Walt Disney Concert hall

technique . Anna Batebe
The Walt Disney concert hall as building employs the informal technique in the creation of its form. Quite like approach taken by Cecil Balmond in his article the “new structure and the informal,” Gehry reinvents architecture, by breaking down the barrier between architectural design and structural engineering. In the design of the concert hall Gehry blurs of the fields of architecture and engineering forcing us to look at engineering as evolving nature in design. Furthermore, Gehry’s use of tectonics and assemblage in design add a depth of meaning, creating a building unique and seamless in design.

The informal approach used in the Walt Disney concert hall is revolutionary in that, the engineering and technology were used as driving forces in the creation of the building. At the time of the building's proposal, there were several grey areas in technique that questioned if the building could be built. These questions led to the shutting down of the project during the initial stages. The concert hall was initially created to be built in limestone but was rendered unbuildable by the executive architect that was preparing the construction documents. This was as a result of the technological disconnect with the nature of the form that was to be created, and the material that it was to be built in. This initial lack of clarity of what technique to use in the construction of the Walt Disney concert hall was overcome with the employment of the informal technique that created a structure that had not been used or tested before. It was to be made out of a steel frame and clad in metal (figure one).

Thus, after numerous consultations and design rethinking, the architects were later able to use a three dimensioning program CATIA, which had been originally created for automotive and aeronautical styling. It was this approach, this thinking outside the box that led them to determine that the building could be easily created if they changed their building technique and material to one that involved a steel frame and metal cladding rather than a limestone finish. CATIA modelled the buildings forms accurately and at a fraction of the cost and time. With the integration of CATIA “the forms of the building are built and digitized; then the digital information is used to build the computer model that generates the precise information to rebuild a true physical model” (Backstage story, 67). This reinvention of technique used in the design of the concert hall created new and fresh architecture.
The engineering (structural) techniques used in the concert hall are closely thought out that they seem to blend perfectly with the work of architecture created. This seamless, informal technique or approach used in the construction of the concert hall is unique and directly affects the natural form of the building. In essence, the form of the building is as a result of the structural solutions, the form is quite simply a direct manifestation of the structure. Take for example, (in figure 2) the frame or structure of the founders hall, directly translates into the final form the founders hall takes once cladded (the structure blends seamlessly). Furthermore, the metal material that was chosen as the final cladding for the structure enabled the “sail like surfaces to be achieved” (Backstage story, 71). This sail like effect that the building has would not have been possible had any other material or technique been used. Thus the process and technique led to this specific form.

The seamless blend between architecture and engineering in the Walt disney concert hall shows how a close interaction between the two creates an architecture that is new and fresh; An architecture that pushes the boundary and the relationship of architecture and engineering into a realm that the two disciplines become one, a unification of the two clearly manifested in the buildings form. In the concert hall, we are no longer able to tell what is the structure, or what is the form of the building. This can be seen in figure 3 when we look at the exterior of the concert hall, we can not tell what are the structural members, or the main supports of the building, all we are able to see is a carefully choreographed series of forms at play intersecting each other a unified whole.

This fusion of architecture and engineering in the writings of Cecil Balmond is achieved by treating form and structure in architecture with the same language. In the design of the concert hall, Gehry uses a great deal of curves, thus would it be right to use a straight treatment for a structural member, that does not take in to consideration any of curvy playful language the form employs? No. Thus Gehry's language filters though all the aspects of the design in structure, form etc. Take for example in figure 4 (the main foyer) the forms that the support columns take reflects the curves used in the buildings form. The columns curve and split in to two before attaching to the roof in the same way that the buildings masses such as those in the founders hall split., Showing how Gehry's language filters though all the aspects of the design.
It is this common language that creates seamless properties and characteristics in the concert hall. Gehry’s emphasis ensured that structure was not be seen as late consideration, or a final thought, but was considered all the steps along the way.

Furthermore, the informal technique in architecture signals a change from regular and controlled measures to seemingly irregular and uncontrolled measures. “Instead of regular formally controlled measures, varying rhythms and wayward impulses take root” (Balmond). It is these irregular and seemingly uncontrolled rhythms that we see manifest in the walt disney concert hall. In the design of the concert hall distinct rules and fixed patterns are no more. In figure three we can see that the exterior structure of the walt disney concert hall is in staccato and off beat rhythms. The exterior masses are irregular and follow no rhythm in arrangement, the masses collide with each other, intersecting at various angles. In figure five this off beat rhythm is also seen in plan, by the way the spaces are laid out. The plan follows no solid grid, but rather the spaces flow in to each other in random (chaotic) yet in a carefully orchestrated manner.

The seamless merge between architecture and engineering in the Walt disney concert hall further lends itself well to the writings and thoughts of Kenneth Frampton who argues that “architecture must of necessity be embodied in structural and constructional form” (Frampton, 518). In essence, architecture should be a manifestation of construction and structural deformation and should derive its meaning from tectonic. Frampton suggests that the structural unit in architecture should be the irreducible essence of architectural form, rather than works of architecture that strive to do this though arbitrary or “superfluous proliferation of sculptural gestures all of which have arbitrary dimension” (Frampton, 519).
The Walt Disney Concert Hall embodies architectural tectonic by not “alluding here to the mechanical revelation of construction but rather to a potentially poetic manifestation of structure (in the original Greek sense as an act of making and revealing)” (Frampton, 518). The nature of the tectonic in the Walt Disney concert hall is not reductive as its definition may allude to but “indicates a structural and material Probity, and a poesis of construction” (Frampton, 520). The poesis of construction in the concert hall, can be seen in Figure 5. In this diagram we can see that the structure of the concert hall (in the interior and exterior) is embedded in the form, and is not independent or alien to it. Furthermore, if a structural element is introduced in the interior it is done so using the same language used in the form. Thus, rather than having a straight column, the interior support columns have curvy forms. By using the same language in structure as in form the structure is not alien to the overall concept of the concert hall.

In addition, tectonics play a large role in the way buildings form is created. The Walt Disney concert hall employs the tectonics of frame in its design here “members of varying lengths are conjoined to encompass a spatial field” (Frampton, 520) figure 6 Through this specific approach to tectonics a specific ontological consequence manifests, this is seen by “the way in which framework tends towards the aerial and the dematerialization of mass” (Frampton, 520). Unlike buildings where a mass of a building tends to embed itself or seem grounded in the earth. The tectonics of framework tend towards light and the “immateriality of the frame aspiring to the sky” (Frampton, 522).

In figure 6 The tectonic element helped bring the idea of the masses looking like sails in the sky come to life. Furthermore, the “poetics of construction arise in part, out of the infection and positioning of the tectonic object” (Frampton, 527). In the Walt Disney concert hall something can be said about the breaks in form at the points where collisions occur between the masses, here both the surface and structure are abruptly ending and giving rise to another (figure 5) showing the freeness of the structure. It is these tectonic details that give us insight as to the true meaning of the structure. It is these qualities of tectonics that bring about a sense of “being” in a building. A building thus goes beyond being a static piece of architecture, to something that takes on a life of its own.
Furthermore, the relationship between a building's form and meaning can be seen in the organization of the Walt Disney concert hall. The concert hall speaks about an assemblage, quite like those in geology where “a group of fossils that, appearing together, characterise a particular stratum. These collections of things or of heterogeneous elements” (Deluze, 78) are things brought together that have particular relations. It is these “collections of things and their relations that help express some thing. Take for example, with the Walt Disney concert hall the building in essence is a collection of relationships, here we have the founders room tower and the pre-concert hall areas located near each other, and located towards the exterior (showing their relationship too the public and to each other), and in the centre we have the main concert hall that is the “heart” of the building (figure 7).

In addition, the different elements collected in this assemblage “also include the qualities present (large, poisonous, fine, blinding) and the affects and effectivity of the assemblage: that is not what it is but what it can do” (Deluze, 78). The Walt Disney concert hall relates to this technique of assemblage on many levels in that the assemblage of the Walt Disney concert hall not only reflects how the building functions as a whole but takes into consideration detail such as the materiality of these elements. Take for example an element such as the founders hall which is the most highly reflective element of the whole assemblage demarcates a territory that was made to commemorate the founding members, (figure 7) this element is “more than just a space; it has a stake, its stated a claim” (Deluze, 79) These placements of particular program in specific areas speak about the relationships they have to one another and to the overall building.

The Walt Disney concert hall employs specific architectural techniques such as the informal approach, the use of tectonics and the use of assemblage to create its form. Gehry’s careful selection of technique was revolutionary, in that he pushed boundaries in architectural technique, going for the new and innovative to create a piece of architecture like no other created. His careful fusion of both architecture and engineering resulted in a concert hall unique, fresh and of its time.
works cited page


Kenneth frampton, “rappel a L’orde, the acse for the tectonic” in kate nesbit ed. Theorising a new agenda for architcture, 1996, 518 - 528.