

Jock Kinneir

British, 1917–1994

Margaret Calvert

British, born 1936

UK road signage

designed 1957–67

Retroreflective sign face sheeting, composite substrate, and aluminum alloy support channels

Designed with support from Simon Morgan, Buchanan Computing

Manufacturer: RBLI – Royal British Legion Industries Limited, Aylesford, UK, est. 1919

Committee on Architecture and Design Funds, 2020

Hear Calvert on making a signage system that has stood the test of time. Enter the number on moma.org/audio.



English only

Francis Picabia

French, 1879–1953

**Trifold from 291, nos.
5–6, New York** (July–August 1915)
Printed journal, deluxe edition; letterpress

The Museum of Modern Art Library, New York.
Acquired through the generosity of The
Library Council; The Trustee Committee on
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Kathy Fuld, Marie-Josée Kravis, Philip E.
Aarons, Barbara Jakobson, Gilbert Silverman,
Werner H. Kramarsky, Kathleen Lingo, and
Elaine Lustig Cohen

In two of the collages reproduced here, which evoke commercial advertisements, Picabia renders himself as a car horn and “une jeune fille américaine dans l’état de nudité” (a young American girl in a state of nudity) as a spark plug. The images appeared in a 1915 issue of the American avant-garde art and literary magazine *291* following the artist’s visit to New York earlier that year. “The machine has become more than a mere adjunct of human life,” he remarked. “It really is a part of human life—perhaps the very soul . . . I have enlisted the machinery of the modern world and introduced it into my soul.”

Charles Sheeler

American, 1883–1965

American Landscape

1930

Oil on canvas

Gift of Abby Aldrich Rockefeller, 1934

Hear how a factory in Michigan inspired artists. Enter the number on moma.org/audio.



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English only

Margaret Bourke-White

American, 1904–1971

Chrysler Corporation

 1932

Gelatin silver print

Gift of the artist, 1974

Margaret Bourke-White captured the might of American automotive manufacturing in her images of Ford and Chrysler plants in the early 1930s, around the same time that she became the first staff photographer for *Fortune* magazine, and later, in 1932, the first female staff photographer for *Life*. Albert Kahn's soaring modern architecture for the Ford River Rouge complex captivated painter and photographer Charles Sheeler as early as 1927. Sheeler cemented the image of this spectacular iteration of industrial capitalism in his painting *American Landscape*, noting that "our factories are our substitutes for religious experience."

Lilly Reich

German, 1885–1947

**Folding car seat designs
of tubular steel, with
rubber straps** 1930s

Pencil on tracing paper

Lilly Reich Collection, Mies van der Rohe
Archive

Anni Albers

American, born Germany. 1899–1994

**Automobile upholstery
material samples** after 1933

Horsehair, chenille, and gimp

Gift of Josef Albers, 1970

Hear about the contribution of two women to
the interiors of car design. Enter the number
on moma.org/audio.



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English only

Automobile pistons

1924–34

Aluminum alloy

Manufacturer: Aluminum Company of America, Pittsburgh, PA, est. 1888

Gift of the manufacturer, 1934

Every component of an automobile has to be carefully engineered and designed to ensure maximum safety and efficiency, a fact demonstrated by the curators of the 1934 MoMA exhibition *Machine Art*, which elevated industrial objects to fine art. This display pays homage to that show, with some notable additions. Among the car parts are two contributions by women, who were largely excluded from the male-dominated industry: automobile upholstery fabrics by Anni Albers and a design for a tubular-steel car seat by Lilly Reich.

Ferdinand Porsche

German, born Bohemia. 1875–1951

Volkswagen Type 1 Sedan

designed 1938 (this example 1959)

Steel body, glass, rubber, and other materials

Manufacturer: Volkswagenwerk AG, Wolfsburg,
West Germany, est. 1938

Acquired with assistance from Volkswagen of
America, Inc., 2002

Conservation was made possible by a
partnership with Volkswagen of America

Hear about a popular car design that
remained unchanged for decades. Enter the
number on moma.org/audio.

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English only

In the mid-1930s Adolf Hitler charged German automakers with designing an inexpensive *Volkswagen*, or “people’s car,” as part of his larger aspirations to get as many Germans on the road as possible and drag his country into the auto age. The result was the Type 1 Sedan, which in the years after World War II transcended its inglorious origins and lived up to its name by becoming the choice for millions of car owners around the globe. Better known today as the Beetle, the Type 1 surpassed Ford’s Model T as the best-selling automobile of all time in 1972.

E. McKnight Kauffer

American, 1890–1954

Posters for Shell-Mex and British Petroleum oil companies 1931–34

Lithographs

Gifts of the designer and Shell-Mex BP, 1937–
1939

A wild stallion, a lightning bolt, a heavy chain—these advertisements convey the industrial might and brute strength of the gasoline-fueled engine. A leading exponent of modern graphic design in Britain, Kauffer paired “forms symbolical of mechanical power . . . to advertise powerful machines,” as the author Aldous Huxley described of the designer’s work. Kauffer was one of the eminent artists hired by oil companies Shell-Mex and British Petroleum in the 1930s for an internationally admired advertising campaign to promote their products, including tetraethyl lead fuel, which improved engine performance. Leaded gas was later banned from widespread use after it was determined to be a major pollutant and harmful to human health.

Pininfarina (Battista “Pinin” Farina)

Italian, 1893–1966

Cisitalia 202 GT Car

designed 1946 (this example 1948)

Aluminum body, glass, rubber, and other materials

Manufacturer: S.p.A. Carrozzeria Pininfarina, Turin, Italy

Gift of the manufacturer, 1972

Hear about the slow process of making a fast car. Enter the number on moma.org/audio.



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English only

The first car to enter MoMA’s collection, in 1972, the Cisitalia 202 is also the rarest—only approximately 170 of them are known to have been made. Its small production run was partly due to the handmade qualities of the car: In a process held over from the horse-drawn-carriage trade, the body panels were hammered out over wooden forms as opposed to being stamped by machines (as was more common in mass production). Pininfarina’s radical design eschews the ornamentation and separation of parts typical of cars of the period in favor of a unified structural skin, or monocoque. The taut aluminum skin of the 202 GT seems formed by nature rather than by human hands.

Sir William Lyons

British, 1901–1985

Malcolm Sayer

British, 1916–1970

William M. Heynes

British, 1903–1989

Jaguar E-Type Roadster

designed 1961 (this example 1963)

Steel unibody with fabric top, glass, rubber,
and other materials

Manufacturer: Jaguar Ltd., Coventry, UK

Gift of Jaguar Cars, 1996

The swooping teardrop shape of this classic roadster contributes to its aerodynamic efficiency. Capable of reaching sixty-two miles per hour in just over fifteen seconds, the E-Type (known in the United States as the XK-E) was the fastest large-production passenger car in the world when it was introduced in 1961. Both a cutting-edge racing car and a luxurious passenger vehicle, the E-Type became an icon of the swinging sixties. It was owned by celebrities including musician George Harrison and actress Brigitte Bardot and has starred in countless films and television shows, from James Bond movies to *Mad Men*.

“Oscar” design template

early 1950s

Plastic and metal

Drawing tool belonging to General Motors car designer Homer LaGassey

Car design sweeps 1950s

Aluminum and wood

Drawing tools used in the General Motors Styling Section

Committee on Architecture and Design Funds, 2020

What role did this “average human male” play in car design?
Enter the number on moma.org/audio.



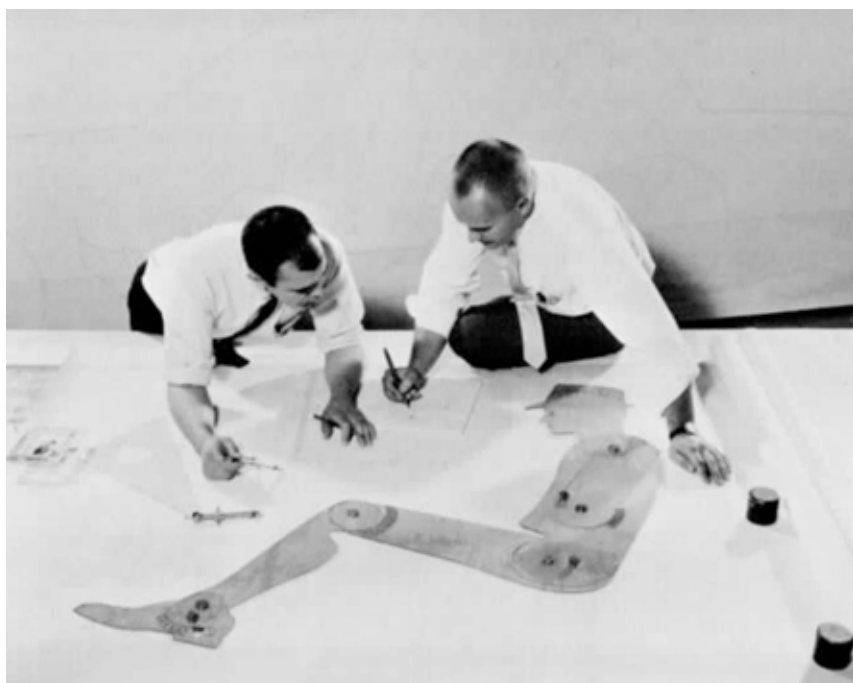
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English only

General Motor’s Art and Color Section—later renamed the Styling Section—was responsible for creating a detailed design for each vehicle from the ground up, a process that began with a pencil and paper. Once preliminary sketches were resolved, full-size two-dimensional renderings of the car interior were produced. A life-size plexiglass figure with a brimmed hat helped designers envision how an “average” 167-pound male body might fit in the car seats in relation to the roof, steering wheel, brake pedal, and other controls. Nicknamed Oscar, the dummy had no female equivalent, despite American market research estimating that women drove in 60 percent of car-owning families and were a dominant factor in 80 percent of all car purchases.



Car designers using an Oscar “dummy.” Published in Henry B. Lent, *The Look of Cars: Yesterday, Today, Tomorrow* (New York: Dutton, 1966), 65. Courtesy Ford Motor Company

Judy Chicago

American, born 1937

Flight Hood 1965–2011

Automotive lacquer on car hood

Courtesy the artist and private collection

Hear the artist on how the death of two loved ones inspired this work. Enter the number on moma.org/audio.



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English only

After completing her masters of fine arts, Chicago enrolled at an auto body school in order to learn how to spray-paint—“partly to prove something to the male artists” she’d met in Los Angeles, who had “repeatedly stated that women couldn’t be artists.” Here she applied a multicolored palette to a Chevrolet Corvair hood, one of a series she made in 1964–65. On multiple counts the Car Hoods were anathema to a male-dominated art establishment—not only due to their biomorphic, female-centric imagery and decorative style, but as the work of a woman artist repurposing an object considered inherently masculine.

CLOCKWISE FROM TOP LEFT:

Eduardo Paolozzi

British, 1924–2005

**Untitled (M.I.R.A. Pair),
Untitled (School Bus), and
Untitled (U 14322) from
The Conditional
Probability Machine** 1970

Three from an illustrated book with twenty-five photogravures

Publisher: Editions Alecto, London

Printer: Alecto Studios, London

Edition: 24

Donald H. Karshan Fund, 1971

To the British artists of the Independent Group, American car culture in the 1950s appeared impossibly glamorous, offering a new iconography of the contemporary world. Paolozzi, a leading member of the group, drew on imagery he found in magazines and science journals from the United States. For his 1970 series *The Conditional Probability Machine*, the artist rephotographed pictures dealing with traffic-accident simulations and transferred them to etching plates. Paolozzi explores the complex and often violent interchange between humanity and its technology in a dance that encompasses debates around modernism, consumerism, and popular culture.

Airstream, Inc.

United States, est. 1931

Airstream Bambi Travel Trailer

designed 1960 (this example 1963)

Aluminum, steel, glass, wood, and other
materials

Gift of Airstream, Inc., 2006

Hear about the animal that inspired the name
Bambi. Enter the number on moma.org/audio.



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English only

An American symbol of freedom, progress, and the enduring possibilities of the open road, the Airstream Travel Trailer was first conceived in the late 1920s by Wally Byam as a sheltered alternative to tent-camping. Introduced in 1961, the Bambi was the company's smallest model, a single-axle trailer roughly the same length as the average passenger car. The lightweight all-aluminum monocoque design, which increases the Bambi's aerodynamic efficiency, was inspired by early airplanes.

CLOCKWISE FROM TOP:

Robert Frank

American, born Switzerland. 1924–2019

South Carolina 1955

Gelatin silver print

Gift of Paul A. Katz and Arthur Penn, 1984

**U.S. 90, en route to
Del Rio, Texas** 1955

Gelatin silver print

Purchase, 1959

Butte, Montana 1956

Gelatin silver print

Acquired through the generosity of the Young family in honor of Robert B. Menschel, 2003

Hear how these portraits of the United States were made on the road. Enter the number on moma.org/audio.



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English only

“The humor, the sadness, the EVERYTHING-ness and American-ness of these pictures!” Jack Kerouac exclaimed in his introduction to Frank’s book *The Americans* (1959). The photographer had begun traversing the United States by car with his wife and children in 1955, chronicling his road trip with more than 2,700 pictures, eighty-three of which were eventually published in the book. His photo-essay captured the economic ascendancy of the postwar US—and revealed a profound sense of alienation in a country divided by segregation and political strife. The many Black subjects of Frank’s portraits did not enjoy the same freedom to travel the open road, for fear that they might become victims of racist violence.

Paul Rudolph

American, 1918–1997

Lower Manhattan Expressway, New York, NY

Project, 1972

Perspective to the east

Ink and graphite on paper

Gift of The Howard Gilman Foundation, 2000

In the late 1960s an expressway that would run across lower Manhattan was under discussion. Rudolph proposed a Y-shaped corridor that was designed to leave the city's infrastructure intact, suggesting an approach to city building in which transportation networks could bind rather than divide communities. By this point, however, popular opposition to massive road projects in urban centers, and in Greenwich Village in particular, heralded the doom of the ambitious project. Its ultimate defeat marked a turning point, with New York beginning to reevaluate the primacy of the automobile—a debate that continues to this day.

Frank Lloyd Wright

American, 1867–1959

The Living City Project, 1958

Perspective from street

Pencil and ink on paper

The Frank Lloyd Wright Foundation Archives
(The Museum of Modern Art | Avery
Architectural & Fine Arts Library, Columbia
University, New York)

Hear about the ideas behind Wright's car-centric city design. Enter the number on moma.org/audio.



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English only

This illustration depicts a futuristic cityscape encircled by freeways populated with “road machines,” a car design partly inspired by a tractor. The Living City was the final iteration of Broadacre City, Wright's comprehensive plan for the car-centric urbanization of the United States, which he worked on from the 1920s until his death in 1959. An avowed car nut, the architect owned eighty-five automobiles over his lifetime—the majority coated in his signature Cherokee Red. He imagined a web of roads with modern filling stations and roadside markets that would connect urban and rural communities across the US.

SITE

United States, est. 1970

James Wines

American, born 1932

Ghost Parking Lot, National Shopping Centers, Hamden, CT

1977

Wood, plaster, paint, and toy cars

Courtesy SITE – James Wines LLC

Hear what inspired Wines to transform a shopping center parking lot. Enter the number on moma.org/audio.



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English only

Against the backdrop of the 1970s energy crisis, in which American oil consumption rose in tandem with the decline of domestic oil production, the architecture collective SITE submerged twenty defunct cars beneath a thin skin of asphalt in a parking lot outside a shopping mall in Connecticut. A *New York Times* piece observed that “automobiles consume petroleum and asphalt is a petroleum product . . . used here to consume the automobiles”—a cycle that Wines intended to prompt a questioning of “private mobility . . . as a continuing way of life.”



Courtesy SITE – James Wines LLC

Jorge Rigamonti

Venezuelan, 1940–2008

**Ciudad nuclear
(Nuclear City)** 1967
Cut-and-pasted lithograph

**Caracas nodo de
transferencia 2
(Caracas Transfer
Node 2)** 1970
Cut-and-pasted lithograph

Latin American and Caribbean Fund, 2014

Home to the largest proven oil reserves in the world, Venezuela has long experience with the mixed blessings conferred by riches of such volatile nature. Architect Rigamonti reflects on the perils of environmental transformation in service of the new national industry: resource extraction. He focuses in particular on the rapid growth of Caracas and on the industrialization around Lake Maracaibo, the heart of the country's oil wealth. Whether in the ever-expanding city or in remote lakes festooned with derricks and pipelines, the landscape has been forever and dramatically scarred by humanity's presence.

Herbert Leupin

Swiss, 1916–1999

**. . . trink lieber Eptinger!
(Instead Drink Eptinger!)**

1948

Poster for Eptinger mineral water

Lithograph

Gift of the Swiss Government, 1951

Leupin's poster of a smashed-up road sign alludes to the consequences of driving while intoxicated. The distorted sign assumes human qualities: the exclamation mark resembles a shocked face, suggesting the carnage wrought on bodies and minds by careless and impaired drivers. The advertising message—drink Eptinger mineral water instead of alcohol—offers a simple solution to a problem that needlessly claims tens of thousands of lives per year.

John Barnard

British, born 1946

**Ferrari Formula 1
Racing Car (641/2) 1990**

Honeycomb composite with carbon fibers,
Kevlar, and other materials

Manufacturer: Ferrari S.p.A., Maranello, Italy,
est. 1929

Gift of the manufacturer, 1994

**This car is presented in conjunction with the
exhibition *Automania* on Floor 3.**

Every aspect of the Ferrari 641—from its shape to its engineering to its materials—is determined by one overriding goal: speed. The car combines advanced, lightweight carbon fiber body panels with innovations like the first-ever computer-assisted, steering-wheel-mounted gear shifters—all features designed to shave off precious seconds in a race. For a machine of such technological complexity, the 641 is, paradoxically, an example of handmade construction. In an era in which the majority of car manufacturing is done by robots, the Ferrari 641 is an extraordinarily unique, bespoke creation that harkens to an earlier age of car design.