

PART III: A Short History of Concrete

As we see in *Mud*, the Assyrians and Babylonians used clay as the bonding substance for cement. This type of building substance required maintenance to reverse or slow down the impact of rain and erosion. The century of the highrise, from about 1800 to 1900, explored in *Concrete*, also saw additional innovations in terms of materials, which resulted in increased production. In 1756, British engineer John Smeaton made the first modern concrete (hydraulic cement) by adding pebbles as a coarse aggregate and mixing powdered brick into the cement. By 1824, English inventor Joseph Aspdin had created Portland cement, which has remained the dominant cement since then. This artificial and strongly resistant cement was formed by burning ground limestone and clay together. This process changed the chemical properties to produce stronger cement that could be used in the buildings developed to house the growing populations in urban areas. Industry was drawing more people to cities, creating the need to provide adequate housing.

Following the industrial revolution, as societies moved into larger, municipally organized and heavily populated areas, political concerns began to dictate housing and social needs provisions. The types of housing that emerged within the 20th century began to illustrate the division of class within particular societies. These ideas and concerns continue to be depicted across a variety of art forms. As *Concrete* indicates, in this century of urban development, public perception of the highrise shifted from the solution for to the primary cause of many of society's social problems. The 20th century saw a rise in concern for public housing and social equity, particularly as corporate interests took hold of previously affordable housing. Although the primary goal of public housing was to provide affordable places for people to live, the details, terminology, definitions of poverty and other criteria for allocation varied within different contexts.

The design, capacity and broad purpose of the highrise in the mid-20th century, however, were developed as a result of the convergence of technological advancement and perceived social need. Concrete became a readily available and durable building material. The resulting increase in housing was directly correlated to the population's growing needs. As we will see in *Glass*, however, this idea shifted again, from development to demolition, to make way for privately funded, commercial real-estate ventures.

Concrete: Study and Discussion Questions

- Who is responsible for providing accessible and affordable housing?
- What is the role of government in terms of affordable housing?
- What is the relationship between accessible housing and urban development?
- What is the role of technology, with regards to urban development and housing?
- Discuss the shift in perception of the highrise from a solution to social problems to a cause of them.

- What do you think is the current perception of highrises?
- What is at play in your community in the attempt to address social problems through housing? In your opinion, are current solutions working or not?
- What do you think is at stake for housing now?
- Compare socialism and capitalism. How does each system address the issue of housing?

Understanding Concrete: References and Definitions

Socialism: A theory or system of social organization in which the means of production and distribution of goods are owned and controlled collectively or by the government (as defined by the Merriam-Webster dictionary).

Capitalism: An economic and political system in which private owners control a country's trade and industry for profit.

Market Capitalism: An economy that operates by voluntary exchange in a free market and is not planned or controlled by a central authority; a capitalistic economy.

The Great Depression – According to *Encyclopedia Britannica Academic*: A worldwide economic downturn that began in 1929 and lasted until about 1939. It was the longest and most severe depression ever experienced by the industrialized Western world, sparking fundamental changes in economic institutions, macroeconomic policy, and economic theory. Although it originated in the US, the Great Depression caused drastic declines in output, severe unemployment, and acute deflation globally. Its social and cultural effects were no less staggering, especially in the US, where the Great Depression represented the harshest adversity faced by Americans since the Civil War.

Public Housing – A form of housing tenure in which the property is owned by a government authority, which may be central or local. Social housing is an umbrella term referring to rental housing, which may be owned and managed by the state, by non-profit organizations, or by a combination of the two, usually with the aim of providing affordable housing. According to this [Wikipedia entry](#) this type of housing can also be seen as a potential remedy to housing inequality. In application, however, numerous issues are clear in terms of accessibility, quality control, maintenance and sustainability. The solution becomes the problem toward the end of the 20th century as *Concrete* suggests, and the problems are international in scope.

The New Deal – The New Deal was a series of domestic economic programs enacted in the United States between 1933 and 1936 in response to the Great Depression, and focused on what historians call the "3 Rs": Relief, Recovery, and Reform.

The Berlin Wall

The wall was a barrier constructed by the German Democratic Republic (GDR, East Germany) starting on August 13, 1961, that completely cut off (by land) West Berlin from surrounding East Germany. It was demolished in 1989. As a structure of division, the wall was considered a powerful symbol of communism. With its fall, the Berlin Wall also became a powerful symbol of communism's weaknesses.

[The Dakota](#)

The Dakota was constructed between October 25, 1880, and October 27, 1884. The building is known as the home of former Beatle John Lennon (from 1973 to 1980) and the site of his murder. The Dakota is considered to be one of Manhattan's most prestigious and exclusive cooperative residential buildings, with apartments generally selling for between \$4 million and \$30 million, as of 2013.

[Pruitt-Igoe Housing Project](#)

Pruitt-Igoe was a large urban housing project first occupied in 1955 in St. Louis, Missouri. Living conditions in Pruitt-Igoe began to decline soon after the project's completion in 1956. Ten years later, the complex had become a site known for poverty, crime, and segregation. Its 33 buildings were torn down in the mid-1970s, and the project has become an icon of urban design and housing failure. The complex was designed by architect Minoru Yamasaki, who also designed the World Trade Center towers and the Lambert-St. Louis International Airport main terminal.

[Ronan Point](#)

Ronan Point was a 22-storey tower block in Newham, East London, which partly collapsed on May 16, 1968, when a gas explosion demolished a load-bearing wall, bringing down one entire corner of the building. Four people were killed and 17 injured. The building was named after Harry Louis Ronan (a former Chairman of the Housing Committee of the London Borough of Newham), and was part of the wave of tower blocks built in the 1960s as cheap, affordable prefabricated housing for inhabitants of the West Ham region of London. The site represents the eventual decline of the highrise as a solution for housing issues. Click on this link to [ambient music](#), which uses the problems of Ronan Point as a source inspiration.

[The Condominium Developments in Hong Kong](#)

Completed in 1965, Mei Foo Sun Chuen is the earliest and largest private housing estate to be built in Hong Kong.

[Getting to Know Concrete: Key Figures](#)

[Le Corbusier](#) (October 6, 1887 – August 27, 1965)

According to this [Wikipedia link](#): “Charles-Édouard Jeanneret-Gris, better known as Le Corbusier, was an architect, designer, painter, urban planner, writer and one of the pioneers of what is now called modern architecture. He was born in Switzerland and became a French citizen in 1930. His career spanned five decades, with his buildings constructed throughout Europe, India, and America. He was a pioneer in studies of modern high design and was dedicated to providing better living conditions for the residents of crowded cities.” A resource with a list of buildings created by this influential and key architect is [greatbuildings.com/architects/le_corbusier.html](#).

[Robert Moses](#) (December 18, 1888 – July 29, 1981)

Moses's obituary in the *New York Times* highlights his life achievements and contributions to urban development. See below for a list of NYC websites that outline his contributions to the development of NYC. [The American Experience – The World That Moses Built](#) is part I of a documentary that examines the legacy of Robert Moses and his work. Columbia University's “[Robert Moses and the Modern City](#)” also explores consequences of urban development. The [Wikipedia link](#) on Moses states that he was the “master builder of mid-20th-century New York City, Long Island, Rockland County and Westchester County, New York. His decisions favouring highways over public transit helped create the modern suburbs.” The role of highways has subsequently become a much-debated topic in the framework of urban development as well.

[Nikita Khrushchev](#)

The BBC link [bbc.co.uk/history/historic_figures/khrushchev_nikita_shtml](#) describes Khrushchev (April 15, 1894 – September 11, 1971) and his historical role. [The Wikipedia entry](#) for Khrushchev summarizes that he led the Soviet Union during part of the Cold War, and that he served as First Secretary of the Communist Party of the Soviet Union from 1953 to 1964, and as Chairman of the Council of Ministers, or Premier, from 1958 to 1964. It also outlines that Khrushchev was responsible for the partial de-Stalinization of the Soviet Union, for backing the progress of the early Soviet space program and for several relatively liberal reforms in areas of domestic policy, many of which were seen as ineffective.

[Fiorello Henry La Guardia](#) (December 11, 1882 – September 20, 1947)

La Guardia was the 99th Mayor of New York for three terms, from 1934 to 1945, as a Republican. Previously he had been elected to Congress in 1916 and 1918, and again from 1922 through 1930. He supported President Franklin D. Roosevelt, a Democrat, and in turn Roosevelt heavily funded the city and cut off patronage to La Guardia's foes. La Guardia revitalized New York City. See also [La Guardia Airport, named after the NYC mayor](#).

Additional Reading and Resource Material for *Concrete*

- [Early 20th-century America](#) – a link to the *History Learning Site* segment which outlines U.S. literary, economic and social culture in the 20th century.
- [History of New York City's Parkway System](#) – A New York City website that highlights the history of the parkway system in historical context.
- Biles, R. "Public Housing and the Postwar Urban Renaissance 1949–1973." From *Tenements to the Taylor Homes*. Eds. J.F. Bauman, R. Biles and K.M. Szylian. University Park, Pennsylvania: The Pennsylvania State University Press, 2000. 143–162. Print.
- Carol Berkin et al. *Making America, Volume 2: A History of the United States: Since 1865*. Cengage Learning, 2011. 629–32.
- Monhollon, Rusty L. *Baby Boom: People And Perspectives*. Santa Barbara: ABC-CLIO, 2010. *eBook Academic Collection (EBSCOhost)*. Web.
- Ortega-Alcazar, Iliana. "[Mexico City: Housing and Neighbourhoods](#)." LSE Cities. Feb. 2006. Web.
- Wallace, Aurora. *Media Capital: Architecture And Communications In New York City*. Urbana: University of Illinois Press, 2012. *eBook Academic Collection (EBSCOhost)*. Web.
- A [collection of nine Ted Talks](#) specifically dedicated to urban issues, ranging from access to affordable housing and international economic trends to sustainability and employment.
- [Stewart Brand: What Squatter Cities Can Teach Us](#) – TED Talks series that outlines the current shift to urban living worldwide. This is one of the featured TED talks.
- Stoloff, J.A. "[A Brief History of Public Housing](#)." US Department of Housing and Urban Development. reengageinc.org/research/brief_history_public_housing.pdf.