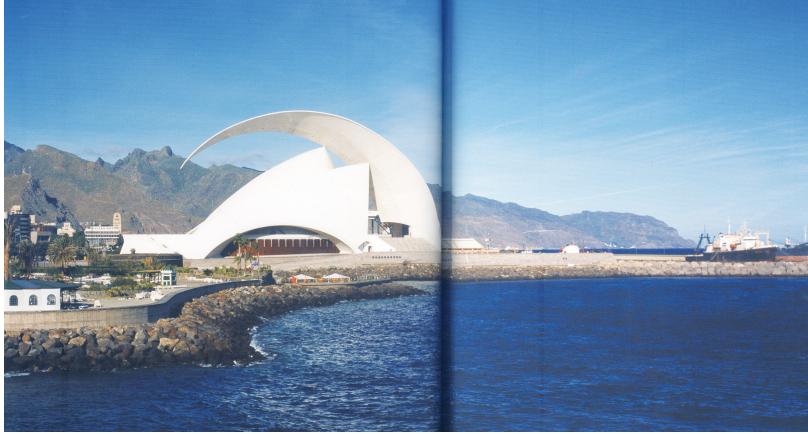
THE EYE OF INSPIRATION

TENERIFE OPERA HOUSE: BY SANTIAGO CALATRAVA



SANTA GRUZ DE TENERIFE, CANARY ISLANDS, 1991-2003

WRITTEN AND RESEARCHED BY: (student name withheld)

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HISTORICAL SEARCH #2



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ABSTRACTIONS:

UNLIKE THE CLASSICAL MAN THAT WAS SUBJECTED TO PROPORTION, OR THE MODERN HOMELESS MAN OF ABSTRACT PROPORTIONS, CALATRAVA VIEWED THE HUMAN BEING THROUGH A POSTMODERN LENS. HE CREATED NUMEROUS DRAWINGS OF THE HUMAN FIGURE IN MOTION, IMPLYING MOVEMENT IN AN IMAGINATIVE WAY. HE WOULD LATER INTEGRATE HIS DISCOVERED FIGURES INTO SCULPTURES AND BUILDINGS (LEVIN, 23). HE FOCUSES ON UNDERSTANDING THE HUMAN FORM IN DIFFERENT SCALES FROM A VARIETY OF PERSPECTIVES (LEVIN, 22). HE EMPHASIZED THAT WHEN AN OBJECT IS SCALED, THE SUBJECT IS NOT FORGOTTEN OR DISCARDED (LEVIN, 30).

CALATRAVA CONDUCTED STUDIES OF THE HUMAN EYE IN RELATIONSHIP TO ITS CONTEXT. AFTER MULTIPLE ITERATIONS OF ABSTRACTING AND DECOMPOSING, HE DEVELOPED A LANGUAGE THAT WOULD CARRY THROUGH BOTH HIS SCULPTURES AND HIS ARCHITECTURE, SPECIFICALLY THE TENERIFE OPERA HOUSE, HIS STUDIES UNEARTHED A SIMPLE. YET CLEAR AND ELEGANT FORM THAT DESCRIBES THE WAY THE PUPIL IS IN RELATIONSHIP TO THE EYEBROW. THE FORM IMPLIES ENCLOSURE, FOCUS, AND RELATIONSHIP. THE WAY THE BROW ARCHES OVER THE PUPIL CREATES ENCLOSURE AND CREATES AN UNBREAKABLE **RELATIONSHIP**. THE CIRCULAR PUPIL IS NOT ONLY THE FOCUS OF THE COMPOSITION, BUT IS THE PORTAL THROUGH WHICH THE VIEWER IS SEEN BY THE OWNER OF THE EYE, CREATING A RELATIONSHIP BETWEEN THE TWO. THE MULTIPLE DIMENSIONS OF INTERPRETATION ARE POSTMODERN, WHILE THE SIMPLICITY, ABSTRACTION, AND RELATIONSHIP BETWEEN FORM AND FUNCTION IS MODERN.

THE FORM OF THE BODY:

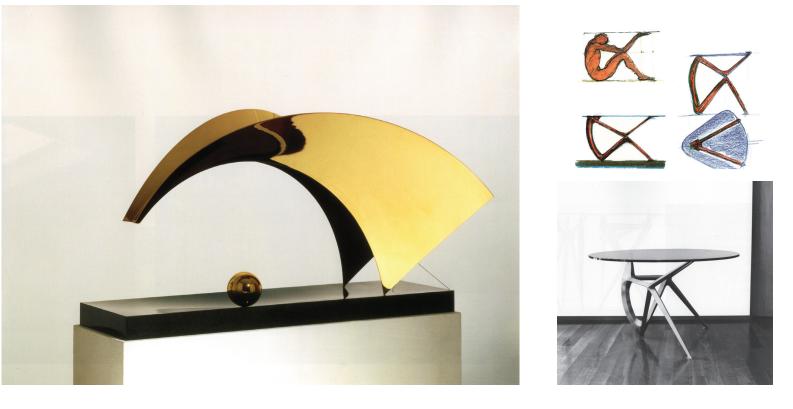
THE RELATIONSHIP BETWEEN CALATRAVA'S DRAWINGS, SCULPTURES, AND ARCHITECTURE IS CRITICAL TO BE UNDERSTOOD, HE COMMONLY WILL USE A SCULPTURE TO INSPIRE A BUILDING, WHICH WILL THEN BE USED TO INSPIRE A NEW DRAWING, SOON TO BE RESEARCHED THROUGH MORE DRAWINGS AND ABSTRACTIONS. "FOR [CALATRAVA], THE CONSTRUCTION OF... OBJECTS IS A FURTHER MEANS OF INTEGRATING ART INTO DAILY LIFE" (LEVIN, 25). THEREFORE, THE BODY AS A MOVING FORM IS EXPLORED IN HIS SCULPTURES, SPECIFICALLY AS A GENERATOR OF FORM AND STRUCTURE. SCULPTURES AND BUILDING USED THE DISCOVERED HUMAN FORMS TO REACT TO PHYSICAL FORCES ON THE STRUCTURES (LEVIN, 32). IT IS OFTEN DIFFICULT TO TELL WHICH SUBJECT WAS THE INSPIRATION: DOES THE ARCHITECTURE PRODUCE THE CHAIR OR DOES THE CHAIR PRODUCE ARCHITECTURE? (LEVIN, 26), THEREFORE, IN DISCUSSING A DRAWING OF CALATRAVA'S, SO ALSO IS HIS SCULPTURES BEING DISCUSSED, AS HIS ARCHITECTURE,

SCIII PTURF:

THE TABLES HE DESIGNS ARE CLOSELY MODERN IN FORM, BUT ALSO RELATE TO THE CLASSICAL FORMS OF HUMAN BEINGS THAT WOULD DECORATIVELY BE CARVED INTO ARCHITECTURAL ELEMENTS, SUCH AS COLUMNS. HIS EXPLORATIONS IN SCALE ARE SIMILAR TO LEONARDO'S HUMAN FIGURE, THAT THE HUMAN FIGURE CAN PROVIDE SCALE AT ANY SCALE FOR ALL THINGS (LEVIN, 30). SIMILAR TO CLASSICISM, HIS FIGURES ARE OFTEN PORTRAYED IN STANCE THAT CREATES TRIANGULAR SPACE (LEVIN, 23). HOWEVER, THE LEVELS OF BEAUTY OF HIS SCULPTURES RESULTS FROM THE MULTIPLE READINGS THAT CAN BE DRAWN DEPENDING ON THE USER. THE INSPIRATION FOR THE TENERIFE OPERA HOUSE, BIRD I CAN BE DEPICTED AS BIRD'S WING OR AN EYE (LEVIN, 24). HIS FORMS OF HIS TABLES CAN BE INTERPRETED DIFFERENT WAYS, AN EXAMPLE BEING A TABLE THAT IS UNDERSTOOD AS AN ABSTRACTION OF THE HUMAN FIGURE, OR PERHAPS AT A SECOND GLANCE, A BULL SKULL (LEVIN, 24). THE TABLES ARE FIXED, YET ARE AT THE SAME TIME MOVING (LEVIN, 28). THE MULTIPLICITY OF READINGS MAKES IT IMPOSSIBLE TO INSTANTLY UNDERSTAND THE SUBJECT FROM MERELY LOOKING WITHOUT FURTHER INVESTIGATION (LEVIN, 28). AS SUBJECTS OF FURTHER INVESTIGATIONS, HIS ARCHITECTURE AND SCULPTURES HAVE THE ABILITY TO TAKE ON NEW MEANING AS TIME PASSES AND MORE DISCOVERIES ARE MADE (LEVIN, 30).

THE IMPORTANCE OF RELATIONSHIP AND FOCUS IS EMPHASIZED IN BIRD I. THE PLACEMENT OF THE SPHERE IN RELATIONSHIP TO THE WING ALLOWS THE WING TO EMPHASIZE THE SPHERE WITHOUT ALLOWING THE FORM OF THE SPHERE TO OVERPOWER THE COMPOSITION. THE WING LIGHTLY TOUCHES THE BASE TO CREATE A RELATIONSHIP BETWEEN THE TWO, ATTEMPTING TO RECONCILE THE FLAT PLANE AS IRREMOVABLE PART OF FORM (LEVIN, 27). HE EVEN DISTINGUISHES THE BASE FROM THE PLATFORM TO EMPHASIZE THE BASE AS A COMPONENT OF THE ART PIECE. THE CRAFT THAT HE EMPLOYED IN HIS SCULPTURES MAKE THEM A WORK OF ART AS A STAND-ALONE FIGURE, BUT THE SIMPLICITY OF THE FORMS MAKES THEM A PRODUCT EASILY CONFORMED TO MASS PRODUCTION (LEVIN, 27). MANY OF HIS SCULPTURES ARE HAND-MADE, AN ATTRIBUTE OF THE ARTS AND CRAFTS MOVEMENT (LEVIN, 25). HIS CONCERN TO CREATE A RELATIONSHIP WITH THE SUBJECT AND ITS ABSTRACTION CARRIES INTO HIS MATERIAL CHOICES. HIS SCULPTURES ARE TYPICALLY CONSTRUCTED OF STONE OR METAL TO EMPHASIZE SENSUALITY, SIMILAR TO THE WAY THAT MIES VAN DER ROHE WOULD USE BOLD MATERIALS (LEVIN, 31). THE CLEAN, SMOOTH, SENSUOUS, REFLECTIVE QUALITIES OF THE MATERIALS SHOW A RELATIONSHIP BETWEEN FORM AND BASE, WHILE ALSO REMINISCING OF THE ATTRIBUTES OF THE HUMAN FORM. EACH MATERIAL CHOICE MUST BE APPROPRIATE FOR THE SCULPTURE OR ARCHITECTURE AND EMPHASIZE THE DRIVING IDEA. IN THE TENERIFE OPERA HOUSE, CONCRETE IS USED TO GIVE A SENSE OF HEAVINESS TO THE SHELL AS IT OVERHANGS THE FOCUS BENEATH.



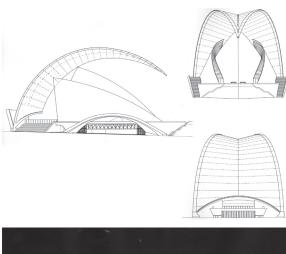


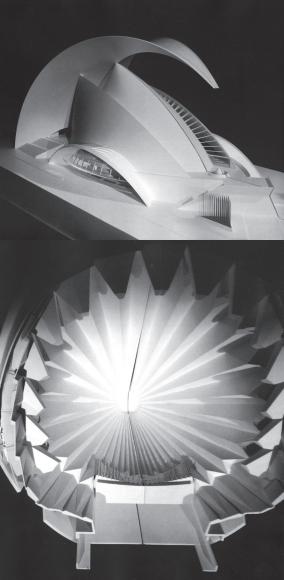
THE TENERIFE OPERA HOUSE:

EXTERIOR:

THE TENERIFE OPERA HOUSE BORROWS FROM THE FORMS OF THE SCULPTURES WHILE ACCOMMODATING THE PROGRAM GIVEN. THE SPHERE OF THE SCULPTURE'S FORM IS ALTERED WITHOUT LOSING ITS VISUAL FUNCTION AS A FOCUS. STILL PROVIDING A FOCUS, THE CORE OF THE BUILDING BECOMES THE PUPIL OF THE BUILDING. THE EXTERIOR EMPHASIZES MOVEMENT AND FOCUS THROUGH THE RELATIONSHIP OF THE LARGE OVERHANG, CALLED THE WING, CREATES ENCLOSURE AROUND THE BODY OF BUILDING THAT VISUALLY MOVES BACK AND UNDERNEATH THE WING. THE WING TOUCHES THE GROUND LIGHTLY WHILE FIRMLY SUPPORTING ITS HEAVY MASS, A REMINDER OF THE HUMAN FOOT. THE COMBINATION OF THE BODY MOVING AWAY AND THE WING **REACHING FORWARD** CREATES A LAYERING THAT GIVES THE APPEARANCE OF AN ORGANISM IN MOTION THAT CREATES AN EMPHASIS TO MOVE INTO THE BUILDING AND DISCOVER WHAT IS CONCEALED BENEATH THE WING. THE PARTS SURROUND THE CORE SEEM TO WRAP AROUND IT, SIMILAR TO THE WAY THE EYELIDS SURROUND AND EMPHASIZE THE EYE. THE RIBS THAT SURROUND THE CORE CAN BE INTERPRETED GILLS, OR POSSIBLY THE IRIS OF THE EYE. THE SLOPE OF THE LAND WORKS TO FRAME THE COMPOSITION IN A WAY THAT UNIFIES THE BASE WITH THE STRUCTURE.

THE GRANDNESS OF THE APPROACH IS AN ATTRIBUTE OF MANY CLASSICAL BUILDINGS, ALSO USING SYMMETRY AND MONUMENTAL ELEMENTS TO SIGNIFY THE ENTRANCE. THE WING CREATES AN ABSTRACTION OF THE ARCH, PROVIDING EMPHASIS TO WHAT IS BELOW, YET INSTEAD OF BECOMING A PORTAL TO BE PASSED THROUGH, IT IS RATHER AN ELEMENT TO BE ENTERED. HOWEVER, THE PERCEPTION OF THE CLEAN SURFACES AND BREAKING AWAY FROM CLASSICAL FORMS AND ORNAMENT IS MODERN. THE EXPRESSION OF THE CAPABILITIES OF CONCRETE THROUGH SHELL ROOF WHILE EXPRESSING BOTH WING AND HUMAN EYE IS ALSO A MODERN CONCEPT (U & A, 76). The blending classicism and modernism THAT SIMULTANEOUSLY ACKNOWLEDGES BOTH THE WING AND THE HUMAN EYE, WHILE LOSING HUMAN SCALE, IS POSTMODERN.



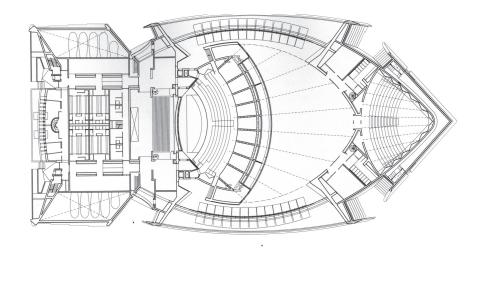


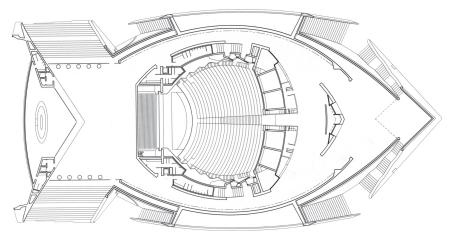
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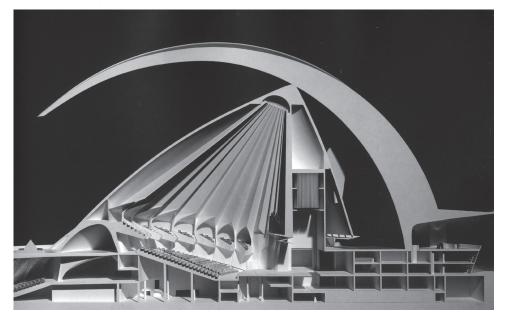
UNDERSTANDING THE Opera House's RELATIONSHIP TO THE HUMAN EYE AND THE WING OF A BIRD, ONE WILL NOTICE THE SUBTLETY IN HOW THE NARRATIVE ENDS AND THE DEEPER ABSTRACTION BEGINS. THE HUMAN ELEMENT IS ALWAYS A VISIBLE LANGUAGE THROUGHOUT EVERY SPACE OF THE BUILDING. THE SPACES REINFORCE THE OVERALL CONCEPT OF THE HUMAN FORM AND EYE IN PLAN, SECTION, ELEVATION, AND PERSPECTIVE, A **UNITY** UNACHIEVED BY MOST MODERN BUILDINGS. EVEN THE SUPPORTS WITHIN ARE INSPIRED BY THE STUDIES OF THE BODY HOLDING UP A MASS. THE EMPHASIS ON THE HUMAN FORM ACTING AS STRUCTURE DATES BACK TO EARLY CLASSICISM, BUT THE RESULT SURPASSES THE ACHIEVEMENTS OF MODERNISM.

THE PLAN SHOWS THE **OPENING OF THE EYE** AS A NARRATIVE, YET A FUNCTION IS SAME; IT IS THE ENTRY INTO THE BUILDING, SIMILAR AS LIGHT ENTERS TO THE EYE, THUS BEGINNING THE INTERACTION BETWEEN THE USER AND THE INTERIOR ARCHITECTURE. THE INTERIOR SPACES HAVE GEOMETRIES THAT REMEMBER THE SLOPE OF THE WING AND THE **CURVE OF THE EYEBROW**, ALL CREATING A FOCUS THAT IS DICTATED BY THE PROGRAM. THE SMALLER CHAMBER HALL HAS A SINGLE FOCUS MOVING TOWARD THE STAGE.

IN CONTRAST, THE CONCERT HALL HAS MULTIPLE FOCI, BOTH VERTICAL AND HORIZONTAL, CREATING MULTIPLE READINGS. THE HORIZONTAL EMPHASIS IS ON THE STAGE BENEATH, AND IF ON STAGE, THE EMPHASIS IS PLACED BACK ON THE AUDIENCE. THE EXCHANGEABLE FOCUS CREATES A VISUAL **RELATIONSHIP** BETWEEN THE LISTENERS AND THE ORCHESTRA; ALL WHILE SATISFYING THE ACOUSTICAL NEEDS OF THE SPACE. THE VERTICAL EMPHASIS IS TOWARDS THE HEAVENS ABOVE, CREATED BY SERIES OF FOLDING RIBS THAT MARRIES AESTHETICS WITH STRUCTURE, OPENS TO THE SKY. THE GOTHIC VERTICAL EMPHASIS OF THE SHAFT CREATES A VERTICAL FOCUS, FURTHER AIDED BY PATTERN, REPETITION, AND THE CONTRAST OF LIGHT AGAINST HEAVINESS EDGES. THE CLASSICAL EMPHASIS ON VERTICALITY PROVIDED TO CREATE A RELATIONSHIP WITH THE HEAVENS WITH THE SPACE BELOW IS **MONUMENTAL**, TIMELESS, AND MYSTIC.





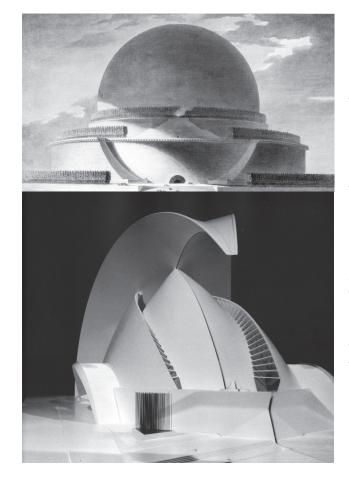


LOOKING AT PRECEDENT:

NEOCLASSICAL COMPARISONS:

ETIENNE LOUIS BOULLEE CREATED SIMILAR STUDIES USING SPHERES THAT CREATE A FOCUS, ALTHOUGH HIS USAGE CREATES OVERWHELMING AND DOMINEERING FORMS THAN THOSE OF CALATRAVA. BOTH ARCHITECTS USE SYMMETRY AND CREATE MONUMENTAL FORMS THAT USES A POWERFUL LANGUAGE THAT INFLUENCES EVERYTHING SURROUND THE FOCUS IN A WAY THAT REINFORCES THE CENTRAL THEME. IN BOULLEE'S **CENOTAPH FOR NEWTON**, HE CREATES A REVERSE ABSTRACTION BY USING TREES IN A WAY THAT RESEMBLES COLUMNS IN THEIR ORGANIZATION AROUND THE SPHERE. THE HUMOR LIES IN THE ORIGINAL ATTEMPT OF THE COLUMN TO BE AN ABSTRACTION OF THE TREE ITSELF. IN COMPARISON, CALATRAVA ABSTRACTS COLUMNS BY MAKING THEM RIBS WITHIN THE CONCERT HALL THAT ACT AS STRUCTURE YET LOSE THE FAMILIARITY OF THE COLUMN.

WHILE BOTH FORMS ARE MONUMENTAL, UNLIKE BOULLEE'S CENOTAPH, THE TENERIFE OPERA HOUSE EMPHASIZES ENTRANCE, AN ATTRIBUTE OF ALL OF CALATRAVA'S ARCHITECTURE. THE ENCLOSURE OF THE FOCUS OF BOULLE'S OPERA HOUSE ALLOWS THE SPHERE TO BE OVERWHELMING, WHILE THE WRAPPING OF THE WING OVER CALATRAVA'S CREATES A DELIGHTFUL HARMONY. ALTHOUGH BOTH OF THE ARCHITECT'S WORK ARGUABLY CONTAIN ORNAMENT IN SOME FORM, CALATRAVA'S HAS A VISUAL IMPORTANCE THAT MAKES ITS IMPORTANCE TO THE COMPOSITION OVERRULE IT NEED TO PERFORM A PRAGMATIC FUNCTION.



BOULLEE'S OPERA HOUSE USES A LITERAL SPHERE, WHILE CALATRAVA'S NPERA HOUSE ABSTRACTS AND IMPLIES A SPHERE. PARTICI II ARIY IN THE CONCERT HALL. THOUGH BOTH USED SPHERES IN THEIR STUDIES, BOULLEE HAD A MORE MYSTIC APPRECIATION OF THE SPHERE. AS A VISIONARY, HE SAW THE SPHERE AS A UNIVERSAL FORM THAT WOULD CREATE A GLOBAL LANGUAGE THAT COULD BE EMPLOYED. IN COMPARISON, CALATRAVA USED THE SPHERE MINIMALIST GEOMETRY Δ THAT CREATES A FOCUS IN A COMPOSITION THAT NEEDS A RELATIONSHIP WITH OTHER FORMS TO RESIST THE GREEDINESS OF THE SPHERICAL FORM. WHILE BOULLEE USED SYMMETRY AS A DIRECT ASSAULT ON MODERNISM, GALATRAVALISEDITINA SHAMELESS REACTION TO NATURE'S NATURAL IMPLEMENTATION OF SYMMETRY.

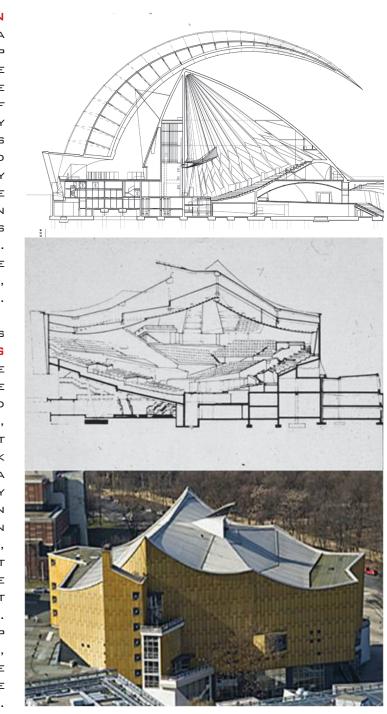


MODERN COMPARISONS:

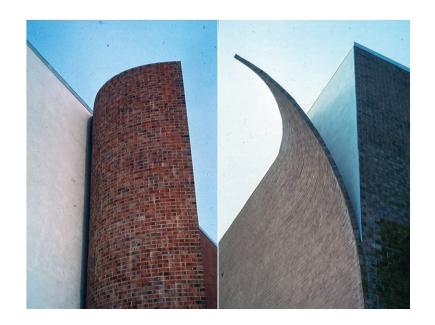
WHEN CONSIDERING THE **MERANDRO II**, THE VIEWERS UNDERSTANDING OF THE HUMAN ANATOMY ALLOWS HIM OR HER TO ASSOCIATE THE FORM WITH THE LEG, WHILE THE ABSTRACTION EMPHASIZES THE **MOTION** OF THE LEG MORE THAN THE ACTUAL LEG ITSELF. BOTH HIS SHELL AND LEGIMPLY AMEMBER **SUSPENDED RIGIDLY IN SPACE.** THE MANNER THAT THE BUILDING TOUCHES THE GROUND AND THE STRUCTURE TOUCHES THE SHELL RELATES TO THE WAY THAT THE FOOT **LIGHTLY TOUCHES** THE GROUND. THE FORMS THAT CALATRAVA GENERATES FROM THIS UNDERSTANDING HAVE INHERENT QUALITIES THAT ARE BOTH FUNCTIONAL AND EXPRESSIVE.

HANS SCHAROUN'S BERLIN PHILHARMONIC HAS Δ PARTICULARLY STRONG RELATIONSHIP WITH THE TENERIFE OPERA HOUSE IN SECTION. BOTH BUILDINGS HAVE AN EMPHASIZED, MAIN PORTION OF THE BUILDING THAT BREAKS AWAY FROM CLASSIC, ORTHOGONAL ROOMS BENEATH, AND SHOW ASYMMETRY AND CLUSTERING, BOTH STRUCTURES DENY VIEWER A SENSE OF SCALE FROM THE EXTERIOR, AND BOTH EMPHASIZE AN ENTRANCE BY A MEMBER OR MEMBERS THAT JUT OUT FROM THE BUILDING. BOTH BUILDINGS HAVE THE NATURE SOMETHING LIVING, MOVING, ΠF PROGRESSING (LEVIN, 28).

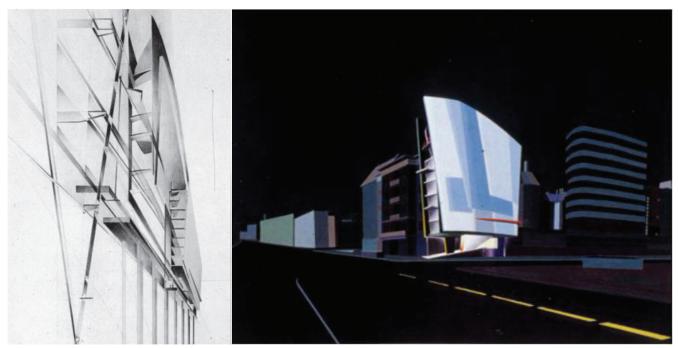
WHILE THE BERLIN PHILHARMONIC IS MORE EXPRESSIVE OF BREAKING **OR TEARING AWAY, THE TENERIFE** OPERA HOUSE EXPRESSES GENTLE AND SENSUOUS OVERLAPPING AND OVERHANGING. FURTHERMORE. Philharmonic is THE MFANT ТП UNEXPLAINABLE AND LACK UNDERSTANDING, WHILE THE OPERA HOUSE IS MEANT TO FIND CLARITY WHEN VIEWED IN PERSPECTIVE. IN PLAN, BOTH A BUILDINGS HAVE AN IMPLIED CENTRIOD. HOWEVER, IN THE PHILHARMONIC, MOVEMENT MOVES TO THE CENTROID, WHILE IN THE OPERA HOUSE, MOVEMENT PASSES THROUGH THE CENTROID. MORE COHESIVE RELATIONSHIP FOUND BETWEEN THE PLAN. 15 SECTION, AND PARTICULARLY THE ELEVATION OF THE OPERA HOUSE THAN THAT OF THE PHILHARMONIC.



REDEEMING POSTMODERNISM:



THE BEST PRODUCT BUILDING USES PARTS THAT PROVIDE A READING FOR THE VIEWER BY USING DECORATIVE APERTURES THAT EXTEND FROM THE BUILDING. SIMILARLY, THE WING OF THE TENERIFE OPERA HOUSE PROVIDES NO STRUCTURAL FUNCTION, BUT IS THE RESULT OF EARLIER ABSTRACTIONS OF A WING AND OF THE EYEBROW. HOWEVER, MULTIPLE READINGS ARE PERCEIVABLE WHEN VIEWING THE OPERA HOUSE. THE MOTIVES OF THE BEST PRODUCT BUILDING ARE TO BE DECEPTIVE, IRONIC, AND JOKING, WHILE THE OPERA HOUSE WING IS USED TO BE EXPRESSION OF FORM, CREATE ENCLOSURE, AND CREATE VISUAL HIERARCHY. ZAHA HADID CREATES FORMS MEANT TO BE UNDERSTOOD IN THREE-DIMENSIONS, SIMILAR TO THE STUDIES OF CALATRAVA. BOTH ARCHITECTS DEMONSTRATE FORMS THAT MOVE AND EXPAND, THAT LOSE SCALE AND CHALLENGE CLASSICAL AND MODERN FORM. DECONSTRUCTIVISM IS USED TO DISCOVER FRAGMENTED FORM THAT LOSES THE HUMANITY, WHILE IRONICALLY, CALATRAVA ALSO USES DECONSTRUCTIVISM TO ABSTRACT THE HUMAN FORM. BOTH HADID'S ARCHITECTURE AND THE TENERIFE OPERA HOUSE SHOW PROGRESSION AND HAVE MONUMENTAL FACADES WITH LAYERING AND DEPTH.



THE WORK OF LARS SPYBROEK DEMONSTRATES SIMILAR FORMS OF THE TENERIFE OPERA HOUSE, DISPLAYING APERTURES THAT REACHING OUT AND AWAY FROM THE MAIN STRUCTURE. THE ABILITY OF COMPUTERS TO CALCULATE THE NEEDED SUPPORT AGAINST FORCES ON CANTILEVERS IS A GREAT ADVANTAGE TO QUICK DESIGN FOR BOTH SPYBROEK AND CALATRAVA. IN CONTRAST, SPYBROEK CONCENTRATES MORE ON THE SKIN OF THE FORM THAN CALATRAVA. BOTH HAVE A RELATIONSHIP TO THE GROUND, BUT THE SPYBROEK'S WORK SEEMS TO GROW OUT OF THE GROUND, WHILE THE OPERA HOUSE USES THE GROUND AS THE FRAME A CENTRAL FOCAL COMPONENT OF THE COMPOSITION.



THE STUDIES OF FRANK GEHRY TO ABSTRACT A NATURAL BEING TO CREATE FORM MAKE HIS WORK COMPARABLE TO THE TENERIFE OPERA HOUSE. BOTH ARCHITECTS ATTEMPT TO RESPECT THE ORIGINAL SUBJECT OF THE WORK WHILE MOVING AWAY TO MAKE NEW DISCOVERIES. HOWEVER, WHILE BOTH HAVE NARRATIVE QUALITIES, CALATRAVA'S ABILITY TO UNEARTH THE INHERENT BEAUTY OF THE HUMAN FORM MAKES HIS ARCHITECTURE SENSUAL EVEN AFTER THE SUBJECT HAS BEEN REALIZED; THE MANNER IN WHICH THE LANGUAGE OF THE HUMAN FORM PENETRATES AND SATURATES THE FORM FROM EXTERIOR INTO THE INTERIOR MAKES CALATRAVA A MASTER. ALSO WORTH NOTING IS THAT GEHRY IS MORE CONCERNED WITH THE SKIN, WHILE CALATRAVA IS MORE CONCERNED ABOUT THICK, HEAVY FORMS.



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