## BLANCHE'S GLASS CHAIN

AT THE END OF 1919, THE GERMAN ARCHITECT BRUNO TAUT INITIATED A YEAR-LONG CORRESPONDENCE WITH A GROUP OF FELLOW ARCHITECTS WHICH CAME TO BE KNOWN AS DIE GLÄSERNE KETTE, OR THE GLASS CHAIN. THE SUBJECT OF THEIR CORRESPONDENCE WAS THE ROLE OF GLASS IN THE BUILDINGS OF THE FUTURE.

FOR TAUT AND HIS COLLEAGUES, GLASS WAS THE QUINTESSENTIAL BUILDING MATERIAL FOR THE MODERN AGE BECAUSE OF ITS CAPACITY TO HOLD AND DISPERSE LIGHT. INDEED, TAUT BELIEVED THAT GLASS BUILDINGS HAD THE CAPACITY TO SPIRITUALLY TRANSFORM THE LIVES OF THEIR INHABITANTS. PART OF HIS CORRESPONDENCE IN THE GLASS CHAIN LETTERS CONSISTED OF A SERIES OF FANTASIES ABOUT LANDSCAPES TRANSFORMED BY ELABORATE GLASS EDIFICES THAT WOULD LINK THE NATURAL AND HUMAN WORLDS IN A KIND OF PERFECTED EXISTENTIAL SPACE.

THE IDEA OF THE TRANSPARENT BUILDING WAS, IN THE MINDS OF THEORISTS OF THE TIME, A COMPELLING SYMBOL OF ALL THAT A NEW AGE MIGHT BE.
THE INTRODUCTION OF LIGHT TO SPACES WHICH HAD IN THE PAST BEEN ENCLOSED AND DARK WAS AN ACT OF LITERAL ENLIGHTENMENT. LIGHT WAS THE PHYSICAL AND SPIRITUAL HYGIENE OF THE NEW TECHNOLOGICAL AGE. AT THE SAME TIME, THE GLASS BUILDING WAS BEYOND THE SCOPE OF THE TECHNOLOGY OF THE TIME TO BUILD, AND EXISTED MORE IN THEORY THAN IN PRACTICE.

IT IS APPROPRIATE, THEN, THAT TAUT'S PROJECT SHOULD BE CALLED THE GLASS CHAIN, WHICH SEEMS A WONDERFUL METAPHOR FOR THE HYPOTHETICAL. A GLASS CHAIN APPEARS TO BE A NEAR IMPOSSIBLE OBJECT, ONE WHICH, BECAUSE OF ITS FRAGILE MATERIALS, DEFIES OUR EXPECTATIONS OF WHAT A CHAIN SHOULD BE: A STRUCTURE BOTH SUPPLE AND STRONG. IT IS AS THOUGH THIS NAME NOT ONLY DESCRIBED THE MODE OF TAUT'S CORRESPONDENCE – A CHAIN LETTER – BUT ALSO A SENSE OF REACHING OUT TOWARDS SOMETHING THAT WAS NOT YET QUITE POSSIBLE. EACH LETTER, EACH FRAGILE "LINK" IN THE GLASS CHAIN, DESCRIBED A SPACE OF REVERIE IN WHICH, FOR A BRIEF AND TENTATIVE MOMENT, THE IMPOSSIBLE WAS BROUGHT INTO BEING THROUGH THE WILLS AND IMAGINATIONS OF ITS AUTHORS.

BLANCHE TILDEN HAS LONG TRADED IN THE CONTRADICTIONS AT THE HEART OF TAUT'S METAPHOR. FOR FIFTEEN YEARS, HER CHAINS OF METAL AND GLASS HAVE EXPLORED THE UNLIKELY CONNECTIONS BETWEEN THE FORMAL AND STRUCTURAL LANGUAGES OF THE MACHINE AND OF JEWELLERY. HER EARLIER WORK TOOK AS A STARTING POINT THE BEAUTIFUL CHAIN STRUCTURES OF THE INDUSTRIAL WORLD: BICYCLE CHAINS, CHAINS USED IN CONVEYOR BELTS IN FACTORIES, PULLEYS. SHE WOULD EITHER CONVERT INDUSTRIAL CHAIN DIRECTLY INTO BRACELETS, NECKLACES AND RINGS, OR, IN HER WORK'S MOST BEGUILING ITERATIONS, RE-FABRICATE THEM, USING THE PROPERTIES OF GLASS TO GESTURE TOWARDS THE STRUCTURAL PROPOSITIONS OF THE CHAIN.

THE LINKS OF ONE CHAIN WERE ENTIRELY CONNECTED BY GLASS RIVETS; IN ANOTHER, THE STRUCTURE WAS REVERSED, SO THAT THE LINKS WERE MADE OF GLASS AND WERE RIVETED WITH METAL.

TO HANDLE THESE WORKS IS TO IMMEDIATELY UNDERSTAND THE WAY IN WHICH THE FUNCTION OF A CHAIN DEPENDS ABSOLUTELY UPON THE INTEGRITY OF EACH ONE OF ITS UNITS. THE SIGHT OF THOSE FRAIL GLASS RIVETS IS ENOUGH TO MAKE US ANXIOUSLY IMAGINE THE INEVITABLE OUTCOME OF THE WORKING OF METAL AGAINST GLASS – TO IMAGINE, IN EFFECT, THE CHAIN'S CONTINGENT EXISTENCE, AND THE POSSIBILITY OF ITS ALWAYS-IMMINENT DESTRUCTION.

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INDEED, TILDEN'S GLASS AND METAL INDUSTRIAL CHAINS COULD ONLY EXIST IN THE REALM OF THE WORN OBJECT, SINCE THEIR FUNCTION HAS SHIFTED: NO LONGER ABLE TO DRIVE THE PARTS OF A MACHINE, THEY HAVE BECOME AN OBJECT WHICH IS A KIND OF HYPOTHETICAL PROPOSITION, KEPT IN EXISTENCE BY A VERY CAREFUL AND MINDFUL ACT OF WEARING. THE WEARER ALWAYS KNOWS THAT ONE ACCIDENTAL SLIP, ONE MOMENT OF CLUMSINESS CAN BRING IT ALL UNDONE, AND INDEED, TILDEN CONFESSES THAT HER WORK DOES SOMETIMES RETURN TO HER FOR REPAIRS, A FACT WHICH SHE SEES AS AN ONGOING PART OF THE LIFE OF THE WORK.

IN FER ET VERRE, TILDEN TURNS TO THE PREHISTORY OF THE MODERNIST GLASS BUILDING FOR HER INSPIRATION. THE TITLE OF HER LATEST BODY OF WORK REFERS TO IRON AND GLASS, THE MATERIALS USED IN THE EDIFICES BUILT FOR THE GREAT EXHIBITIONS OF THE NINETEENTH CENTURY, THOSE EXTRAORDINARY SPECTACLES DESIGNED TO SHOWCASE THE POLITICAL, COLONIAL AND INDUSTRIAL ACHIEVEMENTS OF THE NEW WORLD AND THE GREAT EUROPEAN POWERS. THEIR SCALE, AND THE REQUIREMENT THAT THESE BUILDINGS BE TEMPORARY AND THEREFORE QUICK TO CONSTRUCT AND DISMANTLE OFTEN DEMANDED NEW ENGINEERING SOLUTIONS TO BRING THEM INTO BEING.

A FEW OF THESE BUILDINGS HAVE SURVIVED – THE GRAND PALAIS, REMNANT OF THE PARIS UNIVERSAL EXPOSITION OF 1901, FOR EXAMPLE, AND EVEN MORE FAMOUSLY, THE EIFFEL TOWER, ORIGINALLY BUILT AS A GATEWAY TO THE PARIS EXPOSITION OF 1989. HOWEVER, MOST DID NOT. ALL THAT IS LEFT TO US ARE THEIR TRACES IN THE PUBLIC RECORD – PLANS, DRAWINGS AND PHOTOGRAPHS – TO UNDERSTAND WHAT THEY MUST HAVE BEEN LIKE. THEIR EVANESCENCE, THEIR GLASSY TRANSLUCENCY, LENDS THEM A MYTHIC, ALMOST CHIMERICAL QUALITY. EVEN IN THEIR LIFETIME THEIR COMMANDING SCALE AND AIRY, LIGHTFILLED SPACES DEDICATED TO THE TECHNOLOGICAL AND CULTURAL MARVELS OF THE DAY INSPIRED PEOPLE TO CALL THEM PALACES OR CATHEDRALS, BUILDINGS MORE USUALLY ASSOCIATED WITH FAIRY TALES OR WITH THE SPIRITUAL.

THE TOUCHSTONE FOR FER ET VERRE IS THE LEGENDARY PALAIS DES MACHINES, DESIGNED BY THE GREAT FRENCH INDUSTRIAL ARCHITECT FERDINAND DUTERT FOR THE PARIS EXHIBITION OF 1889. THIS BUILDING SURVIVED BARELY TWENTY YEARS, BEING FINALLY DEMOLISHED IN 1909. HOWEVER, ITS HISTORICAL REPUTATION IS SECURED BY ITS SCALE – IT WAS THE LARGEST IRON FRAMED STRUCTURE EVER BUILT, AND COVERED FIFTEEN ACRES OF EXHIBITION SPACE – AND ITS INNOVATIVE THREE-HINGED ARCH CONSTRUCTION, WHICH PROVIDED A SKELETON STRONG AND FLEXIBLE ENOUGH TO BEAR THE WEIGHT OF ITS EXTENSIVE GLAZED ROOF STRUCTURE.

THE PALAIS DES MACHINES WAS LIT BY ELECTRICITY, SERVICED BY AN ELEVATOR AND MOVING WALKWAYS AND EXHIBITED THE FINEST MECHANICAL ACHIEVEMENTS OF FRENCH INDUSTRY. INTERESTINGLY, GIVEN TILDEN'S INTERESTS, JOHN STAMPER DESCRIBES THE WAY IN WHICH THE WHOLE BUILDING WAS "COVERED WITH COLOURED GLASS, MOSAIC WORK, PAINTINGS AND CERAMIC BRICKS, SO THAT THE GREAT METAL SKELETON BECAME ESSENTIALLY THE FRAME OF AN ENORMOUS JEWEL BOX". IN THIS UNION OF ART WITH TECHNOLOGY, THE PALAIS DES MACHINES, LIKE THE PARIS EXHIBITION ITSELF, BECAME THE VECTOR FOR FRANCE'S POLITICAL, CULTURAL AND TECHNOLOGICAL AMBITION.

A SENSE OF HOW THE PALAIS DES MACHINES LOOKED SURVIVES IN DUTERT'S FINELY-RENDERED PLANS, AND IN A BEAUTIFUL AND EXTENSIVE PHOTOGRAPHIC RECORD. TILDEN HAS DRAWN ON THESE PHOTOGRAPHS FOR FER ET VERRE. THE IMAGES OF THE PALAIS IN USE DURING THE EXHIBITION ARE CROWDED WITH SPECTATORS, EXHIBITS AND ALL OF THE ORNATE PARAPHERNALIA OF LATE NINETEENTH CENTURY EXHIBITION FURNITURE, BUT TILDEN RAISES HER EYES TO THE SPECTACULAR ROOF WHICH DOMINATES EVERY IMAGE.

IN THESE, A SEQUENCE OF EVER-DIMINISHING CROSSBEAMS FORMS A SURPRISINGLY DELICATE TRACERY THAT FRAMES REGULAR GROUPINGS OF GLASS RECTANGLES, COLLECTIVELY FORMING A GREAT CANOPY OF GLASS AND LIGHT.

SOME OF TILDEN'S CHAINS MIMIC THE PERSPECTIVAL EYE OF THE CAMERA. IN THESE, SMALL GRADUATED PANES OF GLASS ARE TRAPPED IN WEBS OF OXIDISED SILVER WIRE. THEY CAN BE SEEN TO REFER SIMULTANEOUSLY TO THE WAY IN WHICH, IN THE PHOTOGRAPHS, THE PANELS OF GLASS IN THE "PALAIS' ROOF APPEAR TO RECEDE, AND TO THE TRADITIONAL FORM OF A CHAIN OR STRING OF BEADS, IN WHICH THE ELEMENTS GRADUATE FROM SMALL TO LARGE AND THEN TO SMALL AGAIN, AS THE CHAIN LOOPS AROUND THE WEARER'S NECK.

IN OTHERS, THE LENGTH OF THE CHAIN IS EXAGGERATED. THE PLEASING SUCCESSION OF LINKS GIVES PLAY TO THE STRUCTURAL LOGIC OF THE CHAIN, WHICH IS ESSENTIALLY A SEQUENCE OF ELEMENTS REPEATED. THESE CHAINS, WHICH CONSIST OF A LONG LENGTH OF RECTANGULAR SILVER LINKS BETWEEN WHICH A SERIES OF GLASS AND WIRE WEBS ARE SLUNG, REFER TO THE LONG, EXPANSIVE VISTAS OF GLASS WHICH THE PALAIS' ROOF PRESENTS.

AT THE SAME TIME, THEY UNITE TILDEN'S ARCHITECTURAL AND JEWELLER'S INTERESTS ONCE AGAIN, SINCE, LIKE A CHAIN, THE PALAIS DES MACHINES' STRUCTURAL LOGIC DEPENDED ON THE AGGREGATION OF SMALLER ELEMENTS WHICH BUILT TOGETHER TO FORM A LARGER WHOLE.

IN THE NINETY YEARS SINCE TAUT INSTIGATED HIS GLASS CHAIN, WE HAVE DEVELOPED THE TECHNOLOGIES TO BUILD THE GLASS STRUCTURES THAT HE AND HIS COLLEAGUES DREAMT OF. AT THE SAME TIME, WE HAVE WELL AND TRULY WOKEN UP FROM THE UTOPIAN DREAMS OF MODERNISM. NO-ONE NOW BELIEVES IN THE PERFECTIBLE ENVIRONMENTS OF TAUT'S FANTASIES AND NEW TECHNOLOGIES HAVE RADICALLY TRANSFORMED OUR CONCEPT OF BUILT SPACES IN WAYS THAT THE EARLY MODERNISTS COULD NEVER HAVE IMAGINED.

IT SEEMS INTERESTING, THEN, THAT AT THIS TIME, WHEN MODERNISM'S DREAMS OF THE FUTURE HAVE BECOME THE STUFF OF OUR PAST, BLANCHE TILDEN SHOULD RECOGNISE IN ITS MOST UTOPIAN MOMENTS AN IDEA WHICH STILL HAS THE POWER TO ENCHANT US: THAT OF A BUILDING MADE OF GLASS. AND YET, HERS ARE NOT EMPTILY NOSTALGIC OBJECTS, RESPECTFUL AS THEY ARE OF THE DREAMS AND ACHIEVEMENTS OF DESIGNERS OF THE PAST. RATHER, WE MIGHT READ IN THEM A NEW IDEA ABOUT OUR RELATIONSHIP WITH BUILT SPACES. AT A TIME WHEN TELECOMMUNICATIONS ALLOW US TO BE BOTH MORE CONNECTED TO GLOBAL COMMUNITIES AND YET SEE THOSE COMMUNITIES AS NOTHING MORE THAN AN AGGREGATE OF INDIVIDUALISED SELVES, HER STRUCTURES REVERSE THE TRADITIONAL IDEA OF A BUILDING AS AN ENVELOPE FOR BODIES. INSTEAD, THEY PROPOSE A RELATIONSHIP IN WHICH THE BODY CARRIES HER STRUCTURES WITH IT, A SORT OF TALISMAN FOR A CONTEMPORARY NOMADIC LIFE IN WHICH THE WEBS OF GLASS AND SILVER CREATE SMALL PRISMS OF LIGHT, NOT QUITE MATERIAL AND RESONANT WITH OUR OWN DREAMS OF OTHER POSSIBLE FUTURES.

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## **REFERENCES**

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