

IN PERSPECTIVE

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INSPIRATION

Architectural projects often follow non-linear paths to completion and incorporate ideas from diverse sources.

Toronto's New City Hall is an interesting example. The winning design for the building and an associated

as changes to the shape of the towers to reduce their aerodynamic effect in strong winds and supporting the entire central domed council chamber on a single massive concrete stem. The design of the public square was finalized. The results were captured in a model (Fig. 3) that was presented to, and approved by, City Council.

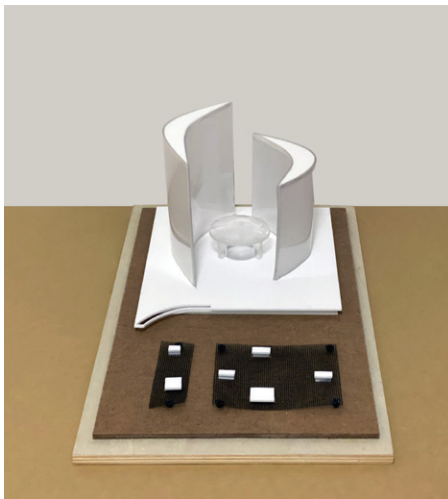


Figure 1

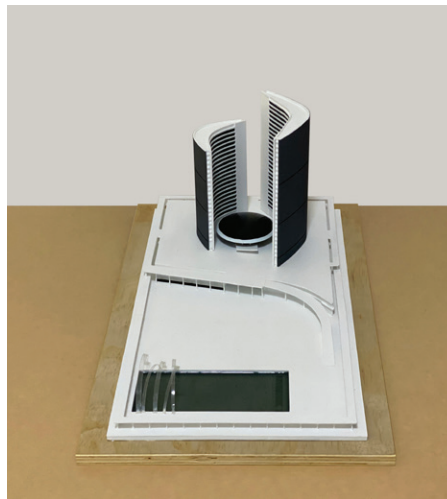


Figure 2

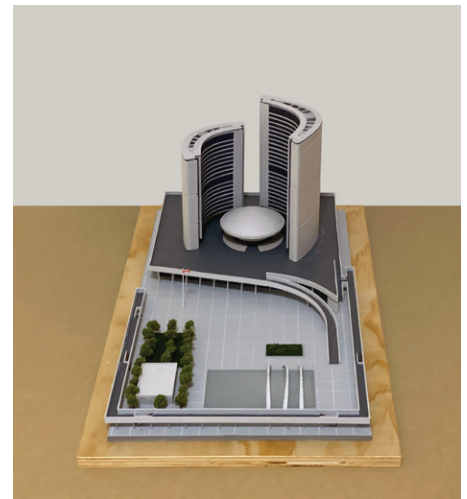


Figure 3

The CMA's models illustrating the evolution of City Hall's design. Scale 1:600.

public square was submitted by Viljo Revell in the 1958 international competition. His proposal was comprised of two curved towers with an ellipsoid disc between them on a rectangular podium. Ill-defined structures in the foreground represented the square. The model (Fig 1) conveyed the essence of his concept despite the absence of detail though Revell did provide sketches on its functionality.

Feedback from the jury provided some of the impetus for further development. The left-right orientation was reversed to better suit the site. Information on the treatment of windows, the roof line and structural details fleshed out the appearance of the building. The design of the square had progressed (Fig 2).

Further engineering modifications were made, such

ANTECEDENTS

Although the structure, as built, is unquestionably unique in its entirety, antecedent designs and ideas may have had an influence.

For instance, the basic composition of a podium supporting an ellipsoid disc and two towers appears, though in a different arrangement, in the National Congress Hall, Brasilia, Brazil, under construction at the time.

The De La Warr Pavilion is an illustrative example of ribbon windows where glass panes, separated only by mullions, are placed in horizontal rows. Developed in the 1920s, they could be used only where floors were supported independently of the walls. Ribbon windows are used on the inner faces of the City Hall towers.



Basic Composition

National Congress Hall, Brasilia, Brazil, Oscar Niemeyer. Completed in 1960.



Brutalism

Palace of Assembly, Chandigarh, India, Le Corbusier. Completed in 1962.



Toronto's New City Hall.



Ribbon Windows

De La Warr Pavilion, Bexhill-on-Sea, England, S. Chermayeff and E. Mendelsohn. Completed in 1935.



Thin Shell Concrete

Palazzetto dello Sport, Rome, Italy, I.A. Vitellozzi and P. L. Nervi. Completed in 1957.

By the mid-twentieth century, brutalism, the practice of not applying conventional finishes to building materials, especially concrete, was becoming an accepted style. This was adopted for City Hall. There was, however, a small concession. Marble chips were added to the concrete forming the outer walls of the towers to soften the effect.

Piere Luigi Nervi, an engineer, pioneered the development of thin shell concrete structures, beginning in the 1930s. These structures are a form of reinforced concrete, but generally rely on wire mesh rather than steel bars. The shape of the shell follows the lines of force that develop as the structure carries its own weight. Consequently, the shells are thin but strong. The roof of the council chamber is such a thin shell and stands without internal supports. Although a 150 ft in diameter, it is only 10 inches thick at the periphery and thins to 4 inches at its centre.

Though not built until 1965, the Gateway Arch in St. Louis was designed by architect Eero Saarinen in 1947. The arches over the pool at City Hall are conceptually similar.



*Gateway Arch (above).
City Hall pool (right).*



This iterative process, fueled by inspiration, is essential to the creation of vibrant and elegant architectural designs.

- Peter Brueckner

Bibliography

Armstrong, Christopher. *Civic Symbol: Creating Toronto's New City Hall, 1952-1966*. Toronto: University of Toronto Press 2018.

Images

Image 1: Toronto City Hall. Photo by cmh2315fl: www.flickr.com/photos/cmh

pictures/36915480441

Image 2: De la Warr Pavilion. Photo by Alan Stanton. en.m.wikipedia.org/wiki/File:De_La_Warr_Pavilion,_Bexhill.jpg

Image 3: Palace of Assembly. Photo by duncid. www.flickr.com/photos/48013827@N00/275987220