrangements. European Mesolithic rock art gives more space to human figures, and is characterized by keener observation, and greater narrative in the paintings. Also, because of the warmer weather, it moves from caves to outdoor sites in numerous locations.

Famous Works of Art From the Mesolithic Period

Famous works of painting and sculpture created by Mesolithic artists include the following:

Artwork: Cueva de las Manos (Cave of the Hands) (c.9500 BCE)

Type: Stencils of Hands; Pigments on Rock

Local Period: Upper Paleolithic/Neolithic

Location: Rio de las Pinturas, Argentina

Artwork: Bhimbetka Rock Art (c.9,000-7,000 BCE)

Type: Paintings and Stencil Art

Local Period: Upper Paleolithic and Mesolithic

Location: Madhya Pradesh, India

Artwork: Paintings on Pachmari Hills (9000–3000 BCE)

Type: Pigments on Sandstone

Local Period: Mesolithic

Location: Satpura Range of Central India

Artwork: Wonderwerk Cave Engravings (c.8200 BCE)

Type: Geometric Designs and Representations of Animals

Local Period: African Neolithic

Location: Wonderwerk Cave, Northern Cape Province, South Africa

Artwork: Tassili-n-Ajjer Rock Art (c.8000 BCE)

Type: Paintings and Engravings

Local Period: Archaic Tradition

Location: Tassili-n-Ajjer, Algeria, N Africa

Artwork: The Shigir Idol (7,500 BCE)

Type: Wood carving of an anthropomorphic figure.

Local Period: Late Mesolithic, Early Neolithic

Location: Peat bog near Sverdlovsk in Russia.

c. 4,000 - 2,000 BCE: Northern and Western Europe

c. 7,000 - 2,000 BCE: Southeast Europe

c. 8,000 - 2,000 BCE: Middle East & Rest of World

The Neolithic era saw a fundamental change in lifestyle throughout the world. OUT went the primitive semi-nomadic style of hunting and gathering food, IN came a much more settled form of existence, based on farming and rearing of domesticated animals. Neolithic culture was characterized by stone tools shaped by polishing or grinding, and farming (staple crops: wheat, barley and rice; domesticated animals: sheep, goats, pigs and cattle), and led directly to a growth in crafts like pottery and weaving. All this began about 9,000 BCE in the villages of southern Asia, from where it spread to the Chinese interior - see Neolithic Art in China - and also to the fertile crescent of the Tigris and Euphrates in the Middle East (c.7,000), before spreading to India (c.5,000), Europe (c.4,000), and the Americas (independently) (c.2,500 BCE).

The establishment of settled communities (villages, towns and in due course cities) triggered a variety of new activities, notably: a rapid stimulation of trade, the construction of trading vehicles (mainly boats), new forms of social organizations, along with the growth of religious beliefs and associated ceremonies. And due to improvements in food supply and environmental control, the population rapidly increased. For tens of millennia before the advent of agriculture, the total human population had varied between 5 million and 8 million. By 4,000 BCE, after less than 5,000 years of farming, numbers had risen to 65 million.

Neolithic Art

In general, the more settled and better-resourced the region, the more art it produces. So it was with Neolithic art, which branched out in several different directions. And although most ancient art remained essentially functional in nature, there was a greater focus on ornamentation and decoration. For instance, jade carving - one of the great specialties of Chinese art - first appeared during the era of Neolithic culture, as does Chinese lacquerware and porcelain. See: Chinese Art Timeline (18,000 BCE - present.)

Portable Art

With greater settlement in villages and other small communities, rock painting begins to be replaced by more portable art. Discoveries in Catal Huyuk, an ancient village in Asia Minor (modern Turkey) include beautiful murals (including the world's first landscape painting), dating from 6,100 BCE. Artworks become progressively ornamented with precious metals (eg. copper is first used in Mesopotamia, while more advanced metallurgy is discovered in South-East Europe). Free standing sculpture, in stone and wood begins to be seen, as well as bronze statuettes (notably by the Indus Valley Civilization, one of the early engines of painting and sculpture in India), primitive jewellery and decorative designs on a variety of artifacts.

Ceramics

However, the major medium of Neolithic civilization was ceramic pottery, the finest examples of which (mostly featuring geometric designs or animal/plant motifs) were produced around the region of Mesopotamia (Iran, Iraq) and the eastern Mediterranean.

Other Cultural Developments

Other important art-related trends which surface during the Neolithic art include writing and religion. The appearance of early hieroglyphic writing systems in Sumer heralds the arrival of pictorial methods of communication, while increased prosperity and security permits greater attention to religious formalities of (eg) worship (in temples) and burial, in megalithic tombs.

Architecture and Megalithic Art

The emergence of the first city state (Uruk, in Mesopotamia) predicts the establishment of more secure communities around the world, many of which will compete to establish their own independent cultural and artistic identity, creating permanent architectural megaliths in the process. (See: History of Architecture). The Neolithic age also saw the emergence of monumental tomb buildings like the Egyptian pyramids and individual monoliths like the Sphinx at Giza - see Ancient Egyptian Architecture for details. For details of tomb architecture and decorative engravings in Ireland during this period, please see Irish Stone Age art.

Other Famous Works of Art From the Neolithic Period

Famous works of painting and sculpture created by Neolithic artists include the following:

Artwork: Jiahu Carvings (c.7000–5700 BCE)

Type: Turquoise Carvings, Bone Flutes

Local Period: Chinese Neolithic

Location: Yellow River Basin of Henan Province, Central China

Artwork: Coldstream Burial Stone (c.6,000 BCE)
Type: Pigments on Quartzite Pebble
Local Period: African Neolithic
Location: Lottering River, Western Cape Province, South Africa

Artwork: The Seated Woman of Catal Huyuk (c.6000 BCE)
Type: Terracotta Sculpture
Local Period: Neolithic
Location: Catal Huyuk, Anatolia, Turkey

Artwork: Egyptian Naquada I Female Figurines (c.5500-3000 BCE)
Type: Small Carved Figures: Bone, Ivory, Stone (Ornamented w. Lapis Lazuli)
Local Period: Egyptian Predynastic Period (Naquada I Period, 4000-3500 BCE)
Location: Egypt

Artwork: Persian Chalcolithic Pottery (c.5000-3500 BCE)
Type: Ceramic Ware painted with Human, Bird, Plant or Animal Motifs
Local Period: Chalcolithic Culture
Location: Iran (Persia)

Artwork: Thinker of Cernavoda (c.5,000 BCE)
Type: Terracotta
Local Period: Neolithic Hamangia Culture
Location: Romania

Artwork: Fish God of Lepenski Vir (c.5000 BCE)
Type: Sandstone Carving
Local Period: Neolithic
Location: Danube Settlement of Lepenski Vir, Serbia

Artwork: Iraqi Samarra and Halaf Ceramic Plates (c.5000)
Type: Ceramic Dish with Figurative or Geometric Decoration
Local Period: Samarra/Halaf Style, Neolithic
Location: Iraq and Syria

Artwork: Dabous Giraffe Engravings (c.4000 BCE)
Type: Saharan Rock Engravings
Local Period: Taureg Culture
Location: Agadez, Niger, Africa

Artwork: Valdivia Figurines (c.4000–3500 BCE)
Type: First representational images in the Americas, in limestone and marble
Local Period: Neolithic
Location: Real Alto and Loma Alta sites, Ecuador

Artwork: Pig Dragon Pendant (Hongshan Culture) (c.3800 BCE)
Type: Jade Carving
Local Period: Hongshan Culture
Location: Tomb 4, Niuheiliang, Jianping, Liaoning Province, NE China

Bronze Age (In Europe, 3000 BCE - 1200 BCE)

Characterized by the development of metallurgy, in particular copper mining and smelting, along with tin-mining and smelting, as reflected in the exquisite bronze, gold and silver sculptures. Emergence of Egyptian architecture, metallurgy, encaustic painting and stone sculpture. See: Bronze Age Art.

Bronze Age Masterpiece: Ram in a Thicket (c.2500 BCE)

This extraordinary 18-inch high sculpture (British Museum, London) features a ram standing on its hind legs, peering through a symbolic piece of undergrowth. The minimalist depiction of the thicket and the focused, forlorn look on the face of the animal, demonstrates an

amazing artistic sensibility and makes it a masterpiece of Sumerian art of the time.

Type: Sculpture in gold-leaf, copper, lapis lazuli, red limestone

Local Period: Early Dynastic

Location: Great Death Pit, Ur, Mesopotamia (Iraq)

Artwork: Maikop Gold Bull (c.2500 BCE)

Type: Gold Sculpture (Lost-Wax Casting Method) (Found with 3 more; 1 silver, 2 gold)

Local Period: Maikop Culture

Location: North Caucasus, Russia

Iron Age (In Europe, 1500 BCE - 200 BCE)

Characterized by the processing of iron ore to produce iron tools and weapons. In northern Europe, Hallstatt and La Tene styles of Celtic art flourished, while around the Mediterranean there emerged the great schools of Greek art and Persian art as well as the culture and architecture of the Minoan, Mycenaean, and Etruscan civilizations. See: Iron Age Art.

In India, around 200 BCE, the first paintings appeared in the Ajanta Caves. For more, see: Classical Indian Painting (up to 1150 CE).

Renaissance Art in Italy (c.1400-1600)

History, Characteristics, Causes, Techniques

During the two hundred years between 1400 and 1600, Europe witnessed an astonishing revival of drawing, fine art painting, sculpture and architecture centred on Italy, which we now refer to as the Renaissance (rinascimento). It was given this name (French for 'rebirth') as a result of La Renaissance - a famous volume of history written by the historian Jules Michelet (1798-1874) in 1855 - and was better understood after the publication in 1860 of the landmark book "The Civilization of the Renaissance in Italy" (Die Kultur der Renaissance in Italien), by Jacob Burckhardt (1818-97), Professor of Art History at the University of Basel.

What Were the Characteristics of the Renaissance?

In very simple terms, the Italian Renaissance re-established Western art according to the principles of classical Greek art, especially Greek sculpture and painting, which provided much of the basis for the Grand Tour, and which remained unchallenged until Pablo Picasso and Cubism.

From the early 14th century, in their search for a new set of artistic values and a response to the courtly International Gothic style, Italian artists and thinkers became inspired by the ideas and forms of ancient Greece and Rome. This was perfectly in tune with their desire to create a universal, even noble, form of art which could express the new and more confident mood of the times.

Renaissance Philosophy of Humanism

Above all, Renaissance art was driven by the new notion of "Humanism," a philosophy which had been the foundation for many of the achievements (eg. democracy) of pagan ancient Greece. Humanism downplayed religious and secular dogma and instead attached the greatest importance to the dignity and worth of the individual

Effect of Humanism on Art

In the visual arts, humanism stood for (1) The emergence of the individual figure, in place of stereotyped, or symbolic figures. (2) Greater realism and consequent attention to detail, as reflected in the development of linear perspective and the increasing realism of human faces and bodies; this new approach helps to explain why classical sculpture was so revered, and why Byzantine art fell out of fashion. (3) An emphasis on and promotion of virtuous action: an approach echoed by the leading art theorist of the Renaissance Leon Battista Alberti (1404-72) when he declared, "happiness cannot be gained without good works and just and righteous deeds".

The promotion of virtuous action reflected the growing idea that man, not fate or God, controlled human destiny, and was a key reason why history painting (that is, pictures with uplifting 'messages') became regarded as the highest form of painting. Of course, the exploration of virtue in the visual arts also involved an examination of vice and human evil.

Causes of the Renaissance

What caused this rebirth of the visual arts is still unclear. Although Europe had emerged from the Dark Ages under Charlemagne (c.800), and had seen the resurgence of the Christian Church with its 12th/13th-century Gothic style building program, the 14th century in Europe

witnessed several catastrophic harvests, the Black Death (1346), and a continuing war between England and France. Hardly ideal conditions for an outburst of creativity, let alone a sustained rinascita of paintings, drawings, sculptures and new buildings. Moreover, the Church - the biggest patron of the arts - was racked with disagreements about spiritual and secular issues.

Increased Prosperity

However, more positive currents were also evident. In Italy, Venice and Genoa had grown rich on trade with the Orient, while Florence was a centre of wool, silk and jewellery art, and was home to the fabulous wealth of the cultured and art-conscious Medici family.

Prosperity was also coming to Northern Europe, as evidenced by the establishment in Germany of the Hanseatic League of cities. This increasing wealth provided the financial support for a growing number of commissions of large public and private art projects, while the trade routes upon which it was based greatly assisted the spread of ideas and thus contributed to the growth of the movement across the Continent.

Allied to this spread of ideas, which incidentally speeded up significantly with the invention of printing, there was an undoubted sense of impatience at the slow progress of change. After a thousand years of cultural and intellectual starvation, Europe (and especially Italy) was anxious for a re-birth.

Weakness of the Church

Paradoxically, the weak position of the Church gave added momentum to the Renaissance. First, it allowed the spread of Humanism - which in bygone eras would have been strongly resisted; second, it prompted later Popes like Pope Julius II (1503-13) to spend extravagantly on architecture, sculpture and painting in Rome and in the Vatican (eg. see Vatican Museums, notably the Sistine Chapel frescoes) - in order to recapture their lost influence. Their response to the Reformation (c.1520) - known as the Counter Reformation, a particularly doctrinal type of Christian art - continued this process to the end of the sixteenth century.

An Age of Exploration

The Renaissance era in art history parallels the onset of the great Western age of discovery, during which appeared a general desire to explore all aspects of nature and the world. European naval explorers discovered new sea routes, new continents and established new colonies. In the same way, European architects, sculptors and painters demonstrated their own desire for new methods and knowledge. According to the Italian painter, architect, and Renaissance commentator Giorgio Vasari (1511-74), it was not merely the growing respect for the art of classical antiquity that drove the Renaissance, but also a growing desire to study and imitate nature.

Why Did the Renaissance Start in Italy?

In addition to its status as the richest trading nation with both Europe and the Orient, Italy was blessed with a huge repository of classical ruins and artifacts. Examples of Roman architecture were found in almost every town and city, and Roman sculpture, including copies of lost sculptures from ancient Greece, had been familiar for centuries. In addition, the decline of Constantinople - the capital of the Byzantine Empire - caused many Greek scholars to emigrate to Italy, bringing with them important texts and knowledge of classical Greek civilization. All these factors help explain why the Renaissance started in Italy. For more, see Florentine Renaissance (1400-90).

For details of how the movement developed in different Italian cities, see:

- Sienese School of Painting (eg. Lorenzetti brothers, Sassetta);
- Renaissance in Florence (eg. Giotto, Masaccio, Brunelleschi, Leonardo);
- Renaissance in Rome Under the Popes (eg. Raphael and Michelangelo);
- Renaissance in Venice (eg. Mantegna, Bellini family, Titian, Tintoretto).

Renaissance Artists

If the framework for the Renaissance was laid by economic, social and political factors, it was the talent of Italian artists that drove it forward. The most important painters, sculptors, architects and designers of the Italian Renaissance during the 14th, 15th and 16th centuries include, in chronological order:

Cimabue (c.1240-1302)

Noted for his frescos at Assisi.

Giotto di Bondone (1267-1337)

Scrovegni Arena Chapel frescos.

Gentile da Fabriano (1370-1427)

Influential Gothic style painter.

Jacopo della Quercia (c.1374-1438)

Influential sculptor from Siena.
Lorenzo Ghiberti (1378-1455)
Sculptor of "Gates of Paradise"
Donatello (1386-1466)
Best early Renaissance sculptor
Paolo Uccello (1397-1475)
Famous for work on perspective.
Tommaso Masaccio (1401-1428)
Greatest early Florentine painter.
Piero della Francesca (1420-92)
Pioneer of linear perspective.
Andrea Mantegna (1430-1506)
Noted for illusionistic foreshortening techniques.
Donato Bramante (1444-1514)
Top High Renaissance architect.
Alessandro Botticelli (1445-1510)
Famous for mythological painting.
Leonardo da Vinci (1452-1519)
Creator of Mona Lisa, Last Supper.
Raphael (1483-1520)
Greatest High Renaissance painter.
Michelangelo (1475-1564)
Genius painter & sculptor.
Titian (1477-1576)
Greatest Venetian colourist.
Andrea del Sarto (1486-1530)
Leader of High Renaissance in Florence.
Correggio (1489-1534)
Famous for illusionistic quadratura frescoes.
Andrea Palladio (1508-80)
Dominated Venetian Renaissance architecture, later imitated in Palladianism.
Tintoretto (1518-1594)
Religious Mannerist painter.
Paolo Veronese (1528-1588)
Colourist follower of Titian.

General List of Renaissance Painters & Sculptors

ITALY & SPAIN

c.1280-1400 - Proto-Renaissance Artists
c.1400-1490 - Early Renaissance Artists
c.1490-1530 - High Renaissance Artists
c.1530-1600 - Mannerist Artists

NORTHERN EUROPE

c.1400-1600 - Northern Renaissance Artists.

SCULPTORS

c.1400-1600 - Renaissance Sculptors.

Effects of the Renaissance on Painting and Sculpture

As referred to above, the Italian Renaissance was noted for four things. (1) A reverent revival of Classical Greek/Roman art forms and styles; (2) A faith in the nobility of Man (Humanism); (3) The mastery of illusionistic painting techniques, maximizing 'depth' in a picture, including: linear perspective, foreshortening and, later, quadratura; and (4) The naturalistic realism of its faces and figures, enhanced by oil painting techniques like sfumato.

Renaissance Painting Techniques

- Linear Perspective

Example: Flagellation of Christ by Piero della Francesca.

- Foreshortening

Example: Lamentation over the Dead Christ by Mantegna.

- Quadratura

Example: Camera degli Sposi frescoes by Mantegna.

- Sfumato

Example: Mona Lisa by Leonardo da Vinci.

In Northern Europe, the Renaissance was characterized by advances in the representation of light through space and its reflection from different surfaces; and (most visibly) in the achievement of supreme realism in easel-portraiture and still life. This was due in part to the fact that most Northern Renaissance artists began using oil paint in the early 15th century, in preference to tempera or fresco which (due to climatic and other reasons) were still the preferred painting methods in Italy. Oil painting allowed richer colour and, due to its longer drying time, could be reworked for many weeks, permitting the achievement of finer detail and greater realism. Oils quickly spread to Italy: first to Venice, whose damp climate was less suited to tempera, then Florence and Rome. (See also: Art Movements, Periods, Schools, for a brief guide to other styles.)

Among other things, this meant that while Christianity remained the dominant theme or subject for most visual art of the period, Evangelists, Apostles and members of the Holy Family were depicted as real people, in real-life postures and poses, expressing real emotions. At the same time, there was greater use of stories from classical mythology - showing, for example, icons like Venus the Goddess of Love - to illustrate the message of Humanism. For more about this, see: Famous Paintings Analyzed.

As far as plastic art was concerned, Italian Renaissance Sculpture reflected the primacy of the human figure, notably the male nude. Both Donatello and Michelangelo relied heavily on the human body, but used it neither as a vehicle for restless Gothic energy nor for static Classic nobility, but for deeper spiritual meaning. Two of the greatest Renaissance sculptures were: David by Donatello (1440-43, Bargello, Florence) and David by Michelangelo (1501-4, Academy of Arts Gallery, Florence). Note: For artists and styles inspired by the arts of classical antiquity, see: Classicism in Art (800 onwards).

Raised Status of Painters and Sculptors

Up until the Renaissance, painters and sculptors had been considered merely as skilled workers, not unlike talented interior decorators. However, in keeping with its aim of producing thoughtful, classical art, the Italian Renaissance raised the professions of painting and sculpture to a new level. In the process, prime importance was placed on 'disegno' - an Italian word whose literal meaning is 'drawing' but whose sense incorporates the 'whole design' of a work of art - rather than 'colorito', the technique of applying coloured paints/pigments. Disegno constituted the intellectual component of painting and sculpture, which now became the profession of thinking-artists not decorators. See also: Best Renaissance Drawings.

Influence on Western Art

The ideas and achievements of both Early and High Renaissance artists had a huge impact on the painters and sculptors who followed during the cinquecento and later, beginning with the Fontainebleau School (c.1528-1610) in France. Renaissance art theory was officially taken up and promulgated (alas too rigidly) by all the official academies of art across Europe, including, notably, the Accademia di San Luca in Rome, the Accademia del Disegno in Florence, the French Académie des Beaux-Arts in Paris, and the Royal Academy in London. This theoretical approach, known as 'academic art' regulated numerous aspects of fine art. For example, in 1669, Andre Felibien, Secretary to the French Academy, announced a hierarchy of painting genres, modelled on Renaissance philosophy, as follows: (1) History Painting; (2) Portrait art; (3) Genre Painting; (4) Landscape; (5) Still Life.

In short, the main contribution of the Italian Renaissance to the history of art, lay in its promotion of classical Greek values. As a result, Western painting and sculpture developed largely along classical lines. And although modern artists, from Picasso onwards, have explored new media and art-forms, the main model for Western art remains Greek Antiquity as interpreted by the Renaissance.

Renaissance Chronology

It is customary to classify Italian Renaissance Art into a number of different but overlapping periods:

- The Proto-Renaissance Period (1300-1400)
- Pre-Renaissance Painting (1300-1400)
- The Early Renaissance Period (1400-1490)
- The High Renaissance Period (1490-1530)
- The Northern Renaissance (1430-1580)

----- Netherlandish Renaissance (1430-1580)

----- German Renaissance (1430-1580)

- The Mannerism Period (1530-1600)

[The High Renaissance developed into Mannerism, about the time Rome was sacked in 1527.]

This chronology largely follows the account given in the authoritative book "Vite de' più eccellenti architetti, pittori, et scultori Italiani" by the Renaissance commentator Giorgio Vasari (1511-74).

Italian High Renaissance Period (c.1490-1530)

- High Renaissance Painting

Characteristics and famous painters.

- Renaissance Art in Florence

Masaccio, Donatello, Brunelleschi, Leonardo, Michelangelo and others.

- Renaissance Art in Rome

Raphael, Michelangelo and others.

- Renaissance Art in Venice

Mantegna, Giorgione, Titian, Veronese, Bellini, Tintoretto and others.

- Best Renaissance Drawings

Sketches in chalks, metalpoint, charcoal, pen and ink.

- Greatest Renaissance Paintings

The most important works of fresco, tempera and oils.

- Northern Renaissance (1430-1580)

Jan Van Eyck, Roger van der Weyden, Memling, Bosch, Albrecht Durer.

NOTE: For the ongoing influence of High Renaissance classicism on 20th century art, see: Classical Revival in modern art (c.1900-30).

Note: the term "Renaissance", used to describe the new forms of architecture, painting and sculpture which appeared in Italy, during the period 1400-1530, was first coined by the French historian Jules Michelet (1798-1874.)

What is the High Renaissance? - Characteristics

The period known as the High Renaissance roughly spans the four decades from 1490 to the sack of Rome in 1527. It represents the accepted apogee of Renaissance art - the period when the ideals of classical humanism were fully implemented in both painting and sculpture, and when painterly techniques of linear perspective, shading and other methods of realism were mastered. While the preceding Early Renaissance had been centred on Florence and largely paid for by the Medici family, the High Renaissance was centred on Rome and paid for by the Popes. Indeed, it very nearly bankrupted the city.

The key High Renaissance artists in Rome included Leonardo da Vinci (1452-1519) master of oil painting and sfumato; Michelangelo (1475-1564), the greatest sculptor and fresco painter of the day; Raphael (1483-1520), the finest painter of the High Renaissance; Correggio (1489-1534), the Parma painter, famous for his illusionistic Assumption of the Virgin (Parma Cathedral) (1526-30); and Donato Bramante (1444-1514), the leading architect of the High Renaissance. Provincial painters included Luca Signorelli (1450-1523), whose Sistine Chapel murals and Orvieto Cathedral frescoes are believed to have been an important influence on Michelangelo.

High Renaissance Works of Art

Masterpieces of High Renaissance painting include: Michelangelo's Genesis Sistine Chapel frescoes; Leonardo's Virgin of the Rocks (1484-6, Louvre, Paris), Lady with an Ermine (1490) Czartoryski Museum, Krakow, Last Supper (1495-8, Santa Maria delle Grazie, Milan) and Mona Lisa (1503-5, Louvre); Raphael's Sistine Madonna (1513), Transfiguration (1518-20), Portrait of Baldassare Castiglione (1514-15) and School of Athens (1509-11), in the Raphael Rooms in the Vatican; and Titian's Assumption of the Virgin (1518, S. Maria Gloriosa dei Frari).

Highlights of High Renaissance sculpture include: Pieta (1500, St Peter's, Rome) and David by Michelangelo (1501-4, originally located in the Piazza della Signoria, Florence, now in the city's Academy of Arts).

The High Renaissance unfolded against a back-drop of mounting religious and political tension, which affected painters and sculptors, as well as patrons of the arts throughout Italy. After the sack of Rome in 1527, it was superseded by the more artificial and dramatic style of Mannerism.

Political Developments During the High Renaissance

Christopher Columbus's discovery of the Americas in 1492, together with Magellan's first circumnavigation of the world in 1522, trashed the prevailing dogma of a flat earth; in 1512 Copernicus placed the sun (not the earth) at the centre of the visible universe. These discoveries rocked the foundations of theology along with many assumptions about human life.

In 1494, Charles VIII of France invaded Italy, causing upheaval throughout the country. In the same year, political rivalry in Florence led to the rise and fall of the fanatical cleric Girolamo Savonarola (1494-8), which severely shook Florentine art in the process. (During this time it is said that Botticelli actually pledged to renounce art.)

In 1517, Martin Luther posted his 95 Theses in Wittenberg, triggering the Reformation and plunging much of Europe into chaos. This led to a number of military conflicts between Charles V (ruler of Spain, Austria, the Low Countries and southern Italy), Francis I of France, Henry VIII in England and the Popes in Rome. The era ended with the sacking of Rome in 1527.

Rome: The Centre of the High Renaissance

Rome now superseded Florence as the focal point of the Early Renaissance, not least because of papal ambition to make Rome even greater than its Florentine rival. The exorbitant patronage of Pope Julius II (1503-13) and Pope Leo X (1513-21) secured and retained the services of painters like Raphael, Leonardo and Michelangelo, all of whom created oils and mural painting of startling novelty, plus architects like Donato Bramante, a key figure in the redevelopment of St Peter's Basilica. Driven by Popes who wished to use art to reinforce the glory of Rome, the High Renaissance marked the zenith of the return to classical humanist values based on ancient Greek art and culture. As the Church was the major patron, Christian art remained the major genre.

For the leaders of the Florentine High Renaissance once Leonardo and Michelangelo had departed: see Fra Bartolommeo (1472-1517), leader 1508-12; replaced by Andrea del Sarto (1486-1530).



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**SCHOOL OF BUILDING & ENVIRONMENT
DEPARTMENT OF FASHION DESIGN**

UNIT – II - History of Art & Fashion– SFDA1303

History of Museums

Museum is a place and an institution that collects, takes care and interprets object, artifacts and other material evidence of human history, as well as of nature and makes them available for viewing by general public. Word “museum” comes from Ancient Greek “mouseion” which meant “seat of Muses” and it was used for philosophical institution or for a place for contemplation. In Rome, Latin word “museum” was used for places for philosophical discussions. First time a word “museum” was used to describe something similar to modern museum was in 15th century for collection of Lorenzo de Medici in Florence. Until 17th century, it was a name for collections of curiosities such were Ole Worm's collection in Copenhagen and John Tradescant's collection in Lambeth. When John Tradescant's collection became property of Elias Ashmole in 1677, it was moved to University of Oxford to a building especially built for it. Building was opened for public in 1683 and was named the Ashmolean Museum and is considered to be the first museum open to public that held the name “museum”. That marks the moment when “museum” starts being an institution and not just collection of items and it remained like that during 19th and 20th century.

In time some other forms of museums began to appear as they begin to accommodate different types of artifacts. There are now open-air museums that have preserved buildings as objects, ecomuseums and even virtual museums that exist only in electronic form on the Internet. There are also archeology museums that hold archaeological artifacts; art museums (or art galleries) that display different forms of art; encyclopedic museums that give many different information about local and global history; history museums; maritime, military and war museums; pop-up museums that are temporary and many more.

Museum History

Museums deal with nature and human influence on nature and how humans change through history. But museums also change through history. How? You can read about museum history here.

Early Museums - The First Public Museums

Museums as places for collecting, preserving and displaying of man-made objects are much older than we probably think. First museum that we have proofs of is **Ennigaldi-Nanna's** museum from 530 BC that was located in state of Ur. It was curreted by Princess Ennigaldi, daughter of King Nabonidus, the last king of the Neo-Babylonian Empire. He is known as the first archeologist and he gave an idea to Princess Ennigaldi to make a museum. Museum held Mesopotamian antiquities and even had labels for items in a shape of clay cylinders with descriptions of items in three languages. It was placed in the royal palace and it was not open to public. First museums opened for public were founded in Rome during the Renaissance.

The oldest public collection of art is **Capitoline Museums**. It started when Pope Sixtus IV donated ancient bronze sculptures to people of Rome and placed them on Capitoline Hill in 1471. Since then it has grown in number of showpieces and it consists of ancient Roman statues, inscriptions, and medieval and Renaissance art. Museum now has three main buildings that surround the Piazza del Campidoglio in a plan conceived by Michelangelo Buonarroti. Buildings are also connected with underground gallery that goes beneath the piazza.

Vatican Museums were founded in the early 16th century (1506) by Pope Julius II. They are museums in the city-state of Vatican and are located within city borders. Museum began as a one statue (Laocoön and his Sons) but now holds works collected by Roman Catholic Church from classical sculptures and paintings to modern religious art.

In 1684, an abbot Jean-Baptiste Boisot donated his own collection to the Benedictine monks of Saint-Vincent, under the condition that they make a museum out of it that would be open to general public two days in a week. That collection grew and became **Musée des Beaux-Arts et d'archéologie de Besançon** - the first museum in France.

London British Museum was based on the collections of the physician and scientist Sir Hans Sloane and it was founded in 1753 and opened for public in 1759.

Uffizi Gallery in Florence is one of the oldest art galleries in the world. It was first opened for visitors in 16th century but only on demand. In 1765 it was opened for public viewing.

Hermitage Museum is founded by Catherine the Great in 1764. Since 1852 it is open for public and today it consists of six buildings including the Winter Palace. It holds over three million items from Egyptian antiquities to Modern art.

The Louvre is one of the largest museums of the world, former royal palace and historic monument. It was opened in 1793. I has almost 35,000 items from all periods of history and is the most visited museum in the world with 8 million visitors a year.

Belvedere Museum in Vienna was built at the place of summer residence for Prince Eugene of Savoy and opened for public in 1781.

Charleston Museum is a first American museum. It was founded in 1773 and opened for public in 1824.

History of Art Museums

Art museum or art gallery is a term for a place - building or space, for exhibition of visual arts. There are private and public museums of art that differ in who owns the exposed art pieces. The most common items that are exhibited in art museums are paintings but sculpture, drawings, textiles, photographs and other type of visual arts are also shown.

Public art museums are nonprofit or publicly owned while private galleries sell art. Galleries are also rooms in museums where the art is displayed. There are also contemporary art galleries that are semi-private: they sell the art and keep portion of the sales. Vanity galleries charge the artists for displaying their art.

For the first art museum is considered **Kustmuseum Basel** which originated from Amerbach-Cabinet the city of Basel bought in 1661 and with that made it the first municipally owned museum. Kustmuseum Basel opened publicly in 1671. World's first university art museum is Ashmolean Museum in Oxford opened in 1683.

The most visited art museum in the world is **Louvre Museum** in Paris with over 9 million visitors a year. It is located on the right bank of the Seine and is housed in the Louvre Palace which began as a fortress in the second half of the 12th century. When in 1682 Louis XIV chose Palace of Versailles as his household he left Louvre as a place for displaying a royal collection. From that moment, Louvre held many important works of art.

Metropolitan Museum of Art in New York City is second most visited art museum in the world, largest in the United States and third largest in the world. It was founded in 1870 and opened for public February 20, 1872. It was founded by local businessmen and financiers, leading artists and thinkers. It is originally located on Fifth Avenue but it was later moved to on the eastern edge of Central Park.

British Museum in London is the third most visited art museum with over 5 million visitors a year. It was founded in 1753 from a collection of physician and scientist Sir Hans Sloane. It was opened for public viewing in 1759. In years it grew and it holds art from ancient times to Renaissance.

Fourth most visited art museum is **Tate Modern** in London. It is located in the Bankside area in the former Bankside Power Station. It was founded in 2000 and it displays modern art from 1900 until today.

National gallery is fifth most visited. It is placed on Trafalgar Square in London. It is founded in 1824 when British government bought 38 paintings from the heirs of John Julius Angerstein, an insurance broker and patron of the arts. It now holds over 2300 paintings from 14th to 19th century.

National Museum of Modern Art in Paris holds 6th place in the number of yearly visits. It is located in Centre Pompidou in the 4th arrondissement of the city. It was founded in 1947 and it holds 70,000 works of art.

History Museums - Historic House and other History Museum Types

History museums are oriented on collecting, preserving and displaying objects important for history of a certain territory - local or more general. Their purpose is to give a chronological perspective. History museums contain wide range of artifacts, documents and archeological items. Some of the more famous history museums (or museums that have history department) are Museum of History in London, National Museum of History in Chapultepec Castle, Mexico City, and city museums of Amsterdam, Dresden, Luxembourg, New York City, Stockholm and Warsaw. One of the more common types of history museum is a history house. Reason to make a house a history house could be that it is of architectural significance, that someone famous was born or lived in it or that something important happened in it.

Historic sites are also type of history museum. They are usually places where are preserved pieces of social, political or military history or they mark public crimes that happened there. Examples of that kind of historic site are Tuol Sleng Genocide Museum or Robben Island. Historic site can be any place, building, or site that is of local, regional, or national significance. They are usually protected by the law.

One more special type of history museums is ethnography museum. They are more concentrated on the culture (again local or national) than on chronology. Among newer nations they are seen as a contribution to unity among different cultures while in nations that have history in colonizing, ethnographic museums represent cultures of other peoples. They are usually founded in capital cities.

History museums are very concerned with preserving history of rural and urban tradition especially because of the rapid influence of progress. First such museum was founded in Sweden by Artur Hazelius in 1873. He founded museum of traditional life at the Nordic Museum in Stockholm. After that idea spread and other cities started opening history museums as well.

History of Open-air Museums

Open-air museum is a type of museum that exhibits old buildings that are reconstructed or rebuilt so they look like they did in an earlier period in history. First open-air museum was founded in Oslo, Norway in 1881 from King Oscar II's collection. Idea was to build 8 to 10 buildings that would show development of the traditional Norwegian architecture since Middle Ages. Open-air museum in Sweden was

built in the second half of the 19th century. It was called Skansen and it was founded by Artur Hazelius after he saw open-air museum in Oslo. Skansen in time became a model for other open-air museums in Europe and North America. Living museums are a special type of open-air museums where actors interpret life and crafts of the period that open-air museum represents. First North American open-air museum is Greenfield Village in Dearborn, Michigan founded by Henry Ford in 1928. Greenfield Village and Colonial Williamsburg, established 1934, influenced other open-air museums in North America and established their style and difference in regards to European open-air museums. European open-air museum are more focused on buildings while North American seek to show life of people in the settlements of past.

Some of the notable open-air museums are:

Luxor in Upper Egypt on the east bank of the Nile River that dates from 1400 BC.

Nazareth Village in Israel where Muslim and Christian actors dress in costumes from 1st century and reenact life and craft of that time.

Edo-Tokyo Open Air Architectural Museum in Tokyo , Japan which enables visitors to experience architecture of many different buildings from different periods such are high-class houses, public baths and shops which don't exist any more out of the museum.

Xinye Village in Jiande , Zhejiang Province, China is a well-preserved village with Ming and Qing era architecture and ancient residential buildings.

Árbæjarsafn in Iceland that displays life of the people of Reykjavik in the past.

Tumba Madžari in Macedonia is a reconstruction of a Neolithic settlement placed north-east of Skopje, capitol of Macedonia.

Alaska Native Heritage Center that is situated on 26 wooded acres and has Hall of Cultures, theatre, Gathering place and six life-sized Native houses that surround Lake Tiulana.

Amish Acres Historic Farm & Heritage Resort, Nappanee , Indiana that shows Amish life and has nine buildings, two log buildings that were relocated from their original position, ice house, mint distillery, maple sugar camp, apple cider mill, one-room school and a blacksmith shop.

History of Science Museums

Science museum is a museum that exhibits items connected with science and history of science. Although there were exhibits before in form of cabinets of curiosities, first science museum was Museo Nacional de Ciencias Naturales in Madrid, Spain opened in 1752. Industrial Revolution through national exhibits, whose role was to show marvels and triumphs of industry and science, also gave birth to science museums. National Exhibit in Crystal Palace in 1951 lead to founding of London's Science Museum. In United States museums also originated from collections that were collected by various Natural History Societies. For instance New England Museum of Natural History that opened in Boston in 1864 became "Museum of Science". In the beginning, science museums had items that were not allowed to be touched. But at the start of the 20th century, Deutsches Museum in Munich changed all that with its idea of an interactive museum of science. It had moving exhibits and visitors were encouraged to interact with them by pushing buttons and pulling levers. Idea of a museum where visitors are not just passive observers but active participants spread from there. In the 1911, Julius Rosenwald, chairman of Sears, Roebuck and Company, visited Deutsches Museum and he liked idea so much that he decided to open something like that in the United States. From that was founded Chicago's Museum of Science and Industry in the period of 1933 and 1940. In Saint Louis in 1959 was founded one more interactive science museum - Museum of Science and Natural History. Interactivity became indispensable ingredient in functioning of science museums around the world.

Some of the world's science museums:

Haus der Musik in Vienna, Austria . Opened in 2000. It is a museum of sound and music and it studies history of music from the beginning to today with high-tech interactive presentations.

Technopolis in Mechelen, Belgium is a science museum with interactive exhibition whose goal is to stimulate biotechnology and micro-electronics in Flanders.

Mendel Museum of Masaryk University in Brno, Czech Republic . It is founded as a way to promote the legacy of Augustinian abbot G. J. Mendel, who is known primarily for his studies conducted on plants, peas in particular, and because of that is considered father of genetics.

Cité de l'espace in Toulouse, France . Theme park and a science museum opened in 1997. It exhibits full scale models of the Ariane 5 rocket, Mir space station, and Soyuz modules.

Sinsheim Auto & Technik Museum in Sinsheim, Germany . Opened in 1981 it is the largest privately owned museum in Europe. It exhibits: Concorde aircraft, Tupolev Tu-144, Russian Buran space shuttle and the largest permanent Formula One collection.

Oceanographic Museum in Monaco-Ville, Monaco . Founded in 1910 it had a Jacques-Yves Cousteau for a director from 1957 to 1988. It exhibits various species of sea fauna in stuffed form and as skeletons, as well as sea related objects, model ships, tools and weapons. It has a large aquarium in the basement with a wide variety of sea flora and fauna.

Different Types of Museums

There are different types of museums. Here are some of them:

Archaeology museums. They display archeological artifacts. They can be open-air museums or they can exhibit items in a building.

Art museums. Also known as art galleries. They are spaces for showing art objects, most commonly visual art objects as paintings, sculpture, photography, illustrations, drawings, ceramics or metalwork. First publicly owned art museum in Europe was Amerbach-Cabinet in Basel (Now Kunstmuseum Basel).

Encyclopedic museums. They are usually large institutions and they offer visitors a wide variety of information on many themes, both local and global. They are not thematically defined nor specialized.

Historic house museums. A house or a building turned into a museum for a variety of reasons, most commonly because the person that lived in it was important or something important happened in it. House is often equipped with furniture like it was in the time when it was used. Visitors of the house learn through guides that tell story of the house and its inhabitants.

History museums. They collect objects and artifacts that tell a chronological story about particular locality. Objects that are collected could be documents, artifacts, archeological findings and other. They could be in a building, historic house or a historic site.

Living history museums. Type of a museum in which historic events are performed by actors to immerse a viewer and show how certain events looked like or how some crafts were performed because there is no other way to see them now because they are obsolete.

Maritime museums. Specialized museums for displaying maritime history, culture or archaeology. Primarily archaeological maritime museums exhibit artifacts and preserved shipwrecks recovered from bodies of water. Maritime history museums, show and educate the public about humanity's maritime past.

Military and war museums. Museums specialized in military histories. Usually organized from a point of view of a one nation and conflicts in which that country has taken part. They collect and present weapons, uniforms, decorations, war technology and other objects.

Mobile museums. Museums that have no specific strict place of exhibiting. They could be exhibited from a vehicle or they could move from museum to museum as guests. Also a name for a parts of exhibitions of a museum that are sent to another museum.

Natural history museums. Usually display objects from nature like stuffed animals or pressed plants. They educate about natural history, dinosaurs, zoology, oceanography, anthropology, evolution, environmental issues, and more.

Open-air museums. Characteristic for exhibiting outdoors. Exhibitions consist of buildings that recreate architecture from the past. First opened in Scandinavia near the end of the 19th century.

Pop-up museums. Nontraditional museum institutions. Made to last short and often relying on visitors to provide museum objects and labels while professionals or institution only provide theme. With that is constructed shared historical authority.

Science museums.

Specialized for science and history of science. In the beginning they were static displays of objects but now they are made so the visitors can participate and that way better learn about different branches of science.

List of Most Visited Art Museums in the World

01. Louvre is the most visited museum with over 9 million visitors in a year. It placed on the right bank of the river Seine and is one of the largest museums in the world. It has 35000 exhibited art objects (of 380000). Museum is located in Louvre Palace and was open in 1682.

02. Metropolitan Museum of Art, largest museum in the United States is located in New York City and it has more the 6 million visitors a year. It was founded in 1870; it has seventeen separate curatorial departments and has very rich permanent collection from classical antiquity to modern art.

03. British Museum is located in London and has over 5 and a half million visitors a year. It was opened to the public on 15 January 1759 and it has, among other items, world's largest and most comprehensive collection of Egyptian antiquities.

04. Tate Modern, a modern art gallery, is located in London, in the former Bankside Power Station, in the Bankside area of Central London. Yearly it has over 5.3 million visitors. It was established in 2000 and has a wide collection of modern and contemporary art from 1900 until today.

05. National Gallery is an art gallery in London on Trafalgar Square. It has over 5 million visitors a year. It was founded in 1824 with 38 paintings that British government bought from the heirs of John Julius Angerstein, an insurance broker and patron of the arts. Now it houses over 2,300 paintings.

06. Musée National d'Art Moderne is very close with number of visitors to National Gallery. It is a largest gallery of modern art Europe. It is located in Centre Georges Pompidou, complex in the Beaubourg area of the 4th arrondissement of Paris. Museum is opened in 1947 and it has 70,000 works of art.

07. Vatican Museums are museums that are in Vatican City within city borders. It has 5 million visitors in a year. They are established in 1506 and It has a vast collection that the Roman Catholic Church built up throughout the centuries including some of the greatest works of Renaissance.

08. National Palace Museum is art museum in Taipei City, Taiwan, Republic of China. It has over 4.3 million visitors a year and one of the greatest collections in the world with permanent collection of 693,507 pieces of ancient Chinese artifacts and artworks. It was founded in 1925.

09. National Gallery of Art is a national art museum in Washington, D.C. It was established in 1937 by United States Congress when it received gift of financier, public servant, and art collector Andrew W. Mellon. It has 4.2 million visitors in a year. It has very rich collection including the only painting by Leonardo da Vinci in the Americas.

10. Musée d'Orsay is a Paris museum located on the left bank of Seine. It is established in 1986 and located in the former Gare d'Orsay - railway station built in 1900. Its collection consists of mainly French art made between 1848 and 1915.

Museum Facts

As much museums started from the same point, collections of curiosities, they changed in time, focused on different themes, cultures, and had different goals. Read more about interesting museum facts.

Interesting Facts about Museums

- There is a World Brick Museum in Maizuru City, Japan.
- In the late medieval period, parts of the Palace of Versailles were used as a museum and anybody could enter but only if he had "correct clothes". In this case this meant silver shoe buckles and a sword. Luckily it was possible to rent them at the entrance.
- Beside standard museums like art, science and history museums there are also less conventional ones: museum of SPAM, of PEZ candy, of potato, salami, mustard, chocolate, banana and ramen museum.
- Oceanographic Museum in Monaco was built on a cliff, 85 meters above the sea.
- Sinsheim Auto & Technik Museum in Sinsheim, Germany has a Buran space shuttle in its collection.
- McLean, Texas has a museum dedicated to barbed wire.
- In 1989, Harrison Ford and Lucasfilm donated Indiana Jones' fedora hat to the Smithsonian museum. In the 1999 they donated the bullwhip too.
- St. Louis's City Museum has the largest graphite pencil in the world. It is 23 meters long and has 9800kg.
- First museums were cabinets of curiosities - collections of rare and strange objects that were not yet defined.

Department stores arrive: Mid 1800s – Early 1900s.

The pioneering spirit of people moving west and both opening and shopping at local general stores evolved as the United States moved into the 20th century.

In the late 19th and early 20th centuries, America's business and economic sectors changed dramatically. Agriculture — which had previously been the dominant business — was replaced by manufacturing and industry. Oil, steel, textile, and food production in factories brought new jobs and new standards of living.

With more successful and affluent Americans having broader tastes, department stores like Macy's (1858), Bloomingdales (1861), and Sears (1886) began popping up in cities like New York City and Chicago.

These institutions became fixtures of American life, influencing:

- what people bought,

- how they furnished their homes, and
- what luxuries they felt they needed.

The stores didn't just sell items. They also provided demonstrations, lectures, and entertainment events that appealed to newly wealthy customers looking for how best to use their disposable income.

Today people are still looking for content and experiences as part of their shopping activities that can help influence what they buy. In 2019, brands are finding success in building strong content- and experience-led commerce experiences.

Modern Department Stores Origins

The rise and fall of department stores in Cleveland is a most interesting story wrought with drama, intrigue and occasionally peril. Passionate about their calling, locally-based retailers took great pride in the merchandise they sold and customer service they provided. Fierce rivalry forced them to remain on the cutting edge of innovation. Coincidentally, this breakthrough in retailing occurred at a time of unprecedented economic and demographic expansion nationwide. Late 19th and early 20th century major department stores, in growing cities like Cleveland, set the business and ethical standards for retailing worldwide. Harry Selfridge had nothing over the likes of Cleveland top retailers such as William B. Davis, Samuel Halle, Edwin C. Higbee, Max J. Lindner, Frederick A. Sterling or William Taylor.

Before discussing some of the important innovations and unique business strategies made by retailers in Cleveland, it is important to briefly review the economic precedents responsible for this phenomenon. Breakthroughs in 19th and 20th century retailing resulted from a marked increase in affordable quality items manufactured during the Industrial Revolution. Begun in 1765 in the United Kingdom when a Scottish inventor and mechanical engineer named James Watts invented the steam engine, the Industrial Revolution quickly spread to the U.S. It started modestly enough in 1793 with the Slater Mills in Pawtucket, R.I. Designed by Samuel Slater (1768-1835), a former engineer with the British firm of Arkwright & Strutt, this multi-story, wood frame structure was the very first U.S. textile mill to utilize steam power for carding, roving and spinning. The Slater Mills became very successful very quickly. [1] A model of efficient manufacturing repeated in the Merrimack Mills in Lowell, MA; Chicopee-Dwight Mills in Chicopee Falls, MA and Amoskeag Mills in Manchester, NH, to name but a few, the Slater Mills symbolized an amazing achievement given the limited building materials available and primitive construction technology of the late 18th century.

Wood frame construction in the early 19th century consisted of numerous large, hallowed out vertical wood posts placed atop a rough-cut stone basement. Builders strategically positioned these posts throughout the structure to support intricate wood rafter beams above. Regrettably, the span between posts was very small. Supporting the horizontal rafter beams with the appropriate number of posts, while maintaining as wide a span as possible between them, was essential. Rafter beams served as the base for the floors above and gable roof in the attic.

Samuel Slater compensated for the limited work area by utilizing every available inch of floor space. His ingenuity insured maximum occupancy within confined spaces. This mill design remained popular in the U.S. until the 1850s. Recent breakthroughs in construction, in conjunction with the widespread use of iron and steel as primary building materials, signaled the end of these wood frame structures. Brick warehouse-like factories, with plenty of open work space, soon replaced them.

A major dilemma facing early 19th century mill owners and their investors involved tough state laws regarding personal financial liability. These antiquated laws prevented many eager investors from experimenting with the latest business techniques and manufacturing methods. This meant that any innovations made in manufacturing and distribution had to be weighed against possible financial losses and legal penalties. Any miscalculations might lead to bankruptcy and possibly imprisonment. Therefore, caution prevailed into the first decade of the 19th century. Better utilization of natural resources and an insatiable appetite for more manufactured items after the War of 1812 led to a relaxation of earlier harsh state laws.

However, none of these changes would have occurred without the development of a new legal device called the corporation. First introduced at the turn of the 19th century, the corporate legal entity sanctioned business expansion and production innovation by limiting personal liability. [2] Under this newly business arrangement, a legally recognized body called the corporate dummy controlled all company assets and liabilities.

The corporation also enjoyed legal rights and liabilities that were distinct from its employees and stockholders. Those investors using this new legal form elected a board of directors to oversee the company's operations. Opponents argued that there were no legal precedents for such action and that if left unchecked it might ruin the economy. However, astute business leaders argued convincingly that its positive benefits outweighed any of its disadvantages. [3]

It took federal court action to silence opponents. The U.S. Supreme Court in 1819, under Chief Justice John Marshall, ruled that corporations were legally recognized persons entitled to the same Constitutional rights as all other citizens. This ruling meant that corporations now had the legal right to prosecute individuals and other businesses for wrongdoing. When a business generated profit,

then its stockholders made money, when it incurred debt, investors were only liable for the amount they had invested. If a corporation declared bankruptcy then its creditors received the remaining business assets. Once those assets ran out, that was it. Creditors could not go after the investor's personal property or additional assets.

The overwhelming success of corporations led to a resurgence in buying and selling company stocks and bonds. The selling of company ownership rights through interest bearing stocks and bonds was not something new. It had been around since antiquity. What distinguished the early 19th century issuance of stocks and bonds from earlier activities was not the process; but rather, the clever ways in which enterprising business leaders used this additionally generated capital to promote expansion while also generating profits.

Furthermore, this issuance of stocks and bonds insured corporate owners that outside investors were committed for the duration. Most of the funds accrued in this way went towards business innovation and company expansion. The amount of stocks and bonds held by individual investors determined their percentage of ownership. The actual value of their investment changed over time based on profits and losses. Company officials paid out additional profits in the form of stock dividends. Preferred stock and bondholders received dividends first followed by common stockholders.

The corporation provided fantastic economic opportunities for shrewd early 19th century investors. In particular, it encouraged innovation in ways never dreamed of before. In the textile industry it led to new mills in the Northeast and Mid-Atlantic states during the late 1820s and early 1830s. With workforces totaling hundreds of people, these efficiently operated factories produced some of the finest broadloom ever made.

However, their success story did not end with producing quality broadloom. Many mill owners, by the late 1830s, began to manufacture their-own ready-made clothes. Clothes manufacturing represented the next logical step for ambitious businessmen who wanted new opportunities. Affordable blouses, frocks, pants and shirts flooded the market. These ready-made garments sold quickly. The quandary facing mill owners was how best to market these items?

Two retail options existed at that time. The first, involved selling items directly to consumers through company-owned stores. That option required mill owners to finance every aspect of retailing through their-own controlled stores. No jobbers involved. Employing a commissioned agent represented a second option. Under this arrangement, a company agent would be responsible for delivering manufactured goods to shopkeepers who, in turn, would sell them. Individual shop owners then brokered the merchandise in question. However, being selected to sell certain desirable items did not mean give them free rein when it came to selling. Manufacturers held these shop owners accountable for everything they supplied. Factory owners also demanded sizeable profits on every product sold. The inability of many early 19th century shopkeepers to generate sufficient profits to meet rising costs necessitated such harsh terms.

The question facing manufacturers and merchants was which option best suited their needs? The final decision was not the exclusive prerogative of one over the other. Shoppers themselves played a key role in its outcome. In this instance, customers let it be known that they wanted ready access to a wide assortment of reasonable priced items, and that they were willing to pay a pretty penny for this service. Their demands posed an interesting challenge to manufacturers and shopkeepers alike. After much experimentation, mid-19th century merchants determined that earlier retail models no longer worked. A new form of retailing must be developed if they planned to profit handsomely from recent distribution and manufacturing breakthroughs.

Business historians often credit a Parisian retailer named Aristide Boucicaut (1810-1877) for developing the first department store. [4] Called Le Bon Marche, this establishment featured the latest fashions and accessories within a spectacular setting. Although Le Bon Marche symbolized a major breakthrough in department store development, Boucicaut was not alone in such activity. Early 19th century U.S. retailers from Boston to Richmond and from New York to Chicago also devoted countless hours towards resolving this retail dilemma. Innovation knows no bounds or boundaries. It is a cause and effect process generated by real or perceived economic and social needs.

A New York City merchant named Henry Sands Brooks epitomized this early 19th century highly innovative retailer. This shopkeeper, in 1818, opened H & DH Brooks Company. [5] The forerunner of today's Brooks Brothers, this Manhattan-based haberdashery soon expanded its retail line to include ready-made men's suits. Others soon followed. A number of fashionable retail shops in the late 1820s lined lower Manhattan's Liberty Street and several nearby avenues. These highly energetic merchants formed the nucleus of what became New York's first downtown district. Their phenomenal success prompted most of them in the 1840s to move to larger facilities. Their new homes, on lower Broadway between Liberty and Houston streets, represented some of the finest retail establishments in the world. They set the stage for larger department stores yet to come.

As important as these Broadway shops were to the expansion of early 19th century retailing, they were not the only economic forces at work here. Many scholars believe that the general store set the stage for traditional department stores. A friendly, informal setting with a wide range of items, the general store had been around for nearly two centuries. It offered all sorts of merchandise from leather goods, clothes and household items to candy, medicines and food stuffs. [6] Early 19th century dry goods stores simply improved upon it. Instead of squeezing many items into cramped dirty quarters, these enlightened merchants sold their wares in no frills, large warehouses. It was just a matter of time before these plain warehouses became fancy department stores.

Yet, this retail experience meant much more than changes in building archetypes. Astute 19th century retailers also taught their customers how to become discerning shoppers. These new department stores truly symbolized a revolutionary step in retailing whose time had come. Some of its most thought provoking ideas included standardized packaging of items by weight; fixed pricing, universal clothing sizes and open shelf merchandise placement for easy access. It paid retailers to standardize their merchandise choices and prices as a way of insuring fair pricing. [7]

Its unique setup further distinguished this retail experiences. Owners created separate departments or units each operated by a trained sales manager. Department store buyers and sales staff answered to their sales managers. [8] Managers monitored their employees and served as liaisons between their staff and store officials. As unofficial human resource experts, store managers often settled disputes among staff members.

In order to generate additional capital, many rented space in their stores to independent shopkeepers. Renting to others mollified competition to a certain extent by insuring the loyalty of merchants who rented that space. This rental arrangement provided customers with a whole range of specialty items and services that would not otherwise be offered there. At the same time, it afforded small shop owners the opportunity of expanding without assuming the high costs and debt inherent with independent shop expansion.

This kind of business efficiency represented the keystones to financial success for hundreds of shopkeepers during the Industrial Age. The Gospel of Efficiency that resulted from the adoption of such business practices pressured department store owners to hire competent employees at all levels. Nowhere was this more evident than in sales departments. Professionally trained salespersons enhanced the customer's shopping experience at every level. This meant hiring the best people for each department. These shrewd retailers also relied on the latest business principles when it came to purchasing merchandise. At first, they purchased the bulk of their products from both jobbers and wholesalers. Hoping to significantly lower costs, many beginning in the 1850s bought their wares from manufacturers and agent representatives. This new buying practices eliminated the need for both jobbers and wholesalers.

The growing popularity of ready-made clothing during the Civil War not only lowered clothing manufacturing costs, but also, encouraged new distribution methods. By the mid-1870s, most large department stores depended on manufacturers and distributors exclusively. [9] Jobbers and wholesalers redirected their efforts away from large stores towards smaller retail outlets. Lacking the economic and financial clout necessary to compete in the big leagues, small retailers welcomed them into their fold. Their expertise allowed small shopkeepers to focus on other pressing financial concerns.

As stated earlier, mid-19th century department store owners used modern business principles in a variety of new and innovative ways. For example, they relied heavily on qualified staff members to settle customer complaints and employee problems. These merchants previously handled all human resource and customer issues. Relieved of this responsibility enabled shopkeepers to nurture new business methods intended to please their customer-base. They wanted their shoppers to thoroughly enjoy their shopping experience each and every time. If that meant providing credit to worthy customers, so be it. New flexible credit plans appealed to penny-wise shoppers. Layaway plans also gained favor with some customers as did store-issued credit cards. From a management perspective it made perfect sense in that it provided them with an accurate daily record of shoppers' expenses.

The highly profitable 19th century textile industry took full advantage of these stores. They relied on them to sell thousands of items weekly. In turn, store owners depended on these industries to stock them with quality items on a continual basis. As stated earlier in this chapter, early 19th century merchants on Liberty Street risked a great deal when they moved to lower Broadway. To the casual observer such actions may have seemed foolhardy. They might say that locating next door to each other might cause confusion among customers, and most especially those who did not want to search the numerous shops for specific items.

Their reluctance to explore the area might result in them purchasing any-and-all available items from the shops at the beginning of the street, rather than browsing through the other stores further down the block. Fortunately, New York shoppers were not confused by the many retail choices at their disposal. They loved the opportunity of going from one store to another in search of the perfect item at the best possible price. It represented a challenge, in their minds it was the ultimate shopping experience.

Close proximity proved advantageous for the store owners as well. It enabled them to stay abreast of all the latest business breakthroughs, while encouraging greater cooperation. If one place did not have a certain item, the shopkeeper would suggest that the customer look next door. Perhaps that retailer might have the desired item. It was certainly worth a try. Reciprocity among neighboring stores led to long-lasting bonds among them. They were fellow-entrepreneurs dedicated to serving their shoppers. If one succeeded, then they all succeeded.

Their phenomenal success in the 1820s and 1830s was legendary and led to expansion quickly. Expanding a business, any business, requires large amounts of capital. Unfortunately, many early 19th century New York retailers lacked the kind of capital necessary to meet these growing challenges. They also fully recognized that the local retail market was influx, and that the future of local retailing belonged to those who could successfully reinvent themselves using outside capital. With those very thoughts in mind, successful shopkeepers sought out large investments from many of the world's richest entrepreneurs.

Long-term investments by the rich led to the establishment of many successful Manhattan department stores during the mid to late-19th century. Those investors readily lent both their business expertise and extensive financial resources. The new sophisticated department stores represented the culmination of a long and perilous journey that had begun nearly two hundred years earlier with the general store. Every large city in the U.S., by the 1850s, boasted of at least one department store with many having several. Early leaders included Brooks Brothers (1818), Lord & Taylor (1826), Gilchrist (1842), A.T. Stewart's (1846), Jordan Marsh (1851), Carson Pirie Scott (1854), R. H. Macy (1858), Hower & Higbee (1860), Bloomingdale (1861), Saks-5th Avenue (1867), Rich's (1867), Taylor, Kilpatrick (1870), Wanamaker (1876) and Marshall Field (1881).

Much of their success originated with the uncanny knack of these talented retailers to provide quality goods and services within a friendly business environment. [10] For example, elegant women's fashions, special Christmas display windows and a free personal shopping service distinguished New York's Lord & Taylor's, while Boston's Gilchrist's became known for its fabulous shoes, jewelry, housewares and of course delicious almond macaroons. Rich's in Atlanta gained national recognition for its generous credit and exchange policies, while Philadelphia's Wanamaker's became one of the first to sell its-own ready-made clothes. Marshall Fields of Chicago led the pack with its ever-popular Tea Room, European buying rooms and special bridal registry.

However, there were other crucial elements that played into their hand. A respected 19th century Cleveland retailer named E.M. McGillin (1847-1919) summed it up best. He suggested that large department store owners enjoyed a decided economic advantage over small shopkeepers in that they had access to great amounts of capital and large inventories, not readily available to smaller store owners. He believed that a great majority of large retailers sustained their leads by selling many popular items at below-cost. Selling in volume like that generated huge profits. Those not having access to large inventories or vast amounts of capital often found it virtually impossible to sustain themselves on low profit margins. In the end, these less affluent shopkeepers found themselves charging much higher prices for the same goods sold by big retailers at a fraction of the cost.

McGillin pointed out that the Panic of 1873 reinforced the business adage that prized merchandise must be sold at the lowest possible price. [11] The Panic of 1873 led to the closing of over 18,000 businesses. Many of these businesses were small to medium sized stores with limited capital reserves. McGillin contended that easy credit following the Civil War led to the establishment of these fly-by-night firms. He further argued that sound businesses never depend on easy credit. Instead, they acquired gold and silver reserves as collateral. Those without such reserves declared bankrupt when the economy soured. According to McGillin, customers in the 1870s enjoyed an advantage of earlier generations in that they have the where-for-all to shop around for the best possible deal. They turn, more often than not, to well-established department stores for their goods.

Large-scale department stores required carefully orchestrated business planning. Once an enterprising business person understood the fundamental principles of retailing then it was up to that individual to stay informed of the latest business and fashion trends. Certain staples within the industry such as advertising, customer services and salesmanship grew more sophistication over time. Successful late 19th century retailers often used psychology to promote sales. Everything from store décor and advertising to customer service and cost savings had a psychological edge. Store owners wanted their customers to buy as many items and take advantage of as many services as possible. The sky was the limit. Also, every establishment developed its-own identity. Most often, the owner's perception of what the community needed and wanted shaped that identity. Many focused on everyday shoppers, while others concentrated on the needs and wants of the growing middle and upper classes.

Whatever their customer-base, all retailers conveyed a similar message. Some transported their shoppers to distant and exotic lands through high priced, imported merchandise. These items included such things as expensive perfumes, fine wines, rare cheeses, luxurious furs and designer jewelry. Strategically placed within highly decorative displays, these products represented a glamorous world far removed from their customer's daily lives.

Others emphasized everyday items such as auto parts, appliances, work clothes, stationary and tools. This kind of merchandise required little fanfare and practically sold itself. The key to repeat business rested with the ability of these store owners to understand their patrons' specific wants and needs, and then readjust their business strategies accordingly to fulfill changing demands year in and year out.

Showmanship represented half the battle, knowing what the shoppers really intended to buy was the other half. Through it all, common sense prevailed. Once customers believed in the integrity and sincerity of their local department stores, then it became the responsibility of those retailers to provide the desired goods and services at a fair price. Store owners knew all too well that if they slacked in their chosen roles that other retailers were prepared to serve their every need.

This new approach to retailing whereby the customer was always right ran counter to the take-it-or-leave-it philosophies of general stores. Known for supplying hardware and software products within a no-frills environment, general stores served a useful function for many years. Their friendly, informal settings especially flourished in remote parts of the nation where survival itself depended upon settlers being able to secure durable, low-cost staples quickly. With the advent of the Industrial Revolution and the elimination of the American frontier, all of that changed.

Insightful department store owners distinguished between hardware and software items with most focusing on one or the other. Only a select few such as Montgomery Ward or Sears & Roebuck continued to promote both. Competition among department stores, from the 1880s to the 1920s, intensified greatly. Increasing public pressure for reasonably priced goods and high quality services led large retailers to offer a barrage of new and enticing incentives and luxuries. Daily newspaper advertising played an ever important role in promoting individual department store merchandise and services. The idea of advertising was not new. Astute retailers in the U.S. as early as the 1830s recognized its potential value. Not only did it foster increased consumer demand for merchandise generally, but also, proved highly effective in promoting certain items over the exclusion of others. Its intensity, rather than its goals, changed over time.

Most early and mid-19th century advertising occurred in local newspapers. These advertisements, often found on the front page of dailies, were often limited to a few lines. They described the item or items for sale at a particular retailer along with its cost. Advertisements might also include drawings of the merchandise for sale or possibly an artist's rendering of the front façade of the shop where the item or items were being sold. However, merchandise promotions through the local press expanded quickly. Department stores, by the early 1880s, ran full page advertisements extolling the many virtues of the product or products for sale. [12] Many advertisements were patronizing, overly sentimental. But, they got the job done. Increasingly, retailers stressed the need for the middle class customers to emulate the wealthy. Advertisements, throughout the 1920s, featured testimonies by celebrities and sports figures promoting merchandise.

The "Roaring Twenties" also introduced professional artistic renderings of attractive people who were either wearing or using the item or items in question. [13] Detailed advertisements prominently displaying the store's logo also found their way into regional and national magazines. The 1930s saw the introduction of Sunday newspaper pictorial sections. Called rotogravures, they detailed community social events through photographs. They were often accompanied by full-page advertisements showing the latest fashions found in a certain store.

Motion pictures also promoted department stores, but in a somewhat different way. Not relying on store advertising to sell their productions, Hollywood producers took great care when it came to selecting department stores for their films. Like other successful business leaders of their day, Hollywood promoters wanted the biggest bang for the buck. Only the best and biggest department stores got their names on the marquee. *Miracle on 34th Street*, *The Big Store* and *Breakfast at Tiffany's* represented three popular films utilizing that formula. Movie newsreels also featured department stores. Topics ran the gamut from the latest fashions worn by a specific star at a prominent event to what constituted proper department store etiquette for children. Some stores, in the 1950s and 1960s, went so far as to advertise between features at local drive-in theaters.

With the advent of radio and television, department stores relied on jingles to sell their merchandise. Retailers also sponsored their-own radio spots. Television, like films, devised very clever ways to weave popular department stores into their programming. Major televised events sponsored by large department stores included such things as Easter Day, Thanksgiving Day and Christmas Day parades. The big three television networks also, on occasion, utilized department stores as backdrops for situation comedies. They included the CBS hit comedy *Rhoda*, in the mid-1970s, and ABC's *Drew Carey Show* in the 1980s. The importance of advertising notwithstanding there were other factors accounting for the phenomenal success of department stores during the late 19th and early 20th centuries.

The majority of retailers used any-and-all economic or geographical advantages they might possess to promote sales. Their decision to concentrate within major downtowns was no accident. Most major economic and social activities in 19th century communities occurred there. In fact, most influential people lived and worked within walking distance of their city's center. It took the advent of horse-drawn buses followed by electric streetcars and automobiles before the elite removed themselves from the hustle and bustle of downtown to the more pristine suburbs.

Prestigious law firms, major hospitals, prominent insurance companies, popular business concerns, large service industries and virtually all government services chose downtown locations. Recognizing the importance of prime location, major retailers quickly joined the bandwagon. Beginning in the early 19th century with modest dry goods companies and large wholesale groceries, downtown retailing soon blossomed into full-service, top quality department stores. The economic and social complexities readily identified with downtown may have evolved over time, but not its inherent importance. Each new generation of downtown leaders built upon the achievements of their predecessors.

Downtown Cleveland continued to grow and prosper following the Second World War. In fact, stores such as Halle's and the May Company continued to post sizeable profits right into the 1960s in spite of the fact that the makeup of the central business district was changing very rapidly. Old traditions die hard. With the advent of Urban Renewal in the 1950s and 1960s, business and political leaders in large cities, such as Cleveland, began to weigh their options. They envisioned grand, new business opportunities within deteriorating areas bordering downtown.

The U.S. Congress agreed and approved funding for Urban Renewal beginning with the National Housing Act of 1949. Over the next two decades, federal officials poured in millions of dollars for major Urban Renewal projects. Many targeted towards older communities. In the case of Cleveland, it culminated on November 22, 1960 when Mayor Anthony J. Celebrezze (1910-1998) unveiled

plans for a massive redevelopment effort at the northeast corner of the city's central business district. Designed by the world renowned architect named I.M. Pei, this 64-acre tract called Erieview represented one of the largest renewal efforts ever undertaken. This announcement came as no surprise to downtown department store owners.

A Cleveland Planning Commission study, published in 1958, claimed that the current surplus in downtown retail space would last for the next seventeen years. No need for further expansion here. Commissioners determined that what the downtown needed was additional high quality housing, first-rate office space and major hotels. Local retailers did not question these findings. This renewal effort led to the establishment of a new East 9th and East 13th street office/residential core that ran between Chester and Lakeside avenues. That area eventually included the Chesterfield Apartment, 38-story Erieview Tower and a full service Holiday Inn. In terms of downtown retailing, this shift in weekday pedestrian traffic from the Euclid-Prospect corridor to the East 9th and East 13th street district along with the growth of suburban stores soon marked the end of traditional downtown department stores. This truth eluded some retailers in the 1960s who tried to remain optimistic.

Downtown Cleveland truly lost its luster by the mid-1970s. Major traffic problems, an outmoded public transportation system, and growing incidents of one-on-one crime all but destroyed downtown shopping. Community leaders remained divided over what steps to take next. An interview in the January 1971 issue of *Cleveland Magazine* offered some possible remedies. [14] The reporter interviewed four prominent leaders of the recently created downtown consortium. They were Robert O. Clary of B.R. Baker Clothiers; James Carney of the Cleveland law firm of Carney, Carney & Broadbent, Walter M. Halle President of Halle Brothers Co., and Howard B. Klein Vice President of Higbee's. A part of the Greater Cleveland Growth Association, this consortium dedicated itself to the revitalization of downtown Cleveland. Howard B. Klein chaired it.

These leaders agreed that growing incidents of crime downtown prevented many Clevelanders from enjoying its many attractions including shopping. They attacked the local media for not lessening the public's anxiety regarding that area's safety. Hoping to improve this situation quickly, these leaders developed a number of priorities. They ran the gamut from developing a modern transportation system and creating more parking to encouraging new investment and presenting more accurate media portrayals of downtown. All four believed these problems to be only temporary.

Unfortunately, other issues such as a shrinking population-base and preferences by customers for suburban shopping further undermined the future of downtown. This downward economic spire continued into the remaining decades of the 20th century. In a last ditched effort, many downtown stores launched extensive advertising campaigns. Although some were briefly successful most campaigns failed miserably. The day of the downtown department store was over.

Sadly, the latest generation of shoppers has no idea the important role these stores once played in the life of Clevelanders. New stores have taken their place. One can only hope that today's retailers will learn from the successes and failures of the past. If not, they might be forced to face similar dilemmas in the future. Long-term success least they forget is based on ability, timing and the ability to learn from others.



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DEPARTMENT OF FASHION DESIGN**

UNIT – III - History of Art & Fashion– SFDA1303

Industrial Revolution

Industrial Revolution, in modern history, the process of change from an agrarian and handicraft economy to one dominated by industry and machine manufacturing. This process began in Britain in the 18th century and from there spread to other parts of the world. Although used earlier by French writers, the term Industrial Revolution was first popularized by the English economic historian Arnold Toynbee (1852–83) to describe Britain's economic development from 1760 to 1840. Since Toynbee's time the term has been more broadly applied.

The main features involved in the Industrial Revolution

The main features involved in the Industrial Revolution were technological, socioeconomic, and cultural. The technological changes included the following: (1) the use of new basic materials, chiefly iron and steel, (2) the use of new energy sources, including both fuels and motive power, such as coal, the steam engine, electricity, petroleum, and the internal-combustion engine, (3) the invention of new machines, such as the spinning jenny and the power loom that permitted increased production with a smaller expenditure of human energy, (4) a new organization of work known as the factory system, which entailed increased division of labour and specialization of function, (5) important developments in transportation and communication, including the steam locomotive, steamship, automobile, airplane, telegraph, and radio, and (6) the increasing application of science to industry. These technological changes made possible a tremendously increased use of natural resources and the mass production of manufactured goods.

New developments in nonindustrial spheres

There were also many new developments in nonindustrial spheres, including the following: (1) agricultural improvements that made possible the provision of food for a larger nonagricultural population, (2) economic changes that resulted in a wider distribution of wealth, the decline of land as a source of wealth in the face of rising industrial production, and increased international trade, (3) political changes reflecting the shift in economic power, as well as new state policies corresponding to the needs of an industrialized society, (4) sweeping social changes, including the growth of cities, the development of working-class movements, and the emergence of new patterns of authority, and (5) cultural transformations of a broad order. Workers acquired new and distinctive skills, and their relation to their tasks shifted; instead of being craftsmen working with hand tools, they became machine operators, subject to factory discipline. Finally, there was a psychological change: confidence in the ability to use resources and to master nature was heightened.

Windmill

British windmill construction was improved considerably by the refinements of sails and by the self-correcting device of the fantail, which kept the sails pointed into the wind. Spring sails replaced the traditional canvas rig of the windmill with the equivalent of a modern venetian blind, the shutters of which could be opened or closed, to let the wind pass through or to provide a surface upon which its pressure could be exerted. Sail design was further improved with the "patent" sail in 1807. In mills equipped with these sails, the shutters were controlled on all the sails simultaneously by a lever inside the mill connected by rod linkages through the windshaft with the bar operating the movement of the shutters on each sweep. The control could be made more fully automatic by hanging weights on the lever in the mill to determine the maximum wind pressure beyond which the shutters would open and spill the wind. Conversely, counterweights could be attached to keep the shutters in the open position. With these and other modifications, British windmills adapted to the increasing demands on power technology. But the use of wind power declined sharply in the 19th century with the spread of steam and the increasing scale of power utilization. Windmills that had satisfactorily provided power for small-scale industrial processes were unable to compete with the production of large-scale steam-powered mills.

Steam engines

Although the qualification regarding older sources of power is important, steam became the characteristic and ubiquitous power source of the British Industrial Revolution. Little development took place in the Newcomen atmospheric engine until James Watt patented a separate condenser in 1769, but from that point onward the steam engine underwent almost continuous improvements for more than a century. Watt's separate condenser was the outcome of his work on a model of a Newcomen engine that was being used in a University of Glasgow laboratory. Watt's inspiration was to separate the two actions of heating the cylinder with hot steam and cooling it to condense the steam for every stroke of the engine. By keeping the cylinder permanently hot and the condenser permanently cold, a great economy on energy used could be effected. This brilliantly simple idea could not be immediately incorporated in a full-scale engine because the engineering of such machines had hitherto been crude and defective. The backing of a Birmingham industrialist, Matthew Boulton, with his resources of capital and technical competence, was needed to convert the idea into a commercial success. Between 1775 and 1800, the period over which Watt's patents were extended, the Boulton and Watt partnership produced some 500 engines,

which despite their high cost in relation to a Newcomen engine were eagerly acquired by the tin-mining industrialists of Cornwall and other power users who badly needed a more economic and reliable source of energy.

During the quarter of a century in which Boulton and Watt exercised their virtual monopoly over the manufacture of improved steam engines, they introduced many important refinements. Basically they converted the engine from a single-acting (i.e., applying power only on the downward stroke of the piston) atmospheric pumping machine into a versatile prime mover that was double-acting and could be applied to rotary motion, thus driving the wheels of industry. The rotary action engine was quickly adopted by British textile manufacturer Sir Richard Arkwright for use in a cotton mill, and although the ill-fated Albion Mill, at the southern end of Blackfriars Bridge in London, was burned down in 1791, when it had been in use for only five years and was still incomplete, it demonstrated the feasibility of applying steam power to large-scale grain milling. Many other industries followed in exploring the possibilities of steam power, and it soon became widely used.

Watt's patents had the temporary effect of restricting the development of high-pressure steam, necessary in such major power applications as the locomotive. This development came quickly once these patents lapsed in 1800. The Cornish engineer Richard Trevithick introduced higher steam pressures, achieving an unprecedented pressure of 145 pounds per square inch (10 kilograms per square centimetre) in 1802 with an experimental engine at Coalbrookdale, which worked safely and efficiently. Almost simultaneously, the versatile American engineer Oliver Evans built the first high-pressure steam engine in the United States, using, like Trevithick, a cylindrical boiler with an internal fire plate and flue. High-pressure steam engines rapidly became popular in America, partly as a result of Evans' initiative and partly because very few Watt-type low-pressure engines crossed the Atlantic. Trevithick quickly applied his engine to a vehicle, making the first successful steam locomotive for the Penydarren tramroad in South Wales in 1804. The success, however, was technological rather than commercial because the locomotive fractured the cast iron track of the tramway: the age of the railroad had to await further development both of the permanent way and of the locomotive.

Meanwhile, the stationary steam engine advanced steadily to meet an ever-widening market of industrial requirements. High-pressure steam led to the development of the large beam pumping engines with a complex sequence of valve actions, which became universally known as Cornish engines; their distinctive characteristic was the cutoff of steam injection before the stroke was complete in order to allow the steam to do work by expanding. These engines were used all over the world for heavy pumping duties, often being shipped out and installed by Cornish engineers. Trevithick himself spent many years improving pumping engines in Latin America. Cornish engines, however, were probably most common in Cornwall itself, where they were used in large numbers in the tin and copper mining industries.

Another consequence of high-pressure steam was the practice of compounding, of using the steam twice or more at descending pressures before it was finally condensed or exhausted. The technique was first applied by Arthur Woolf, a Cornish mining engineer, who by 1811 had produced a very satisfactory and efficient compound beam engine with a high-pressure cylinder placed alongside the low-pressure cylinder, with both piston rods attached to the same pin of the parallel motion, which was a parallelogram of rods connecting the piston to the beam, patented by Watt in 1784. In 1845 John McNaught introduced an alternative form of compound beam engine, with the high-pressure cylinder on the opposite end of the beam from the low-pressure cylinder, and working with a shorter stroke. This became a very popular design. Various other methods of compounding steam engines were adopted, and the practice became increasingly widespread; in the second half of the 19th century triple- or quadruple-expansion engines were being used in industry and marine propulsion. By this time also the conventional beam-type vertical engine adopted by Newcomen and retained by Watt began to be replaced by horizontal-cylinder designs. Beam engines remained in use for some purposes until the eclipse of the reciprocating steam engine in the 20th century, and other types of vertical engine remained popular, but for both large and small duties the engine designs with horizontal cylinders became by far the most common.

A demand for power to generate electricity stimulated new thinking about the steam engine in the 1880s. The problem was that of achieving a sufficiently high rotational speed to make the dynamos function efficiently. Such speeds were beyond the range of the normal reciprocating engine (i.e., with a piston moving backward and forward in a cylinder). Designers began to investigate the possibilities of radical modifications to the reciprocating engine to achieve the speeds desired, or of devising a steam engine working on a completely different principle. In the first category, one solution was to enclose the working parts of the engine and force a lubricant around them under pressure. The Willans engine design, for instance, was of this type and was widely adopted in early British power stations. Another important modification in the reciprocating design was the uniflow engine, which increased efficiency by exhausting steam from ports in the centre of the cylinder instead of requiring it to change its direction of flow in the cylinder with every movement of the piston. Full success in achieving a high-speed steam engine, however, depended on the steam turbine, a design of such novelty that it constituted a major technological innovation. This was invented by Sir Charles Parsons in 1884. By passing steam through the blades of a series of rotors of gradually increasing size (to allow for the expansion of the steam) the energy of the steam was converted to very rapid circular motion, which was ideal for generating electricity. Many refinements have since been made in turbine construction and the size of turbines has been vastly increased, but the basic principles remain the same, and this method still provides the main source of electric power except in those areas in which the mountainous terrain permits the economic generation of hydroelectric power by water turbines. Even the most modern nuclear power plants use steam turbines because technology has not yet solved the problem of

transforming nuclear energy directly into electricity. In marine propulsion, too, the steam turbine remains an important source of power despite competition from the internal-combustion engine.

Electricity

The development of electricity as a source of power preceded this conjunction with steam power late in the 19th century. The pioneering work had been done by an international collection of scientists including Benjamin Franklin of Pennsylvania, Alessandro Volta of the University of Pavia, Italy, and Michael Faraday of Britain. It was the latter who had demonstrated the nature of the elusive relationship between electricity and magnetism in 1831, and his experiments provided the point of departure for both the mechanical generation of electric current, previously available only from chemical reactions within voltaic piles or batteries, and the utilization of such current in electric motors. Both the mechanical generator and the motor depend on the rotation of a continuous coil of conducting wire between the poles of a strong magnet: turning the coil produces a current in it, while passing a current through the coil causes it to turn. Both generators and motors underwent substantial development in the middle decades of the 19th century. In particular, French, German, Belgian, and Swiss engineers evolved the most satisfactory forms of armature (the coil of wire) and produced the dynamo, which made the large-scale generation of electricity commercially feasible.

The next problem was that of finding a market. In Britain, with its now well-established tradition of steam power, coal, and coal gas, such a market was not immediately obvious. But in continental Europe and North America there was more scope for experiment. In the United States Thomas Edison applied his inventive genius to finding fresh uses for electricity, and his development of the carbon-filament lamp showed how this form of energy could rival gas as a domestic illuminant. The problem had been that electricity had been used successfully for large installations such as lighthouses in which arc lamps had been powered by generators on the premises, but no way of subdividing the electric light into many small units had been devised. The principle of the filament lamp was that a thin conductor could be made incandescent by an electric current provided that it was sealed in a vacuum to keep it from burning out. Edison and the English chemist Sir Joseph Swan experimented with various materials for the filament and both chose carbon. The result was a highly successful small lamp, which could be varied in size for any sort of requirement. It is relevant that the success of the carbon-filament lamp did not immediately mean the supersession of gas lighting. Coal gas had first been used for lighting by William Murdock at his home in Redruth, Cornwall, where he was the agent for the Boulton and Watt company, in 1792. When he moved to the headquarters of the firm at Soho in Birmingham in 1798, Matthew Boulton authorized him to experiment in lighting the buildings there by gas, and gas lighting was subsequently adopted by firms and towns all over Britain in the first half of the 19th century. Lighting was normally provided by a fishtail jet of burning gas, but under the stimulus of competition from electric lighting the quality of gas lighting was greatly enhanced by the invention of the gas mantle. Thus improved, gas lighting remained popular for some forms of street lighting until the middle of the 20th century.

Lighting alone could not provide an economical market for electricity because its use was confined to the hours of darkness. Successful commercial generation depended upon the development of other uses for electricity, and particularly on electric traction. The popularity of urban electric tramways and the adoption of electric traction on subway systems such as the London Underground thus coincided with the widespread construction of generating equipment in the late 1880s and 1890s. The subsequent spread of this form of energy is one of the most remarkable technological success stories of the 20th century, but most of the basic techniques of generation, distribution, and utilization had been mastered by the end of the 19th century.

Internal-combustion engine

Electricity does not constitute a prime mover, for however important it may be as a form of energy it has to be derived from a mechanical generator powered by water, steam, or internal combustion. The internal-combustion engine is a prime mover, and it emerged in the 19th century as a result both of greater scientific understanding of the principles of thermodynamics and of a search by engineers for a substitute for steam power in certain circumstances. In an internal-combustion engine the fuel is burned in the engine: the cannon provided an early model of a single-stroke engine; and several persons had experimented with gunpowder as a means of driving a piston in a cylinder. The major problem was that of finding a suitable fuel, and the secondary problem was that of igniting the fuel in an enclosed space to produce an action that could be easily and quickly repeated. The first problem was solved in the mid-19th century by the introduction of town gas supplies, but the second problem proved more intractable as it was difficult to maintain ignition evenly. The first successful gas engine was made by Étienne Lenoir in Paris in 1859. It was modeled closely on a horizontal steam engine, with an explosive mixture of gas and air ignited by an electric spark on alternate sides of the piston when it was in midstroke position. Although technically satisfactory, the engine was expensive to operate, and it was not until the refinement introduced by the German inventor Nikolaus Otto in 1878 that the gas engine became a commercial success. Otto adopted the four-stroke cycle of induction-compression-firing-exhaust that has been known by his name ever since. Gas engines became extensively used for small industrial establishments, which could thus dispense with the upkeep of a boiler necessary in any steam plant, however small.

Petroleum

The economic potential for the internal-combustion engine lay in the need for a light locomotive engine. This could not be provided by the gas engine, depending on a piped supply of town gas, any more than by the steam engine, with its need for a cumbersome boiler; but, by using alternative fuels derived from oil, the internal-combustion engine took to wheels, with momentous consequences. Bituminous deposits had been known in Southwest Asia from antiquity and had been worked for building material, illuminants, and medicinal products. The westward expansion of settlement in America, with many homesteads beyond the range of city gas supplies, promoted the exploitation of the easily available sources of crude oil for the manufacture of kerosene (paraffin). In 1859 the oil industry took on new significance when Edwin L. Drake bored successfully through 69 feet (21 metres) of rock to strike oil in Pennsylvania, thus inaugurating the search for and exploitation of the deep oil resources of the world. While world supplies of oil expanded dramatically, the main demand was at first for the kerosene, the middle fraction distilled from the raw material, which was used as the fuel in oil lamps. The most volatile fraction of the oil, gasoline, remained an embarrassing waste product until it was discovered that this could be burned in a light internal-combustion engine; the result was an ideal prime mover for vehicles. The way was prepared for this development by the success of oil engines burning cruder fractions of oil. Kerosene-burning oil engines, modeled closely on existing gas engines, had emerged in the 1870s, and by the late 1880s engines using the vapour of heavy oil in a jet of compressed air and working on the Otto cycle had become an attractive proposition for light duties in places too isolated to use town gas.

The greatest refinements in the heavy-oil engine are associated with the work of Rudolf Diesel of Germany, who took out his first patents in 1892. Working from thermodynamic principles of minimizing heat losses, Diesel devised an engine in which the very high compression of the air in the cylinder secured the spontaneous ignition of the oil when it was injected in a carefully determined quantity. This ensured high thermal efficiency, but it also made necessary a heavy structure because of the high compression maintained, and also a rather rough performance at low speeds compared with other oil engines. It was therefore not immediately suitable for locomotive purposes, but Diesel went on improving his engine and in the 20th century it became an important form of vehicular propulsion.

Meantime the light high-speed gasoline (petrol) engine predominated. The first applications of the new engine to locomotion were made in Germany, where Gottlieb Daimler and Carl Benz equipped the first motorcycle and the first motorcar respectively with engines of their own design in 1885. Benz's "horseless carriage" became the prototype of the modern automobile, the development and consequences of which can be more conveniently considered in relation to the revolution in transport.

By the end of the 19th century, the internal-combustion engine was challenging the steam engine in many industrial and transport applications. It is notable that, whereas the pioneers of the steam engine had been almost all Britons, most of the innovators in internal combustion were continental Europeans and Americans. The transition, indeed, reflects the general change in international leadership in the Industrial Revolution, with Britain being gradually displaced from its position of unchallenged superiority in industrialization and technological innovation. A similar transition occurred in the theoretical understanding of heat engines: it was the work of the Frenchman Sadi Carnot and other scientific investigators that led to the new science of thermodynamics, rather than that of the British engineers who had most practical experience of the engines on which the science was based.

It should not be concluded, however, that British innovation in prime movers was confined to the steam engine, or even that steam and internal combustion represent the only significant developments in this field during the Industrial Revolution. Rather, the success of these machines stimulated speculation about alternative sources of power, and in at least one case achieved a success the full consequences of which were not completely developed. This was the hot-air engine, for which a Scotsman, Robert Stirling, took out a patent in 1816. The hot-air engine depends for its power on the expansion and displacement of air inside a cylinder, heated by the external and continuous combustion of the fuel. Even before the exposition of the laws of thermodynamics, Stirling had devised a cycle of heat transfer that was ingenious and economical. Various constructional problems limited the size of hot-air engines to very small units, so that although they were widely used for driving fans and similar light duties before the availability of the electric motor, they did not assume great technological significance. But the economy and comparative cleanness of the hot-air engine were making it once more the subject of intensive research in the early 1970s.

The transformation of power technology in the Industrial Revolution had repercussions throughout industry and society. In the first place, the demand for fuel stimulated the coal industry, which had already grown rapidly by the beginning of the 18th century, into continuing expansion and innovation. The steam engine, which enormously increased the need for coal, contributed significantly toward obtaining it by providing more efficient mine pumps and, eventually, improved ventilating equipment. Other inventions such as that of the miners' safety lamp helped to improve working conditions, although the immediate consequence of its introduction in 1816 was to persuade mineowners to work dangerous seams, which had hitherto been regarded as inaccessible. The principle of the lamp was that the flame from the wick of an oil lamp was enclosed within a cylinder of wire gauze, through which insufficient heat passed to ignite the explosive gas (firedamp) outside. It was subsequently improved, but remained a vital source of light in coal mines until the advent of electric battery lamps. With these improvements, together with the simultaneous revolution in the transport system, British coal

production increased steadily throughout the 19th century. The other important fuel for the new prime movers was petroleum, and the rapid expansion of its production has already been mentioned. In the hands of John D. Rockefeller and his Standard Oil organization it grew into a vast undertaking in the United States after the end of the Civil War, but the oil-extraction industry was not so well organized elsewhere until the 20th century.

Development of industries

Metallurgy

Another industry that interacted closely with the power revolution was that concerned with metallurgy and the metal trades. The development of techniques for working with iron and steel was one of the outstanding British achievements of the Industrial Revolution. The essential characteristic of this achievement was that changing the fuel of the iron and steel industry from charcoal to coal enormously increased the production of these metals. It also provided another incentive to coal production and made available the materials that were indispensable for the construction of steam engines and every other sophisticated form of machine. The transformation that began with a coke-smelting process in 1709 was carried further by the development of crucible steel in about 1740 and by the puddling and rolling process to produce wrought iron in 1784. The first development led to high-quality cast steel by fusion of the ingredients (wrought iron and charcoal, in carefully measured proportions) in sealed ceramic crucibles that could be heated in a coal-fired furnace. The second applied the principle of the reverberatory furnace, whereby the hot gases passed over the surface of the metal being heated rather than through it, thus greatly reducing the risk of contamination by impurities in the coal fuels, and the discovery that by puddling, or stirring, the molten metal and by passing it hot from the furnace to be hammered and rolled, the metal could be consolidated and the conversion of cast iron to wrought iron made completely effective.

Iron and steel

The result of this series of innovations was that the British iron and steel industry was freed from its reliance upon the forests as a source of charcoal and was encouraged to move toward the major coalfields. Abundant cheap iron thus became an outstanding feature of the early stages of the Industrial Revolution in Britain. Cast iron was available for bridge construction, for the framework of fireproof factories, and for other civil-engineering purposes such as Thomas Telford's novel cast-iron aqueducts. Wrought iron was available for all manner of mechanical devices requiring strength and precision. Steel remained a comparatively rare metal until the second half of the 19th century, when the situation was transformed by the Bessemer and Siemens processes for manufacturing steel in bulk. Henry Bessemer took out the patent for his converter in 1856. It consisted of a large vessel charged with molten iron, through which cold air was blown. There was a spectacular reaction resulting from the combination of impurities in the iron with oxygen in the air, and when this subsided it left mild steel in the converter. Bessemer was virtually a professional inventor with little previous knowledge of the iron and steel industry; his process was closely paralleled by that of the American iron manufacturer William Kelly, who was prevented by bankruptcy from taking advantage of his invention. Meanwhile, the Siemens-Martin open-hearth process was introduced in 1864, utilizing the hot waste gases of cheap fuel to heat a regenerative furnace, with the initial heat transferred to the gases circulating round the large hearth in which the reactions within the molten metal could be carefully controlled to produce steel of the quality required. The open-hearth process was gradually refined and by the end of the 19th century had overtaken the Bessemer process in the amount of steel produced. The effect of these two processes was to make steel available in bulk instead of small-scale ingots of cast crucible steel, and thenceforward steel steadily replaced wrought iron as the major commodity of the iron and steel industry.

Low-grade ores

The transition to cheap steel did not take place without technical problems, one of the most difficult of which was the fact that most of the easily available low-grade iron ores in the world contain a proportion of phosphorus, which proved difficult to eliminate but which ruined any steel produced from them. The problem was solved by the British scientists S.G. Thomas and Percy Gilchrist, who invented the basic slag process, in which the furnace or converter was lined with an alkaline material with which the phosphorus could combine to produce a phosphatic slag; this, in turn, became an important raw material in the nascent artificial-fertilizer industry. The most important effect of this innovation was to make the extensive phosphoric ores of Lorraine and elsewhere available for exploitation. Among other things, therefore, it contributed significantly to the rise of the German heavy iron and steel industry in the Ruhr. Other improvements in British steel production were made in the late 19th century, particularly in the development of alloys for specialized purposes, but these contributed more to the quality than the quantity of steel and did not affect the shift away from Britain to continental Europe and North America of dominance in this industry. British production continued to increase, but by 1900 it had been overtaken by that of the United States and Germany.

Mechanical engineering

Closely linked with the iron and steel industry was the rise of mechanical engineering, brought about by the demand for steam engines and other large machines, and taking shape for the first time in the Soho workshop of Boulton and Watt in Birmingham, where the skills of the precision engineer, developed in manufacturing scientific instruments and small arms, were first applied to the construction of large industrial machinery. The engineering workshops that matured in the 19th century played a vital part in the increasing mechanization of industry and transport. Not only did they deliver the looms, locomotives, and other hardware in steadily growing quantities, but they also transformed the machine tools on which these machines were made. The lathe became an all-metal, power-driven machine with a completely rigid base and a slide rest to hold the cutting tool, capable of more sustained and vastly more accurate work than the hand- or foot-operated wooden-framed lathes that preceded it. Drilling and slotting machines, milling and planing machines, and a steam hammer invented by James Nasmyth (an inverted vertical steam engine with the hammer on the lower end of the piston rod), were among the machines devised or improved from earlier woodworking models by the new mechanical engineering industry. After the middle of the 19th century, specialization within the machinery industry became more pronounced, as some manufacturers concentrated on vehicle production while others devoted themselves to the particular needs of industries such as coal mining, papermaking, and sugar refining. This movement toward greater specialization was accelerated by the establishment of mechanical engineering in the other industrial nations, especially in Germany, where electrical engineering and other new skills made rapid progress, and in the United States, where labour shortages encouraged the development of standardization and mass-production techniques in fields as widely separated as agricultural machinery, small arms, typewriters, and sewing machines. Even before the coming of the bicycle, the automobile, and the airplane, therefore, the pattern of the modern engineering industry had been clearly established. The dramatic increases in engineering precision, represented by the machine designed by British mechanical engineer Sir Joseph Whitworth in 1856 for measuring to an accuracy of 0.000001 inch (even though such refinement was not necessary in everyday workshop practice), and the corresponding increase in the productive capacity of the engineering industry, acted as a continuing encouragement to further mechanical innovation.

Textiles

The industry that, probably more than any other, gave its character to the British Industrial Revolution was the cotton-textile industry. The traditional dates of the Industrial Revolution bracket the period in which the processes of cotton manufacture in Britain were transformed from those of a small-scale domestic industry scattered over the towns and villages of the South Pennines into those of a large-scale, concentrated, power-driven, mechanized, factory-organized, urban industry. The transformation was undoubtedly dramatic both to contemporaries and to posterity, and there is no doubting its immense significance in the overall pattern of British industrialization. But its importance in the history of technology should not be exaggerated. Certainly there were many interesting mechanical improvements, at least at the beginning of the transformation. The development of the spinning wheel into the spinning jenny, and the use of rollers and moving trolleys to mechanize spinning in the shape of the frame and the mule, respectively, initiated a drastic rise in the productivity of the industry. But these were secondary innovations in the sense that there were precedents for them in the experiments of the previous generation; that in any case the first British textile factory was the Derby silk mill built in 1719; and that the most far-reaching innovation in cotton manufacture was the introduction of steam power to drive carding machines, spinning machines, power looms, and printing machines. This, however, is probably to overstate the case, and the cotton innovators should not be deprived of credit for their enterprise and ingenuity in transforming the British cotton industry and making it the model for subsequent exercises in industrialization. Not only was it copied, belatedly and slowly, by the woollen-cloth industry in Britain, but wherever other nations sought to industrialize they tried to acquire British cotton machinery and the expertise of British cotton industrialists and artisans. One of the important consequences of the rapid rise of the British cotton industry was the dynamic stimulus it gave to other processes and industries. The rising demand for raw cotton, for example, encouraged the plantation economy of the southern United States and the introduction of the cotton gin, an important contrivance for separating mechanically the cotton fibres from the seeds, husks, and stems of the plant.

Chemicals

In Britain the growth of the textile industry brought a sudden increase of interest in the chemical industry, because one formidable bottleneck in the production of textiles was the long time that was taken by natural bleaching techniques, relying on sunlight, rain, sour milk, and urine. The modern chemical industry was virtually called into being in order to develop more rapid bleaching techniques for the British cotton industry. Its first success came in the middle of the 18th century, when John Roebuck invented the method of mass producing sulfuric acid in lead chambers. The acid was used directly in bleaching, but it was also used in the production of more effective chlorine bleaches, and in the manufacture of bleaching powder, a process perfected by Charles Tennant at his St. Rollox factory in Glasgow in 1799. This product effectively met the requirements of the cotton-textile industry, and thereafter the chemical industry turned its attention to the needs of other industries, and particularly to the increasing demand for alkali in soap, glass, and a range of other manufacturing processes. The result was the successful establishment of the Leblanc soda process,

patented by Nicolas Leblanc in France in 1791, for manufacturing sodium carbonate (soda) on a large scale; this remained the main alkali process used in Britain until the end of the 19th century, even though the Belgian Solvay process, which was considerably more economical, was replacing it elsewhere.

Innovation in the chemical industry shifted, in the middle of the 19th century, from the heavy chemical processes to organic chemistry. The stimulus here was less a specific industrial demand than the pioneering work of a group of German scientists on the nature of coal and its derivatives. Following their work, W.H. Perkin, at the Royal College of Chemistry in London, produced the first artificial dye from aniline in 1856. In the same period, the middle third of the 19th century, work on the qualities of cellulosic materials was leading to the development of high explosives such as nitrocellulose, nitroglycerine, and dynamite, while experiments with the solidification and extrusion of cellulosic liquids were producing the first plastics, such as celluloid, and the first artificial fibres, so-called artificial silk, or rayon. By the end of the century all these processes had become the bases for large chemical industries.

An important by-product of the expanding chemical industry was the manufacture of a widening range of medicinal and pharmaceutical materials as medical knowledge increased and drugs began to play a constructive part in therapy. The period of the Industrial Revolution witnessed the first real progress in medical services since the ancient civilizations. Great advances in the sciences of anatomy and physiology had had remarkably little effect on medical practice. In 18th-century Britain, however, hospital provision increased in quantity although not invariably in quality, while a significant start was made in immunizing people against smallpox culminating in Edward Jenner's vaccination process of 1796, by which protection from the disease was provided by administering a dose of the much less virulent but related disease of cowpox. But it took many decades of use and further smallpox epidemics to secure its widespread adoption and thus to make it effective in controlling the disease. By this time Louis Pasteur and others had established the bacteriological origin of many common diseases and thereby helped to promote movements for better public health and immunization against many virulent diseases such as typhoid fever and diphtheria. Parallel improvements in anesthetics (beginning with Sir Humphry Davy's discovery of nitrous oxide, or "laughing gas," in 1799) and antiseptics were making possible elaborate surgery, and by the end of the century X-rays and radiology were placing powerful new tools at the disposal of medical technology, while the use of synthetic drugs such as the barbiturates and aspirin (acetylsalicylic acid) had become established.

Agriculture

The agricultural improvements of the 18th century had been promoted by people whose industrial and commercial interests made them willing to experiment with new machines and processes to improve the productivity of their estates. Under the same sort of stimuli, agricultural improvement continued into the 19th century and was extended to food processing in Britain and elsewhere. The steam engine was not readily adapted for agricultural purposes, yet ways were found of harnessing it to threshing machines and even to plows by means of a cable between powerful traction engines pulling a plow across a field. In the United States mechanization of agriculture began later than in Britain, but because of the comparative labour shortage it proceeded more quickly and more thoroughly. The McCormick reaper and the combine harvester were both developed in the United States, as were barbed wire and the food-packing and canning industries, Chicago becoming the centre for these processes. The introduction of refrigeration techniques in the second half of the 19th century made it possible to convey meat from Australia and Argentina to European markets, and the same markets encouraged the growth of dairy farming and market gardening, with distant producers such as New Zealand able to send their butter in refrigerated ships to wherever in the world it could be sold.

Civil engineering

For large civil-engineering works, the heavy work of moving earth continued to depend throughout this period on human labour organized by building contractors. But the use of gunpowder, dynamite, and steam diggers helped to reduce this dependence toward the end of the 19th century, and the introduction of compressed air and hydraulic tools also contributed to the lightening of drudgery. The latter two inventions were important in other respects, such as in mining engineering and in the operation of lifts, lock gates, and cranes. The use of a tunneling shield, to allow a tunnel to be driven through soft or uncertain rock strata, was pioneered by the French émigré engineer Marc Brunel in the construction of the first tunnel underneath the Thames River in London (1825–42), and the technique was adopted elsewhere. The iron bell or caisson was introduced for working below water level in order to lay foundations for bridges or other structures, and bridge building made great advances with the perfecting of the suspension bridge—by the British engineers Thomas Telford and Isambard Kingdom Brunel and the German American engineer John Roebling—and the development of the truss bridge, first in timber, then in iron. Wrought iron gradually replaced cast iron as a bridge-building material, although several distinguished cast-iron bridges survive, such as that erected at Ironbridge in Shropshire between 1777 and 1779, which has been fittingly described as the

“Stonehenge of the Industrial Revolution.” The sections were cast at the Coalbrookdale furnace nearby and assembled by mortising and wedging on the model of a timber construction, without the use of bolts or rivets. The design was quickly superseded in other cast-iron bridges, but the bridge still stands as the first important structural use of cast iron. Cast iron became very important in the framing of large buildings, the elegant Crystal Palace of 1851 being an outstanding example. This was designed by the ingenious gardener-turned-architect Sir Joseph Paxton on the model of a greenhouse that he had built on the Chatsworth estate of the duke of Devonshire. Its cast-iron beams were manufactured by three different firms and tested for size and strength on the site. By the end of the 19th century, however, steel was beginning to replace cast iron as well as wrought iron, and reinforced concrete was being introduced. In water-supply and sewage-disposal works, civil engineering achieved some monumental successes, especially in the design of dams, which improved considerably in the period, and in long-distance piping and pumping.

Transport and communications

Transport and communications provide an example of a revolution within the Industrial Revolution, so completely were the modes transformed in the period 1750–1900. The first improvements in Britain came in roads and canals in the second half of the 18th century. Although of great economic importance, these were not of much significance in the history of technology, as good roads and canals had existed in continental Europe for at least a century before their adoption in Britain. A network of hard-surfaced roads was built in France in the 17th and early 18th centuries and copied in Germany. Pierre Trésaguet of France improved road construction in the late 18th century by separating the hard-stone wearing surface from the rubble substrata and providing ample drainage. Nevertheless, by the beginning of the 19th century, British engineers were beginning to innovate in both road- and canal-building techniques, with J.L. McAdam’s inexpensive and long-wearing road surface of compacted stones and Thomas Telford’s well-engineered canals. The outstanding innovation in transport, however, was the application of steam power, which occurred in three forms.

Steam locomotive

First was the evolution of the railroad: the combination of the steam locomotive and a permanent travel way of metal rails. Experiments in this conjunction in the first quarter of the 19th century culminated in the Stockton & Darlington Railway, opened in 1825, and a further five years of experience with steam locomotives led to the Liverpool and Manchester Railway, which, when it opened in 1830, constituted the first fully timetabled railway service with scheduled freight and passenger traffic relying entirely on the steam locomotive for traction. This railway was designed by George Stephenson, and the locomotives were the work of Stephenson and his son Robert, the first locomotive being the famous Rocket, which won a competition held by the proprietors of the railway at Rainhill, outside Liverpool, in 1829. The opening of the Liverpool and Manchester line may fairly be regarded as the inauguration of the railway era, which continued until World War I. During this time railways were built across all the countries and continents of the world, opening up vast areas to the markets of industrial society. Locomotives increased rapidly in size and power, but the essential principles remained the same as those established by the Stephensons in the early 1830s: horizontal cylinders mounted beneath a multitubular boiler with a firebox at the rear and a tender carrying supplies of water and fuel. This was the form developed from the Rocket, which had diagonal cylinders, being itself a stage in the transition from the vertical cylinders, often encased by the boiler, which had been typical of the earliest locomotives (except Trevithick’s Penrydarren engine, which had a horizontal cylinder). Meanwhile, the construction of the permanent way underwent a corresponding improvement on that which had been common on the preceding tramroads: wrought-iron, and eventually steel, rails replaced the cast-iron rails, which cracked easily under a steam locomotive, and well-aligned track with easy gradients and substantial supporting civil-engineering works became a commonplace of the railroads of the world.

Road locomotive

The second form in which steam power was applied to transport was that of the road locomotive. There is no technical reason why this should not have enjoyed a success equal to that of the railway engine, but its development was so constricted by the unsuitability of most roads and by the jealousy of other road users that it achieved general utility only for heavy traction work and such duties as road rolling. The steam traction engine, which could be readily adapted from road haulage to power farm machines, was nevertheless a distinguished product of 19th-century steam technology.

Steamboats and ships

The third application was considerably more important, because it transformed marine transport. The initial attempts to use a steam engine to power a boat were made on the Seine River in France in 1775, and several experimental steamships were built by William Symington in Britain at the turn of the 19th century. The first commercial success in steam propulsion for a ship, however, was that of the American Robert Fulton, whose paddle steamer the “North River Steamboat,” commonly known as the Clermont after its first overnight port, plied between New York and Albany in 1807, equipped with a Boulton and Watt engine of the modified beam or side-lever type, with two beams placed alongside the base of the engine in order to lower the centre of gravity. A similar engine was installed in the Glasgow-built Comet, which was put in service on the Clyde in 1812 and was the first successful steamship in Europe. All the early steamships were paddle-driven, and all were small vessels suitable only for ferry and packet duties because it was long thought that the fuel requirements of a steamship would be so large as to preclude long-distance cargo carrying. The further development of the steamship was thus delayed until the 1830s, when I.K. Brunel began to apply his ingenious and innovating mind to the problems of steamship construction. His three great steamships each marked a leap forward in technique. The Great Western (launched 1837), the first built specifically for oceanic service in the North Atlantic, demonstrated that the proportion of space required for fuel decreased as the total volume of the ship increased. The Great Britain (launched 1843) was the first large iron ship in the world and the first to be screw-propelled; its return to the port of Bristol in 1970, after a long working life and abandonment to the elements, is a remarkable testimony to the strength of its construction. The Great Eastern (launched 1858), with its total displacement of 18,918 tons, was by far the largest ship built in the 19th century. With a double iron hull and two sets of engines driving both a screw and paddles, this leviathan was never an economic success, but it admirably demonstrated the technical possibilities of the large iron steamship. By the end of the century, steamships were well on the way to displacing the sailing ship on all the main trade routes of the world. Printing and photography

Communications were equally transformed in the 19th century. The steam engine helped to mechanize and thus to speed up the processes of papermaking and printing. In the latter case the acceleration was achieved by the introduction of the high-speed rotary press and the Linotype machine for casting type and setting it in justified lines (i.e., with even right-hand margins). Printing, indeed, had to undergo a technological revolution comparable to the 15th-century invention of movable type to be able to supply the greatly increasing market for the printed word. Another important process that was to make a vital contribution to modern printing was discovered and developed in the 19th century: photography. The first photograph was taken in 1826 or 1827 by the French physicist J.N. Niepce, using a pewter plate coated with a form of bitumen that hardened on exposure. His partner L.-J.-M. Daguerre and the Englishman W.H. Fox Talbot adopted silver compounds to give light sensitivity, and the technique developed rapidly in the middle decades of the century. By the 1890s George Eastman in the United States was manufacturing cameras and celluloid photographic film for a popular market, and the first experiments with the cinema were beginning to attract attention.

Telegraphs and telephones

The great innovations in communications technology, however, derived from electricity. The first was the electric telegraph, invented or at least made into a practical proposition for use on the developing British railway system by two British inventors, Sir William Cooke and Sir Charles Wheatstone, who collaborated on the work and took out a joint patent in 1837. Almost simultaneously, the American inventor Samuel F.B. Morse devised the signaling code that was subsequently adopted all over the world. In the next quarter of a century the continents of the world were linked telegraphically by transoceanic cables, and the main political and commercial centres were brought into instantaneous communication. The telegraph system also played an important part in the opening up of the American West by providing rapid aid in the maintenance of law and order. The electric telegraph was followed by the telephone, invented by Alexander Graham Bell in 1876 and adopted quickly for short-range oral communication in the cities of America and at a somewhat more leisurely pace in those of Europe. About the same time, theoretical work on the electromagnetic properties of light and other radiation was beginning to produce astonishing experimental results, and the possibilities of wireless telegraphy began to be explored. By the end of the century, Guglielmo Marconi had transmitted messages over many miles in Britain and was preparing the apparatus with which he made the first transatlantic radio communication on December 12, 1901. The world was thus being drawn inexorably into a closer community by the spread of instantaneous communication.

Military technology

One area of technology was not dramatically influenced by the application of steam or electricity by the end of the 19th century: military technology. Although the size of armies increased between 1750 and 1900, there were few major innovations in techniques, except at sea where naval architecture rather reluctantly accepted the advent of the iron steamship and devoted itself to matching ever-increasing firepower with the strength of the armour plating on the hulls. The quality of artillery and of firearms improved with the new high

explosives that became available in the middle of the 19th century, but experiments such as the three-wheeled iron gun carriage, invented by the French army engineer Nicolas Cugnot in 1769, which counts as the first steam-powered road vehicle, did not give rise to any confidence that steam could be profitably used in battle. Railroads and the electric telegraph were put to effective military use, but in general it is fair to say that the 19th century put remarkably little of its tremendous and innovative technological effort into devices for war.

In the course of its dynamic development between 1750 and 1900, important things happened to technology itself. In the first place, it became self-conscious. This change is sometimes characterized as one from a craft-based technology to one based on science, but this is an oversimplification. What occurred was rather an increase in the awareness of technology as a socially important function. It is apparent in the growing volume of treatises on technological subjects from the 16th century onward and in the rapid development of patent legislation to protect the interests of technological innovators. It is apparent also in the development of technical education, uneven at first, being confined to the French polytechnics and spreading thence to Germany and North America but reaching even Britain, which had been most opposed to its formal recognition as part of the structure of education, by the end of the 19th century. Again, it is apparent in the growth of professional associations for engineers and for other specialized groups of technologists.

Second, by becoming self-conscious, technology attracted attention in a way it had never done before, and vociferous factions grew up to praise it as the mainspring of social progress and the development of democracy or to criticize it as the bane of modern man, responsible for the harsh discipline of the “dark Satanic mills” and the tyranny of the machine and the squalor of urban life. It was clear by the end of the 19th century that technology was an important feature in industrial society and that it was likely to become more so. Whatever was to happen in the future, technology had come of age and had to be taken seriously as a formative factor of the utmost significance in the continuing development of civilization.

Colonial Architecture

Colonialism is a practice of domination, which involves the subjugation of one people to another. One of the difficulties in defining colonialism is that it is hard to distinguish it from imperialism. ... Like colonialism, imperialism also involves political and economic control over a dependent territory.

Colonial architecture is an architectural style from a mother country that has been incorporated into the buildings of settlements or colonies in distant locations. Colonists frequently built settlements that synthesized the architecture of their countries of origin with the design characteristics of their new lands, creating hybrid designs.[

India has a long history of being ruled by different empires, however, the British rule stands out for more than one reason. The British governed over the subcontinent for more than three hundred years. Their rule eventually ended with the Indian Independence in 1947, but the impact that the British Raj left over the country is in many ways still hard to shake off. Freedom came to India with a price. The price of years of struggle, countless men, women and children bearing the brunt of oppression and the political control of the masses by outsiders who didn't quite understand or respect the internal dynamics of the nation for a long time. The British initially were more interested in using the rich resources of the colonized areas. However, it is understood that especially after the 1857 Mutiny they started taking a much keener interest in governance and social norms.

An overview of the British Colonial Architecture

One of the earliest architectural influences of the British colonial rule is seen on the churches. Gothic and neo-classical style was in vogue and many of the structures in the Presidency of Bengal, Madras and Bombay became flag bearers of the opulent style of building. St. John's Church, Fort William, Calcutta Cathedral in Kolkata or the Mutiny Memorial Church in Kanpur are some examples of the Gothic style of colonial architecture. However, the constructors realized that the climate of the subcontinent did not always suit the architectural and raw material usage of the built structures. They slowly started to adapt to the climatic needs of the land, just like the Mughals had done earlier and began using the verandahs, blinds, screens, lattice work and so on. After the Mutiny of 1857, Queen Victoria and Her Majesty's Crown took over the administration of the India. The shift from being traders to rulers was also seen in the architecture of the regime which now started incorporating few Indian designs and motifs into its own style. There was a sort of architectural and construction boom since the mid nineteenth century that saw the building of various monuments, railway stations, rest houses, government buildings and so on. The Rajabai Clock Tower, Victoria Terminus, Bombay High Court in Mumbai and the grand Victoria Memorial in Kolkata are some of the many notable structures built during the late 19th century.

However, it was also during the late 19th century that the Indo Saracenic architecture took its place in the colonial architectural history. Indo Saracenic architecture was in many ways a revival style which incorporated the British style along with many elements from the Mughal architecture as well as the Hindu temple architecture. The Chhapra Palace, Madras High Court and Chennai Central Station are some examples of the Indo Saracenic architecture. Others include the Taj Mahal Palace Hotel in Mumbai, the Khalsa College in Amritsar, Mumbai GPO and many more

New Delhi is a classic example of early 20th century colonial architecture. Sir Lutyens along with a group of architects designed the main central administrative district of the city that till date stands and houses important buildings and residences of the political and administrative importance.

Cities of British Colonial Architecture

Many cities have some or the other influence of the colonial architecture. However, the cities that are landmarks of the British architectural history are Kolkata, Mumbai, Chennai, Agra, Delhi, Hyderabad, Nagpur, Bhopal and Karachi. Over the years the names of many of the colonial structures have been changed to give them an Indian tone, however, the structure itself bears testimony to its period and age of construction. The British colonial era is a reality of the Indian subcontinent history and its architecture is an important and integral part of the nation's past and present.



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SCHOOL OF BUILDING & ENVIRONMENT

DEPARTMENT OF FASHION DESIGN

UNIT – IV - History of Art & Fashion– SFDA1303

Art in India: Painting, Sculpture, Architecture

Introduction

The cultural heritage of India is one of the richest and most ancient in the world, rivalled only by Chinese art. The art of sculpture, the most highly respected medium for artists, was widely practised throughout the subcontinent, and buildings were profusely adorned with it. The subject matter of Indian sculpture was almost invariably abstracted human forms that were portrayed to instruct people in the truths of the Hindu Buddhist or Jain religions. Painting in India typically concerned religious deities and kings and was influenced in style by Chinese painting as well as the art of Ancient Persia and other countries from middle and central Asia, as well as Greece. Painting in India encompasses Buddhist murals in the Ajanta caves and the Brihadisvara Temple, to the large frescoes of Ellora to the miniaturist tradition of Mughal, to the mixed-media embellished works from the Tanjore school. The paintings from Gandhar-Taxila are influenced by Persia to the west, while the eastern style of Indian painting - taking inspiration from Indian mythology, grew up around the Nalanda school of art. Indian civilization is also a rich source of architecture and architectural styles, one of its more minor examples being the famous Taj Mahal. Please Note: for important dates in the evolution of Asian culture, see: Chinese Art Timeline (18,000 BCE - present).

Origins of Art in India

The art of India begins way back in the Paleolithic culture of the Stone Age, with the famous Bhimbetka petroglyphs at the Auditorium Cave, Bhimbetka, Madhya Pradesh, as well as other petroglyphs at Daraki-Chattan, a narrow, deep rock shelter in the Indragarh Hill, near Tehsil Bhanpura, Madhya Pradesh. These primitive cupules and instances of rock art have been dated to as far back as 290,000-700,000 BCE. (For other prehistoric artworks in the Far East, see also: Chinese Neolithic art.) Later, Buddhists were associated with many instances of cave art, which was imitated in the seventh century by Hindus at Badami, Aihole, Ellora, Salsette, Elephanta, Aurangabad and Mamallapuram. In addition, Buddhist literature is full of descriptions about late Iron Age royal palaces in India being decorated with a variety of religious art including frescoes and panel paintings but no such works have survived. The best early frescoes to have emerged are those from the Brihadisvara Temple at Chola, and the murals on temple walls in Pundarikapuram, Ettumanoor, Aymanam and Trivandrum

Sculpture in India

There is almost no individuality in Indian sculpture, because figures are conceived of as shapes that are more perfect than any to be found in human models.

Sculpting in India dates from the Indus Valley civilization of 2500-1800 BCE, when small items of bronze sculpture and terracotta sculpture were produced. An early masterpiece is The Dancing Girl of Mohenjo-Daro (c.2500-2000 BCE, National Museum, New Delhi), arguably the finest surviving statuette of the Indus Valley culture. This was followed by the great circular stone pillars and carved lions of the Maurya period (c. 250 BCE), and the mature Indian figurative sculpture of the second and first centuries BCE, in which Hindu and Buddhist themes were already well established. (For 2nd millennium arts in China, see Shang Dynasty art c.1600-1000 BCE.) A wide range of sculptural styles subsequently emerged in different parts of India over succeeding centuries, but by 900 CE Indian plastic art had reached a form that has lasted with little change up to modern times. This sculpture is distinguished not by a sense of plastic fullness but rather by its linear character: the figure is conceived from the standpoint of its outline, and typically is graceful and slender with supple limbs. From 900 CE onwards, this sculpture was used mainly as architectural decoration with huge numbers of relatively small figures of mediocre quality being produced for this purpose.

Schools of Painting

There is no one style of painting in India. Geography, climate, local cultural traditions, demographics all help to shape art along regional lines. Also, outside artistic influences are more strongly felt in border regions. Not surprisingly therefore, Indian painting is a complex patchwork of differing styles, with different approaches to both figure drawing and figure painting. Here are a few examples.

Madhubani

Practiced in the Mithila region of Bihar state, India, the origins of Madhubani painting traditionally derive from the time of the Ramayana, when King Janak commissioned artists to portray the marriage of his daughter, Sita, with Sri Rama who was regarded as the incarnation of the Hindu god Vishnu

Mughal

Mughal painting is a miniaturist style of Indian painting, typically executed to illustrate texts and manuscripts. It emerged and flourished during the the Mughal Empire in the sixteenth-nineteenth centuries, coinciding with the upsurge in the art of illumination in Persia, which reached its heyday during the Safavid Dynasty (1501-1722). In fact, Mughal pictures were a blend of Indian and Islamic art. One of the key patrons of Mughal painting was Akbar (1556-1605). At Fatehpur Sikri, he employed the two Persian master painters Abdus

Samad and Mir Sayyid Ali, and attracted artists from throughout India and Persia. They painted on cloth using vivid reds, blues and greens, as well more muted Persian colours of pink and peach.

Rajput

Another type of miniature court-style art, Rajput painting flourished in particular during the eighteenth century, in the royal courts of Rajputana. Typically it depicts a variety of themes, including Krishna's life, epics like the Ramayana and the Mahabharata, as well as landscapes, and people. Colours used were usually extracted from minerals, plants, even conch shells. Brushes used by Rajput artists were typically very fine and tapered.

Mysore

Noted for their elegance, subtle colours, and intricate detail, Mysore painting is an important form of classical art from Southern India. Mysore paintings portray Hindu Gods and Goddesses and scenes from Hindu mythology. The process of making a Mysore painting involves a preliminary sketch of the image which is then covered by a gesso paste made of Zinc oxide and Arabic gum to give a slightly raised effect. Afterwards a thin gold foil is pasted. The rest of the drawing is then pasted using watercolour.

Bengal

An avant garde, nationalist movement which reacted against the dominant academic style of art in India as promoted by both Indian and British art schools, the Bengal School of Art was an influential style of painting that developed in India during the British Raj in the early twentieth century. Its influence waned with the spread of modernist ideas in the 1920s.

Architecture

Arguably the two greatest examples of architecture from the Indian subcontinent, are the 11th century Kandariya Mahadeva Hindu Temple (1017-29) at Khajuraho in Madhya Pradesh - noted for its Nagara-style architecture, and extraordinary erotic relief sculpture - and the 17th century Taj Mahal (1632-54) in Agra, Uttar Pradesh - noted for its Mughal (Mogul) designs and serene Islamic art - either of which can compare with the finest architectural works in the West. For a comparison with South-East Asian architecture, see: the 12th century Angkor Wat Khmer Temple (1115-45) in Cambodia.

Arts And Crafts

As well as painting, sculpture and architecture, India has a rich tradition of crafts including gold-work, silver and other precious metalwork, paper-art, weaving and designing of artifacts such as jewellery and toys. Not surprisingly, this wealth of talent and ingenuity now includes some of the world's most innovative computer software and graphics designers.

Ajanta Painting (1st century BCE - 7th century CE)

Buddhist monks were forbidden any prolonged stay in towns and therefore sought sanctuary from the monsoons in natural grottoes, just as modern Indian ascetics do today. As soon as the community became prosperous, they hewed for themselves monasteries and sanctuaries out of the cliffs that edged the Western Ghats. These caves were fairly secluded but always accessible to the laity. They bordered the trade routes which linked the Deccan with Central and Western India, and the main adherents of Buddhism were recruited from the traders and merchants. In a sense the caves of Karli, Bhaja, Nasik, Aurangabad, Ajanta and Bagh were staging houses of the Buddhist faith.

Of all these complexes (and in only a few are paintings preserved), the most important and justly famous is the one at Ajanta. The Ajanta caves were begun around the 2nd century BCE. and were continued until the 7th century. They were dug out over a distance of over six hundred yards, on the flank of a rock face which juts out like a rounded arch over the Waghora river. The site has a savage grandeur well suited to inspire both a state of metaphysical anguish and meditation. (For earlier examples of Stone Age cave painting, see also: Parietal Art: 40,000-10,000 BCE.)

There are twenty-nine Buddhist caves composed of viharas, or monasteries, and chaityas, or meeting-places for the monks and the faithful. The countless sculptures which decorate them were originally polychrome as well as all the flat surfaces. Subjects and themes on a grand scale were painted on the walls, while the ceilings were covered with decorative patterns and serial figures.

Only thirteen of the caves have fragments of paintings, the most important of which are in two chaityas, dating from the 1st century BCE, and in four of the viharas; these were done between the 5th and 7th centuries.

The techniques employed in painting the religious art at Ajanta are peculiar to Northern India. The rock face of the cave is first of all covered with a thick layer of ferruginous, or rust-coloured, earth, bound by organic matter. On this base was applied a smooth coating of lime, a fraction of an inch thick, to which was added an application of glue in order to fix the colour. The composition was then sketched out in vermilion over the ivory-smooth surface. The areas thus demarcated were given a base, a sort of terra verde, over which the colours were applied in detail. (For the range of pigments used, see: prehistoric colour palette.)

Finally, the contours were outlined in black or brown. Though the techniques for obtaining light and shade relief were not known to the Indian painter at this time, by the 5th century, at least, he was using a method of surface relief, an effect he obtained through scraping or boring. It is remarkable how the Indian artist managed to give an illusion of depth, in spite of his flat painting technique; he achieved it solely through the amazing exactitude and sensitivity of his drawing. There is no one who can surpass the Indian artist at conveying, with the help of simple curves, the idea of fullness and plenitude, a sense of weight or the frailty of the female body.

Colour pigments were chosen with regard to their resistance to damp and the limestone, and all had mineral bases: earth colours of red-brown and yellow ochre, green made from finely pounded iron silicates, black and white. However, as the Vishundharmottaram explains, they could get "an unlimited variety of colours by mixing up to three colours, and by the play of imagination and emotion". From the 5th century onwards blue was used, extracted from lapis-lazuli which Indian merchants sought as far afield as Persia. Rare and costly, this blue was only applied in special instances and to highlight certain scenes, like the splashes of azure which caressingly surround the great Bodhisattva in the first of the chaityas. Gold was never used, its effect being achieved through a mixture of green and yellow.

The composition of the frescoes is quite special; it is impossible to translate their extraordinary exuberance. The first caves are still fairly hieratic, particularly where a Buddha is seen preaching to his disciples. This painting has the noble severity of the Autun tympanum. But the composition which at first was in the form of an illustrated strip suddenly bursts forth in the viharas as a design which not only goes from left to right but from top to bottom all over the surface of the walls. The scenes follow one upon another rather like the linked fade-outs of cinema techniques. Stories are recounted simultaneously and on several levels; the only indication that the centre of interest has moved might be an architectural feature, a tree or a face turned away from another person. Each pictorial phase is encircled in a zone of suspense, each scene is punctuated by a beat, regulating the rhythm of the symphony.

Bagh Painting (6th Century - 7th Century)

Two hundred and forty kilometres to the north-west of Ajanta, in western Malwa, are the Buddhist caves of Bagh. For almost half a mile they are dotted along a cliff of friable sandstone and have consequently suffered considerable damage. Most of them were painted; important fragments existed up to about 1950, although they have practically disappeared today. While copies were made at the beginning of the century, they are unable to recapture the beauty of the original. However, they do give precious clues as to the general style, movement and feeling of depth which characterises them. In fact, while they are closely linked to the Ajanta archetype, the Bagh paintings show a freshness, a bonhomie, a vibrant, almost earthy, happiness which contrast sharply with the restraint and introspection of their model. The fresco painting techniques are identical, but the figures, once painted, are not outlined again, which increases the general impression of carefree spontaneity. The subjects treated are presented in a broader, more open fashion than those at Ajanta: a long procession of elephants followed by princes and princesses appear to be on their way to a spring festival. Women, clinging to terraces, watch them pass. The most impressive section is a group of musicians, who surround two long-haired dancers. The twirling, frenzied movement of the ensemble is quite remarkable and portrays a purely pagan joy. This painting is a warm and live expression (though no doubt provincial) of classic Buddhist art.

Sigiriya (5th Century)

Tradition has it that the devout Buddhist Emperor Asoka (reigned 264-226 BCE) of the Maurya dynasty sent his own brother Mahendra, in 250 BCE, to convert the Sinhalese to the new faith. He seemed to have succeeded so well that Sri Lanka is still today one of the main bastions of Hinayana Buddhism.

We owe the beautiful frescoes of Sigiriya to a king-parricide. On top of a huge rock, 600 feet high, he had a palace-fortress hewn out of the stone. It is only reached by a narrow path cut out of the rock. About a third of the way up, in pockets sheltered by an overhang, forty feet above the pathway, there are paintings representing bearers of gifts and offerings, fragments of a vast composition which must have accompanied the visitor for the greater part of his climb. Twenty-one of these figures remain. The irregularity of the inner rock surface did not permit the painter to complete the silhouettes in their entirety: women appear to emerge from clouds, their bodies concealed from mid-thigh. They are contemporary with the paintings of cave No. 16 at Ajanta and have the same grace and distinction, but with an added sense of realism. There is an attention to detail in the observation of the human body here which is not so evident in the Ajanta paintings. These ladies and their handmaidens, who are darker skinned and keep slightly in the background, seem to have been painted in such a way as to accentuate their ethnic type rather than their individual personalities. Not only do their facial features differ one from the other but their stance, their hair style and the details of their clothing all vary. This could easily be a portrait gallery of court ladies. This is, perhaps, the only example in classical Indian painting of such careful personalisation.

The sense of volume and depth is particularly noteworthy, thanks to a technique which consisted of first cutting the design on to the smooth surface of the wall, before putting on the red. The outline, moreover, was gone over several times to emphasise the relief. The colours are the same as those used at Ajanta, including yellow ochre, red-brown and mineral green, but to these was certainly added a copper blue, of which there are now but few traces. A final outline in black, as in Northern India, brought the details into greater prominence. The idea of these women, their sensual, haunting grace, their fine supple hands intermingling with the flowers brought as offerings, has little to do with Buddhism. It would seem here that a point has been reached where beauty is glorified for its own sake, where there is a purely aesthetic search for perfect form, of which a foretaste was given us by the great Bodhisattva at Ajanta.

At Ajanta, Bagh and Sigiriya we notice a relaxation from the strict purity of classical Buddhism in favour of a new dynamism, an aestheticism and sensuality, which was soon to be freely expressed in Brahman art.

Brahmanic Painting (Badami, Panamalai, Sittanavasal, Ellora, Tanjore)

The great Indian empires collapsed with the Hun invasions at the end of the 6th century, but the new dynasties, which divided up the peninsula, continued the artistic traditions of Ajanta. Classical art carried on with the same brilliance. But Buddhism was gone; instead the new kingdoms dedicated their sanctuaries to the gods of a reviving Brahmanism. Painting, while maintaining the characteristics of the preceding era - beauty and fullness of form, elegance and sureness of line - was slowly but surely seduced by the passion and grandeur of the Hindu pantheon. Art now began to devote itself entirely to expressing the infinite complexity of this prodigious vortex.

Badami Painting (6th Century)

In the 6th century a power grew up in the Deccan which was to rule Southern India for the next two hundred years. These were the first western Chalukyas. They made their capital at Badami, where, as at Pattadakal, Aihole and Mahakuteshvara, they constructed many fine temples. The Badami site is very beautiful: cliffs and imposing monoliths of pink stone tower above a blue lake. In a Badami cave-sanctuary dedicated to Vishnu (second in the Brahman trinity of Brahma, Vishnu and Shiva), built in 578, we find our first example of Brahman painting.

Of the frescoes which once covered the walls of this grotto, only a fragment remains; it occupies the concave surface of a heavy cornice which shelters the entrance to the verandah. It is hard to tell what the actual subject of the composition was, but those figures, which are still distinguishable, are exquisitely graceful. The rounded heads in soft relief are sketched in fine, delicate lines. This delicacy probably stems from the Southern Indian technique of applying the colours a fresco secco. The tenderness and suave and almost friendly charm which emanate from this painting are characteristic of all works of the Chalukya period: elegant, restrained, humane. Their sweet faces, half-erased by time, are identical to the beautifully sculptured pairs which decorate the interior of the Malikarjuna temple at Pattadakal.

Panamalai and Sittanavasal Painting (8th Century - 9th Century)

The reign of the first western Chalukyas was noted for the long struggle they had against the Pallavas, who from the 6th century were the suzerains of India, south of the Tungabhadra. Until the 9th century, the Pallavas dotted their territory with many temples and bequeathed to art the marvellous complexes of Mahabalipuram and Kantchipuram. Only tiny fragments of their painting remain at Kantchipuram, and sixty-two somewhat larger pieces at Panamalai and Sittanavasal.

At Panamalai on one of the walls in the temple, Talagirishvara, there is a ravishing female figure; the delicate, sharp outline, the fluidity of colours give us an idea of the technical perfection reached by these southern people. The position of the young woman, one knee bent and the body graciously leaning backwards, is identical to that of the princess at Ajanta, next to the scene of the birth of Buddha in Cave No. 2. It is a posture which we also find in the Kajurao sculptures of the 12th century and is, in all probability, one of the characteristic poses of the heroines of Sanskrit literature.

The second group of paintings, and the most important of those of the Pallava period, are to be found in a Jainist temple, cut out of the side of a hill near the village of Sittanavasal. The frescoes, which may date from the first half of the 9th century, are in fairly good condition. On the verandah pillars there are paintings of two dancers in fine and delicate silhouette and a group of three other persons. The drawing, as at Panamali, is firm, precise and elegant; it is done in brownish red, and stands out beside the pale yellow of the lightly modelled bodies. The ceiling of this verandah is decorated with a very remarkable composition representing three youths about to pick lotus flowers in a pond where elephants, buffaloes and birds are coming to drink. This interweaving of animals and plants, in greens and browns, is admirably cadenced and the stylisation of the whole painting takes away nothing from its freshness and grace. The charming, youthful bodies of the young men are hardly filled out at all, but the drawing is very sure. The lotus, some in bud and some in flower, haloed by huge rounded leaves, and with their long sinuous stalks, is the centre-piece of this obviously symbolic group.

Ellora Painting (8th-9th centuries)

In the second half of the 8th century the first western Chalukyas were wiped out by a new dynasty, the Rashtrakutas, who controlled the northern Deccan for more than a century. It is to these princes that we owe one of the most beautiful monuments, and certainly the most extraordinary, in India, the Kailasha of Ellora. It is an immense monolithic temple, entirely sculptured out of the massive rock. Of the thirty-four caves at Ellora, twelve are Buddhist, seventeen Brahman and five Jainist. They issue from an abrupt, vertical cliff above the

horizontal sweep of a natural platform and dominate the northern part of the vast Deccan plateau. In this huge group, containing the most beautiful pieces of Indian stone sculpture, we have only two examples of painting, in the Kailasha and in the Jainist grotto called Indra Sabha.

The Kailasha frescoes are to be found on the ceiling of the western porch. They are covered by three successive layers of paintings, and are now in process of renovation. The oldest must date from the time the temple was built in the second half of the 8th century. Here we see gods and goddesses in flight, dwarfs and a mythological being astride a monster. The technique is the same as that at Badami, but here the drawing is more important than the modelling. Brahman rhythm grows more and more definite as Buddhist borrowings become less. Shiva is dancing, and meditation is replaced by a cosmetic jubilation.

This intensity, this acceleration of movement, is even more striking in the very lovely fragments from the Jainist cave, which date from the middle of the 9th century and show gods in flight and Shiva dancing with an astonishing virtuosity. One character flies in the sky, revealing his back and curved buttocks, his hands joined above his head; it is startling in the perfection of its technique and its sure brilliance. Here bodies have the elegance, the slimness and the light angularity of the female figure at Panamalai, but there is a great degree of stylisation. The artist has freed himself from the conventions of Ajanta. Brahmanism is never didactic like Buddhism; there is no attempt to convince or persuade but one is carried away by the excitement of the scene. Naturalism is too heavy, and is rejected in favour of schematisation, a neater way of expressing the symbolic geometry of shapes.

Tanjore Painting (11th century)

While the Rashtrakutas were ruling in the north of the Deccan a new dynasty, the Cholas, took over the waning power of the Pallavas in the south and held it from the middle of the 9th century to the beginning of the 13th century. The very special temple architecture of the south developed in the Chola period, the most perfect example being the great Shiva temple at Tanjore.

In six of the rooms at the base of the great tower of this sanctuary, frescoes dating from the construction of the building (early 11th century) have been discovered underneath paintings of the 17th and 18th centuries. Restorers are now at work on the important paintings. On the whole the paintings depict scenes about the god Shiva. Most remarkable are the dancers; with their prodigious expressive strength they convey a feeling of triumphant joy. Although they may resemble the flying genies of Ellora, here something more carnal animates their being, swells their bodies and gives greater curve to their form. Their elan, much more violent here, is reflected in the twisting of the dancer's chest. The colours from mineral pigments seem to be freely applied. According to recent studies, they were applied to the fresco on wet plaster. Like all Indian painting, the contours are etched in red and black, and figures are only lightly filled out. New frescoes have been found in an ambulatory, and once this group has come to light we shall have one of the most important examples of Indian classical painting.

Late Classical Buddhist Art in Bengal and Sri Lanka (11th-12th Century)

In the 5th century Buddhism was born on the borders of Nepal, and it was in this northeastern corner of India that the Buddhist faith, hunted from the peninsula by a triumphant Brahmanism, was to find its last refuge.

Pali Illuminated Manuscripts (11th-12th Century)

The Pali dynasty, rulers from 750 until the middle of the 12th century, were patrons of an intense, artistic and religious movement, with Brahmanism and Buddhism standing side by side, although the Palis always had a clear predilection for the latter faith. Pali art was founded on the ruins of the Gupta empire, whose style it continued, although in a more precious and affected way. Its greatest successes were in the field of architecture. Pali wall-paintings have all practically disappeared, but some illuminated manuscripts remain. They were carried out in the great Buddhist monasteries, the most famous of which, Nalanda, was the resort of countless pilgrims from South-East Asia.

The manuscripts were executed on palm leaves, long and narrow in format and kept together by threads running through the pages, the whole bound between two pieces of wood. The illustrations are scanty and are done in small frames 3-inches by 2-inches inset within the text. As in wall-paintings, the outlines of this book illustration are done in red or black and colours are filled in afterwards; the colours are white, red, yellow, green and indigo-blue. The composition is simple and usually includes a god (Buddha or a Bodhisattva) surrounded by pupils, or their female alter ego (shakti); the latter sometimes take pride of place in the paintings. Here we touch on Tantric Buddhism, and while these paintings do give an impression of calm and dignity, there is a hint of this Mahayana tendency towards eroticism and magic.

The manuscripts, the oldest of which, as far as is known, do not go back further than the 11th century, are of great interest, since they reveal the final outcome of classical Buddhist painting in India. (For more about illuminated texts, see: History of Illuminated Manuscripts - 600-1200).

In the second half of the 12th century, Islam conquered Bengal, and razed the monasteries to the ground. Buddhism was now finally wiped out in the peninsula and was forced to seek refuge in Nepal and Tibet, where there developed an extremely complex iconography, though in style it remained faithful to its Pali origins.

Polotmaruva Painting (12th Century)

Sri Lanka, which remained faithful to Buddhism in spite of two centuries of Chola occupation, underwent a new artistic and religious phase with her regained independence in the 12th century. The island capital, Polonnaruwa, was studded with temples and ornate palaces which, according to the chronicles, were covered with many paintings. However, the only ones remaining of this period are the exquisite frescoes in the small Tivamka temple. Unfortunately, they are in bad condition, but they do help us to study the development of Buddhist painting in the southern part of India.

In spite of the recent Chola invasions, the frescoes were not painted in the Tanjore style and lack both the intensity and vivacity of this art. Here Brahman influence is categorically rejected in favour of Buddhist inwardness and sweetness. The artist has gone back to Ajanta for his inspiration, adding that sensual naturalism, nonchalance and simplicity which we saw in the works of 5th-century Sri Lanka. But the painted figures at Polonnaruwa are somewhat more restrained, more abstract, more religious, than the opulent young ladies of Sigiriya. There are scenes of jatakas, a procession of the faithful, all conceived with freedom and suppleness. Some people are painted green. Green, in fact, is the only colour to be used alongside the yellow-ochre tones of the whole. The foliage is very beautiful and drawn with great ease, evoking the abundance of the dense Sinhalese jungle.

By their finesse, their serenity and rather languid grace the Polonnaruwa paintings show a definite return to pure Buddhist classicism; this was possibly a simple reaction against the attempted Brahman hegemony, or it may have been the stagnation of an inspiration limited by the continued repetition of the same themes. The perfect drawing techniques make us regret, all the more, the loss of these secular compositions.

We have now arrived at the end of the classical period. At the beginning of the 14th century Moslem incursions penetrated right into Southern India. The new epoch was to prove tense and stirring but not one for the expression of classical ideals. A transitional art was born, which opened up the way to a new visual language.

The Story Of Khadi, India's Signature Fabric

Khadi – the word conjures up images of Mahatma Gandhi and the Swadeshi movement he led. For a long time khadi was associated with the country's freedom struggle and politics. Here we take a look at its history, exploring the story and significance of this textile. Khadi is a term used for fabrics that are hand-spun and handwoven, usually from cotton fiber. However, contrary to popular belief, khadi is also manufactured from silk and wool, known as khadi silk or woolen khadi respectively. The fabric is known for its rugged texture, comfortable feel and ability to keep people warm in winter while keeping them cool during the summer.

Broadly speaking, khadi is manufactured in two steps: converting the fiber into yarn using tools like spinning wheels (Charkha) and then weaving the yarn into fabric using looms. There are many steps like dyeing and strengthening of the fibers which can be explored in detail here. Both the spinning and weaving can be mechanized, resulting in hand-loom fabric when the first step is mechanized and mill-made fabric when both steps are mechanized.

Khadi in Ancient Times Hand spinning and hand weaving have been around for thousands of years, thus, making the craft of khadi ancient. The Indus civilization, around 2800 B.C., had a well-developed tradition of textiles. Discovery of terracotta spindle whorls for spinning yarn, bone tools for weaving, terracotta beads with textile impressions and figurines wearing woven fabrics are evidence supporting such claims. The most prominent figurine is of the Mohenjodaro Priest King sculpture shown wearing a cloak over the shoulder with patterns still in use in modern Sindh, Gujarat and Rajasthan. There have been various other mentions of the beauty and vividness of Indian fabric. Alexander the Great discovered printed and painted cotton during his invasion of India. He and his successors established trade routes which finally introduced cotton to Asia and eventually to Europe. Recovery of Indian fabrics in the old ruins of Cairo supports this theory. Cotton textiles were considered all the rage in Rome and were popular among the wealthy.

Muslin, Chintz and Calico – Pride of Khadi

Over the years, Indian textiles became more refined with natural dyes and broader prints. Vasco Da Gama's advent of the sea route to Calicut introduced calicos (named after Calicut, where they were made) and chintz (glazed calicos) to Europe. Initially used as household linens, they soon became commoner's clothes due to their comfort, durability and low costs. By the end of the 17th century, the East India Company was importing a quarter of a million pieces into Britain. Dhaka's famous muslin and Calicut's calico and chintz held sway in European markets.

Stories about the fine translucent quality of muslin are commonplace. One of the best-known stories is that of Emperor Aurangzeb admonishing his daughter for wearing a transparent dress. Princess Zeb-un-Nisa replied, to the astonishment of Aurangzeb, that she was wearing seven layers of muslin.

Chintz threatened the local industry so much that a law was brought in both France in 1686 and in Britain in 1720 banning their use. This was during the golden era of khadi, and henceforth, khadi went into decline. Increase in production of low-cost mill fabric due to industrialization spurred demand for raw produce cotton rather than high-quality imports.

The East India Company encouraged cotton farming, and mill-produced fabrics flooded Indian markets, thus, starting a downward spiral for handwoven khadi. Mill culture soon started in Bombay, and mill fabric became the norm, thus, bringing a further decline in hand spinning. This was khadi's dark moment.

Khadi and Charkha

Khadi owes its revival to the Father of the Nation, Mahatma Gandhi. He was the one who saw its potential as a tool to being self-reliant, independent and bringing villages back to life. In his words:

‘The spinning wheel represents to me the hope of the masses. The masses lost their freedom, such as it was, with the loss of the Charkha. The Charkha supplemented the agriculture of the villagers and gave it dignity.’

However, he soon understood that more than the production and sale of this handwoven fabric, it's the acceptance of the very fabric in our own daily lives that will bring the change. Gandhi made the Swadeshi Movement synonymous with khadi. He promoted its simplicity as a social equalizer and made it the nation's fabric.

‘If we have the ‘khadi spirit’ in us, we would surround ourselves with simplicity in every walk of life. The ‘khadi spirit’ means illimitable patience. For those who know anything about the production of khadi know how patiently the spinners and the weavers have to toil at their trade, and even so must we have patience while we are spinning ‘the thread of Swaraj.’

The ‘khadi spirit’ means fellow-feeling with every human being on earth. It means a complete renunciation of everything that is likely to harm our fellow creatures, and if we but cultivate that spirit amongst the millions of our countrymen, what a land this India of ours

would be! And the more I move about the country and the more I see the things for myself, the richer, the stronger is my faith growing in the capacity of the spinning wheel.’

Introduced with the intention of boycotting foreign goods, khadi became a national movement under Gandhiji. All India Spinners Association was launched with the intention of propagation, production and the selling of khadi in 1925. Techniques were improved upon, and employment to the scale of two lakh was created. After independence, the movement continued, and the All India Khadi and Village Industries Board was created, which later culminated in the formation of Khadi, Village and Industries Commission. KVIC today is responsible for the planning, promotion, organization and implementation of programs for the development of khadi and other village industries in rural areas with the coordination of other agencies in rural development wherever necessary.

Since independence, the journey of khadi has been about maintaining a balance between traditions and modernity. Khadi stands for what’s traditional, but every tradition has to undergo change to stay relevant. Khadi has seen a new wave of acceptance thanks to many fashion designers like Sabyasachi Mukherjee, Ritu Kumar and Rohit Bal, to name a few. Brands like Fab India and Nature Alley have made their name with khadi products. India now celebrates Khadi Day on September 19th.



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DEPARTMENT OF FASHION DESIGN

UNIT – V - History of Art & Fashion– SFDA1303

THE ARTS AND CRAFTS MOVEMENT

The Arts and Crafts Movement originated in Britain during the late 19th century and was characterized by a style of decoration reminiscent of medieval times. The primary artist associated with the movement is William Morris, whose work was reinforced with writings from John Ruskin. The movement placed a high importance on the quality of craftsmanship while emphasizing the importance for the arts to contribute to economic reform.

Origins, History, Members

One of the most influential of modern art movements, the Arts and Crafts Movement was established in Britain about 1862 by the artist and medievalist William Morris (1834-96), in response to the negative social and aesthetic consequences of the Industrial Revolution. The movement took its name from the Arts and Crafts Exhibition Society, set up in 1888, although its origins went back to the negative sentiment generated by the Great Exhibition of 1851, which was ably articulated by the art critic John Ruskin (1819-1900). His ideas on the need to preserve individual craftsmanship and design had a major impact on William Morris, who founded the design firm of Morris, Marshall, Faulkner & Co to recreate manual craftsmanship in the era of mass production. Although Morris's firm was a commercial success, only rich people could afford his designs. Even so, his ideas had a strong impact on numerous designers, manufacturers and practitioners of Victorian art, and led to the creation of several organizations to promote Arts and Crafts ideas, such as the Art Workers Guild (1884). The Arts and Crafts Movement was primarily concerned with architecture and the decorative arts, including stained glass, wallpaper, textiles, furnishings, printed fabrics (chintzes), tapestry art, furniture, wood carving, metalwork, ceramics, jewellery and mosaic art. Other artists and designers associated with the Arts and Crafts Movement include the painters Edward Burne-Jones (1833-98), Dante Gabriel Rossetti (1828-82), Ford Madox Brown (1821-93) and the Scottish muralist John Duncan (1866-1945), the ceramicist William de Morgan (1839-1917), the illustrator Aubrey Beardsley (1872-98), the designers Philip Webb (1831-1915), Charles Francis Annesley Voysey (1857-1941) and Charles Ashbee (1863-1942), the architects Richard Norman Shaw (1831-1912), Edward William Godwin (1833-86), and WR Lethaby (1857-1931). The Arts & Crafts Movement opened the door for Art Nouveau in Europe (1890-1905), the modernist designs of Swiss architect Le Corbusier (1887-1965), Walter Gropius (1883-1969) and his Bauhaus Design School in Germany (1919-33) and the Union des Artistes Modernes (UAM) in France. It also influenced C.R. Mackintosh and the Glasgow School of Painting: 1880-1915.

Aims, Aesthetics and Ideals

The Arts and Crafts movement was a social/artistic movement of modern art, which began in Britain in the second half of the nineteenth century and continued into the twentieth, spreading to continental Europe and the USA. Its adherents - artists, architects, designers, writers, craftsmen and philanthropists - were united by a common set of aesthetics, that sought to reassert the importance of design and craftsmanship in all the arts in the face of increasing industrialization, which they felt was sacrificing quality in the pursuit of quantity. Its supporters and practitioners were united not so much by a style than by a common goal - a desire to break down the hierarchy of the arts (which elevated fine art like painting and sculpture, but looked down on applied art), to revive and restore dignity to traditional handicrafts and to make art that could be affordable for all.

William Morris

The leading champion of the Arts and Crafts movement was the designer, painter, poet and social reformer William Morris. A passionate Socialist, Morris proclaimed, "I do not want art for a few, any more than I want freedom for a few." Drawing on the ideas of the architect Augustus W.N. Pugin (1812-52), who proselytized the moral superiority of the art of the Middle Ages, and the art critic and writer John Ruskin (1819-1900), who denounced the greed and self-interest of contemporary capitalist society, Morris developed the view that art should be both beautiful and functional. His ideal, the pure and simple beauty of medieval craftsmanship, was further strengthened by his friendships with members of the Pre-Raphaelite Brotherhood like Edward Burne-Jones and Dante Gabriel Rossetti, who also looked to the Middle Ages (hence the term 'Pre-Raphaelite') for aesthetic inspiration and moral guidance. See also: Medieval Sculpture and Medieval Artists.

The Red House

The Red House (1859), Morris's home in Bexley Heath, Kent, marked the emblematic start of the movement. Morris commissioned it from his friend, the architect Philip Webb, for himself and his new bride. The red brick house (hence the name), with its free-flowing design, the absence of pretentious facades, the concern for structure and sensitivity to local materials, traditional building methods and the particularities of location, is a landmark in the domestic revival movement in Victorian architecture (1840-1900). Morris himself designed the garden, and the interior was fitted and decorated by Webb, the Morris family, Rossetti and Burne-Jones, resulting in what Rossetti described as 'more a poem than a house'. It is, in fact, the earliest example of the concept of a 'total work of art' (gesamtkunstwerk) that would become central not only to the Arts and Crafts philosophy, but to many other movements, among them Art Nouveau, the Bauhaus and Art Deco.

Morris, Marshall, Faulkner & Co

The Red House project amongst friends soon led to a commercial venture. In 1861 Morris, Webb, Rossetti, Burne-Jones, painter Ford Madox Brown, surveyor P P Marshall and accountant Charles Faulkner founded the manufacturing and decorating firm of Morris, Marshall, Faulkner & Co (later Morris & Co.). The anti-industrial structure of the firm was based on the concept of medieval guilds, in which craftsmen both designed and executed the work. Its aim was to create beautiful, useful, affordable, applied-art objects, so that art would be a lived experience for all, not just the affluent. The members of the company turned their hands to designing and producing domestic objects, including furniture, tapestry, stained glass, jewellery, furnishing fabrics, carpets, tiles and wallpaper.

Ideology Not Design

However, the major innovation of the Arts and Craft movement was in their ideology, not in their style or design, which harked back to medieval architecture and tapestries, illuminated manuscripts and rustic styles of decoration and furniture. Tellingly, their themes and subjects were often drawn from Arthurian legend or the poetry of 14th-century poet Geoffrey Chaucer. Moreover, though the movement was successful in raising the status of the craftsman and promoting respect for native materials and traditions, it failed to produce art for the masses: its handmade products were expensive. By the 1880s one could live in a house designed by Webb, decorated with Morris wallpaper, with ceramics by William de Morgan and paintings by Burne-Jones, while wearing clothing based on Pre-Raphaelite dress - but only if one was wealthy. Morris himself is best known for his use of flat, formal pattern designs for wallpaper and tiles characterized by a richness of colour and complexity of design. The flowing, dynamic line of such designs, particularly those of second-generation designers Arthur Heygate Mackmurdo (1851-1942) and Charles Voysey (1857-1941), would later influence the international Art Nouveau, in which designers would develop the look without its social program.

Architecture

The architecture of the Arts and Crafts Movement was its most radical and influential aspect, and architects such as Webb, Voysey, M. H. Baillie Scott (1865-1945), Norman Shaw (1831-1912) and Charles Rennie Mackintosh, developed principles which not only influenced 19th century architecture but would later become the touchstones of twentieth-century architects. These included the belief that design should be dictated by function, that vernacular styles of architecture and local materials should be respected, that new buildings should integrate with the surrounding landscape, and that freedom from historicist styles was essential. The result was a number of buildings - especially houses for the middle class - that architectural historian Nikolaus Pevsner called 'fresher and more aesthetically adventurous than anything done at the same time abroad'. These architectural canons fed the growing Garden City movement in Britain in the early twentieth century, which brought together on a large scale Arts and Crafts design and Morris's social reform ideals. The Garden City movement was based on the theories of Ebenezer Howard (1850-1928), as put forward in his highly influential book, *Tomorrow: a Peaceful Path to Real Reform*, 1898 (later revised as *Garden Cities of Tomorrow* in 1902). Howard's social policies advocated the creation of small, economically self-sufficient cities throughout the country, with the aim of halting urban sprawl and overcrowding. Numerous such cities were built, with varying degrees of success, and the ordinary home became the focal point of progressive architects throughout the country.

Arts and Crafts Organizations

The Arts and Crafts movement encompassed other English guilds of architects and designers. The Century Guild (founded in 1882 as a democratic collective) included as its members Mackmurdo and Selwyn Image (1849-1930), who also produced a journal, *The Hobby Horse* (1884-92). The Art Workers' Guild (founded 1884) included William Lethaby (1857-1931) and Voysey among its members; its aims were 'to advance education in all the visual arts and to foster and maintain high standards of design and craftsmanship'. The recognition that public exposure was essential to achieve their educational goals and commercial survival (the London Royal Academy did not exhibit decorative arts) prompted

Art Nouveau (c.1890-1914)

Introduction

Art Nouveau was an innovative international style of modern art that became fashionable from about 1890 to the First World War. Arising as a reaction to 19th-century designs dominated by historicism in general and neoclassicism in particular, it promulgated the idea of art and design as part of everyday life. Henceforth artists should not overlook any everyday object, no matter how functional it might be. This aesthetic was considered to be quite revolutionary and new, hence its name - New Art - or Art Nouveau. Hence also the fact that it was applied to a host of different forms including architecture, fine art, applied art, and decorative art. Rooted partly in the Industrial Revolution, and the Arts and Crafts Movement, but also influenced by Japonism (especially Ukiyo-e prints by artists like Hokusai and his younger contemporary Hiroshige) and Celtic designs, Art Nouveau was given a major boost by the 1900 Exposition Universelle in Paris. After this, it spread across Europe and as far as the United States and Australia, under local names like Jugendstil (Germany), Stile Liberty (Italy), Sezessionstil (Austria) and Tiffany style (America). A highly decorative idiom, Art Nouveau typically employed intricate curvilinear patterns of sinuous asymmetrical lines, often based on plant-forms (sometimes derived from La Tene forms of Celtic art). Floral and other plant-inspired motifs are popular Art Nouveau designs, as are female silhouettes and forms. Employing a variety of materials, the style was used in architecture, interior design, glassware, jewellery, poster art and illustration, as well as painting and sculpture. The movement was replaced in the 1920s by Art Deco.

Art Nouveau is usually deemed a matter of 'style' rather than a philosophy: but, in fact, distinctive ideas and not only fanciful desires prompted its appearance. Common to all the most consistently Art Nouveau creators was a determination to push beyond the bounds of historicism - that exaggerated concern with the notions of the past which characterises the greater part of 19th-century design: they sought, in a fresh analysis of function and a close study of natural forms, a new aesthetic. It is true that the outer reaches of Art Nouveau are full of mindless pattern-making but there was, at and around the centre, a marvellous sequence of works in which the decorative and the functional fuse to novel and compelling effect. Art Nouveau means much more than a single look or mood: we are reminded of tall grasses in light wind, or swirling lines of stormy water, or intricate vegetation - all stemming from organic nature: an interest in which should be understood as proceeding from a sense of life's order lost or perverted amidst urban industrial stress

Definition, Characteristics

There is no single definition or meaning of Art Nouveau. But the following are distinguishing factors. (1) Art Nouveau philosophy was in favour of applying artistic designs to everyday objects, in order to make beautiful things available to everyone. No object was too utilitarian to be "beautified". (2) Art Nouveau saw no separation in principle between fine art (painting and sculpture) and applied or decorative arts (ceramics, furniture, and other practical objects). (3) In content, the style was a reaction to a world of art which was dominated by the precise geometry of Neoclassical forms. It sought a new graphic design language, as far away as possible from the historical and classical models employed by the arts academies. (4) Art Nouveau remains something of an umbrella term which embraces a variety of stylistic interpretations: some artists used new low-cost materials and mass production methods while others used more expensive materials and valued high craftsmanship.

Types of Designs

In line with the Art Nouveau philosophy that art should become part of everyday life, it employed flat, decorative patterns that could be used in all art forms. Typical decorative elements include leaf and tendril motifs, intertwined organic forms, mostly curvaceous in shape, although right-angled designs were also prevalent in Scotland and in Austria. Art made in this style typically depicted lavish birds, flowers, insects and other zoomorphs, as well as the hair and curvaceous bodies of beautiful women. For Art Nouveau architectural designs, see the exaggerated bulbous forms of the Spanish architect Antoni Gaudi (1852-1926), and the stylistic Parisian Metro entrances of Hector Guimard (1867-1942).

The term "Art Nouveau" stemmed from the name of the Parisian art gallery, called "La Maison de l'Art Nouveau", owned by the avant-garde art-collector Siegfried Bing (1838-1905), which showcased works created in the Art Nouveau style. The gallery's reputation and fame was considerably boosted by its installations of modern furniture, tapestries and objets d'art at the 1900 Exposition Universelle, after which the gallery's name became almost synonymous with the style.

At the same time, in Belgium the style was promoted by Les Vingt and La Libre Esthetique, while in Germany the style was popularized and promoted by a magazine called Jugend: Münchner illustrierte Wochenschrift für Kunst und Leben (Youth: the illustrated weekly magazine of art and lifestyle of Munich), which is why German Art Nouveau - along with that of the Netherlands, the Baltic and the Nordic countries - has since been known as "Jugendstil" (youth-style). In Austria, Art Nouveau was first popularized by artists of the Vienna Secession movement, leading to the adoption of the name "Sezessionstil". In fact, the Vienna Secessionists, like Joseph Maria Olbrich (1867-1908), influenced art and architecture throughout Austria-Hungary. In Germany, after the Munich Secession (1892) and the Berlin Secession (1898), many of its leading practitioners came together again in 1907 as members of the Deutscher Werkbund (German Work Federation).

Other temporary names were used which reflected the novelty of the style, or its ribbon-like curvilinear designs. For example, in France it was also known as "le style moderne" or "le style nouille" (noodle style); in Spain, "arte joven" (young art); in Italy "arte nuova" and in the Netherlands "Nieuwe kunst" (both, new art). The style was also named after certain of its exponents or promoters. For instance, Hector Guimard's Parisian Metro entrances led to the temporary name "Style Metro"; in America the movement was called the "Tiffany style" due to its connection with the Art Nouveau glassmaker and jeweller Louis Comfort Tiffany.

Evolution of Art Nouveau

The origins of Art Nouveau are unclear, although most art historians agree that its roots lay in the English Arts and Crafts Movement, championed by the medievalist William Morris, as well as the flat-perspective and strong colours of Japanese woodcuts. This idiom was reinforced by the wave of Japonism that swept through Europe in the 1880s and 1890s, and by the decorative painting styles of Synthetism (Gauguin) and Cloisonnism (Bernard, Anquetin) developed at the Pont-Aven School in Brittany. For more details, please see: Post Impressionist Painting (1880-95).

As a movement, Art Nouveau shared certain features with Romanticism, the Pre-Raphaelites, the Symbolists, and the Arts and Crafts Movement, although each differed in various ways. For example, unlike Symbolist painting, Art Nouveau has a distinctive visual look; and, in contrast to the artisan-oriented Arts & Crafts Movement, Art Nouveau artists readily employed new materials, and did not turn their backs on mass-produced or machined surfaces.

Connections were also forged between practitioners of Jugendstil and Celtic-style artists, notably in the area of abstract patternwork. Christopher Dresser's *Unity in Variety* (1859) - a treatise on botany for artists, was also influential. But it is Arthur Heygate Mackmurdo (1851-1942) who is often identified as the first designer in whom historical precedents were sufficiently subdued for the new mode to show clearly. Indeed, the earliest example of Art Nouveau was the variety of rhythmic floral patterns used by Mackmurdo in his book-cover for Sir Christopher Wren's *City Churches* (1883). His buildings, furniture, graphics and textiles derive definitely, though not exclusively, from the natural world, convey a strong sense of their materials, and are structurally elemental. Mackmurdo accepted a good deal of Ruskin's involvement with the social and economic conditions of art and turned eventually to the composition of political tracts. Whatever its exact origins, Art Nouveau benefited enormously from the exposure it received at international exhibitions such as the Paris Exposition Universelle (1900) and the Turin Esposizione Internazionale d'Arte Decorativa Moderna (1902), as well as individual outlets such as London's Liberty & Co and Siegfried Bing's "Maison de l'Art Nouveau".

The style has been said to end in the work of Charles Rennie Mackintosh (1868-1928), a key figure in the Glasgow School of Painting (1880-1915). Painter, architect and designer, he was initially attracted by the creative freedom of Art Nouveau and its encouragement of the fanciful, but he used a cooler treatment. The essentials of his passage may be traced in one place, the Glasgow School of Art. A system of repeated curving forms in the main building (1897-9) gave way to regimented verticals and horizontals in the library (1907-9): the new order fell to a new orderliness. From then on, the need and the wish for economy of means, a desire to exploit easy mechanical replication, became dominant. Both architecture and the applied arts contrived an ethic and an aesthetic based on meaner notions of utility.

Applications

Art Nouveau Decorative Glass and Jewellery

In both these areas, Art Nouveau found tremendous expression, as exemplified in works by Louis Comfort Tiffany in New York, Charles Rennie Mackintosh in Glasgow and Emile Galle and the Daum brothers in Nancy, France. Jewellery of the Art Nouveau period saw new levels of virtuosity in enameling as well as the introduction of new materials such as moulded glass, horn, and ivory. The growth of interest in Japanese art (a fashion known as Japonisme), along with increased respect for Japanese metalworking skills, also stimulated new themes and approaches to ornamentation. As a result, jewellers stopped seeing themselves as mere craftsmen whose task was to provide settings for precious stones like diamonds, and began seeing themselves as artist-designers. A new type of Art Nouveau jewellery emerged that depended less on its gemstone content and more on its designwork. The jewellers of Paris and Brussels were at the forefront of the Art Nouveau movement and it was in these cities that it achieved the greatest success. In America, Louis Comfort Tiffany (1848-92) was an adventurous creator of luxury objects, mainly in glass, often utilising the shot-silk glow of metallic iridescence, and inspired by flower and feather. Tiffany's firm was enormously successful and his goods were much imitated.

Art Nouveau Architecture

Art Nouveau architecture was one of the great ubiquitous cultural impulses, appearing virtually throughout Europe and Scandinavia, and in America too.

A very vigorous strain developed in Belgium, where Henri van de Velde (1863-1937) pared away the conventions of art and architecture in favour of a rather rigid floral style (his house at Uccle, 1895), while Victor Horta (1861-1947) seems to have passed the rule-book through a maze of botanical fact (the Hotel Tassel, 1892-3, and the Maison du Peuple, 1896-9 in Brussels). Horta was widely admired for his readiness to reconsider basic design problems and for the fluency of his adaptations of organic principle. For the Tassel house he opened up the centre into a sort of conservatory space in which the exposed cast iron supports are themselves stylised plants. And the Maison du Peuple he constructed around a sinuous iron frame, every decorative element of which arose from the containment of stresses. It was said that 'he follows the secret law obeyed by vegetation, which grows in immutable and ever harmonious forms, but he compels himself never to draw a motif, nor to describe a solitary curve which could be seen as a pastiche of natural form'.

In France, Art Nouveau-style nineteenth century architecture had the State's seal of approval when Guimard's designs for the Paris Metro stations were accepted, and above the subways (1898-1900) sprouted elaborate arrangements of iron and glass resembling large bean shoots and seed-pods. Hector Guimard (1867-1942) had liked Horta's work in Brussels and hoped to extend its radical disruption of expected architectural behaviour. But the most spectacular results of the decision to rethink design from the ground up, so to speak, are to be found in Spain. Antoni Gaudi (1852-1926) conceived for Barcelona a series of architectural extravaganzas, apparently pervaded by thoughts of nature in its less attractive manifestations - the rabbit warren or termite hill, reptilian anatomy, weeds on the rampage. The Palacio Guell (1885-9) has already the ebb and flow, the rhythmic asymmetry of his mature efforts, but is relatively urbane. The Casa Mila (1905-07) is a riotous assembly of pitted stone and twisting iron, with a ground plan which altogether ignores the right-angle. And the Church of the Sagrada Familia (1884, uncompleted) bemuses the visitor, with its four towers like monster decaying cucumbers: it resembles, on the whole, a vegetable garden in the grip of some ferocious virus and mutating freely. Meanwhile, in America, the giant office blocks of Louis Sullivan (1856-1924) - the Wainwright Building, St Louis (1890), the Guaranty Building, Buffalo (1894), the Carson, Pirie & Scott Store, Chicago (1899-1904) - reveal in their facades, their honeycomb insides and the strips and panels which divide the cells a riot of plant-like ornament.

Art Nouveau architectural designs were widespread throughout many parts of central and eastern Europe, including Latvia (Riga), the Czech Republic (Prague), Poland (Krakow), Slovenia (Ljubljana), as well as Italy. Leading Art Nouveau architects and designers included the Hungarian architect Odon Lechner (1845–1914), the French architect Hector Guimard (1867-1942), the Spanish architect Antoni Gaudí (1852-1926), the Belgian architect Victor Horta (1861-1947), and the Viennese designers Otto Wagner (1841-1918) and Joseph Maria Olbrich (1867-1908), to name but a few. Further afield, examples of Art Nouveau-style buildings can be seen in South America (Uruguay's Montevideo) and Australia.

Famous Art Nouveau Artists

The two greatest graphic artists of the Art Nouveau movement were the French lithographer Jules Cheret (1836-1932) whose invention of "3-stone chromolithography" made Art Nouveau poster art feasible, and the Czech lithographer and designer Alphonse Mucha (1860-1939) whose celebrated posters epitomized the Art Nouveau idiom. Emile Galle of France and Louis Comfort Tiffany of the United States were famous for their colourful Art Nouveau glassware, as were the English artists Aubrey Beardsley and Walter Crane for their wonderful Art Nouveau drawings. Other famous artists involved in the "new art" included: the French jewellery designer René Lalique, the Viennese painter Gustav Klimt, the Polish theatrical designer and stained glass artist Stanisław Wyspiański, and the Scottish architect and designer Charles Rennie Mackintosh (1868-1928), leader of the Glasgow School.

Legacy & Influence of Art Nouveau

While Art Nouveau promoted a more widespread adoption of "beautiful" design, it did not diminish the value of the machine or mass-production (as the Arts and Crafts Movement did), but instead took advantage of many technological innovations from the late 19th century. Even so, by World War I, it too succumbed to the more streamlined design processes that were beginning to become available.

Possibly its greatest influence was on (1) 20th-century advocates of integrated design, such as the German Bauhaus design school and the Dutch design movement De Stijl; and (2) Graphic art such as illustration and poster-design.

Nowadays, Art Nouveau is viewed as an important bridge between Neoclassicism and modernism, and a number of its monuments are on the UNESCO World Heritage List, notably the historic centre of Riga, Latvia with over 750 buildings in the Art Nouveau style.

Bauhaus, in full Staatliches Bauhaus, school of design, architecture, and applied arts that existed in Germany from 1919 to 1933. It was based in Weimar until 1925, Dessau through 1932, and Berlin in its final months. The Bauhaus was founded by the architect Walter Gropius, who combined two schools, the Weimar Academy of Arts and the Weimar School of Arts and Crafts, into what he called the Bauhaus, or “house of building,” a name derived by inverting the German word Hausbau, “building of a house.” Gropius’s “house of building” included the teaching of various crafts, which he saw as allied to architecture, the matrix of the arts. By training students equally in art and in technically expert craftsmanship, the Bauhaus sought to end the schism between the two. Beginning in the mid-19th century, reformers led by the English designer William Morris had sought to bridge the same division by emphasizing high-quality handicrafts in combination with design appropriate to its purpose. By the last decade of that century, these efforts had led to the Arts and Crafts movement. While extending the Arts and Crafts attentiveness to good design for every aspect of daily living, the forward-looking Bauhaus rejected the Arts and Crafts emphasis on individually executed luxury objects. Realizing that machine production had to be the precondition of design if that effort was to have any impact in the 20th century, Gropius directed the school’s design efforts toward mass manufacture. On the example of Gropius’s ideal, modern designers have since thought in terms of producing functional and aesthetically pleasing objects for mass society rather than individual items for a wealthy elite.

The Machine Aesthetic

The Moderne Style used the look of the machine ornamentally. It was decorative design, and its machine aesthetic served to conceal the inner workings of the object while calling attention to itself as machine. In a sense, the Moderne was simply a sort of superficial styling, aesthetically emoting the machine yet not necessarily possessing a functional relationship with the object. America in the 1920s and early 1930s was an increasingly machine-driven culture. American art and design reflected the proliferation and primacy of the machine. Coupled with an influx of European avant-garde styles, the machine challenged design and the period was one of experimentation and invention. Electricity powered machines in the home, automobiles changed the shapes of cities and homes, radio redefined leisure, and telephones closed the distances between people. The machine was valued for its service. Its aesthetic was promoted by those who saw a beauty in the machine -- a beauty in appearance and function. The machine aesthetic was assumed by all sorts of objects. Shiny metals, molded plastics, and mirrored glass became important decorative devices. The design of cabinets and tea services resembled skyscrapers. Originally housed in enormous wood cabinets, radios became increasingly smaller and packaged in synthetic materials. The look of the machine was not universally celebrated, yet it was widespread nonetheless. At the onset of the Depression, patronage of the arts, once the realm of the church and the private collector, shifted to business. Industry drove design and the machine aesthetic was pushed into the average citizen's home through a wide range of consumer items. As economic hardship impacted the country, traditional luxury items

were unfeasible. Yet, mass-produced replicas of such items were affordable. As the machine aesthetic became more acceptable, such designs became more common. By 1934, as witnessed at Chicago's Century of Progress Exposition, "the emphasis was on consumerism and labor-saving machines. In effect, the debate over modernism -- its existence, its appropriateness for America, and the merits of its aesthetic qualities -- became secondary to the need for economic recovery."¹ The popularity of the Machine Art Exposition at the Museum of Modern Art (1934) also reflected the cultural embrace of modernism. It was a modernism derived from Bauhaus functionalism, as opposed to the decorative French moderne style so popular in the preceding years. Functionalism -- the opinion that an object's form and appearance should be determined by its purposes -- was driving American design by the mid-thirties. Modern style was viewed as simple, practical, convenient, and sanitary.

Moderne

The Moderne Style used the look of the machine ornamentally. It was decorative design, and its machine aesthetic served to conceal the inner workings of the object while calling attention to itself as machine. In a sense, the Moderne was simply a sort of superficial styling, aesthetically emoting the machine yet not necessarily possessing a functional relationship with the object.

In architecture, the Moderne figured most prominently in non-residential buildings, from skyscrapers to movie theaters, advertising "the promise of a machine-made future."³ As the Depression deepened, fewer and fewer buildings of this style were constructed. The Moderne primarily exhibited itself, then, in consumer products and interiors. Of the few homes built in the Moderne style, the decorative exteriors belied floor plans that remained traditional.

The popularity of the Moderne was joined by an interest in primitive designs borrowed from American Indian and Middle Eastern cultures. Although certainly not machine-made, these vernacular styles were serviceable for their symmetrical and geometrical forms given in bold colors.

Machine Purity

While Moderne homes were dressed as machines, they hardly fulfilled Le Corbusier's intent that a house be "a machine for living in." Such qualification required a convergence of interior and exterior, function and form. Machine purity, as a stylistic interpretation of machine aesthetics, emerged in the United States in the early thirties. Indicative of this style was simplified geometric form. This, in itself, would not particularly separate it from the Moderne. And certainly, there are no solid boundaries between the different interpretive schools of machine aesthetics. But where the Moderne used the look of the machine ornamentally, the machine purists attacked any sense of decoration that exceeded functionality. Where the Moderne was exuberant, machine purity was austere. In an architectural sense, it espoused a factory aesthetic. The most concerted attempt to articulate this style was given in an exhibition on "Modern Architecture" at the Museum of Modern Art in 1932. *The International Style: Architecture Since 1922* accompanied the exhibition. Historian Henry-Russell Hitchcock and critic Philip Johnson outlined the principles of the "International" style: The idea of style as the frame of potential growth, rather than as a fixed and crushing mould, has developed with the recognition of underlying principles such as architects discern in the great styles of the past. The principles are few and broad. . . . There is, first, a new conception of architecture as volume rather than mass. Secondly, regularity rather than axial symmetry serves as the chief means of ordering design. These two principles, with a third proscribing arbitrary applied decoration, mark the productions of the international style.⁴

Advances in construction techniques and materials allowed for a shift in structural support. Whereas walls were once weight-bearing, and thus massive, support was now given by skeletal infrastructures. This change provided greater flexibility in window placement; once nothing more than holes cut in a wall, they could now be located virtually anywhere. Thus, proponents of the International style, the architectural equivalent of machine purity, moved windows away from walls' centers, lest they suggest traditional construction.

Armed with these new possibilities, asymmetrical designs were encouraged, as "function in most types of contemporary building is more directly expressed in asymmetrical forms."⁵ Ideally, structures were not to be arbitrarily asymmetrical, but it was assumed that the needs of residents and the purposes of different spaces in the buildings would not produce symmetrical designs -- in fact, arbitrary asymmetry would be a decorative device, and thus an anathema to the Internationalists.

Machine purity was a reaction against the ornamentation of previous decades and even the Moderns. Honesty in use and materials was sought -- functions should not be concealed beneath a covering, and items shouldn't be presented as something they were not. Simplicity and sterility championed the antiseptic white of the hospital and lab. Stucco was an ideal material, as it provided for unbroken, continuous surfaces. Walls were skins, stripped down and allowing for a maximum of interior space. These interior spaces were to be designed individually, matching the needs of the resident, to "provide for the amelioration and development of the functions of living."⁶ Rooms were to be determined by function, and the movement between rooms was to "stress the unity and continuity of the whole volume inside a building."⁷ Book shelves and living plants were the best decorative devices in the home.

Hitchcock and Johnson had some sense of what they were up against in selling their style to an American audience. The Director of the Museum of Modern Art, Alfred H. Barr, Jr., anticipated ample resistance from commercially successful architects, "for even more than the great styles of the past it [the International style] requires restraint and discipline, the will to perfect as well as to invent. And this is contrary to the American cult of individualism."⁸ Hitchcock and Johnson feared imposters simply appropriating the stripped, horizontal, asymmetrical aesthetic without designing according to the dictates of functionalism. Many criticized the style as "divorced from social purpose" and constrained by overly narrow principles.⁹ As for its application to American housing beyond the occasional venture by a wealthy patron, Hitchcock and Johnson acknowledged, condescendingly, that "in America, local traditions are further complicated by an excessive sentimentality about the 'homes' of the past."¹⁰ Like the Moderne, most instances of International style appeared in skyscrapers, factories, or even gas stations, and not in domestic structures.

Streamlining

Another interpretation of the machine aesthetic -- one that often clashed with the functional ideals of the International style -- was streamlined design. For its leading practitioners, "speed was the essence of the modern age and the shape which was most conducive to speed was the ovoid, or tear-drop."¹¹ It also captured the public mind as the symbol of progress. Designers like Norman Bel Geddes and Raymond Loewy were unconcerned that the packaging did not derive from the object's purpose, as long as it did not explicitly contradict it. Household appliances, toasters, and trailer homes were streamlined.¹² Even children's toys were served by this design, as one critic noted, "streamlining is legitimate in the tricycle because the younger generation expects the latest modernity in its playthings." The result of streamlining was not only the appearance of speed in every kind of item (ironically, often in thoroughly grounded objects, such as homes), but also a diversion from the attention of that item's actual inner workings. Like the Moderne, and opposed to the principles of machine purity, streamlining concealed. When used in houses, it often sought to create a nautical effect, as though the home were an ocean liner replete with pipe railings, white bows, and strip windows.

Biomorphic

The biomorphic aesthetic dislocated the machine from primary image to enabler. Designs became sympathetic to the forms of nature and the human body. If the ovoid was the symbol of streamlining, the amoeba was that of biomorphic design. New machine technologies and materials, such as plastics, paved the way for this new stylistic development. As such, the biomorphism was a machine aesthetic for how it was produced, not necessarily how it appeared. In terms of domestic architecture, the biomorphic label might be tangentially applied to Frank Lloyd Wright, for his arguments for the use of materials in their nearly natural conditions and his insistence on "organic" design. While Lewis Mumford's visual aesthetic was closer to that of the International style, his sympathies for regional ecology and promotion of greenbelt towns also suggested a biomorphic ethic.

Pop Art (c.1955-70)

What is Pop-Art? - Characteristics

The term Pop-Art was invented by British curator Lawrence Alloway in 1955, to describe a new form of "Popular" art - a movement characterized by the imagery of consumerism and popular culture. Pop-Art emerged in both New York and London during the mid-1950s and became the dominant avant-garde style until the late 1960s. Characterized by bold, simple, everyday imagery, and vibrant block colours, it was interesting to look at and had a modern "hip" feel. The bright colour schemes also enabled this form of avant-garde art to emphasise certain elements in contemporary culture, and helped to narrow the divide between the commercial arts and the fine arts. It was the first Post-Modernist movement (where medium is as important as the message) as well as the first school of art to reflect the power of film and television, from which many of its most famous images acquired their celebrity. Common sources of Pop iconography were advertisements, consumer product packaging, photos of film-stars, pop-stars and other celebrities, and comic strips.

Leading Pop Artists

In American art, famous exponents of Pop included Robert Rauschenberg (1925-2008), Jasper Johns (b.1930), Roy Lichtenstein (1923-97) and Andy Warhol (1928-87). Other American exponents included: Jim Dine (b.1935), Robert Indiana (aka John Clark) (b.1928), Ray Johnson (1927-95), Alex Katz (b.1927), Claes Oldenburg (b.1929), Ed Ruscha (b.1937), James Rosenquist (b.1933), and Tom Wesselmann (b.1931). For more, please see Andy Warhol's Pop Art of the sixties and seventies.

Leading British Pop artists included: Sir Peter Blake (b.1932), Patrick Caulfield (1936-2006), Richard Hamilton (b.1922), David Hockney (b.1937), and Allen Jones (b.1937).

Origins and Influences

Pop-art, like nearly all significant art styles, was in part a reaction against the status quo. In 1950s America, the main style was Abstract Expressionism, an arcane non-figurative style of painting that - while admired by critics, serious art-lovers, and experienced museum-visitors - was not "connecting" with either the general public, or with many artists. Very much a painterly style, the more abstract and expressive it became, the bigger the opportunity for a new style which employed more figurative, more down-to-earth imagery: viz,

something that the wider artist fraternity could get its teeth into and that viewers could relate to. Thus Pop-art, which duly became the established art style, and which in turn was superseded by other schools after 1970.

In some ways, the emergence of Pop-art (and its ascendancy over Abstract Expressionism) was similar to the rise of Dada and its broader based successor Surrealism (and their ascendancy over Cubism). Both the superseded schools (Abstract Expressionism and Cubism) involved highly intellectual styles with limited appeal to mainstream art lovers. True, Dada was essentially anti-art, but the years during which it flourished 1916-1922 were marked by great polarization and political strife, and as soon as things calmed down most Dadaists became Surrealists. In any event, as explained below under Aims and Philosophy, Pop-art shares many of the characteristics of Dada-Surrealism and is indebted to it for several techniques derived from Kurt Schwitters' collages, the "readymades" of Marcel Duchamp, the iconic imagery of Rene Magritte and the brash creations of Salvador Dali (eg. Mae West Lips Sofa; Lobster Telephone).

And if Surrealism was essentially internalist, and escapist in nature, while Pop-art was defined by external consumerist forces, both were consumed by the need to make a strong visual impact on the general public.

Another artist who may have had an impact on Pop-art, is Edward Hopper (1882-1967) the realist painter of urban America. Although his painterly style is very different from most pop works, his simple images of ultra-American everyday scenes (eg. "Night Hawks", 1942 and "Gas", 1940) were well known to the pop generation, and may have informed their paintings.

History

British Pop-Art emerged from within the Independent Group - an informal circle of artists including painter Richard Hamilton, curator and art critic Lawrence Alloway, and sculptor Eduardo Paolozzi, that met in the Institute of Contemporary Arts in London.

From the first meeting, in 1952, when Paolozzi presented a number of collages assembled from magazine clippings and other "found objects", including his (now) celebrated collage entitled "I was a Rich Man's Plaything" (created 5 years previously in 1947) their discussions centred largely around the artistic value and relevance of popular mass culture.

Four years later, in 1956, another member of the group, Richard Hamilton, produced his own collage, "Just what is it that makes today's homes so appealing?" - which, along with Paolozzi's 1947 collage, is regarded as one of the earliest examples of British Pop-Art. In 1961, a number of Pop-style works by Derek Boshier, David Hockney, Allen Jones, RB Kitaj and Peter Phillips, featured in the Young Contemporaries Exhibition. In 1962, further publicity was given to British Pop when the BBC screened "Pop Goes the Easel", a film by Ken Russell which explored the new movement in Britain.USA

Meanwhile in America, during the mid-1950s, the art world was being rocked by a number of artists attached to small movements (eg. Neo-Dada, Funk Art, Lettrism, Beat Art, Polymaterialism, Common-Object, to name but a few), many of whom were incorporating articles of mass culture in their works. They wanted their art to be much more inclusive than traditional styles (like Abstract Expressionism), so they used non-art materials and focused on ordinary, easily recognizable subjects that expressed the popular culture of the day.

Among this upsurge of innovation, work by Robert Rauschenberg, Ray Johnson (1927-95) and Jasper Johns, was beginning to make an impact on the important New York art scene. Between them, they opened up a whole range of new subject matter: Johns, with his paintings of flags, targets and numbers, as well as his sculptures of objects like beer cans; Rauschenberg, with his collage and assemblage art, and "combine paintings" (in which a painted canvas is combined with various objects or photographic images - such as: "Monogram" [1955-9] comprising a stuffed goat with a tyre around its middle) of stuffed animals, Coca-Cola bottles, and other items; Johnson with his celebrity collages of James Dean, Shirley Temple and Elvis. Other influential pioneers and advocates of Pop-art were the composer John Cage (an influential teacher at the Black Mountain College in North Carolina), and the Performance artist Allan Kaprow (1927-2006).

This rising tide of new thinking was further enhanced by renewed interest in earlier avant-garde movements like Dada and Surrealism, whose enduring vitality was reinforced by the influence, if not the actual presence, of several ex-Dadaists and Surrealists, like Marcel Duchamp, Max Ernst, and local converts, such as Joseph Cornell. That said, it is important to state that while American avant-garde artists of this period (especially Rauschenberg) were indebted to earlier Europeans (like Duchamp, Schwitters et al) for establishing certain traditions (like collage), their unique focus was on producing art which reflected the reality of contemporary America.

By the early 1960s, a cohort of Pop-style artists began to gain fame through solo exhibitions in places like New York and Los Angeles, several of whom used commercial printmaking techniques (eg. screen-printing) to create their art, rather than traditional painterly methods. These new talents included: Jim Dine, Robert Indiana, Alex Katz, Roy Lichtenstein, Claes Oldenburg, James Rosenquist, Tom Wesselmann, and Andy Warhol. Several works, later to become icons, were shown for the first time. They included Lichtenstein's comic strip oils, Warhol's silkscreen prints of Marilyn Monroe and Campbell's soup cans, and Oldenburg's monumental vinyl burgers and ice-creams.

Strangely, until late 1962 or early 1963, these artists were still labelled by critics as New Realists or some other such term. Thus the two important art shows held in the autumn of 1962 - one curated by Walter Hopps at the Pasadena Art Museum, the other at the Sidney Janis

Gallery in New York - were entitled "The New Painting of Common Objects" (Pasadena) and "New Realism" (New York). Only hereafter was the term Pop-art used as a technical name for the movement, partly due to the critics discomfort with the term Realist, and partly due to the presence in New York of Lawrence Alloway - now a curator at the Guggenheim Museum - who advocated the adoption of the term.

From 1963 onwards, Pop-art spread throughout America and, helped by British Pop-artists, established itself on the Continent. The movement's rise was aided by parallel growth in other areas. In economics, via the growth of the world economy in general and the American economy in particular; in science, via the spread of television; in contemporary music, (which itself became known as "Pop") through the miniaturization of radio, increased record production, the appearance of cult groups like The Beatles, and the phenomenon of psychedelia; and lastly through an expanding art market.

During the later 1960s, Andy Warhol emerged as the Damien Hirst of his day, gaining fame and notoriety in equal amounts for his iconic celebrity screenprints, his conceptualist film work, his increasingly sleek art production methods and his self promotion - at least until he was shot and seriously wounded on June 3, 1968. Roy Lichtenstein, too, became a household name through his comic-strip blow-ups and several prestigious retrospectives on both sides of the Atlantic. Meantime, Rauschenberg won the Grand Prize at the 1964 Venice Biennale, and maintained his avant-garde reputation by helping to form EAT (Experiments in Art and Technology) in 1966 to boost collaboration between artists and engineers, while Johns maintained his high standing by winning first prize at the 1967 Sao Paulo Biennale.

Perhaps inevitably, having weathered the conformity of the 1950s, and the panic of the Cuban Missile Crisis (1962), American Pop-art reached its peak during the second half of the 1960s, only to find itself infected and undermined by the angst of the Vietnam War era, and the corresponding rise of anti-Americanism.

The Aims, Philosophy and Methods of Pop Art

No international art movement that lasts for more than 15 years and encompasses all known art types, genres and types of media, as well as entirely new forms, can be summed up in a few sentences. Even so, no understanding of Pop-art is possible without taking into account the following concepts which help to characterize its core.

Instant Meaning

The basic idea behind Pop-art was to create a form of art with instant meaning. This was in sharp contrast to the super-intellectualism of Abstract Expressionism with its esoteric canvases so beloved by arts professionals. To achieve their goal of instant meaning, Pop artists experimented with new commercial processes, like acrylic painting, collage on canvas using materials not normally associated with painting, and silkscreen printing. In addition, the imagery and colour schemes for most Pop-art painting and sculpture was taken from high-profile and easily recognizable consumerist or media sources such as: consumer goods, advertising graphics, magazines, television, film, cartoons and comic books. People and objects were presented in bright, often highly-contrasting colours, while compositions were typically very simple and visually appealing to the general public.

Art Can be Made From Anything

Up until the 20th century, traditional fine art painting was normally done in oils: sculpture in bronze, stone or wood. Furthermore, subjects were typically those deemed worthy of aesthetic treatment: the human nude, the human face, the classic landscape, genre-scene or still life. Even Cubism, despite its revolutionary nature, tended to observe many of these artistic conventions. Then came the First World War and the anti-art movement known as Dada. This movement initiated the idea that art can be created from all sorts of stuff, including the most banal everyday scraps of material. Pop-artists maintained and developed this idea. They presented the modern world of popular culture with whatever materials they thought appropriate, no matter how low-brow or trivial.

The Idea is More Important Than the Work of Art Itself

Also, up until Dada, the essential feature of traditional fine art was the work itself - the painting, sculpture, etching, carving or whatever. Without a "work of art", there was nothing. All attention was therefore focused on the quality of the finished product, and the skills required to produce it. Dada rebelled against this by celebrating the "idea behind the artwork" rather than the work itself. Many Pop-artists continued this tradition of Conceptual Art. They placed more importance on the impact of the work, and less importance on the making of it. Like the use of low-brow materials, this emphasis on a work's concept and impact was interpreted as an attempt to debunk the gravitas of the art world. This was partly true: some Pop artists did share the anti-art and anti-aesthetic credo of earlier Dadaists. However, mainstream Pop was more positive and more concerned to create new forms of expression, using new methods and new pictorial imagery, than to denigrate tradition. Indeed, many Pop-artists saw themselves as contributing to, rather than junking, fine art.

Modern Art (c.1870-1970)

What is Modern Art? (Definition)

There is no precise definition of the term "Modern Art": it remains an elastic term, which can accommodate a variety of meanings. This is not too surprising, since we are constantly moving forward in time, and what is considered "modern painting" or "modern sculpture" today, may not be seen as modern in fifty years time. Even so, it is traditional to say that "Modern Art" means works produced during the approximate period 1870-1970. This "Modern era" followed a long period of domination by Renaissance-inspired academic art, promoted by the network of European Academies of Fine Art. And is itself followed by "Contemporary Art" (1970 onwards), the more avant-garde of which is also called "Postmodern Art". This chronology accords with the view of many art critics and institutions, but not all. Both the Tate Modern in London, and the Musée National d'Art Moderne at the Pompidou Centre in Paris, for instance, take 1900 as the starting point for "Modern Art". Also, neither they, nor the Museum of Modern Art in New York, make any distinction between "modernist" and "postmodernist" works: instead, they see both as phases of "Modern Art".

Incidentally, when trying to understand the history of art it's important to recognize that art does not change overnight, but rather reflects wider (and slower) changes taking place in society. It also reflects the outlook of the artist. Thus, for example, a work of art produced as early as 1958 might be decidedly "postmodernist" (if the artist has a very avant-garde outlook - a good example is Yves Klein's *Nouveau Réalisme*); while another work, created by a conservative artist in 1980, might be seen as a throw-back to the time of "Modern Art" rather than an example of "Contemporary Art". In fact, it's probably true to say that several different strands of art - meaning several sets of aesthetics, some hypermodern, some old-fashioned - may co-exist at any one time. Also, it's worth remembering that many of these terms (like "Modern Art") are only invented after the event, from the vantage point of hindsight.

NOTE: The 1960s is generally seen as the decade when artistic values gradually changed, from "modernist" to "postmodernist". This means that for a period of time both sets of values co-existed with each other.

What were the Origins of Modern Art?

To understand how "modern art" began, a little historical background is useful. The 19th century was a time of significant and rapidly increasing change. As a result of the Industrial Revolution (c.1760-1860) enormous changes in manufacturing, transport, and technology began to affect how people lived, worked, and travelled, throughout Europe and America. Towns and cities swelled and prospered as people left the land to populate urban factories. These industry-inspired social changes led to greater prosperity but also cramped and crowded living conditions for most workers. In turn, this led to: more demand for urban architecture; more demand for applied art and design - see, for instance the Bauhaus School - and the emergence of a new class of wealthy entrepreneurs who became art collectors and patrons. Many of the world's best art museums were founded by these 19th century tycoons.

In addition, two other developments had a direct effect on fine art of the period. First, in 1841, the American painter John Rand (1801–1873) invented the collapsible tin paint tube. Second, major advances were made in photography, allowing artists to photograph scenes which could then be painted in the studio at a later date. Both these developments would greatly benefit a new style of painting known, disparagingly, as "Impressionism", which would have a radical effect on how artists painted the world around them, and would in the process become the first major school of modernist art.

As well as affecting how artists created art, 19th century social changes also inspired artists to explore new themes. Instead of slavishly following the Hierarchy of the Genres and being content with academic subjects involving religion and Greek mythology, interspersed with portraits and 'meaningful' landscapes - all subjects that were designed to elevate and instruct the spectator - artists began to make art about people, places, or ideas that interested them. The cities - with their new railway stations and new slums - were obvious choices and triggered a new class of genre painting and urban landscape. Other subjects were the suburban villages and holiday spots served by the new rail networks, which would inspire new forms of landscape painting by Monet, Matisse and others. The genre of history painting also changed, thanks to Benjamin West (1738-1820) who painted *The Death of General Wolfe* (1770, National Gallery of Art, Ottawa), the first 'contemporary' history painting, and Goya (1746-1828) whose *Third of May, 1808* (1814, Prado, Madrid) introduced a ground-breaking, non-heroic idiom.

The 19th century also witnessed a number of philosophical developments which would have a significant effect on art. The growth of political thought, for instance, led Courbet and others to promote a socially conscious form of Realist painting - see also Realism to Impressionism). Also, the publication of *The Interpretation of Dreams* (1899) by Sigmund Freud, popularized the notion of the "subconscious mind", causing artists to explore Symbolism and later Surrealism. The new self-consciousness which Freud promoted, led to (or at least coincided with) the emergence of German Expressionism, as artists turned to expressing their subjective feelings and experiences.

When Did Modern Art Begin?

The date most commonly cited as marking the birth of "modern art" is 1863 - the year that Edouard Manet (1832-83) exhibited his shocking and irreverent painting *Le Déjeuner sur l'herbe* in the Salon des Refusés in Paris. Despite Manet's respect for the French Academy, and the fact it was modelled on a Renaissance work by Raphael, it was considered to be one of the most scandalous pictures of the period.

But this was merely a symbol of wider changes that were taking place in various types of art, both in France and elsewhere in Europe. A new generation of "Modern Artists" were fed up with following the traditional academic art forms of the 18th and early 19th century, and were starting to create a range of "Modern Paintings" based on new themes, new materials, and bold new methods. Sculpture and architecture were also affected - and in time their changes would be even more revolutionary - but fine art painting proved to be the first major battleground between the conservatives and the new "Moderns".

What is the Main Characteristic of Modern Art?

What we call "Modern Art" lasted for an entire century and involved dozens of different art movements, embracing almost everything from pure abstraction to hyperrealism; from anti-art schools like Dada and Fluxus to classical painting and sculpture; from Art Nouveau to Bauhaus and Pop Art. So great was the diversity that it is difficult to think of any unifying characteristic which defines the era. But if there is anything that separates modern artists from both the earlier traditionalists and later postmodernists, it is their belief that art mattered. To them, art had real value. By contrast, their predecessors simply assumed it had value. After all they had lived in an era governed by Christian value systems and had simply "followed the rules." And those who came after the Modern period (1970 onwards), the so-called "postmodernists", largely rejected the idea that art (or life) has any intrinsic value.

In What Ways was Modern Art Different? (Characteristics)

Although there is no single defining feature of "Modern Art", it was noted for a number of important characteristics, as follows:

(1) New Types of Art

Modern artists were the first to develop collage art, assorted forms of assemblage, a variety of kinetic art (inc mobiles), several genres of photography, animation (drawing plus photography) land art or earthworks, and performance art.

(2) Use of New Materials

Modern painters affixed objects to their canvases, such as fragments of newspaper and other items. Sculptors used "found objects", like the "readymades" of Marcel Duchamp, from which they created works of Junk art. Assemblages were created out of the most ordinary everyday items, like cars, clocks, suitcases, wooden boxes and other items.

(3) Expressive Use of Colour

Movements of modern art like Fauvism, Expressionism and Colour Field painting were the first to exploit colour in a major way.

(4) New Techniques

Chromolithography was invented by the poster artist Jules Cheret, automatic drawing was developed by surrealist painters, as was Frottage and Decalcomania. Gesturalist painters invented Action Painting. Pop artists introduced "Benday dots", and silkscreen printing into fine art. Other movements and schools of modern art which introduced new painting techniques, included: Neo-Impressionism, the Macchiaioli, Synthetism, Cloisonnism, Gesturalism, Tachisme, Kinetic Art, Neo-Dada and Op-Art.

How Did Modern Art Develop Between 1870 and 1970?

1870-1900

Although in some ways the last third of the 19th century was dominated by the new Impressionist style of painting, in reality there were several pioneering strands of modern art, each with its own particular focus. They included: Impressionism (accuracy in capturing effects of sunlight); Realism (content/theme); Academic Art (classical-style true-life pictures); Romanticism (mood); Symbolism (enigmatic iconography); lithographic poster art (bold motifs and colours). The final decade saw a number of revolts against the Academies and their 'Salons', in the form of the Secession movement, while the late-1890s witnessed the decline of "nature-based art", like Impressionism, which would soon lead to a rise in more serious "message-based" art.

1900-14

In many ways this was the most exciting period of modern art, when everything was still possible and when the "machine" was still viewed exclusively as a friend of man. Artists in Paris produced a string of new styles, including Fauvism, Cubism and Orphism, while German artists launched their own school of expressionist painting. All these progressive movements rejected traditionalist attitudes to art and sought to champion their own particular agenda of modernism. Thus Cubism wanted to prioritize the formal attributes of painting, while Futurism preferred to emphasize the possibilities of the machine, and expressionism championed individual perception.

1914-24

The carnage and destruction of The Great War changed things utterly. By 1916, the Dada movement was launched, filled with a nihilistic urge to subvert the value system which had caused Verdun and the Somme. Suddenly representational art seemed obscene. No imagery could compete with photographs of the war dead. Already artists had been turning more and more to non-objective art as a means of expression. Abstract art movements of the time included Cubism (1908-40), Vorticism (1914-15), Suprematism (1913-18), Constructivism (1914-32), De Stijl (1917-31), Neo-Plasticism (1918-26), Elementarism (1924-31), the Bauhaus (1919-33) and the later St Ives School. Even the few figurative movements were distinctly edgy, such as Metaphysical Painting (c.1914-20). But compare the early 20th century Classical Revival in modern art and Neoclassical Figure Paintings by Picasso (1906-30).

1924-40

The Inter-war years continued to be troubled by political and economic troubles. Abstract painting and sculpture continued to dominate, as true-to-life representational art remained very unfashionable. Even the realist wing of the Surrealism movement - the biggest movement of the period - could manage no more than a fantasy style of reality. Meantime, a more sinister reality was emerging on the Continent, in the form of Nazi art and Soviet agit-prop. Only Art Deco, a rather sleek design style aimed at architecture and applied art, expressed any confidence in the future.

1940-60

The art world was transformed by the catastrophe of World War Two. To begin with, its centre of gravity moved from Paris to New York, where it has remained ever since. Nearly all future world record prices would be achieved in the New York sales rooms of Christie's and Sotheby's. Meantime, the unspeakable phenomenon of Auschwitz had undermined the value of all realist art, except for Holocaust art of those affected. As a result of all this, the next major international movement - Abstract Expressionism - was created by American artists of the New York School. Indeed, for the next 20 years, abstraction would dominate, as new movements rolled off the line. They included: Art Informel, Action-Painting, Gesturalism, Tachisme, Colour Field Painting, Lyrical Abstraction, Hard Edge Painting, and COBRA, a group best known for its child-like imagery, and expressive brushstrokes. During the 1950s other tendencies emerged, of a more avant-garde kind, such as Kinetic art, Nouveau Realisme and Neo-Dada, all of which demonstrated a growing impatience with the strait-laced arts industry.

1960s

The explosion of popular music and television was reflected in the Pop-Art movement, whose images of Hollywood celebrities, and iconography of popular culture, celebrated the success of America's mass consumerism. It also had a cool 'hip' feel and helped to dispel some of the early 60s gloom associated with the Cuban Crisis of 1962, which in Europe had fuelled the success of the Fluxus movement led by George Maciunas, Joseph Beuys, Nam June Paik and Wolf Vostell. Down-to-earth Pop-art was also a welcome counterpoint to the more erudite Abstract Expressionism, which was already started

Modern Photographic Art

One of the most important and influential new media which came to prominence during the "Modern Era" is photography. Four genres in particular have become established. They include: Portrait Photography, a genre that has largely replaced painted portraits; Pictorialism (fl.1885-1915) a type of camera art in which the photographer manipulates a regular photo in order to create an "artistic" image; Fashion Photography (1880-present) a type of photography devoted to the promotion of clothing, shoes, perfume and other branded goods; Documentary Photography (1860-present), a type of sharp-focus camerawork that captures a moment of reality, so as to present a message about what is happening in the world; and Street Photography (1900-present), the art of capturing chance interactions of human activity in urban areas. Practiced by many of the world's greatest photographers, these genres have made a major contribution to modern art of the 20th century.

Modern Architecture

Modernism in architecture is a more convoluted affair. The word "modernism" in building design was first used in America during the 1880s to describe skyscrapers designed by the Chicago School of Architecture (1880-1910), such as The Montauk Building (1882-83) designed by Burnham and Root; the Home Insurance Building (1884) designed by William Le Baron Jenney; and the Marshall Field Warehouse (1885-7) designed by Henry Hobson Richardson. In the 20th century, a new type of design emerged, known as the International Style of Modern Architecture (c.1920-70). Beginning in Germany, Holland and France, in the hands of Le Corbusier (1887-1965), Walter Gropius (1883-1969) and others, it spread to America where it became the dominant idiom for commercial skyscrapers, thanks to the efforts of Mies van der Rohe (1886-1969), formerly director of the Bauhaus School. Later, the centre of modern building design was established permanently in the United States, mainly due to the advent of supertall skyscraper architecture, which was then exported around the globe.

When Did Modern Art End? What Replaced it?

Modernism didn't just stop, it was gradually overtaken by events during the late 1960s - a period which coincided with the rise of mass pop-culture and also with the rise of anti-authoritarian challenges (in social and political areas as well as the arts) to the existing

orthodoxies. A key year was 1968, which witnessed the Tet Offensive, the assassinations of Martin Luther King and Bobby Kennedy, and street demonstrations throughout the capitals of Europe. As Modernism began to look increasingly old-fashioned, it gave way to what is known as "Contemporary Art" - meaning "art of the present era". The term "Contemporary Art" is neutral as to the progressiveness of the art in question, and so another phrase - "postmodernism" - is often used to denote recent avant-garde art. Schools of "postmodernist art" advocate a new set of aesthetics characterized by a greater focus on medium and style. For instance, they emphasize style over substance (eg. not 'what' but 'how'; not 'art for art's sake', but 'style for style's sake'), and place much greater importance on artist-communication with the audience.

What are the Most Important Movements of Modern Art?

The most influential movements of "modern art" are (1) Impressionism; (2) Fauvism; (3) Cubism; (4) Futurism; (5) Expressionism; (6) Dada; (7) Surrealism; (8) Abstract Expressionism; and (9) Pop Art.

(1) Impressionism (1870s, 1880s)

Exemplified by the landscape paintings of Claude Monet (1840-1926), Impressionism focused on the almost impossible task of capturing fleeting moments of light and colour. Introduced non-naturalist colour schemes, and loose - often highly textured - brushwork. Close-up many Impressionist paintings were unrecognizable. Highly unpopular with the general public and the arts authorities, although highly rated by other modern artists, dealers and collectors. Eventually became the world's most famous painting movement. See: Characteristics of Impressionist Painting (1870-1910). The main contribution of Impressionism to "modern art" was to legitimize the use of non-naturalist colours, thus paving the way for the wholly non-naturalist abstract art of the 20th century.

(2) Fauvism (1905-7)

Short-lived, dramatic and highly influential, Led by Henri Matisse (1869-1954), Fauvism was 'the' fashionable style during the mid-1900s in Paris. The new style was launched at the Salon d'Automne, and became instantly famous for its vivid, garish, non-naturalist colours that made Impressionism appear almost monochrome! A key precursor of expressionism. See: History of Expressionist Painting (1880-1930). The main contribution of Fauvism to "modern art" was to demonstrate the independent power of colour. This highly subjective approach to art was in contrast to the classical content-oriented outlook of the academies.

(3) Cubism (fl.1908-14)

An austere and challenging style of painting, Cubism introduced a compositional system of flat splintered planes as an alternative to Renaissance-inspired linear perspective and rounded volumes. Developed by Pablo Picasso (1881-1973) and Georges Braque (1882-1963) in two variants - Analytical Cubism and later Synthetic Cubism - it influenced abstract art for the next 50 years, although its popular appeal has been limited. The main contribution of Cubism to "modern art" was to offer a whole new alternative to conventional perspective, based on the inescapable fact of the flat picture plane.

(4) Futurism (fl.1909-14)

Founded by Filippo Tommaso Marinetti (1876-1944), Futurist art glorified speed, technology, the automobile, the airplane and scientific achievement. Although very influential, it borrowed heavily from Neo-Impressionism and Italian Divisionism, as well as Cubism, especially its fragmented forms and multiple viewpoints. The main contribution of Futurism to "modern art" was to introduce movement into the canvas, and to link beauty with scientific advancement.

(5) Expressionism from 1905

Although anticipated by artists like JMW Turner (Interior at Petworth, 1837), Van Gogh (Wheat Field with Crows, 1890) and Paul Gauguin (Anna The Javanese, 1893), expressionism was made famous by two groups in pre-war Germany: Die Brücke (Dresden/Berlin) and Der Blaue Reiter (Munich), led by Ernst Ludwig Kirchner (1880-1938) and Wassily Kandinsky (1866-1944) respectively. In sculpture, the forms of the Duisburg-born artist Wilhelm Lehmbruck (1881-1919) were (and still are) sublime. The main contribution of expressionism to "modern art" was to popularize the idea of subjectivity in painting and sculpture, and to show that representational art may legitimately include subjective distortion.

(6) Dada (1916-24)

The first anti-art movement, Dada was a revolt against the system which had allowed the carnage of The First World War (1914-18). It rapidly became an anarchistic tendency whose aim was to subvert the arts establishment. Launched in neutral Switzerland in 1916, its leaders were in their early twenties, and most had "opted out", avoiding conscription in the shelter of neutral cities such as New York, Zurich and Barcelona. Founders included the sculptor Jean Arp (1887-1966) and the Romanian poet and demonic activist Tristan Tzara (1896-1963). The main contribution of Dada was to shake up the arts world and to widen the concept of "modern art", by embracing totally new types of creativity (performance art and readymades) as well as new materials (junk art) and themes. Its seditious sense of humour endured in the Surrealist movement.

(7) Surrealism (from 1924)

Founded in Paris by writer Andre Breton (1896-1966), Surrealism was 'the' fashionable art movement of the inter-war years, although the style is still seen today. Composed of abstract and figurative wings, it evolved out of the nihilistic Dada movement, most of whose members metamorphosed into surrealists, but unlike Dada it was neither anti-art nor political. Surrealist painters used various methods - including dreams, hallucinations, automatic or random image generation - to circumvent rational thought processes in creating works of art. (For more, please see Automatism in Art.) The main contribution of Surrealism to "modern art" was to generate a refreshingly new set of images. Whether these images were uniquely non-rational is doubtful. But Surrealist art is definitely fun!

(8) Abstract Expressionism (1948-60)

A broad style of abstract painting, developed in New York just after World War II, hence it is also called the New York School. Spearheaded by American artists - themselves strongly influenced by European expatriates - it consisted of two main styles: a highly animated form of gestural painting, popularized by Jackson Pollock (1912-56), and a much more passive mood-oriented style known as Colour Field painting, championed by Mark Rothko (1903-70). The main contribution of abstract expressionism to "modern art" was to popularize abstraction. In Pollock's case, by inventing a new style known as "action painting" - see photos by text; in Rothko's case, by demonstrating the emotional impact of large areas of colour.

(9) Pop Art (Late-1950s, 1960s)

A style of art whose images reflected the popular culture and mass consumerism of 1960s America. First emerging in New York and London during the late 1950s, it became the dominant avant-garde style until the late 1960s. Using bold, easy to recognize imagery, and vibrant block colours, Pop artists like Andy Warhol (1928-87) created an iconography based on photos of popular celebrities like film-stars, advertisements, posters, consumer product packaging, and comic strips - material that helped to narrow the divide between the commercial arts and the fine arts. The main contribution of abstract expressionism to "modern art" was to show that good art could be low-brow, and could be made of anything

Postmodernist Art

Definition, Characteristics, History

What is Postmodernist Art?

The term "postmodernist art" refers to a wide category of contemporary art created from about 1970 onwards. The hallmark of "postmodernist art" is its rejection of the aesthetics upon which its predecessor - "modern art" (1870-1970) - was based. One of these rejected values is the idea that "art" is something "special" which should be "elevated from" popular taste. Coinciding with a raft of new technological developments, postmodernism has led to almost five decades of artistic experimentation with new media and new art forms, including "Conceptual art", various types of "Performance art" and "Installation art", as well as computer-aided movements like Deconstructivism and Projection art. Using these new forms, postmodernist artists have stretched the definition of art to the point where almost "anything goes".

Unfortunately, most articles on postmodernism are full of complicated words like "modernity" (not the same as modernism), and "post-modernity" (different to postmodernism), "Metamodernism" (from, but not part of, postmodernism), and "Post-postmodernism" (gimme a break). So instead of using jargon, let me give you a simple dress-code example to help you to understand "postmodernist art" and how it differs from "modern art" and its even earlier predecessor "academic art".

The first major style of art after the Renaissance was academic art, the classical stuff which was taught by professors in the Academies. Academic art is the artistic equivalent of the traditional "suit and necktie". Next, about 1870, comes "modern art". This is the artistic equivalent of the "shirt and pants" or "jacket and trousers". Next, about 1970, comes "postmodern art", which is the artistic equivalent of the "jeans and T-shirt". In the same way that dress codes have become less formal and more "anything goes", so today's artists are less impressed with the old ideas of what art should be, and more focused on creating something (anything) that gets noticed.

But informal dress like jeans and T-shirts have only become popular because society itself has become less formal. In the same way, as we shall see, "postmodernist art" is part of a wider current of technological, political and social change in the West, which has introduced many new attitudes and new types of behaviour. The full impact of the Internet, for instance, on the sourcing and distribution of artistic imagery, and on the creation of applied art and design, has yet to be felt. But since it has already revolutionized the music industry, its effect on the art world is not likely to be delayed for long.

Definition of Postmodernist Art

If you really need a one sentence definition of postmodernist art, here it is.

A style of post-1960s art which rejected the traditional values and politically conservative assumptions of its predecessors, in favour of a wider, more entertaining concept of art, using new artistic forms enriched by video and computer-based technology.

How it Differs from Contemporary Art

What's the difference between postmodernist art and contemporary art? In practice, these two terms are more or less interchangeable. However, technically speaking, "postmodern art" means "after modern" and refers to a fixed period (say 50 years in length) beginning about 1970, whereas "contemporary art" refers to the moving 50-year period immediately before the present. At the moment these two periods coincide. But in 2050, for instance, "postmodern art" (1970-2020) will have been superseded by another era, while "contemporary art" will now cover the period 2000-2050. So the two will have diverged.

How it Differs from Late Modernist Art

In visual art, the term "late modernism" refers to movements or trends which reject some aspect of "modern art", but which otherwise remain within the modernist tradition. Styles like Abstract Expressionism (1948-65) were practised by a number of radical modern artists, including Jackson Pollock, inventor of all-over action painting - and Willem De Kooning, both of whom rejected many of the formal conventions of oil painting. And yet neither Pollock nor de Kooning would have produced something like Rauschenberg's Erased de Kooning Drawing (1953, San Francisco Museum of Modern Art), since both remained strong believers in modernist concepts of authenticity and meaning. Likewise, followers of postmodernist movements like Contemporary Realism (1970s onward) and Neo-Expressionism (1980s onward) also included numerous painters who worked in a modernist rather than a postmodernist manner. In dress code terms, late modernism is the artistic equivalent of "shirt and pants", but in a bright yellow colour.

Background

"Modern art" is usually associated with the century 1870-1970 - roughly from Impressionism to Pop-Art. Despite several global catastrophes - The Great War (1914-18), The Influenza Pandemic (1918-19), the Wall Street Crash and the Great Depression (late-1920s, 1930s) - which undermined many of the moral certainties of the era, modern artists generally retained a belief in the fundamental scientific laws of reason and rational thought. Broadly speaking, like most Westerners of the period they believed that life had meaning; that the scientific progress was automatically good; that the Christian West was superior to the rest of the world; that men were above women. Modernists also believed in the meaning, relevance and progression of art, especially fine art and architecture. Following in the footsteps of Leonardo and Michelangelo, they believed in "high art" - art which elevates and inspires the cultivated spectator - rather than "low art" which merely amuses or entertains the masses. They adopted a forward thinking approach, seeing art as something that should constantly progress, led by a leading group of avant-garde artists.

World War II and the Jewish Holocaust turned everything upside down. Paris was abruptly replaced by New York as the capital of world art. In the wake of Auschwitz, all representational art - except Holocaust art - appeared suddenly irrelevant, so modern painters turned instead to abstract art (albeit packed with emotion, symbolism or animation) in order to express themselves. Amazingly, during the 1950s, the New York School - featuring Jackson Pollock's paintings as well as the calmer Colour Field painting of Mark Rothko - spearheaded a temporary recovery of art on both sides of the Atlantic. These avant-garde painters succeeded in redefining the envelope for abstract paintings, but they remained within the confines of modernism. They believed in creating authentic, finished works of art with important content. But the "modernist" era was drawing inexorably to a close. The widening revelations of the Shoah, the testing of Atomic bombs, the Cuban Missile Crisis (1962) and the Vietnam War (from 1964), caused people to become more and more disillusioned about life (and art). Already, in the mid-50s, Jasper Johns and Robert Rauschenberg had produced the first post-modern style works of Neo-Dada and Pop. Soon, mainstream Pop-art would usher in postmodernism proper, as American TV networks focused on the 1968 Tet Offensive and the chaotic Democratic Convention in Chicago.

NOTE: In 20th century architecture, the situation was slightly different. Modern building design was influenced by a desire to create a brand new style for "modern man". Modernist architects wanted to eliminate all historical references and create something entirely fresh. (So no Greek columns, Gothic style arches, or any other reminders of 'past' styles.) This led to the International style of architecture (1920-70), a minimalist idiom of boring regularity, leavened with some truly awful Brutalism (concrete apartment blocks with tiny windows). Mercifully, from about 1970, postmodernist architects began to re-humanize 20th century architecture by designing structures with interesting features, taken from popular culture and from more traditional styles.

Characteristics of Postmodernism

"Postmodernism" is not a movement, it's a general attitude. So there is no agreed list of characteristics that define "postmodernist art". But we must start somewhere, so here are a few selected pointers.

General Ideology

Postmodernism reflects a widespread disillusionment with life, as well as the power of existing value-systems and/or technology to effect beneficial change. As a result, authority, expertise, knowledge and eminence of achievement has become discredited. Artists are now far more wary about "big ideas" (e.g. all 'progress' is good). Most important, "Modernist art" was seen not only as elitist but also as white, male-dominated and uninterested in minorities. Which is why postmodernism champions art by Third World, Feminist and Minority artists. However, critics say that - despite its supposed "rejection" of big ideas - the postmodern movement seems to have lots of big

ideas of its own. Examples include: "all types of art are equally valid"; "art can be made out of anything"; "the democratization of art is a good thing" (how about the democratization of brain surgery?).

To paraphrase Andy Warhol, "anyone can be famous for 15 minutes". This idea, more than any other, sums up the postmodernist age. Faced with a new nonsensical world, the postmodernist response has been:

Okay, let's play around with this nonsense. We accept that life and art no longer have any obvious intrinsic meaning, but so what? Let's experiment, make art more interesting, and see where it leads. Who knows, maybe we can be famous for 15 minutes!

Art Education

Postmodernism changed the educational priorities at numerous art colleges. During the 1970s, the art of painting (and to a lesser extent sculpture), was seen as worn out. Besides, the idea of working for four years to master the necessary skills of these traditional fine arts, was considered retrogressive. Art, it was believed, should be liberated from the elite and opened to the public, so art schools began to turn out a new type of graduate - someone familiar with instant postmodernist-style forms, as well as basic production techniques. In a nutshell, individual "creativity" was considered to be more important than the accumulation of craftsman-like skills.

Use of Technology

The era of "postmodernist art" has coincided with the arrival of several new image-based technologies (eg. television, video, screenprinting, computers, the Internet) and has benefited hugely from them. The new range of video and photographic imagery has reduced the importance of drawing skills, and by manipulating the new technology, artists (notably those involved in new media, like installation, video and lens-based art) have been able to short-cut the traditional processes involved in "making art," but still create something new. This is illustrated by the documentary photography of Diane Arbus, that focuses on members of minorities in New York City, and the video art of the Korean-American Nam June Paik (1932-2006).

Postmodernist Focus on Popular/Low culture

The term "high culture" is often used by art critics when trying to distinguish the "high culture" of painting and sculpture (and other fine arts), from the "low" popular culture of magazines, television, pulp fiction and other mass-made commodities. Modernists, along with their influential supporters like Clement Greenberg (1909-94), considered low culture to be inferior to high culture. By contrast, postmodernists - who favour a more 'democratic' idea of art - see "high culture" as more elitist. Thus Pop-art - the first postmodernist movement - made art out of ordinary consumer items (hamburgers, tins of soup, packets of soap powder, comic strips) that were instantly recognizable by Joe Public. Pop-artists and others went even further in their attempts to democratize art, by printing their "art" on mugs, paper bags, and T-shirts: a method which incidentally exemplifies the postmodernist desire to undermine the originality and authenticity of art.

Mixing of Genres and Styles

Ever since Neo-Dada, postmodernists have enjoyed mixing things up - or injecting novel elements into traditional forms - to create new combinations and pastiches. Fernando Botero creates primitive-style paintings of obese figures; Georg Baselitz paints upside-down figures. Gerhard Richter combined camera art and painting in his 'photo-paintings' of the 1970s, while Jeff Koons combined consumerist imagery (balloon shapes) with highly finished sculptural techniques to create his Balloon Dog pop-sculptures (1994-2000). Meanwhile Andreas Gursky combines photography with computer generated imagery to create works like Rhein II (1999, MOMA, New York), while Jeff Wall uses digitally processed photomontage in his postmodernist pictorialist creations.

Postmodernist Multiple-Meanings

Postmodern artists have junked the idea that a work of art has only one inherent meaning. Instead, they believe that the spectator is an equally important judge of meaning. Cindy Sherman's surrealist photography, for instance, highlights the idea that a work of art can be interpreted in a variety of ways. Indeed, some artists - such as the performance artist Marina Abramovic (b.1946) - even permit spectators to participate in their 'art works', or even require intervention by spectators in order to complete their work.

Meeting Consumer Needs

The growth of consumerism and instant gratification over the last few decades of the 20th century has also had a huge impact on visual art. Consumers now want novelty. They also want entertainment and spectacle. In response, many postmodernist artists, curators and other professionals have taken the opportunity to turn art into an "entertainment product". The introduction of new types of art, for instance - such as Performance, Happenings and Installations - along with new subject-matter - including things like dead sharks, dying flies, huge ice-sculptures, crowds of nude bodies, buildings that appear to be in motion, a collection of 35,000 terracotta figures, islands wrapped in pink polypropylene fabric, painted bodies, spooky projected imagery on public buildings, and so on - have provided spectators with a range of new (sometimes shocking) experiences. Whether these new so-called art forms actually constitute "art" remains a hotly-contested issue. The postmodern conceptualists say "Yes", the traditionists say "No".

Focus on Spectacle

In the absence of any real meaning to life - especially when we are bombarded day and night by radio and TV advertising while at the same time being forced to listen to politicians explain that two plus two equals three - postmodernists have preferred to focus on style and spectacle, often using advertising materials and techniques for maximum impact. This approach is exemplified by the commercial printing methods, billboard-style imagery and primary colours of Pop-artists like Roy Lichtenstein and James Rosenquist. This focus on surface is a reoccurring feature of postmodernist art, and sometimes goes over the top with melodramatic, dazzling, even shocking imagery. See, for instance, the fashion photography of Nick Knight and David LaChapelle. Since 1980, the use of computer and other technologies has revolutionized multimedia art (e.g. animation), and has created specific opportunities in areas like architecture and projection mapping.

The importance that postmodernism places on getting the attention of the audience is perfectly illustrated by the shock-tactics of a group of Goldsmiths College students - known as the Young British Artists - in London during the late-1980s and 1990s. Made famous by three exhibitions - Freeze (1988) and Modern Medicine (1990), both curated by an unknown student called Damien Hirst (b.1965), and Sensation (1997) - the YBAs were lambasted for their shocking bad taste, and yet several (Rachel Whiteread, Damien Hirst, Douglas Gordon, Gillian Wearing, Chris Ofili, Steve McQueen, Mark Wallinger) went on to become Turner Prize-winners, while others (Jake and Dinos Chapman, Tracey Emin, Marc Quinn and Jenny Saville) also achieved considerable fame and fortune.

Three Principles of "Postmodernist Art"

1. Instant Meaning

No more faded oil paintings depicting obscure events from Greek mythology to raise a knowing smile from cultivated spectators. From its beginnings in the Pop-art movement, postmodernist painting and sculpture was bold, bright and instantly recognizable. Themes and images were borrowed mostly from high profile consumer goods, magazines, advertising graphics, TV, film, cartoons and comic books. For the first time, everyone understood the art on display. Although postmodernism has evolved since Pop-art, a key objective remains instant recognition.

However, some works of "postmodernist art" are more "instantly understood" than others. Take for instance Equivalent 1 (1966, Kunstmuseum, Basel) by Carl Andre (b.1935). It is one of those works of art that need to be explained by an expert before it can be appreciated. It's a postmodernist minimalist sculpture consisting of 120 regular building bricks. The bricks are laid on top of each other on the floor in two layers of 60 bricks, set out in a precise rectangular configuration of three units by twenty units. At first glance, this masterpiece of contemporary art looks like something you might see on a super-tidy building site. Fortunately, your art gallery catalogue tells you that Andre took his radical decision to make art flat on the floor in 1965, when canoeing on a lake in New Hampshire, and that this majestic pile of bricks exemplifies his artistic creed that "form = structure = place." As it happens, the original Equivalent 1 was "destroyed" in 1966 and "remade" in 1969. (Maybe they needed the bricks for something).

2. Art Can be Made From Anything

Continuing in the traditions of Marcel Duchamp - whose urinal entitled "Fountain" (1917) was the first famous example of an ordinary object being made into a work of art - postmodernists have made a point of creating art from the most unlikely materials and scraps of rubbish. See: Junk Art. Sculptors, installationists and assemblage artists have made art out of industrial scrap iron, gas-masks, felt, human skulls, human blood, dead flies, neon-lighting, foam rubber, soup cans, concrete, rubber, old clothes, elephant dung and more. The idea behind this is to democratize art and make it more accessible.

3. The Idea Matters More than the Work of Art Itself

Broadly speaking, up until the 1960s, artists (including Picasso, Pollock and Lichtenstein) believed that without a finished product, there was nothing. So a huge amount of attention was lavished on the quality of the finished work of art, and the craftsmanship needed to produce it. Today, things are different. Postmodernists typically have a stronger belief in the concept behind the finished product, rather than the product itself. Which is why a lot of "postmodernist art" is known as "Conceptual Art" or "Conceptualism". This new approach is exemplified by the conceptual artwork (a list of instructions) by Martin Creed, entitled "227: The Lights Going On and Off" (2001), which won the Turner Prize in 2001. Other forms of no-product conceptualism include installations (which are purely temporary affairs, after all), performance art, happenings, projection art, and so on.

Perhaps the ultimate example of conceptual art was the exhibition held in March 2009, at the French National Museum of Contemporary Art in the Pompidou Centre in Paris. Entitled "The Specialisation of Sensibility in the Raw Material State into Stabilised Pictorial Sensibility", it consisted of nine completely empty rooms, and nothing else.

Collections of Postmodernist Art

For two excellent displays of postmodernist art, visit the Saatchi Gallery, in London, or the Guggenheim, New York.

Postmodern Art Movements

So far, there have been no great international art movements during the postmodernist period. Instead, the era has witnessed the appearance of a number of narrow, localized movements, as well as several brand new types of art, like video and word painting. In addition, there have been dozens of artistic splinter groups, as well as one or two anti-postmodernist schools whose members have endeavoured to produce the sort of art that Michelangelo or Picasso would have been proud of. Here is a brief list of the main post-modern movements and styles, including most of the new art forms.

- Pop Art (1960s onwards)

Championed by Andy Warhol (1928-87) who made fine art from banal, mass-produced imagery. For more, see Andy Warhol's Pop Art of the 60s and 70s, and sculpture by Claes Oldenburg (b.1929).

- Word Art (Text-based Painting) (1960s onwards)

A form of conceptualist painting or sculpture which uses word or text-based imagery. A good example of the postmodernist trick of injecting new elements into old media. Associated with pop artists Robert Indiana (b.1928) and Jasper Johns (b.1930), the Japanese artist On Kawara (1932-2014) noted for his "date paintings", Barbara Kruger (b.1945) famous for "I shop therefore I am", and Christopher Wool (b.1955), whose word painting entitled Apocalypse Now (1988) sold in 2013 for \$26.4 million.

- Conceptual Art (1960s onwards)

The definitive postmodernist idiom. Never mind the finished product, it's the underlying idea that counts. The first and (arguably) greatest conceptual artist was Yves Klein (1928-62), founder of Nouveau Realisme. For details, please see: Yves Klein's Postmodernist art (1956-62).

- Performance Art and Happenings (Early-1960s onwards)

Pioneered by artists like John Cage (1912-92) and Allan Kaprow (1927-2006), this genre became a new way to present art to the masses. See also the "living sculptures" Gilbert & George (b.1943, 1942).

- Installation Art (1960s onwards)

A new way to draw spectators into the artwork or assemblage. A leading contributor to installation art is the German artist Joseph Beuys (1921-86). See also the extraordinary installation-type art projects ("interventions") created by Christo & Jeanne-Claude (Christo Javacheff and Jeanne-Claude Denat).

- Fluxus (1960s)

A Dada-style anti-art movement begun by George Maciunas (1931-78). It appeared first in Germany before spreading to New York. Heavily involved with Happenings and other street 'events.'

- Video Art (1960s onwards). See also: Animation art.

Video is one of the most versatile mediums available. A piece of video film can be (1) the work of art itself; and/or (2) a record of how the work of art was made; and/or (3) one element in an installation; and/or (4) part of a multiple-video arrangement. Whatever its precise role, video makes art more dynamic, more absorbing, more exciting. Since the late 1980s, both video and animation have become dependent on the use of computer software to manipulate and control images.

- Minimalism (1960s onwards)

A refuge of intellectual painters and sculptors anxious about "purity" in art. Minimalists attempted to create art devoid of all exterior references, leaving only form. Clever perhaps, but totally boring. Minimalist painters include Agnes Martin (b.1912), Ad Reinhardt (1913-67), Ellsworth Kelly (b.1923), Kenneth Noland (b.1924), Robert Ryman (b.1930), Robert Morris (b.1931), Robert Mangold (b.1937), Frank Stella (b.1936) and Brice Marden (b.1938). For Minimalist sculptors, see below.

- Photorealism (1960s, 1970s)

A hyperrealist form of painting, typically based on photographs. Leading photorealists include Chuck Close (b.1940) and Richard Estes (b.1936). Photorealist sculptors include John De Andrea (b.1941), Duane Hanson (1925-96) and Carole Feuerman (b.1945).

- Land Art (mid-1960s)

No greedy commercial galleries involved (supposedly). Championed by the experimental artist Robert Smithson (1938-73). See also the 'wrapping' interventions in nature, by Christo and Jeanne-Claude (both b.1935) and the environmental works of Andy Goldsworthy.

- Photography (1960s onwards)

The YBAs were just one of several postmodernist groups to champion the use of camera art. In fact, works by the greatest photographers soon passed the \$1 million mark at auction. For the best in postmodernist photography, please see photos by Helmut Newton (1920-2004), Robert Mapplethorpe (1946-89), Cindy Sherman (b.1954) and Nan Goldin (b.1953).

- Arte Povera (1966-71)

Self-styled "poor art" created by an anti-commercial avant-garde art group in Italy, consisting of Piero Manzoni, Michelangelo Pistoletto, Giuseppe Penone and others. Heavily focused on the physical qualities of the materials used.

- Post-Minimalism (1970s)

In Post-Minimalist art - a term first coined by art critic Robert Rauschenberg (b.1935) - the emphasis shifts from the purity of the idea, to how it is conveyed. See works by the German-American Eva Hesse (1936-1970).

- Feminist Art (1970s)

An art movement which dealt with specific female issues, such as having a baby, violence against women, employment conditions for women and so on. Famous female artists involved, include Louise Bourgeois (1911-2010), and the Japanese-born performance artist Yoko Ono (b.1933). Other activists include Miriam Schapiro (1923-2015), Nancy Spero (1926-2009), Eleanor Antin (b.1935), Joan Jonas (b.1936), Judy Chicago (b.1939), Mary Kelly (b.1941), Barbara Kruger (b.1945), and the English artist Margaret Harrison (b. 1940).

- Graffiti Art (1970s onwards)

Ultimate postmodernist movement: instant painting, instant fame. See the biography of graffiti terrorist and street artist Banksy (b. 1973-4). For the two most successful street artists to go mainstream, see: Jean-Michel Basquiat (1960-88), Keith Haring (1958-90) - who created the "Crack is Wack" mural in Harlem - and David Wojnarowicz (1954-92), the AIDS activist and hugely talented street painter and collage artist.

- Postmodernist Sculpture (1970s onwards)

Important contributors to postmodernist plastic art include: the Surrealist Salvador Dali (1904-89), noted for his "Melted Ice Cream Van" (1970, Private Collection); the French sculptor Cesar (1921-98), best known for his "compressions"; the Swiss kinetic artist Jean Tinguely (1925-1991); the Nouveau Realiste Arman (1928-2005) known for his "accumulations"; the minimalists Donald Judd (1928-94), Sol LeWitt (1928-2007) and Richard Serra (b.1939); the monumentalists Anish Kapoor (b.1954) and Antony Gormley (b.1950); the American Bruce Naumann (b.1941), best known for his neon sculptures. Two new types of sculpture which appeared during the 1980s, were Ice Sculpture - the World Ice Art Championships have taken place annually in Fairbanks, Alaska since 1989 - and Sand Art - the World Championship in Sand Sculpture was held in Harrison Hot Springs in Harrison, British Columbia, Canada, from 1989-2009.

- Neo-Expressionism (1980s onwards)

ace of the painting. Leading neo-expressionists included Georg Baselitz (b.1938), Gerhard Richter (b.1932), Jorg Immendorff (b. 1945), Anselm Kiefer (b.1945), Rainer Fetting (b.1949) and A.R.Penck [Ralf Winkler] (b.1939), Julian Schnabel (b.1951) and David Salle (b.1952).

- Deconstructivism (1980s-2000)

Postmodernist style of architecture, exemplified by the work of Los Angeles architect Frank O. Gehry (b.1929), as well as Daniel Libeskind, Peter Eisenman, Rem Koolhaas, Zaha Hadid, Bernard Tschumi and the Co-op Himmelblau group. Gravity-defying Deconstructivist architecture often involves computer-assisted designwork using high-tech software, as well as the resources of cutting-edge firms of architects like Skidmore Owings and Merrill.

- Young British Artists (Britart) (Late 1980s/1990s)

Combination of breathtaking business-savvy opportunism and shocking ideas. An explosion of extreme bad taste dressed up as art. The public loved it. The most famous YBA is Damien Hirst (b.1965) while the group's main sponsor was the art collector Charles Saatchi (b. 1943). For the most recent painters and sculptors in Ireland, see: Contemporary Irish Artists (21st century), and also 20th Century Irish Artists (1900-2000).

- Neo-Pop Art (late 1980s onwards)

Huge plastic sculptures of children's toys and lots more in the same vein, exemplified by the works of Jeff Koons (b.1955).

- Body Art (1990s)

A style of art which uses the body as the "canvas". The most popular form is tattoos, followed by face painting of various kinds. Nail art is another newcomer. Body painting is illustrated by New Zealander Joanne Gair's illusionist painting of Demi Moore - photographed by Annie Leibovitz - which appeared on the front cover of Vanity Fair in August 1992. The most extreme forms of body art are practised by artists like Marina Abramovic (b.1946) and Frank Uwe Laysiepen (aka Ulay) (b.1943).

- Postmodernist Painting

Important contributors to postmodern styles of painting not listed above, include: the inimitable Francis Bacon (1909-92); the contemporary realist Lucian Freud (1922-2011), the subject painter Jack Vettriano (b.1951), and the figure painter Jenny Saville (b. 1970).

- Cynical Realism (1990s)

Chinese contemporary art movement which appeared in the wake of the Tiananmen Square crackdown (1989). Cynical Realists used a style of figurative painting with a mocking (sometimes self-mocking) narrative. Repetitive motifs used include clown-like figures, bald-headed men and photographic style portraits. The style satirized the political and social state of China and, since this was a new

departure for Chinese artists, was well received by western art collectors. Artists associated with the movement include Yue Minjun (b. 1962), Fang Lijun (b.1963) and Zhang Xiaogang (b.1958), all of whom achieved multi-million dollar sales.

- Projection Mapping (Projection Art) (21st Century)

One of the latest forms of postmodernism, projection art involves the computer-assisted mapping of video imagery onto buildings or other large surfaces.

- Computer Art (21st Century)

Also called Digital or Internet art, this is a general category which encompasses a diverse range of computer related art forms. Characterized by typically large-format paintings featuring intense, frequently violent subject matter, painted at speed. Materials were sometimes embedded in the surf