# Art in Architecture: The Collaborative Spirit of the Interwar Period in Detroit

February 5 to May 28, 2011



Teacher's Guide



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# Art in Architecture: The Collaborative Spirit of the Interwar Period in Detroit February 5 to May 28, 2011

This exhibition explores the relationship of artists and architects working in the Detroit area during the period between the First and Second World Wars (approximately 1920-1940). The exhibit focuses especially on the 1920s as this is the decade when the major building boom occurred in the city of Detroit.

The exhibition is arranged thematically in terms of the type/style of architecture. Architecture types/ styles include: skyscrapers, civic architecture, religious architecture, private residences, and Cranbrook Educational Community architecture.

Topics in the introduction include: the arts and crafts movement, the availability of financing during the 1920s, organizations/patrons that supported the arts/artists, the automobile boom in Detroit, the 1893 Chicago World's Fair, architecture schools and the influence of the Ecole des Beaux-Arts.

The next section delves into the specific types of architecture. The first section explores skyscrapers and includes several of the major skyscrapers built during this time period including (but not limited to): the Fisher Building, Guardian Building, and Penobscot Building.

The next section focuses on civic structures such as the Horace H. Rackham Educational Building, Detroit Public Library, and Detroit Institute of Arts.

The following section is on religious architecture and includes such churches and temples as Cathedral of the Most Blessed Sacrament, Jefferson Avenue Presbyterian Church, and Temple Beth El.

The section on residences includes Meadowbrook, the Lawrence Fisher Mansion, and Rose Terrace. Additionally a smaller section focuses on Cranbrook as the quintessential example of this relationship between architects and artists. Cranbrook served as a site for training of architects and artists and was founded on the principles of the arts and crafts movement and the collaboration between architects and artisans. Christ Church, Kingswood School, Cranbrook School and Cranbrook House are represented in the exhibition.

The following section discusses the decline of this relationship between artists and architects. Topics covered include: the stock market crash of 1929 and the resulting Great Depression, the decrease in availability of financing, changes in architectural styles (i.e. modernism), changes in focus at architectural schools, and the advent of World War II.

Throughout the exhibition further information about the artists, architects and patrons is represented with brief biographies, references and photographs about each individual as well as three-dimensional objects when applicable. Individuals discussed in this section may include: Corrado Parducci, Geza Maroti, Diego Rivera, Ezra Winter, Marshall Fredericks, Edwin Blashfield, Gari Melchers, Arthur Neville Kirk, Katherine McEwen, Mary Chase Perry Stratton, John Kirchmayer, William Kapp, Frederick Wiley, Francis Geck, Horace Trumbauer, Myron Barlow, Willet Studios, Edwin Howland Blashfield, William Valentiner, Wirt C. Rowland, Albert Kahn, Cass Gilbert, Paul Cret, C. Howard Crane, Eliel Saarinen, Loja Saarinen, Eero Saarinen, the Booth family, the Fisher brothers, and the Dodge family.

Objects selected for this exhibition include photographs, presentation drawings, working drawings, shop drawings by artists and architects, job files including correspondence and contracts, promotional materials produced during the time period, and three-dimensional materials such as art, models of art, tile, glass and other materials related to the buildings or artists/architects themselves. Didactic labels provide interpretation.

Loaned art and objects in this exhibition were provided by the Detroit Historical Museum, Cranbrook Educational Community, Meadow Brook Hall, and Friedman Real Estate Group, Inc. The Marshall M. Fredericks Sculpture Museum provided two relief sculptures from its collection as well.



Architecture in Detroit

## Introduction

Arthur Nevill Kirk (English, 1881-1958) **Zodiac Bowl**, 1937 Silver, gold 5 3/8"h x 9"w Collection of the Cranbrook Educational Community Photograph courtesy of Cranbrook Archives and Cultural Properties



Silversmith Arthur Nevill Kirk produced this silver and gold

bowl with the signs of the zodiac for Carolyn Farr Booth and Henry Scripps Booth, the youngest son of Cranbrook founders George and Ellen Booth. Kirk is an important figure in the establishment of the crafts tradition in the United States. He headed the Department of Metalwork at Cranbrook and also established a metals department at the Detroit Society of Arts and Crafts. This bowl was created using traditional techniques and exemplifies the qualities of good design and craftsmanship that advocates of the Arts & Crafts Movement stressed.

### Q & A

What is Cranbrook? An educational community founded by George and Ellen Booth in 1904. It is located in Bloomfield Hills, Michigan and is one of the world's leading centers in education, art, and science. It's comprised of a graduate Academy of Art, contemporary Art Museum, House & Gardens, natural history museum and Pre-K through 12 independent college preparatory schools. It is a National Historic Landmark that features the work of world-renowned architects such as Eliel Saarinen, Albert Kahn, Steven Holl, Tod Williams and Billie Tsien, Rafael Moneo, Peter Rose and sculptors Carl Milles, Marshall Fredericks and others.

**What is metalwork? Describe some traditional techniques?** Metalwork is making objects from metal. It has supreme capacities for shape-shifting, physical strength, and weight. Metal's surfaces can show an array of colors and textures, capable of polishing to a high gloss. Metal can be melted, cast, or fused, hammered into thin sheets, or drawn into wire.

**What is the zodiac?** A chart linking twelve constellations to twelve divisions of the year, used as the astrologer's main tool for analyzing character and predicting the future. The twelve divisions are represented as signs that we recognize with horoscopes. They are Aquarius, Pisces, Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpio, Sagittarius, and Capricorn.

**What's Arts & Crafts Movement?** A predominantly English art movement during the last half of the nineteenth century to reassert the importance of finely designed and made objects in the face of increasing industrialization and mass-production. It was most strongly driven by William Morris (English, 1834-1896).

What is the Detroit Society of Arts and Crafts? It was founded in 1906 with George Booth—managing editor of the Detroit News—as president. Albert Kahn was among the founding members. In 1916, this organization became the first Arts and Crafts society in the US to construct its own building. in 1926. The Detroit Society of Arts and Crafts founded a school of art and design that evolved into the College of Creative Studies now located at East Kirby and John R. By 1933, the Detroit Society of Arts and Crafts succeeded in encouraging the auto manufactures to develop design studios and employ professional designers.

**Activity**: Have students work in groups to research the history of the 12 zodiac signs, their corresponding symbol, meanings, etc. Have the groups present their research to the class.

## Civic

Marshall M. Fredericks (American, 1908-1998) Model of Pegasus for the Horace H. Rackham Educational Memorial Building, 1939 Plaster

25"h x 18"w

For the Horace H. Rackham Educational Memorial Building in Detroit, sculptor Marshall M. Fredericks designed a series of forty-six reliefs illustrating the building's functions. This plaster model for the relief entitled *Pegasus* features the Greek mythological winged horse in profile with an airplane propeller under its belly.

## Q & A

What was the purpose Horace Rackham Education Building? Located in Detroit's Cultural Center (Woodward and Warren Streets)—a building designed for the Extension Service of the University of Michigan and for the Engineering Society of Detroit. Mr. Rackham was an original stockholder for the Ford Motor Company.

What is a relief? Figures or shapes that project from a flat surface.

Who is Pegasus? In Greek mythology, a horse with wings, born of the shed blood of Medusa.

Why would Fredericks combine an airplane and Pegasus in a composition? Perhaps a connection of flight in mythology and the modern world. Have students respond to this question.

Name some other relief themes on the building: Educators, engineers, scientists, and structural steel workers.

Activity: Have your class create a collaborative relief panel. Select themes appropriate to your school, community, state, or of historic importance. First start by making 6" by 6" drawings, of the selected





Horace H. Rackham Educational Memorial Building,

theme. When all the drawings have been finalized, have students begin sculpting their relief sculpture designs the same scale or 2 times larger (12" x 12") relating to the selected theme. Use modeling compound, air dry, paint with water-based paints and then mount them on a panel to be displayed at your school or other community organization.

# Cranbrook

Eero Saarinen (American, Born Finland, 1910-1961) Saarinen Crane Insert, 1928 (designed), 2005 (reproduction) Bronze 2 ¾"h x 2 ¾"w Collection of Cranbrook Educational Community

For the Cranbrook School dining hall, a teenaged Eero Saarinen collaborated with his father, Eliel on the design of the room's furniture. The younger Saarinen created a bronze insert for the back of the dining hall's chairs. The insert features a crane, the school's mascot, along with the letters "CS" and the date 1928. The two images show the chair with the insert and a detail of the crane insert.



## Q & A

**What is Cranbrook School?** It is a private college prep boarding school located in Bloomfield Hills, Michigan and part of the Cranbrook Educational Community. See photograph below.

**What is a crane?** A large bird with long legs and a long neck that lives near water. There are 15 different species of cranes. Cranes will fly with their necks stretched out and their legs trailing them. You can find many cranes in Michigan at water sources.

What does the zigzag line under the crane mean? It is a symbol for water.

What is the symbolism of a crane? It has many meanings in different cultures. Some of them are symbols of longevity (long life), symbol of fidelity, messengers of wisdom, luck, immortality, and bird of omen.

Activity: Have your class create an artwork based on your school mascot. If your school doesn't have a mascot, hold a competition to select one.



Cranbrook School in Bloomfield Hills, Michigan

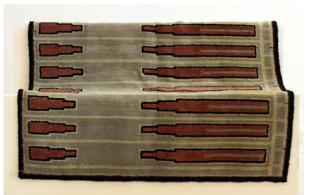


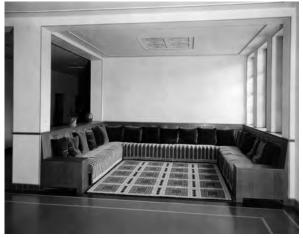
Cranbrook Dining Hall Chair with insert

Loja Saarinen (Finnish, 1879-1968) **Rugs for the Built-in-Seat**, c. 1931 Wool pile, wood weft, linen warp, plain weave with ryijy-knotted pile 65"h x 43 ½" w Collection of the Cranbrook Educational Community

Loja Saarinen collaborated with her husband, Eero on the textile designs for Kingswood School. In order to achieve an integrated design, Loja Saarinen coordinated the building's interior fabrics with Eliel Saarinen's architectural plans for the school. The colors and design she chose for her textiles directly related to the particular environment in which they would be displayed. The carpet for the headmistress' office directly relates to a textile Saarinen created for her own home at Cranbrook. The outer border of the carpet directly correlates to the design of the radiators at the school.

The Studio Loja Saarinen soon became one of the most productive weaving studios in the United States, producing original designs for architect Frank Lloyd Wright and industrial designer Charles Eames. One of the first craftsmen to bring Scandinavian design to America, Saarinen is known for her simplified geometric designs in complementary colors. Saarinen served as the director of Cranbrook's weaving department from 1929 until her retirement in 1942.





"Scandinavia" lounge built-in-seat, Kingswood School

Loja Saarinen collaborated with her husband on the textile designs for Kingswood School. It took a staff of twelve weavers working fulltime one year to complete all of the rugs, draperies, and other fabrics for the school. This rug from "Scandinavia" lounge in the school was originally draped over the room's built-in-seat. See photograph.

#### Q & A

**What was Studio Loja Saarinen?** One of the most productive weaving studios in the United States, producing original designs for architect Frank Lloyd Wright and industrial designer Charles Eames. Art fabrics, rugs and window hangings were produced by commission from this studio located at Cranbrook Educational Community in Bloomfield Hills.

**What is a radiator?** A heating device consisting of a series of connected pipes, typically inside an upright metal structure, through which steam or hot passes through.

What is Kingswood School? A girls Pre K through 12 college preparatory school that is part of the Cranbrook Educational Community in Bloomfield Hills, Michigan.

What is Scandinavian design? Scandinavian design emerged in the 1950s in the three Scandinavian countries (Denmark, Norway and Sweden), as well as Finland. It is a design movement characterized by simple designs, minimalism, functionality, and low-cost mass production.

**Activity:** Have students research Scandinavian design and relate it to current trends of contemporary design in furniture, weavings, architecture interiors, fine art, etc.

## Skyscrapers

Penobscot Building Model, c. 1928 Masonite and cardboard 51"h x 18"w Courtesy of the Friedman Real Estate Group, Inc.

Rising to forty-seven stories tall, the Penobscot Building stood as Detroit's tallest building until the construction of the Renaissance Center in 1977. Completed in 1928, the Penobscot building housed offices for the city's top businesses and professionals.

What is collectively known as the Penobscot building is actually a complex of three buildings. The central structure adjoins two earlier buildings built by the architectural firm of Donaldson and Meier in 1904 and 1918. Named for the river in Maine where Simon J. Murphy, the building's owner, was born and made his fortune, the Penobscot building contains Native American ornamentation throughout both the interior and the exterior.

Designed by architect Wirt C. Rowland of Smith, Hinchman & Grylls, the H-shaped skyscraper consists of a simple limestone mass. The structure rises 565 feet and terminates in a series of cubist setbacks. Designed with a Native American motif, a popular Art Deco decora-



tive style of the 1920s, the Penobscot building encompasses many symbolic decorative details. Native American symbols for the sun, rain, chiefs, and warriors are incorporated into its design. The Griswold Street entrance includes a four story archway topped by a stylized bust of a Native American. Designed by architectural sculptor Corrado Parducci, this figure serves as the entrance's keystone.

In the lobby stands a carved and gilt marble panel entitled, *The Progress of the Mails*. Located above a bronze mailbox, this allegorical panel depicts a cityscape with silhouettes of some of Detroit's most well-known skyscrapers. Constructed of light and dark shades of travertine, the lobby floor is laid in a geometric pattern. The highlight of the building's main lobby is the grand staircase that originally led to the second floor banking room. Three stories tall, the room lacks ornamentation. Like many of Row-land's structures, the room follows a basic cathedral plan with a wide nave and two side aisles. Here Rowland chose to highlight the room's wood paneling. Found throughout the banking room is the form of a Greek cross, which can be seen in both the lighting fixtures and in a relief pattern in the room's ceiling.

The Penobscot building's trademark beacon sits atop the structure's highest point. Constructed of steel and topped with a red neon ball, the beacon was designed by the Claude Neon Company. Twelve feet in diameter, the ball is visible from forty miles and was used by aviators in the 1920s to find their way. In addition to the beacon, a large white tile north arrow is also set into the roof to aid pilots.

#### Q & A

Why do you thing this building has a Native American theme? Have students express their thoughts.

**Do you know of any other buildings that has native American theme and symbols?** The State Theater in Bay City.

**Research Activity:** Compile and research Native American symbols and have students find the meanings of these symbols.

**Art Activity:** Have students design and build their own small-scale architecture structures (house, building, etc.). Discuss some ornamental styles and architecture designs .

## Religious

#### Cathedral of the Most Blessed Sacrament Detroit. MI

Photographer: Anthony Lockhart

Originally planned as a parish church, the Cathedral of the Most Blessed Sacrament serves the entire Roman Catholic population of the Archdiocese of Detroit. Founded in 1905, the parish initially ministered to the residents of the Woodward-Boston Boulevard area in the city. Construction of the church began in 1913 but was not fully completed until thirty-seven years later. Henry A. Walsh of Cleveland, Ohio served as the church's original architect. Due to the length of the project, Detroit architect George Diehl replaced Walsh for the construction of the twin towers on the church's western facade in 1950.

Faced in Ohio sandstone with Indiana limestone, Walsh designed the cathedral in the Norman Gothic style. Flying buttresses support the outer walls of the cathedral's chapel. By 1915, the exte-



rior had been completed but financial problems lead to delays, stalling further construction.

Work proceeded slowly on the interior as funds became available. The nave consists of stone groined vaults with a series of seventeen tall stained glass clerestory windows. Each window depicts a scene in the history of the Catholic church, from the birth of Christ through Pentecost. Metalsmith Oscar Bach of New York designed all of the ornamental metalwork for the cathedral. Woodcarvers from the Oberammergau region of Germany designed and produced the cathedral's original pulpit and Stations of the Cross. Carved from French Caen stone, the reredos, which formerly stood behind the altar, feature Christ with his arms outstretched surrounded by eleven saints in niches.

Stained glass artisans Willet Studios spent over a year working on the Holy Name Window for the north transept. A revival of the worship of praise windows found in European cathedrals, the window depicts Christ clothed in ruby red surrounded by angels and saints. The five apse windows located behind the altar depict events of from the Passion of Christ. Entitled *The Cherubs in Glory*, the cathedral's rose window contains over one hundred stone tracery openings. The small quatrefoil at the center of the window depicts the head of a cherub and traced into the glass are pontifical hats, bishops' mitres, and various ornamental shields.

The cathedral's twin towers, constructed in 1950, rise 136 feet in the air. Located between the towers are three ornamental niches holding sculptures with a Eucharistic theme. At the center sits Christ the Good Shepherd with St. Thomas Aquinas and St. Cyril of Alexandria on either side. Above the main entrance doors stand sculptures of St. Peter, St. Margaret Mary and St. Paschal Baylon by Detroit architectural sculptor Corrado Parducci. Carved with forty different symbols, the main white oak doors of the cathedral depict a variety of Catholic imagery as well as the national saints of those groups whose descendants make up the Archdiocese of Detroit.

Dedicated upon the completion of the interior in 1930, Blessed Sacrament became a cathedral following Detroit's elevation to an Archdiocese eight years later. One of the most impressive churches in Detroit, the cathedral recently underwent a major renovation. The cathedral was listed on the National Register of Historic Places in 1982.

#### Q & A

What is a Cathedral? A church that contains a bishop's throne and is the most important church in the bishop's diocese.

What are the characteristics of Gothic Architecture? Some characteristics are: rose window, pointed arches, flying buttresses, stained glass, and rib vaulting. See below image for more characteristics.

What is the name of the large circular window in the center of the front of the cathedral? Rose window. Gothic architecture has less heavy masonry as compared to Romanesque architecture. So walls were opened up with large areas of windows. The use of stained glass is to give a spiritual-like feeling when the light streams through and reflects multiple colors inside.

Why does the architecture look like everything is pointing upward? In order to give the feeling of rising into heaven or the sky, where heaven is perceived to be in Christianity.

Why are the arches pointed? It channels the weight differently and can be taller. Also the Gothic structure was lighter in weight than the Romanesque structures, which had rounded arches

What is the National Register of Historic Places? A list of the Nation's Historic Places worthy of Preservation. Visit their website at: http://www.cr.nps.gov/nr/

**Research Activity:** Have students research all styles of churches in their city. If possible have them photograph them. Research the type of architecture. Discuss different characteristics of architectural de-

sign elements. The Chartres Cathedral illustration below is an example of Gothic Architecture characteristics.

Visit the National Register of Historic Places website and browse with your class. There are educational opportunities for teachers and kids. You can search for Historic Places in the Great Lakes Bay Region.

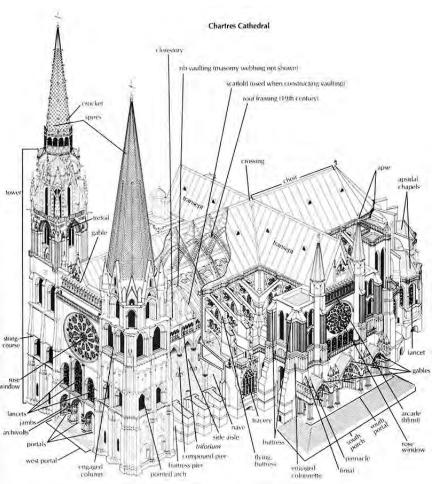
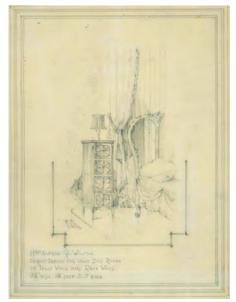


Illustration of Gothic Church from *Art History by* Marilyn Stokstad

## Residential



Presentation Drawing for Side Table, c. 1927-1928 Hampton Shops, NY Black print 17 ½" w x 13 ½" h



Small Side Table from Meadow Brook Hall Master Bedroom, c. 1928-1929 Hampton Shops, NY Tulip Wood and Rose Wood 20"h x 34 ½" w x 11 5%" d

All of the furnishings for Meadow Brook Hall are contemporary to the construction of the mansion. They were made to order from drawings by Hampton Shops, a New York interior decorating firm, and submitted to Matilda Dodge Wilson for her approval. This side table from Mrs. Wilson's Louis XIV and XV style bedroom features an inlaid geometric decoration. One of a pair, these tables sit on either side of the bed.

#### Q & A

**What is Meadow Brook Hall?** Meadow Brook is the historic home built by one of the automotive aristocracy's most remarkable women, Matilda Dodge Wilson, widow of automobile pioneer John Dodge, and her second husband, lumber broker Alfred Wilson. Constructed between 1926 and 1929, for \$4 million, Meadow Brook represents one of the finest examples of Tudor-revival architecture in America.

What does Tudor-revival style mean? The Tudor Revival architecture of the 20th century (also called Mock Tudor or Tudorbethan), first manifested itself in domestic architecture beginning in the United Kingdom in the mid to late 19th century based on a revival of aspects of Tudor style. The emphasis was on the simple, rustic and the less impressive aspects of Tudor architecture, imitating in this way medie-val cottages or country houses.

**Does the drawing and the small side table look alike? What is different?** Have students compare and contrast them. The furniture piece is wider than the drawing.

**Can furniture be an artwork?** Yes, and also serve a function too. A few ways to create designs are by using different types of wood or other materials; by using the direction of the grain for design; and by carving or shaping the wood into designs.

Why would two types of wood be used to make a piece of furniture? Wood has different colors and this would enhance its beauty. Sometimes more inexpensive woods were used for areas of the furniture that was not visible.

#### Francis Geck

Presentation Drawing for Ballroom Mirror, 1927 Black and yellow pencil on paper 14 ½"h x 20"w Collection of the Detroit Historical Museum

While working as a decorator at William Wright Co. in Detroit, Francis Geck designed six ballroom mirrors for the Lawrence Fisher Mansion in Detroit. This Mediterranean style mansion features an ornate interior with many Art Deco elements.

Preliminary drawings were made before the ballroom mirror was made. This is a drawing by Geck.

#### Q & A

Who was Francis Geck? Francis Geck (1900-2005) was born in Detroit and graduated from the New York School of Fine and Applied Art (later, Parsons The New School for Design) in 1924 and taught interior design at the school's Paris Ateliers until 1927. Following a professional career in his native Detroit, Geck became a professor of Fine Arts at University of Colorado, where he taught for 39 years.

What is the Lawrence Fisher Mansion? Built by one of the brothers of the Fisher Brothers Body firm, this home, located in Detroit is a greatly embellished Mediterranean Revival 22,000 square foot home situated on four acres of gardens with 3 fountains a waterfall and peacocks. Built in 1927 the interior designer was Francis J. Geck. 200 craftsman, many of them brought from Europe, worked to build it. Many cultural styles were used in the interior.

# What does Mediterranean Revival style mean? The Mediterranean Revival was an eclectic design style

movement that was first introduced in the United States around the turn of the nineteenth century, and came into prominence in the 1920s and 1930s. The style evolved from rekindled interest in the Italian Renaissance architecture of palaces and seaside villas dating from the sixteenth century, and can be found predominantly in California and Florida due to the popular association of these coastal regions with Mediterranean resorts.

**What is Art Deco?** Descended from Art Nouveau, this movement of the 1920s and 1930s sought to upgrade industrial design in competition with "fine art" and to work new materials into decorative patterns that could be either machined or hand-crafted. Characterized by streamlined design, simplification of form, elongated and symmetrical.

**Activity:** Have students draw a design for a 4" x 6" photograph frame. Then have them sculpt the design in modeling compound. Dry them and paint them. Attach the photograph to them and put sticky back magnets on it to hang on a metal surface.



**Changing Architectural Styles** 

During the first third of the twentieth century, Detroit's architects primarily employed two distinct architectural styles in their designs, Neoclassicism and Art Deco. In churches, public buildings, and the manor homes of the city's industrialists, the classical revival style was most often used. This style was directly inspired by the Beaux Arts architecture of the World's Columbian Exposition and utilized classical forms from ancient Greece and Rome. In contrast, Art Deco was characterized by streamlined, elongated, and symmetrical design. Most commonly found in Detroit's downtown skyscrapers, Art Deco archi-

McGregor Memorial Conference Center, Wayne State tecture off such as those found in the Guardian and Penobscot buildings.

tecture often employed Native American motifs,

As the nation began to recover financially from the Great Depression, a new architectural style began to influence post-war construction across the country. Characterized by a radical simplification of form, rejection of ornament, and the adoption of steel, glass, and concrete as building materials, this new "International" style completely rejected the more decorative forms of architecture of the previous decades. Influenced by the Bauhaus school and the work of Le Corbusier, Walter Gropius, and Ludwig Mies van der Rohe, this architectural style soon spread from Europe to the United States. The clean, geometric qualities of the style came to form the basis of American architecture in the 1950s and '60s and radically changed the instructional philosophy of the country's architectural schools, replacing the Beaux Arts training of the previous seventy years as the dominant form of instruction. As modernism spread, architects began to completely eliminate any form of ornamentation in their designs and instead favored box-like structures with clean lines. This resulted in the decline of the artist and architects call upon local craftsmen and artists to provide decoration for their structures. Instead, Detroit architects such as Minoru Yamasaki and Eero Saarinen would use the building's form and theme to create ornament.

#### Q & A

What factors brought about the change in design with architecture in the early 20th century? Move towards Modernism in architecture; artists and architects not collaborating together as a team because of less ornamentation on Modern architecture; decline of the auto industry and general financial decline from the stock market crash of 1929; changes in focus at architecture schools; and World War II.

Architecture of the late 19th century reflected the collaboration of artists and architects. The decorative arts and sculpture was integral to the architecture. Collaborations between artists and architects declined from the 1940s to the mid 1960s. Today there is a return to this collaboration, but the art is not integral to the architectural structure.





National Bank of Detroit Building

One Woodward Avenue, Detroit

## Glossary

**Apse:** The semicircular or polygonal recess at the end of a Christian church opposite the main entry, or in a wall of a Roman basilica. It is where the altar is placed.

**Arch:** A structure with a curved, pointed, or squared upper edge to an opening, and supporting the weight above it. It is usually a masonry construction, used as a doorway, window, or a portal, although freestanding monumental arches have been built simply for symbolic purposes.

**Architecture:** The art of designing and constructing buildings (structures), and other environmental features. A person who practices architecture is called an architect.

**Arts and Crafts movement:** A predominantly English art movement during the last half of the nine-teenth century to reassert the importance of finely designed and made objects in the face of increasing industrialization and mass-production. It was most strongly driven by William Morris (English, 1834-1896).

**Art Deco:** Descended from Art Nouveau, this movement of the 1920s and 1930s sought to upgrade industrial design in competition with "fine art" and to work new materials into decorative patterns that could be either machined or hand-crafted. Characterized by streamlined design, simplification of form, elongated and symmetrical.

**Art Nouveau:** French for "The New Art." An international art movement and style of decoration and architecture of the late nineteenth and early twentieth centuries, characterized particularly by the curvilinear depiction of leaves and flowers, often in the form of vines.

**Beaux Arts:** Also termed "high art," art that is of universal transcendence, having withstood the test of time and representing the epitome of artistic achievement, as opposed to low art, which is also known as mass culture.

**Bronze:** An alloy or mixture of metals made by combining copper with tin and sometimes lead and zinc. **Cast:** A sculptural object made by pouring a fluid or molten material into a hollow form/mold and allowing that material to harden.

**Cathedral:** A church that contains a bishop's throne and is the most important church in the bishop's diocese.

**Clerestory:** A wall of a building which is raised above an adjoining room, and this section of wall has windows.

**Complementary colors:** Colors opposite each other on a color wheel.

Façade: The front or face of a building.

Fused: To melt two or more materials joining at a molecular level.

Geometric pattern: Any shape or form having more mathematic than organic design.

**Gothic:** The name given to the style of architecture, painting, and sculpture which flourished in western Europe, mainly France and England, between the 12th and 15th centuries — the later Middle Ages **Hammered:** The shaping of metal by hammering or pounding.

**Inlay/inlaid:** Making an image by setting thin pieces of a material precisely into a depressed ground. **International Style:** An architectural style in the early 1900s characterized by a radical simplification of form, rejection of ornament, and the adoption of steel, glass, and concrete as building materials; this new "International" style completely rejected the more decorative forms of architecture of the previous decades.

**Keystone:** The wedge-shaped central and highest stone in an arch and last one set in place during construction.

Metalwork/metalry: Metalwork is making objects from metal.

**Minimalism:** A twentieth century art movement and style stressing the idea of reducing a work of art to the minimum number of colors, values, shapes, lines and textures. No attempt is made to represent or symbolize any other object or experience.

**Nave:** In the architecture of a church, the major, central area where the congregation gathers.

**Neo Classicism:** A French art style and movement that originated as a reaction to the Baroque in the mideighteenth century, and continued into the middle of the nineteenth century. It sought to revive the ideals of ancient Greek and Roman art. Neoclassic artists used classical forms to express their ideas about courage, sacrifice, and love of country.

**Ornamentation:** Decoration or embellishment in architecture, furniture, etc.

Plaster mold: The negative form made in plaster from an original (positive) form.

**Relief sculpture:** Figures or shapes that project from a flat surface.

**Reredos:** An artistic decoration behind the altar in a church, e.g. a wood or stone screen or a wall-hanging.

**Rose window:** Large circular windows, with a radially balanced design of tracery and stained glass found in Gothic cathedrals. Also called a wheel window.

**Textile:** A cloth, usually made by weaving or knitting fiber or yarn; a fabric. Materials might include fibers of raffia, wool, cotton, linen, silk, or synthetics, among others.

**Transept:** An aisle between the apse and nave. It cuts across the nave and side aisles to form a cross-shaped (cruciform) floor plan.

Travertine: A limestone characterized by irregularly shaped hollows.

**Vault:** In architecture, an extended-arched roof or covering of masonry construction — made of brick, stone, or concrete.

**Weaving:** The interlacing of long, thin materials, such as yarn or thread to make cloth (fabric) or baskets. **Wood grain:** The arrangement, direction, or pattern of the fibers in wood typically aligned along a single axis.

#### Resources

www.cranbrook.edu www.artlex.com http://detroit1701.org/Det%20Society%20of%20Arts%20and%20Crafts.html http://detroit1701.org/RackhamEducMemorialBldg.htm http://www.newworldencyclopedia.org/entry/Crane\_%28bird%29 www.answers.com/topic/radiator http://en.wikipedia.org/wiki/Scandinavian\_design Marilyn Stokstad, *Art History*, 3rd Edition http://www.meadowbrookhall.org/ Mark Getlein, *Living With Art*, 9th Edition http://detroit1701.org/LawrenceFisherMansion.html http://www.enotes.com/topic/Cranbrook\_Schools On-line Dictionary

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