

A Brief Review of Frank O. Gehry and the Nationale- Nederlande Building

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Abstract

Constituting the framework of this article are a general overview of the architectural style of one of the foremost figures of contemporary architecture, Frank Gehry, as well as the preliminary results of an effort to review particularly the Nationale-Nederlanden building by the architect through the mathematical concepts of symmetry, similarity and equivalence. The study, which starts on the shell forms of the architectural projects realized by the architect from past to present in general, is detailed through the Nationale-Nederlanden building in particular. “Could symmetry or similarity in the structural elements be an issue in the review of the building —popularly named ‘Fred and Ginger’ or the ‘Dancing House?’ What sort of balance does it establish with the area it is situated in? Which architectural period does it resemble? What conclusions may be drawn when the shell architecture is taken as a sculpture?” are few of the questions we seek to answer.

Frank O. Gehry

“Frank Gehry has been called the Industrial Adhocist, the Father of the Botched Joint, the Son of Bruce Goff, the Leonardo of Galvanized Sheet Metal, The Malevich of Lighting, the Rodchenko of the Non-Sequitur, the Noble Savage of Santa Monica, Daniel Boone, and- worst of all- the First Deconstructionist Architect. And he was called all these things not by an enemy but by a sympathetic critic.” [1]

For many observers, whether involved in architecture or not, Frank Gehry is considered as one of the most important architects of our recent history. The brief quotation we have taken from an article by Charles Jencks published in the “Art and Design” magazine actually presents those of us interested in the issue with a summary of why Gehry’s architecture is important.



Figure 1: *Frank O. Gehry*

As we attempt to detail the sentences used in the quote as someone coming from outside the field of architecture; the minimalist reflective surfaces it attains on the glossy surfaces it uses, its projects that rest of Euclidean foundations, the cubist approach it exhibits on the Platonic solids, the intentional hitches it leaves in details, its compositions susceptible to multiple readings, its non-assimilated elements, its anarchist stance in pursuit of freedom, its strong sculptural creativity, its approach to ordinary, valueless objects, its interest in what is incomplete, its fish forms, its project-scale “Urban Junkyards” [2] the mad, passionate energy it displays from the start to the end of the project, “strange, absurd, surprising” shell forms and similar sentences are what first come to mind about Gehry architecture.

As I have partially tried to explain above, it can be observed that in his pursuit of a new language, the architect may diverge from conventional architectural practices and develop the relationship between the individual and the traditional in favor of the former. On the other hand, although he forms a perception that pushes the fundamentals of civil engineering throughout his works of architecture; it may be seen clearly that he resolved the challenges brought about by such engineering in a natural manner. In addition to all these, Gehry’s understanding of architecture, which has developed over the years, affords us the opportunity to study the Gehry projects from an angle that may well remain outside an architectural approach. That’s why the Nationale-Nederlanden building was chosen as an example among all Gehry structures to be studied on the basis of the concepts of basic symmetry and its contrast such as symmetry, equivalence, similarity, asymmetry, and bilateral symmetry.

Nationale- Nederlanden

The Nationale-Nederlanden building was built from 1992 to 1996 in Prague, in an area that hosted late-19th century Neo-Renaissance structures that were destroyed during the Second World War by American aerial bombardment. One façade of the building faces the Diezenhoferovy Square while another looks at the Vltava River and the Jiraskuv Most Bridge, which connects the opposite bank to the Diezenhoferovy Square. Situated on the corner of two major roads, the building is within walking distance to the Prague National Theater.

Owned by the Dutch bank ING, the project of the building, in which the first president of the Czech Republic, playwright Václav Havel made significant contributions, was approved in a referendum at its final phase. Accepted by 68% of the people, the project has entered among the symbols of the city both thanks to its location in downtown Prague and as a foremost example of modern architecture frequented by visitors to the city.

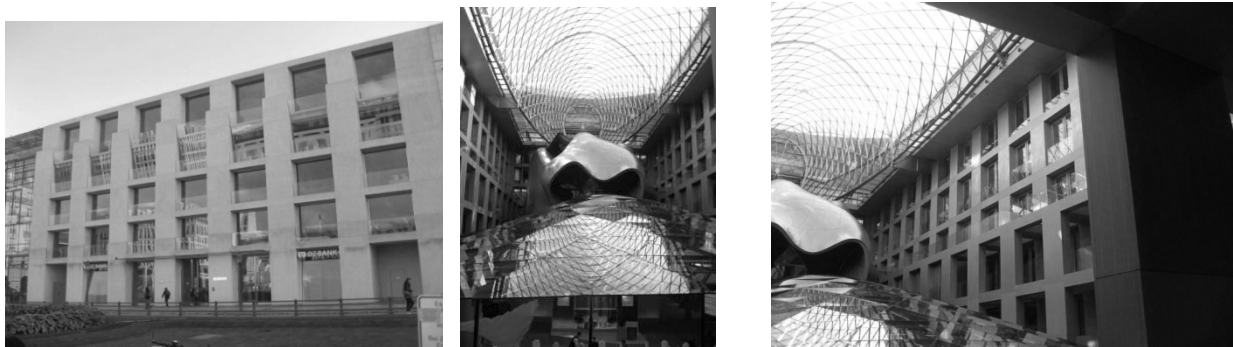


Figure 2: *DZ Bank Building, Berlin, Germany*

After this brief introduction, let us put aside what could be written about the Nationale-Nederlande building; and embark on our journey to briefly explain in a few points the preliminary results of the study conducted on the shell form of the building from the perspective of mathematical concepts such as symmetry, similarity and equivalence:

We should first note that the building is in considerable harmony with the architectural texture of the area where it is situated. Particularly the façade that overlooks the river is hardly discernible from the façade of the neighboring attached building. Many elements find their equivalent in the 19th century architecture at the structure, which seems to have copied the characteristics of 19th-century architecture with a modern understanding. The most significant element in the building, which expresses a roof design similar to 19th century roofs, is a sculptural metal globe. Therefore, in the project that he has realized thanks to his architectural language, Gehry in a sense obtained the contemporary reflection of the architecture of a period. At this point, too, it is impossible not to underline a certain similarity.



Figure 3: *Nationale- Nederlanden, Prague, 1992- 1996*

The overall volume of the Nationale-Nederlande building consists of a rectangular prism, two similar cylinders situated on a corner of this prism and spherical Platonic solids placed on one of these cylinders. At this point, we should recall that circle has a better symmetry than square (and accordingly, sphere than cube) in 2D; which helps us make an assessment of the symmetry of rectangular prism, sphere and cylinder. Accordingly, it may be argued that the basic masses and positioning shapes of the building establish a strong perception of symmetry across the structure. In addition, we must also note that the sculptural sphere built on a cylinder plays a significant role in bolstering the perception of symmetry.

This building also features applications by the architect such as the placement of a simple/static volume alongside a similar dynamic mass, or the balanced use of a common line/mass throughout the entire design. He interferes in one of the cylindrical masses in a manner that creates two conical forms by narrowing down the diameter of the cylinder as we move towards the middle of cylinder height, which brought about a contrast that influences the entire design and breaks the inertia seen in the contour of the building, ensuring dynamism. The balance that we mention here draws the attention also in the designs of the sculptural columns that bear the cylinders. It may be argued here that the balance of fixed/moving, or in other words, of contrast, supports the perception of symmetry of the project in terms of the integrity of the design.

As for the external texture of the building, the first element that draws the attention is the fact that it bears the marks of Gehry's interest in the sea. It may be argued that the wavy and mostly parallel lines on the

external texture are a reflection of the waves on the river that runs by its side or the wind that blows over the sea. Furthermore, the windows of which dimensions constituted of the same rectangles made of the same material and mounted on the building in a manner that all remain on the external surface of the building, strengthen the perception of symmetry of the structure as important elements of the external texture. In addition, the windows are positioned in accordance with the waves of the lines on the external texture, which is believed to break the inertia that would have risen from repetition throughout the design and ensure dynamism, supporting the symmetric balance of the shell form.



Figure 4: *Nationale- Nederlanden, Prague, 1992- 1996*

Conclusion

To conclude the article, we may argue that Frank O. Gehry, who is described as a deconstructionist by the majority and as a “Neo-Moder by Jencks, has included us as the audience in his adventure to create his own “counter-language” thanks to his ability to realize his assertive projects. Thanks to his difference, which is manifested through the use of his consistent language, the architect is now easily distinguishable among contemporary architects, and become the subject of several studies for his contributions in architecture. Accordingly, as a result of the study we have made within the boundaries of this article; it would not be wrong to argue that the phenomenon we call symmetry, which includes within itself the counter-language developed in architecture by Gehry, takes up a position also in Gehry architecture as in everywhere else, making its presence felt overtly or covertly in his designs.

References

- [1] C. Jencks, *Frank Gehry: The Deconstructionist*, Art and Design, vol:1/no:4, archINFORM, pp. 14-19. May 1985.
- [2] M. Friedman, *gehry talks*, architecture + process, Universe Publishing, pp.12. 2002.