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Architecture and Politics: An Exposition of the London City Hall Building by Sir. Norman Foster

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Abstract:- In the 1980s, London's local government had been dissolved and the old government building was transformed into a hotel and aquarium. With Prime Minister, Tony Blair's commitment to bringing back a London-wide government in 1997, the election of a new Mayor and Greater London Authority called for a new government building (7).
The City Hall project was an opportunity to express the values of the newly formed governing body and act as a symbol of change for London (11). The project brief called for a building to house the Greater London Authority (GLA), which consists of the Mayor, London Assembly and their support staff (8). The design for London City Hall was part of a developer-led competition, which asked for submissions according to a design brief that required the promotion of transparency and democracy (9). In addition to these requirements, Foster and Partners incorporated their own environmental goals for the project.

INTRODUCTION

Many in the field of architecture believe that architecture can be read as text, that it is a self-contained sign system with its own grammar. That is to say, architecture can also reveal the hopes, power struggle and the elements culture of the society if put into that context. To this end, architecture can be used to transmit messages when the building users invest into buildings meaning. Poole & Shvartzberg (2015) stated that, architecture as building is always seen as being political, because it literally embodies a mixture of state interests and clan interests (probably better thought of today as corporate interests). In regards to the aforementioned, this study looks at the London City Hall building by Sir Norman Foster, with a view of understanding the methods used in the architecture to express aspirations.

BACKGROUND OF SIR NORMAN FOSTER AND HIS DESIGN PHILOSOPHY

Norman Robert Foster, OM, FRIBA, FCSD, RDI (born 1 June 1935) is an English architect. His early career started by him taking up a job as assistant to a contract manager with John Bearshaw and Partners, a local architectural practice. The staff advised him, that if he wished to become an architect, he should prepare a portfolio of drawings using the perspective and shop drawings from Bearshaw's practice as an example. Bearshaw was so impressed with the drawings that he promoted the young Foster to the drawing department of the practice.

In 1956 Foster won a place at the University of Manchester School of Architecture and City Planning. Foster was not eligible for a maintenance grant so took up a number of part-time jobs to fund his studies, becoming an ice-cream salesman, night-club bouncer and working night shifts at a bakery to make crumpets. He combined these with self-tuition via visits to the local library in Levenshulme. Foster took a keen interest in the works of Frank Lloyd Wright, Ludwig Mies van der Rohe, Le Corbusier and Oscar Niemeyer and graduated from Manchester in 1961. He later won the Henry Fellowship to the Yale School of Architecture, where he met future business partner Richard Rogers and earned his master's degree. Vincent Scully encouraged Foster and Rogers to travel in America for a year. After returning to the UK in 1963 he set up an architectural practice as Team 4 with Rogers and the sisters Georgie and Wendy Cheesman. Georgie (later Wolton) was the only one of the team that had passed her RIBA exams allowing them to set up in practice on their own. Team 4 quickly earned a reputation for high-tech industrial design. After Team 4 went their separate ways, Foster and Wendy Cheesman founded Foster Associates, which later became Foster and Partners in 1967. A long period of collaboration with American architect Richard Buckminster Fuller began in 1968 and continued until Fuller's death in 1983. They collaborated on several projects that became catalysts in the development of an environmentally sensitive approach to design.
Foster's earlier designs reflected a sophisticated, machine-influenced high-tech vision. Today, his designs are geared towards environmental sensitivity as Foster works with its engineers to use computer systems. They pay attention to basic physical laws such as convection and have created efficient buildings like the Swiss Re London headquarters in London. The walls let in air for passive cooling and then let it out as it warms and rises.

LONDON CITY HALL BUILDING

Design Concept

London City Hall's building form is justified according to two main design criteria that consist of democratic and environmental ideals (1).

Democratic criteria

City Hall begins to respond to the necessity for democracy by drawing the public in with its iconic building form. The ground level consists of a sunken outdoor amphitheater that

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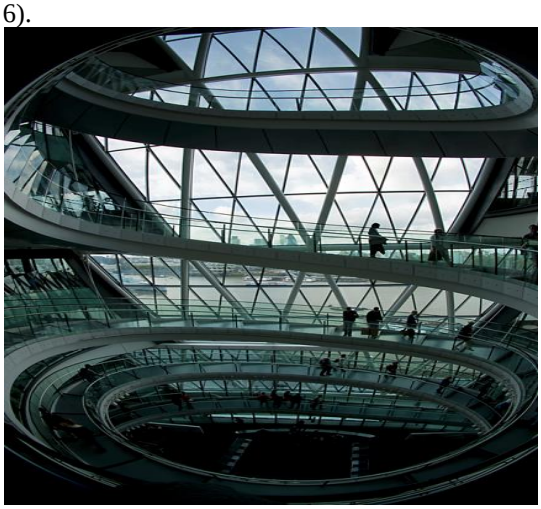
draws the public into an underground café and exhibition space located directly beneath the assembly chamber (Fig 7) (4).

A central winding ramp allows patrons to symbolically ascend through all ten stories of the building and above the debate chamber of their elected representatives (Fig 5) (1). The ramp eventually leads past the mayor's office to what is known as "London's Living Room".

This space provides an excellent exhibition space with its naturally lit spaces, as well as an outdoor terrace that can accommodate up to 200 guests (4).

The transparent glass exterior allows the citizens of London to feel like they are a greater part of their governing body. The transparent façade allows Londoners to see directly into the operating chamber, symbolizing an open system of government. This idea is enhanced by the building's views over the Thames River, Tower Bridge and cityscape abroad that serve as a reminder of London's role as a historically rooted and ever developing world-class city. The chamber also contains 250 seats for public and press viewing of the GLA's meetings and debates (8). Along with the democratic concept, the working atmosphere created inside of the building is admittedly not the spacious office type found in a luxurious office building. Instead, the inside is more of a local-government style office, where the workspace is pushed to the center and open plan areas line the perimeter (Fig 6).



ENVIRONMENTAL CRITERIA

Designed to set the standard for environmentally conscious buildings in London, London City Hall incorporates several passive and active design features to achieve its sustainable merit.

Position

Located on the edge of the Thames, London City Hall takes full advantage of its seclusion from traffic noise and fumes (Fig 8). In addition, the building is positioned to receive the fresh air of the Thames and optimize energy performance according to its on site and orientation to the sun (4).

Form

The exterior formal moves are derived from the desire to reduce the total glass surface area of the building. In general, a spherical building consumes 25% less energy than cubic building of the same volume. Therefore, the solar heat gain and heat loss through London City Hall's building envelope is minimized (9).

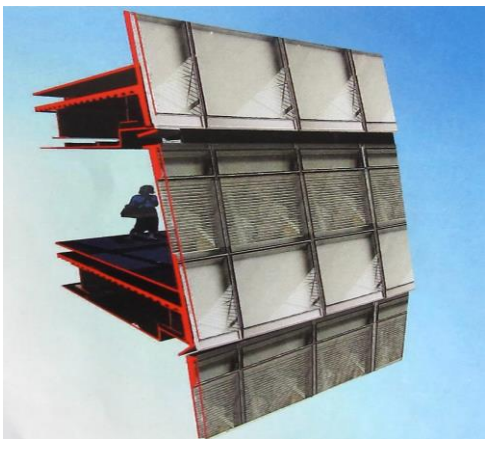
Envelope

Experimental building simulations showed that the energy consumption of an office building could be drastically reduced with the incorporation of thermally efficient cladding. Consequently, the amount of cooling and heating loads would immediately be limited. The building envelope also responds to thermal mapping results, which were derived using three-dimensional lighting analyses and a daylight simulation technique. This technique calculated the incident solar radiation by calculated the illuminance for each panel and converting it into a heat gain value.

In locations along the façade where the greatest solar impacts occur, the ratio of glazing to cladding is reduced and an operable louver system is used (Fig 9) (4).

The angles of the stepping floor plate overhang on the southern façade are calculated to take advantage of sunlight during winter and provide natural shading during summer (Fig 10) (1). In contrast, along the Northern façade, where direct sun exposure is minimal, the assembly chamber is completely glazed and unshaded (Fig 11).

The spherical geometry of the structure required the exact measurements of 654 unique panels that were set at different angles.



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CONCLUSION

Standing monumentally as a part of the "More London" development, London City Hall,
successfully uses innovative practices to declare itself visibly and functionally as a technologically groundbreaking building.
With Foster and Partners' holistic design approach, the architects were able to deliver not only a
transparent and democratic building, but a building that incorporated the most groundbreaking and sustainable technologies of its time.
Today, the building stands proudly, with success radiating visibly from its transparent façade and
literally from its functioning chiller beams. Marked by its success, London City Hall will continue to act as a role model and precedent for many iconic, environmentally responsible buildings to come.

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