

6 BURNS STREET
FOREST HILLS 75, N. Y.
JANUARY 7, 1955

MR. XXXXXXXXXXXXXXXXXXXX
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LONDON, ENGLAND

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DEAR MR. XXXXXXXXX:

IN REPLY TO YOUR QUESTION AS TO WHETHER THE BAUHAUS IDEAS AND TECHNIQUES HAVE HAD ANY FORMATIVE INFLUENCE ON MY WORK, I MUST ANSWER VIGOROUSLY THAT THEY HAVE NOT. SUCH A BLUNT NEGATIVE LEAVES A LARGE VACUUM AND I TAKE THE OPPORTUNITY AFFORDED BY YOUR QUESTION TO ELIMINATE THAT VACUUM BY FILLING IN WITH A POSITIVE STATEMENT OF MY INITIAL TELEOLOGIC PREOCCUPATION AND THEIR RESULTANT PROCLIVITIES.

BY "TELEOLOGIC" I MEAN: THE SUBJECTIVE-TO-OBJECTIVE, INTERMITTENT, ONLY-SPONTANEOUS, BORDERLINE-CONSCIOUS, AND WITHIN-SELF COMMUNICATING SYSTEM THAT DISTILLS EQUITABLE PRINCIPLES, CHARACTERIZING RELATIVE BEHAVIOR PATTERNS, - FROM OUT PLURALITIES OF MATCHING EXPERIENCES AND RE-INTEGRATES SELECTIONS FROM THOSE NET GENERALIZED PRINCIPLES INTO UNIQUE EXPERIMENTAL CONTROL PATTERNS, - PHYSICALLY DETACHED FROM SELF, - AS INSTRUMENTS, TOOLS, OR OTHER DEVICES ADMITTING TO INCREASED TECHNICAL ADVANTAGE OF MAN OVER ENVIRONMENT CIRCUMSTANCE, AND CONSCIOUSLY DESIGNED TO PERMIT HIS MODIFICATION OF FORWARD EXPERIENCES IN PREFERRED WAYS.

MY TELEOLOGIC STIMULATION FIRST GREW OUT OF BOYHOOD EXPERIENCES ON A SMALL ISLAND ELEVEN MILES OFF THE MAINLAND IN PENOBSCOT BAY OF THE STATE OF MAINE, U. S. A., WHERE, - FLOATABLE AT WILL, IN AND OUT OF NATURE'S TIDAL DRYDOCKS, WITH A FIFTEEN-FOOT FLOOD RISE TWICE A DAY, BOAT BUILDING WAS THE PARENT TECHNOLOGY AND THE DEVICES FOR ITS ORIGINAL DESIGN AND FABRICATION, TOGETHER WITH ITS SUBSEQUENT SPARRING, RIGGING, BEACHING-OUT, WINTERING, CRADLING, REBUILDING, LAUNCHING, AND UPKEEP IN GENERAL WERE SO BROADLY EFFECTIVE AS TO GOVERN SPONTANEOUSLY ALMOST ANY TECHNICAL TASKS TO BE EFFECTED ON THE LAND, WHETHER THIS WAS BUILDING OF DWELLINGS, BARNES, WELL HOUSES, OR WATER-COURSE CONTROLS, - FOR WATER CONSERVATION ON THE ISLAND WAS AS ESSENTIAL TO SURVIVAL AS WAS OUR ABILITY TO PASS SUCCESSFULLY OVER THE WATERS AROUND THE ISLAND, AWAY TO OTHER ISLANDS, OR TO THE MAINLAND.

FISHING WAS THE PRIMARY LOCAL INDUSTRY, AND SUCH TENSION SYSTEMS AS SEINES, TRAWLS, WEIRS, SCALLOP DRAGS, LOBSTER POT HEADS, AND TRAPS, TOGETHER WITH ALL THEIR RESPECTIVE DRAG AND BUOY GEAR, INSURED AN EVER PRESENT ABUNDANCE OF STOUT CORDAGE AND LIGHT LINES AS WELL AS EXPERIENCE IN NET WEAVING, TIEING, SPLICING AND SERVING. HERE MEN "PASSED A LINE" AND "TOOK A TURN" IN DEFT TENSION TECHNIQUES AS SPONTANEOUS AS THOSE OF SPIDERS.

THIS BOYHOOD ISLAND-FARM EXPERIENCE INCLUDED THOSE FIRST TURN-OF-THE-19TH-TO-20TH-CENTURY DAYS OF INDIVIDUAL, OR FAMILY, LOCAL AND SMALL TONNAGE WATER TRANSPORTATION ALMOST EXCLUSIVELY BY SAIL OR ROW BOAT, LEADING TO THE EXPERIMENTAL INCLUSION OF THE NEWLY INVENTED "MAKE-AND-BREAK" INTERNAL COMBUSTION ENGINES. WE HAD IN OUR SLOOP ONE OF THE EARLIEST AUXILIARY GASOLINE ENGINES WITHIN A MANY MILE RADIUS, AND THIS INDUCED A WHOLE LINE OF INVENTIVENESS, - ALONG WITH GALLONS OF SWEAT, RELEVANT TO PRIMING THE ENGINE, TESTING THE SPARK, AND ROLLING OVER A FLYWHEEL. BUT THE ROW BOAT HAD TO SERVE ITS COMPLEMENTARY TASKS, AND AS I HAD TO ROW EACH DAY ON A FOUR-MILE ROUND TRIP TO ANOTHER ISLAND FOR THE MAIL, MY FIRST TELEOLOGIC DESIGN INVENTION WAS A MECHANICAL "JELLY FISH" OR TEEPEE-LIKE FOLDING WEB-AND-SPRIT CONE WHICH WAS MOUNTED LIKE AN INSIDE-OUT UMBRELLA ON THE SUBMERGED END OF A POLE, WHICH POLE COULD BE HAND-PULLED THROUGH A RING OVER THE STERN DRAWING THE SELF-FOLDING CONE ON THE POLE'S WATER-END THROUGH THE WATER WITH LITTLE RESISTANCE, BUT WHICH CONE WHEN PUSHED BY THE POLE OPENED AND GAVE INERTIAL ADVANTAGE, ALMOST AS THOUGH TOUCHING BOTTOM, TO PUMP-POLE THE BOAT ALONG, - FAR MORE SWIFTLY AND EASILY THAN BY SCULLING OR ROWING.

THESE TRIPS WERE FREQUENTLY ROWED IN THE FOG AND ACROSS STRONG TIDAL CURRENTS WHICH INVOLVED COMPLETE DEPENDENCE ON CALCULATIONS AND COMPASS. THE PUSH-POLE MADE POSSIBLE THE VERY

DESIRABLE FORWARD WATCHFULNESS, FRUSTRATED IN BACK-TOWARDS-BOW ROWING.

OUR ISLAND HAD A RICH RESOURCE OF BEACH-DRIED DRIFTWOOD AND STANDING TIMBER, USE OF WHICH REQUIRED PERMISSION OF NO ONE. WITH A POCKET KNIFE AND A FEW OTHER TOOLS I DESIGNED AND PRODUCED MANY CRUDE, - SCALE AND FULL-SIZE, - EXPERIMENTAL DESIGNS IN PLANING BOATS, VALVABLE HOUSES, ROLLING OR SOARING TRANSPORT DEVICES AT BEAR ISLAND BETWEEN 1904 AND 1914. THERE WERE ALSO A NUMBER OF INVENTED AND PRODUCED FURNITURE ITEMS. THESE ALSO INCLUDED A SET OF VERTICAL VICTOR RECORD ROLL-IN-AND-POP-OUT STORAGE CABINETS WHICH HAVE BEEN IN USE NOW FOR A HALF CENTURY. THE FIRST VICTOR RECORDS OF 1904 AND 1905 STORED IN THESE CABINETS ARE AS YET IN FAIRLY GOOD CONDITION DUE TO THEIR STANDING ON EDGE RATHER THAN ON FACE. THESE RECORD STORAGE UNITS WERE TENSIONALLY PARTITIONED WHICH MADE FOR GREAT SPACE ECONOMY. THEY WERE THE PROTO-TYPE FOR A CROP OF WELDED WIRE DEVICES WHICH APPEARED ON THE MARKET A QUARTER OF A CENTURY LATER.

MY NEXT SERIES OF IMPORTANT-DESIGN-INFLUENCE EXPERIENCES CAME AT MILTON ACADEMY IN MILTON, MASSACHUSETTS. HERE I RECEIVED A GOOD PRIVATE SCHOOL'S THEORETICAL EDUCATION COUPLED WITH AN ENTHUSIASTICALLY BROAD EXPERIENCE IN THE HISTORICALLY DIFFERENTIATED FAMILY OF CONTROLLED PHYSICAL PRINCIPLES KNOWN AS "ATHLETICS"; ATHLETICS GREATLY HEIGHTENED WHAT I CALL THE "INTUITIVE DYNAMIC SENSE", A FUNDAMENTAL, - I AM CONVINCED, - OF COMPETENT ANTICIPATORY DESIGN FORMULATIONS. THIS ORGANIZED PRIMARY EDUCATION BROUGHT ME INTO HARVARD WITH GOOD MARKS IN ALL BUT LATIN.

MY FIRST SERIOUSLY OBJECTIVE ADOLESCENT EXPERIENCE GREW OUT OF BEING FIRED FROM HARVARD, OFFICIALLY FOR CUTTING MY CLASSES, BUT IN FACT FOR GENERAL IRRESPONSIBILITY. FORTUNATELY, I LANDED IN CANADA AS AN APPRENTICE TO A GROUP OF ENGLISH (LANCASHIRE) AND GERMAN COTTON MILL MACHINE "FITTERS". HERE I LEARNED TO ASSEMBLE AND ERECT COTTON MILL MACHINERY. I FINALLY MASTERED ON MY OWN THE ASSEMBLAGE AND INSTALLATION OF EACH AND EVERY TYPE OF COTTON MANUFACTURING MACHINE. THE INSTALLATION INCLUDED RUNNING OF THE PULLEY-SHAFTING THROUGHOUT THE BUILDINGS AND ITS OVER-ALL ALIGNMENT FROM THE POWER HOUSE TAKE-OFF THROUGH TO EACH BELTED-IN AND ALIGNED PRODUCTION MACHINE. I STAYED ON TO HELP PUT THE MILL INTO OPERATION. STARTING WITH A BARE NEW BUILDING IN A NEW LAND AND TAKING PART IN ITS MECHANICAL INSTALLATIONS AND SUBSEQUENT RUNNING I GAINED, AT FIRST HAND, A DAWNING AWARENESS OF A MAJOR ECONOMIC-PATTERN-FACTOR, - THAT OF EFFECTIVE "ADDITION OF VALUE (OR WEALTH) BY MANUFACTURE", - EFFECTED BETWEEN RAW AND FINISHED GOODS, - AS GAINED BY THE RICH SYNERGETIC ADMIXTURE OF TECHNOLOGY AND ENERGY. BOTH THE LATTER, I COULD SEE WERE FUNDAMENTAL ASSETS THAT DEFIED EXHAUSTION IN APPARENT UNIVERSE, AND TECHNOLOGY, I COULD SEE WAS A BASIC RESOURCE THAT IMPROVED, - OR SELF MULTIPLIED, - WITH EACH REPEATED OPPORTUNITY OF ITS APPLICATION. I COULD SEE FROM ALL THIS FUNDAMENTAL WEALTH AUGMENTATION, - WITHOUT RESOURCE DEPLETION, - THAT THERE WAS ARISING AN IMPORTANT REORIENTATION OF MANKIND, FROM THE ROLE OF AN INHERENT "FAILURE", AS ERRONEOUSLY REASONED BY MALTHUS, - AND ERRONEOUSLY ACCEPTED BY THE BOOTSTRAP-ANCHORED CUSTODIANS OF CIVILIZATION'S PROCESSES, - TO A NEW ROLE FOR MANKIND AS AN INHERENT "SUCCESS". BUT I COULD ALSO SEE THAT THIS MAGNIFICENT REORIENTATION WAS OCCURRING ONLY THROUGH KNOWLEDGEFUL, AND EXPERIENCE-RICH, COMPETENCE IN TELEOLOGIC DESIGNS, - INTEGRATING, - TRANSCENDENTALLY TO MAN'S CONSCIOUS PLANNING, BUT BY VIRTUE OF PHYSICAL LAWS, AS AN ORGANIC WORKABLE COMPLEX, - INDUSTRIALIZATION.

MACHINES OF THE COTTON MILL IN MY PRE-WORLD WAR I, 1913-1914 EXPERIENCE, WERE AS YET PRIMARILY IMPORTED BY THE AMERICAS. THE IMPORTATIONS WERE MOSTLY FROM ENGLAND--DOBSON AND BARLOW--BUT THEY WERE ALSO IMPORTED FROM FRANCE (COMBERS). THE FRENCH MACHINERY WAS OF FAR BETTER METALLURGY AND ENGINEERING REFINEMENT. THE COTTON MILL MACHINERY WAS SHIPPED FROM EUROPE TO AMERICA IN CASES OF COMPLETELY DISASSEMBLED PARTS. FREQUENTLY THE ENGLISH MACHINE PARTS WERE DAMAGED OR BROKEN IN TRANSIT, AND IT BECAME MY SPECIAL TASK TO FIND WAYS OF OBTAINING REPLACEMENT PARTS IN A HURRY WITHIN THE SMALL INDUSTRIAL TOWN OF SHERBROOKE, QUEBEC, CANADA.

THIS INVOLVED ME IN A SELF-TUTORED COURSE OF ENGINEERING EXPLORATION IN REDISCOVERING THE ORIGINAL DESIGNER'S STRATEGY OF DETERMINATION OF THE RESPECTIVE FUNCTIONS AND STRESSES OF EACH OF THE PARTS WHICH IN TURN HAD OCCASIONED THEIR APPROPRIATE DIMENSIONING, AND

METALLURGICAL SPECIFYING. I HAD ALSO TO REDISCOVER THE ECONOMIC CONSIDERATIONS AND PRODUCTION STRATEGIES ORIGINALLY USED IN DETERMINING THE FORMING PROCEDURES FOR FINAL REALIZATION OF THE PARTS. THIS EXPERIENCE ALSO INVOLVED DISCOVERY OF THE WHEREABOUTS OF LOCAL RESOURCES FOR REPRODUCING SUCH ITEMS. THIS BECAME AN ALL IMPORTANT PHASE IN MY LIFE, WHEN I CAME TO KNOW SHOP FOREMEN, MOLDERS, MACHINISTS AND THEIR RESPECTIVE TOOLS, AND THE BEGINNINGS OF METALLURGICAL PROCEDURES IN GENERAL. SOMETIMES I SUCCEEDED IN DESIGNING BETTER PARTS.

THE CHIEF ENGINEER OF MY COMPANY WISELY PERSUADED ME TO KEEP AN ENGINEERING NOTE AND SKETCH BOOK OF MY EXPERIENCES. SO WELL DID I ENJOY AND THEREFORE CARRY OUT MY NEW PHASE OF "LEARNING" THAT I WAS INVITED TO RETURN TO HARVARD AND QUICKLY ACCEPTED; ONLY TO BE FIRED AGAIN FOR LACK OF SUSTAINED INTEREST IN THE PROCESSES WITHIN THE UNIVERSITY, AND ONCE MORE I RESUMED MY REAL LESSONS, NOT WITHOUT DEEP ANGUISH AND SHAME AT HAVING BROUGHT HURT TO MY FAMILY, BUT ALSO WITH A SENSE OF DEEP ENJOYMENT IN THE OPPORTUNITY TO GET INTO THE LIVE ECONOMIC PATTERN.

THIS TIME IT WAS WITH ONE OF THE GREAT PACKING HOUSE INDUSTRIES - ARMOUR AND COMPANY - WHERE I WORKED SUCCESSIVELY IN TWENTY-EIGHT BRANCHES OF THAT COMPANY IN THE NEW JERSEY-NEW YORK CITY AREA. I WENT TO WORK IN NEW YORK CITY'S PRE-WORLD WAR I DAILY MARKET ROUTINE OF 3:00 A. M. TO 5:00 P. M., AND GAINED EXPERIENCES ALL THE WAY FROM PHYSICAL TRICKS IN LUGGING OF BEEF QUARTERS INTO EXPORT SHIPS; TO DIRECT JOB EXPERIENCE IN THE ECONOMICS OF ABATTOIRS, REFRIGERATION, BY-PRODUCT CHEMISTRY, AND HIGH-SPEED CROSS-NATION PERISHABLE TONNAGE MOVEMENTS IMPINGING ENDLESSLY ON SIDEWALK MARKET TRADING. I LEARNED OF DISTRIBUTION SHRINKAGE, OF COMPREHENSIVE PRE-MECHANICAL ACCOUNTING AND AUDITING METHODS, AND MOST IMPORTANTLY OF BROAD SCALE, HIGH-SPEED, BEHIND-THE-SCENES HUMAN RELATIONS IN THE GIVE AND TAKE PROVISIONING OF MEN'S ESSENTIAL GOODS.

THEN CAME WORLD WAR ONE AND MY ENTRY INTO THE NAVY AND A COURSE AT THE UNITED STATES NAVAL ACADEMY AT ANNAPOLIS WHICH GAVE ME VIGOROUS ENTHUSIASM FOR SCIENTIFIC METHODOLOGY, NOT ONLY AS WITNESSED IN THE LARGE PATTERNS OF SHIP BUILDING BUT ALSO AS EXPERIENCED IN THEIR HANDLING AND NAVIGATING, UNDER A MULTITUDE OF CONDITIONS. I FOUND ALL OF THESE SHIP-COMPLEXES TO BE THE MOST SUPERIOR TOOLS OF THEIR RESPECTIVE HISTORICAL MOMENTS, - PROVIDING STANDARDS OF EFFECTIVENESS UNDREAMED OF IN MY BOYHOOD'S ISLAND DAYS. THE NEW SUPER TOOLS OF THE NAVY EXPERIENCE WERE THE MORE DEEPLY APPRECIATED BY ME BECAUSE OF MY EARLIER LIMITED SUCCESS WITH SELF-IMPROVISED TOOLS WHICH SO OFTEN WERE REALIZED ONLY THROUGH SUCCESSIVE STAGES OF SPONTANEOUS DESIGNS, INVENTIONS, AND FASHIONING IN THE TOOLS-TO-MAKE-TOOLS ADVANTAGE "STEP-UP" SERIES.

MY SECOND DERIVATIVE NAVY EXPERIENCE, IN CONCEPTIONING OF PATTERNS, GAVE ME A NEVER SINCE TO BE LOST EXQUISITE CONFIDENCE IN THE SUPERIOR EFFECTIVENESS POTENTIAL TO THE INDIVIDUAL IN THE DIRECTION OF COMPETENTLY APPREHENDED, ANALYZED AND DESIGN-APPLIED PRINCIPLES INTEGRATED TO ANTICIPATE FORWARD NEEDS BY PHYSICAL TRANSLATION OF THE ASSOCIABLE PRINCIPLES INTO EVENT-CONTROL MECHANISMS. TOOLS, I SAW, WERE CONSUMMATELY WEDDED PRINCIPLES, - AS FUNCTION COUPLES, AS VARIABLY FUNCTIONING COUPLES, - DIFFERENTIATED-OUT OF EXPERIENCE, - ABSTRACTED (OR GENERALIZED), IN TERMS OF RATIOS OF ADVANTAGE AND RATIOS OF ANTICIPATED STRESS PROPORTIONMENT - ALL OBJECTIVELY TRANSLATED INTO THE MATHEMATICALLY MANAGEABLE BUT INFRA-SENSORIAL PRINCIPLES GOVERNING SYNERGETIC CHEMICAL STRUCTURES.

I LEARNED THE PROCESS OF CONSCIOUS SELF-ATTUNEMENT TOWARD UNDERSTANDING OF PRINCIPLES AND THEIR SUBSEQUENT TELEOLOGICALLY TRANSLATED ANTICIPATING EFFECTIVENESS, AS DEMONSTRATED IN: NAVIGATION, BALLISTICS, LOGISTICS, SHIP, SQUADRON AND FLEET HANDLING, - AT SEA AND IN PORT, - ALL OF WHICH ATTUNED COMPREHENSION OF PRINCIPLES INVARIABLY REDUCED ITSELF TO GENERALIZED COMPLEX EQUATION BY A PROCESS OF INCISIVE AND SWIFT DIFFERENTIATING-OUT OF THE PROBLEMS' COMPLEMENTARY FUNCTIONS, - NOT ONLY FROM ONE ANOTHER BUT ALSO FROM ALL OF THE ENTIRELY IMPERTINENT AND UNFAVORABLE A PRIORI ASSOCIATION FACTORS. THEN CAME THE EFFECTIVE RE-ASSOCIATION OF THE SELECTED AND SEPARATED PERTINENT FACTORS WITHIN A RECIPROCATING, DYNAMIC TOTALITY OF NOW RELEVANT BUT COMPLEX INTERACTIONS WHICH METHODICALLY PROCESSED THE VARIABLES IN RESPECT TO THE CONSTANTS.

I WAS FORTUNATE IN HAVING NAVY COMMANDS AND VERY LIVE EXPERIENCE IN EXERCISING COMPREHENSIVE RESPONSIBILITY FOR THE SAFETY, COMFORT AND ORGANIZATIONAL EFFECTIVENESS OF LARGE NUMBERS OF MEN, AS ASSOCIATED WITH, AND ADVANTAGED BY, A COMPLEX OF EXQUISITE TOOLING. THIS TOOLING, IT WAS EXCITINGLY CLEAR TO SEE, HAD ACCRUED ONLY TO THE WHOLE HISTORY OF MAN'S EXPERIENCES AND SUBSEQUENT IRREPRESSIBLE TELEOLOGIC REFLEXINGS TOWARDS FURTHER ANTICIPATORY DESIGN.

THUS I SAW THAT THE TELEOLOGIC DESIGN PROCESS WAS EVER REGENERATIVE, - WITHIN THE PLURALITY OF PROGRESSIVELY HARVESTED PHYSICAL PRINCIPLES OF EXPERIENCE WHICH COULD BE CONVERTED, - THROUGH INITIATIVE, - TO ARTICULATABLE ADVANTAGES, - THUS IN TURN PROGRESSIVELY MODIFYING MAN'S A PRIORI PHYSICAL ENVIRONMENTAL-HAZARD PATTERNS, AND THEREBY BETTERING HIS EFFECTIVE SURVIVAL CHANCES. THE TELEOLOGIC PROCESS WAS THEREFORE REGENERATIVE BECAUSE ITS NEW PATTERNS EVER CREATED RE-STIMULUS TOWARD FURTHER TELEOLOGIC CONVERSIONS OF SUBJECTIVE A PRIORI DESIGN EXPERIENCES INTO OBJECTIVE DESIGN FORMULATIONS, - AS MAN TOOK ON INCREASINGLY CONSCIOUS FUNCTIONING IN THE EVOLUTIONARY PROCESSES.

MY NAVY EXPERIENCES RANGED ALL THE WAY FROM THOSE SMALL COMMANDS TO SUBSIDIARY FUNCTIONS WITHIN MUCH LARGER COMMAND PATTERNS. THE ASSIGNMENTS AND COMMISSIONS BROUGHT, FOR INSTANCE, INCIDENTAL PARTICIPATION IN THE FIRST DEVELOPMENT OF SHIP-TO-PLANE RADIO TELEPHONY. THEY ALSO BROUGHT SUBSEQUENT PARTICIPATION IN THE CONVERSION OF RADIO-TELEPHONY FROM 70-MILE-RANGE SPARK SETS TO LONG DISTANCE ARC-TYPE EQUIPMENT. THE FIRST INSTANCE OF THE ABOVE ELECTRONIC EXPERIENCES OCCURRED WHEN A SMALL SHIP WHICH I COMMANDED WAS SELECTED FOR THE EXPERIMENTAL WORK OF DR. LEE DE FOREST. WHILE ABOARD HE ESTABLISHED THE FIRST SUCCESSFUL VOICE COMMUNICATION EVER HEARD BETWEEN A SHIP AND AN AEROPLANE.

I WAS LATER FORTUNATE TO BE FORCE RADIO OFFICER FOR THE CRUISER AND TRANSPORT FORCE OF THE UNITED STATES ATLANTIC FLEET WHICH CARRIED AND ESCORTED THE AMERICAN TROOPS ACROSS THE ATLANTIC IN WORLD WAR I, AND, AS PERSONAL AIDE FOR SECRET INFORMATION TO ITS COMMANDING ADMIRAL, HAD INTIMATE EXPERIENCE IN LARGE TEAMWORK MAINTENANCE OF COLOSSAL DYNAMIC PATTERNS: FOR INSTANCE, THAT OF MAINTAINING THE HIGH VELOCITY TRANS-ATLANTIC TURNAROUND OF ONE HUNDRED AND THIRTY MAJOR TROOP CARRYING SHIPS TOGETHER WITH THEIR CRUISER AND DESTROYER ESCORTS. HERE EXCITINGLY WAS THE PATTERN OF SECRET HIGH-SPEED EXACT COMMUNICATION AND THE STRATEGY OF SEA GROUP FORMATION, ALL LOGISTICALLY MAINTAINED BY EXQUISITE DOCK-SIDE TIMING OF EXPERTLY SCHEDULED SUPPLY AND MAINTENANCE BY MEN AT THEIR INSPIRED BEST, ACCOMPLISHING "THE IMPOSSIBLE" UNDER WAR-INDUCED SPONTANEOUS COOPERATION. I COMPILED AFTER THE WAR THE OFFICIAL NAVY STATISTICS OF THAT OPERATION. DURING THE WAR I WAS EDITOR OF ITS SEA-PRINTED PUBLICATION "TRANSPORT" WITH MONTHLY CIRCULATION IN OUR FLEET OF 130,000 COPIES.

IMMEDIATELY AFTER THE ARMISTICE OF WORLD WAR ONE, THE U. S. S. "GEORGE WASHINGTON", ONE OF OUR SHIPS, WAS SELECTED FOR PRESIDENT WILSON'S TRIP TO FRANCE TO ATTEND THE VERSAILLES CONFERENCES. IN THE "GEORGE WASHINGTON" WE INSTALLED THE FIRST LONG-DISTANCE WIRELESS ARC TELEPHONY WHICH DRAMATICALLY GRADUATED THE SHIP-TO-SHIP TELEPHONY FROM A 70-MILE-RANGE SPARK SET SQUAWK TO AN EFFECTIVE TWO-WAY TRANS-OCEANIC VOICE COMMUNICATION. ON PRESIDENT WILSON'S SECOND TRIP TO FRANCE, THE HUMAN VOICE WAS TRANSMITTED TRANS-OCEANICALLY FOR THE FIRST TIME IN HISTORY AS MAN WAS HEARD THROUGH THE RECEIVING INSTRUMENT IN ARLINGTON, VIRGINIA, U. S. A., SPEAKING OVER THE TRANSMITTER IN THE RADIO SHACK ATOP THE U.S.S. GEORGE WASHINGTON AT ANCHOR IN BREST HARBOR, FRANCE.

THIS NAVY EXPERIENCE ALSO INVOLVED A TOUR OF DUTY WITH NAVAL AVIATION AND SHORT ASSIGNMENTS ESCORTING UNDERWATER CRAFT. IN OUR FIRST NAVAL AVIATION TRAINING PROGRAM OF 1917, SEAPLANES CRASHED DAILY, - USUALLY "STUBBING" THEIR FLOATS, TRIPPING AND CAPSIZING AS THEY HIT THE WATER. A SEAPLANE RESCUE MAST AND BOOM WHICH I DESIGN-INVENTED AND MOUNTED ON HIGH-SPEED PATROL CRAFT FOR YANKING THE USUALLY CAPSIZED CRASHED PLANES FROM THE WATER, WITH INTENT OF SAVING THE BELTED-IN STUNNED PILOTS FROM THEIR USUAL FATE OF DROWNING, WON ME MY APPOINTMENT TO THE SPECIAL COURSE AT THE U. S. NAVAL ACADEMY AT ANNAPOLIS, MARYLAND IN 1917.

SUCH DYNAMIC PATTERN-EXPERIENCE CONTINUALLY EXCITED CONCEPTIONING IN POTENTIAL ADVANTAGES ACCRUABLE TO NEW COMPLEX DESIGN INTEGRATIONS, AND SUBSEQUENT CONCEPTUAL EXPERIMENTATION WITH FORWARDLY CONCEIVED AND THEORETICALLY DESIGNABLE ENTITIES. SUCH AN EXPERIENCE-INDUCED CONCEPTIONING MADE POSSIBLE, FOR INSTANCE, A CLEAR AND RELIABLE PRE-VISION OF AN ENTIRELY NEW TYPE SHIP, - AND A WELL DEVELOPED PRE-SENSE OF HANDLING THAT SHIP IN ACTION, BUT ALL, OF COURSE, PRIOR TO ITS ACTUAL EXPERIMENTAL DEVELOPMENT, PHYSICAL BUILDING AND FINAL SEA TRIALS, AS PROOF OF THE ORIGINAL CONCEPTIONING'S VALIDITY.

THIS COORDINATE PRE-DEMONSTRATION CONCEPTIONING AND INTEGRATION IS A MENTAL FUNCTIONING WHICH MUST FOR MILLENNIUMS HAVE BEEN COMMON TO THOSE MEN WHO HAVE UNDERTAKEN NEW PHASES OF SHIP DESIGN AND BUILDING TECHNIQUES AND WHO TODAY ALSO LEAD THE ACCELERATING-ACCELERATION IN DESIGN EVOLUTION NOW CHARACTERIZING AIR-OCEAN CRAFT WHICH IS DEVELOPING AT AN EXPONENTIAL RATE OF GROWTH WITHOUT PRECEDENT IN, AND UNANTICIPATED BY, HISTORY.

IN THEIR TELEOLOGIC TREATMENT OF OMNI-OCEANS ARCHITECTURE, - OPERATING WITHIN, UPON AND AROUND THE LIQUID AND GASEOUS ENVELOPES OF EARTH, - THE CLEAR PRE-VISION OF COMPREHENSIVE DESIGNERS INTEGRATES, - PERFORCE OF STARK PHYSICAL LIMITING FACTORS, - AS A SYNERGETIC REALITY SO ORGANICALLY PERSUASIVE AS TO INDUCE ITS SPONTANEOUS IDENTIFICATION IN THE COMMUNICATING MINDS OF MEN BY THE VITAL PRONOUN "SHE". SUCH MAN-CONCEIVED DYNAMIC "SHE'S" ARE EVER PARENTED BY A WHOLE INVENTORY OF NEWLY EVOLVING TECHNICAL POTENTIALS, - WHICH INDIVIDUALLY BREAK THROUGH BARRIERS OF YESTERDAY'S PRACTICABLE LIMITS, - ALL MARRIED, BY COMPETENT INTEGRATION, AND INTELLECT WROUGHT WITH THE WHOLE HISTORY OF ACQUIRED SHIP BUILDING AND HANDLING EXPERIENCES.

IN THIS CLAIRVOYANT INTUITIVE FORMULATING THE AESTHETIC PERSPICACITY, - SENSORIALLY TUNABLE, BY MAN, - IS SPECIFICALLY TRAINED TO PROCESS THOSE BORDERLINE NUANCES OF DIMENSIONAL RATIOS OF THE ENVISIONED SYSTEM'S INTERACTING SUBSYSTEM COMPONENT FUNCTIONS.

SO INVISIBLE ARE THE IMPORTANT TELEOLOGIC INITIATION PROCESSES OF THE DESIGNER'S INTELLECT, YET SO VERY DRAMATICALLY VISIBLE ARE THE STRICTLY SEQUENTIAL PROCESSES AND SYSTEMATIC PHASES OF TRANSLATION INTO REALITY OF SUCH SHIP-DESIGN-EVOLUTION ENVISIONING, - AND SO SCIENTIFICALLY PROSAIC ARE THAT ENVISIONING'S RATIOED CRITERIA OF REQUIRED PERFORMANCE IMPROVEMENTS PER UNITS OF INVESTED RESOURCES -- OVER ANY PREVIOUS RESULTS OF UNDERTAKINGS WITHIN THE RESPECTIVE CATEGORIES -- THAT IT HAS BEEN ERRONEOUSLY PREDICTED THROUGHOUT THE ORIGINAL YEARS OF INDUSTRIALIZATION THAT THE SCIENCE, TECHNOLOGY AND INDUSTRIAL EVOLUTION MUST EVENTUATE INHERENTLY IN A VAST "STEREOTYPED" MONOTONY.

IN HISTORICAL REFUTATION OF SUCH INADEQUATE SURMISE, IT IS NOW IN STARTLING EVIDENCE THAT NO EVOLUTIONARY ERA OF BIOLOGICAL MUTATIONS HAS EVER PROVEN SO PROLIFIC IN ACCELERATED MULTIPLICATION OF SPECIES, TYPES AND SUBVARIETY NUANCES AND REGENERATIVE BY-PRODUCT AESTHETIC STIMULATION AS THAT WHICH NOW ACCRUES TO OMNI-MEDIUM SHIP ARCHITECTURES.

I WILL HERE TRACE BRIEFLY A FORTY-YEAR SEQUENCE OF EXPERIENCE EXCITED AND PERSONALLY MAINTAINED CONCEPTIONING EPISODES WHICH QUITE POSSIBLY WERE DELAY DETONATED FROM DELIGHTED 1904 WATCHING OF THE JET PROPELLED WHITE JELLY FISH IN THE CLEAR MAINE WATER. THIS EXPERIENCE DEFINITELY INSPIRED MY PUSH-POLE PROPULSION INERTIAL DEVICE PROBABLY BY THE INNATE ABILITY OF CHILDREN TO PRACTICE, - WITHOUT KNOWLEDGE OF THE "MATHEMATICS" DISCOVERED IN GENERALIZED PATTERNS AND FORMALIZED BY MATURER MINDS, - THE SPONTANEOUS TELEOLOGICAL INVERSION -- OR TRANSFORMATION OF RELATIVE ACTION-AND-REACTION BEHAVIORS. THE SEQUENCE WHICH I SHALL NOW BRIEFLY TRACE STARTS IN 1917. AFTER THE RECITATION WHICH RUNS THROUGH TO 1955 I SHALL RESUME THE MAIN REVIEW OF THIS LETTER AT ITS 1917 PHASE. THIS UNIQUE SPECIAL FORTY-YEAR SEQUENCE NOW WEAVES TOWARD IMMINENT REALIZATION. THIS CONCEPTIONING DEVELOPMENT IS IN TURN WOVEN INTO THE WARP OF CONTIGUOUSLY OVERLAPPING CONCEPTION-TO-REALITY THREADS WHICH I HAVE ALSO SERVED THROUGHOUT A HALF CENTURY. THE FABRIC THUS WOVEN ADEQUATELY DEMONSTRATES MY MAJOR PREOCCUPATIONS, - AND CONSEQUENT ORIENTATIONS, - TO THE IMPORTANT EXCLUSION OF, AND IMMUNIZATION TO, SECONDARY VALUE INFLUENCES OF POST-MATURING LIFE. THE BLUNTLY STATED

PROPOSITION IN THE FIRST SENTENCE OF THIS LETTER IS THUS DEMONSTRATED, WHICH IS THE PURPOSE OF THIS LETTER.

DURING 1917 IN EXPLORATORY CONVERSATIONS WITH MY "C.O.", COMMANDER P. N. L. BELLINGER, LATER VICE ADMIRAL U. S. NAVY, (ONE OF THE NAVY'S FIRST FOUR AIRCRAFT PILOTS) I STARTED MY THEORETICAL CONCEPTIONING AND DEVELOPMENT OF A WINGLESS, AMPHIBIOUS "JET-STILTS" ELEVATABLE AIRCRAFT WHICH WOULD PLUMMET AERONAUTICALLY IN TETRA-VECTOR GUIDANCE. THIS "FLYING JET-STILTS PORPOISE" WOULD BE POWERED BY TWIN COMBINATION PLANTS, CONSISTING OF GAS TURBINES, JETS AND ROCKET ASSIST THRUSTS, UNIVERSALLY HINGE MOUNTED, ON BOTH STARBOARD AND PORT SIDES, - ABREAST THE MAXIMUM BEAM SECTION. EACH THRUST WOULD BE ANGULARLY ORIENTABLE THROUGHOUT A SPHERICAL-TETRANT SECTOR: VERTICALLY, OUTWARDLY, FORWARDLY, BACKWARDLY, INWARDLY, - WITH THE GEOMETRICAL DEGREES OF FREEDOM CHARACTERIZING A WILD DUCK'S FULL MANEUVERING RANGE OF WING-THRUST ANGLES. THE GAS TURBINES WOULD ALSO BE CLUTCHABLE WITH BREAST WHEELS, OR PADDLE WHEELS, FOR ORIGINAL GROUND OR WATER TAXIING, OR FOR TAKE-OFF AND ALIGNMENT SKITTERING.

THIS SLOWLY GESTATING "JET-STILTS" FLYING CONCEPT BROUGHT ME TO A PAPER AND MODEL MAKING DESIGN STAGE OF A CONCEIVABLY WORKABLE "SHIP" IN 1927. IT WAS, HOWEVER, IMPOSSIBLE TO CONSIDER ITS FULL SCALE REALIZATION IN 1927, - (EVEN HAD I THE NECESSARY CAPITAL OR TECHNICAL ACCREDITING, WHICH I DID NOT), - BECAUSE OF THEN PREVAILING METALLURGICAL HEAT LIMITS WHICH, HOWEVER, HAVE SINCE BEEN ADVANCED TO PERMIT PRACTICAL REALIZATION BY OTHERS OF THE PRINCIPLES INVOLVED, FIRST AS JET SHIPS IN 1943 AND NOW IN 1954 AS VERTICALLY ORIENTABLE JET SHIPS, "FLYING BEDSTEDS", ETC.

I PUBLISHED THE CONCEPT WITH A SKETCH IN A 200-COPY PRIVATELY DISTRIBUTED MONOGRAPH, - "4 D", - IN 1928, AND PUBLICLY IN "SHELTER" MAGAZINE IN NOVEMBER 1932. IN DECEMBER 1932 I WAS INVITED TO SHOW THE MODELS OF THE JET STILT "4 D TRANSPORT" IN THE GRAND CENTRAL BUILDING WINDOWS OF THE ENGINEERS' BOOK SHOP IN NEW YORK CITY, AND IN JANUARY 1933 I WAS INVITED TO SHOW AND DEMONSTRATE THEM IN A SPECIAL FEATURE BOOTH THROUGHOUT THE NATIONAL AUTOMOBILE SHOW IN NEW YORK CITY'S GRAND CENTRAL PALACE, - ALL OF WHICH I ACCEPTED AND EXECUTED.

HOWEVER, IN FEBRUARY 1933 I WAS SO SURE OF THE EVENTUAL SUCCESSFUL JET AND ROCKET POWER PLANT DEVELOPMENT THAT IN ANTICIPATION OF ITS IMMINENT REALIZATION I BUILT THREE FULL SCALE EXPERIMENTAL TRANSPORTS OF APPROPRIATE AERONAUTICAL CONFORMATION, EMBODYING STRATEGIC STEERABILITY CONTROLS IN RESPECT TO EVENTUAL OMNI-DIRECTIONABLE STEERABILITY, LOADABILITY AND MANEUVERING AS THESE RELATED TO CENTERS OF BALANCE, EFFORT AND STRESS. I HOPED THAT THESE EXPERIMENTS WOULD HASTEN MAN'S PRACTICAL REALIZATION AND ENJOYMENT OF ALL-MEDIUM NAVIGATION BY HOVERABLE YET SWIFT, SPOT-LIGHTING AND SPOT-TAKE-OFF TRANSPORTATION THUS OPENING UP VAST NEW RANGES OF PREFERRED EARTH DWELLABILITY, WHEN EXTENSION OF CHEMISTRY OF THE METALLURGICAL HEAT-LEVEL STRENGTH RATIOS APPROPRIATE TO THRUST SUPPORTED PLUMMETING AIR-LAND-WATER CRAFT SHOULD BE REALIZED.

I FELT THAT THE GROUND TAXIING AND CROSS WIND TRAVEL PROBLEMS OF SUCH WINGLESS "FISH" WOULD BE MORE DIFFICULT OF SOLUTION THAN THE AERONAUTICAL MANEUVERING PROBLEMS TO BE ENCOUNTERED. THIS PROVED A WORTHWHILE ASSUMPTION FOR THE GROUND CONTACT MANEUVERING PROBLEMS PROVED TO BE MANY AND DIFFICULT TO OVERCOME, AS HAVE BEEN, - EVER, - THE LAND CONTACTING PROBLEMS OF VESSELS OF ALL TYPES OF EITHER THE SEA OR AIR. WHERE THERE IS PLENTY OF SKY ROOM FOR THE PLANE AND SEA ROOM FOR THE BOAT, TIME IS AFFORDED TO RE-ESTABLISH CONTROLS WHEN BREAKS IN REGULAR FUNCTIONING OCCUR. THE LIQUID AND GASEOUS MEDIUMS ARE CHEMICALLY BONDED IN FLEXURAL FREEDOMS PERMITTING ENERGY EVENT CONTACT STRESS DISTRIBUTIONS TO INNOCUOUS MAGNITUDES, BUT THE CRYSTALLINE STATE CONCENTRATES ITS ENERGY EFFECT. CRYSTALLINE STRUCTURED SHIPS IN LIQUID AND GASEOUS MEDIUM PROVIDE CONVERGENT-DIVERGENT SYSTEMS IN EQUILIBRIUS BALANCE, BUT CRYSTALLINE SHIPS AND CRYSTALLINE EARTH CONVERGE ALL THEIR POTENTIAL CONTACT ENERGIES AT POINT OF CONTACT. PNEUMATIC TIRES ARE PACKAGED SKY OCEANS TO INSULATE EARTH AND SHIP AND TO DISTRIBUTE THEIR POTENTIAL ENERGIES OF CONTACT. I CHOSE THIS LANDED PHASE OF THE OMNI-TRANSPORTS EXPERIMENTAL DEVELOPMENT, NOT ONLY BECAUSE THE METALLURGY WAS NOT QUITE READY, BUT BECAUSE THIS WAS THE HAZARD-ZONE WHERE LURKED THE PREPONDERANCE OF FRUSTRATIONS TO BE

OVERCOME ON THE WAY TO IMPORTANT NEW FREEDOMS OF MAN, IN EXPONENTIAL DEGREES OF HIS PRESENT FIRST DIMENSIONAL LINEAR CROWDING.

MY THREE EXPERIMENTAL UNITS OF 1933, 1934, AND 1935 WERE CALLED THE DYMAXION 4D TRANSPORTS. AS A RESULT OF BUILDING AND TESTING THESE THREE SUCCESSIVE TYPES OF THE 4D TRANSPORT I LEARNED OF THE PRIMARY CROSS-WIND, CROSS-FURROW, IN-RUT, ON ICE, IN-TRAFFIC, IN-PARKING, GROUND LOOPING, CORNERING, HIGH-SPEED ACCELERATING AND DECELERATING PROBLEMS-AND-ANSWERS AND, TO THE BEST OF MY KNOWLEDGE, AM AT PRESENT BETTER PREPARED THAN OTHERS FOR INITIATING THE SUCCESSFUL PROTOTYPING PHASES OF THIS NEW ERA TRANSPORT.

PRIOR TO THE ARRIVAL OF THE OPPORTUNITY TO MAKE SUCH INITIATION OF THE "JET STILT" TRANSPORT, I NOW HAVE READY THE CONCEPTION PROCESSED DESIGNS FOR APPLICATION OF THE TETRA-VECTOR THRUST SUPPORT AND PLUMMET PRINCIPLE TO TWIN MINIATURE-COMBINATION JET-ROCKET POWER PLANTS OF A FEW POUNDS EACH MOUNTED IN "CRUTCH"-LIKE ASSEMBLIES HARNESSABLE UNDER AND TO THE TWO ARMS OF AN APPROPRIATELY CLOTHED MAN AND PROVIDING WEIGHT PERFORMANCE PRACTICAL MEANS FOR HIS PERSONAL FREE HOVERING AND SWIFT FLIGHT, AND BIRD-LIKE LANDING AND TAKE-OFF, INDEPENDENT OF FUSELAGE OR SKELETAL FRAME.

WE NOW JUMP A LONG WAY BACK FROM SUCH THOUGHTS TO RESUME TRACKING OF MY DESIGN STIMULUS AND ITS COMPLEX OF CONCEPTIONING TRENDS. THESE HAVE INTEGRATED MOST COMPREHENSIVELY IN A SEARCH AND RESEARCH PREOCCUPATION WHICH I HAVE NAMED SYNERGETIC AND ENERGETIC GEOMETRY.

MY ATTUNEMENT TO THIS PREOCCUPATION WAS SPONTANEOUS AND OF POSSIBLY NATIVE INTEREST FOR I CAN DIMLY RECALL A HAPPY EXPERIENCE IN KINDERGARTEN ABOUT 1899 OR 1900 WHEN I MADE A COMPLEX TRIANGULAR STRUCTURE OF TOOTHPICKS AND SEMI-DRIED PEAS, WHEREAT THE TEACHER CALLED ANOTHER TEACHER TO LOOK AT IT. TOGETHER THEY EXPRESSED EITHER FEIGNED OR TRUE SURPRISE AND PLEASURE. WHICHEVER IT WAS, I HAD MADE AN IMPRESSION ON THE GALS AND THE WHOLE AFFAIR WAS VIVID ENOUGH FOR ME TO REMEMBER.

I DO KNOW, HOWEVER, THAT I BEGAN MY SINCE SUSTAINED SYSTEMATIC SEARCH IN SYNERGETIC AND ENERGETIC GEOMETRY IN 1917 AND THE OMNI-DIRECTIONALLY REGENERATIVE OCTAHEDRON-TETRAHEDRON COMPLEX, OR VECTOR-TENSOR-EQUILIBRIUM, WAS FIRST ASSUMED AS PROBABLE TO AVAGADRO'S LAW OF GASES, AND THEN GLIMPSE-DISCOVERED AS CONSTRUCTIONALLY POSSIBLE SOME TIME IN THE 1920'S AND PROVEN IN THE 1930'S.

MY DISCOVERY OF THE "OCTET" TRUSS WAS SYNERGETIC, - INTUITIVELY AVOIDING SPECIAL CASE TACTICS. I DEFINE "SYNERGY" AS FOLLOWS:

"SYNERGY IS THE UNIQUE BEHAVIOR OF WHOLE SYSTEMS UNPREDICTED BY BEHAVIOR OF THEIR RESPECTIVE SUBSYSTEMS' EVENTS."

I WAS SEEKING IN THE WHOLE OF EXPERIENCE AND KNOWLEDGE, - RATHER THAN IN SPECIALIZED ISOLATIONS, - FOR A COMPREHENSIVE MATHEMATICAL SCHEME OF PATTERNING.

MY ENERGETIC AND SYNERGETIC GEOMETRY EXPLORATION HAS SINCE PROVEN THE "OCTET" COMPLEX TO BE A PRECESSIONALLY NONREDUNDANT, ISOTROPIC VECTOR-TENSOR EVOLUTIONARY RELATIONSHIP WHOSE ENERGY TRANSFORMATION ACCOUNTINGS ARE COMPREHENSIVELY RATIONAL, - RADIALLY AND CIRCUMFERENTIALLY, - TO ALL CHEMICAL, BIOLOGICAL, ELECTRO-PHYSICAL, THERMO-DYNAMIC, GRAVITATIONAL AND RADIATIONAL BEHAVIORS OF NATURE. AS SUCH THE DISCOVERED "SYNERGETIC SYSTEM" IS PROBABLY NATURE'S SPONTANEOUSLY EMPLOYED COORDINATE SYSTEM, FOR IT ACCOMMODATES ALL TRANSFORMATIONS BY SYSTEMATIC, COMPLEMENTARY SYMMETRIES OF CONCENTRIC, CONTRACTURAL, INVOLUTIONAL, TURBO-GEARED POSITIVE-TO-NEGATIVE-TO-EQUILIBRIUM-TO-VICE-VERSA COORDINATE DISPLACEMENTS.

SUBSEQUENT TO MY WORLD WAR I NAVY EXPERIENCE CAME RE-ENTRY INTO THE WORLD OF COMMERCE AS AN ASSISTANT EXPORT MANAGER OF ARMOUR AND COMPANY IN 1919. BORN WITH THAT RE-ENTRY INTO COMMERCE CAME A WHOLE NEW WORLD-AROUND PATTERN OF EXPERIENCE WHICH INTEGRATED NOT ONLY MY THEORETICAL

CONCEPTIONING BUT ALSO THE WHOLE PREVIOUS NAVY TRANSPORT EXPERIENCE IN MAINTENANCE, SUPPLY, AND COORDINATION OF SWIFT TURNAROUND, WITH MY PRE-NAVY GAINED PACKING-HOUSE FAMILIARITY IN HIGH-SPEED CONTINENTAL DISTRIBUTION OF ESSENTIAL AND PERISHABLE GOODS, - TO ALL OF WHICH THE FACTOR OF ACCELERATING TURNOVER SEEMED KEY TO SUCCESS.

THUS CAME A DAWNING CONCEPTION OF AN ENORMOUS OVER-ALL AND WORLD-AROUND ACCELERATING INTEGRATION OF THOSE TWO LAND AND SEA PROCESSES, - "TURNOVER" AND "TURNABOUT", - TURNOVER OF THE LANDED BIOLOGICAL METABOLIC PROCESS CYCLES, AND TURNAROUND OF THE WATERBORN AND LATER AIRBORN VESSELS OF DISTRIBUTION OF THE EVER-ADVANCING PROCESS STANDARDS TO THE MOST PEOPLE IN THE SHORTEST TIME. THE ACCELERATIONS WERE OBVIOUSLY KEYS TO THE ECONOMICS OF WEALTH AUGMENTATION AND ITS CONCOMITANT IMPROVEMENT OF THE OVER-ALL ADVANTAGE OF MAN. BY "ACCELERATION" MORE OF THE TOTAL ENERGY RELAYING IN UNIVERSE MAY BE SHUNTED INTO A COMPLEX OF EARTH EMERGING PATTERNS WITHIN A GIVEN TIME INTERVAL.

INTIMATE PERSONAL BACKGROUND OF MY 1918 THROUGH 1922 YEARS OF OVER-LAPPING NAVY TO COMMERCE EXPERIENCE, CENTERED IN THE BIRTH OF OUR FIRST DAUGHTER AND HER SUBSEQUENT SWIFT CONTRACTION OF EACH OF THE WAR-AGGRAVATED EPIDEMICS OF INFLUENZA, SPINAL MENINGITIS, AND INFANTILE PARALYSIS. I WAS INCREASINGLY RESENTFUL THAT THE EXQUISITE EFFECTIVENESS OF TELEOLOGIC PROCESSING OF MEN'S ALL-HISTORY EXPERIENCE CAME ONLY TO MAXIMUM PROJECTED DESIGN EFFECTIVENESS IN TURN-OVER AND TURN-AROUND EXPLOITATION PATTERNS ARBITRARILY SELECTED AT SUB-TOTAL EXPERIENCE MAGNITUDE. THIS SUB-COMPREHENSIVE UNDERTAKING INVOKED CARELESSLY NONANTICIPATED BY-PRODUCT EMERGENCIES. THE EMERGENCIES WERE RESULTANT TO IRRESPONSIBLY NEGLECTED CONTIGUOUS DISPLACEMENT ACCELERATIONS INHERENT IN THE ARBITRARILY UNDERTAKEN PATTERNS. THE CONTIGUOUS DISPLACEMENTS CAUSED IMPORTANT ECONOMIC GEAR STRIPPINGS WHICH IN TURN INDUCED ECONOMIC AND SOCIAL IMPASSE. IMPASSE MEANT WAR AND INVERSION OF THE RIGHT-MAKES-MIGHT EQUATION, - CONSISTING OF EXQUISITE TELEOLOGIC PROCESSING OF EXPERIENCE-INTO-DESIGN, - INVERTED MATHEMATICALLY INTO MIGHT-MAKES-RIGHT AND THEREAFTER MANIFESTED THROUGH THE TELEOLOGIC PROCESSES ONLY AS AN EMERGENCY RATIONALIZED ESSENTIAL HITTING POWER, WITH WHICH TO SLUG OUT THE ANSWER AS TO WHO SHOULD BE HELD RESPONSIBLE FOR STRIPPING THE GEARS, WHICH STRIPPING COULD ALL THE WHILE HAVE BEEN AVOIDED BY AN EARLIER AND RELATIVELY SMALL COMPREHENSIVE INVESTMENT OF WEALTH ADVANTAGE IN THE CONTINGUOUS BUT DISCLAIMED RESPONSIBILITIES FOR DISPLACEMENTS. HOWEVER, IT WAS CLEAR THAT IF THOSE IN RESPONSIBLE POSITIONS HAD BEEN WILLING TO UNDERWRITE CONTINGUOUS DISPLACEMENT CONTROLS, EVEN THEN SUCH AVOIDANCE OF EVOLUTIONARY GEAR STRIPPING COULD HAVE BEEN EFFECTED ONLY BY AN ENGINEERING INITIATED AND DESIGNED GRADUAL TRANSFER OF THE FULL LOAD THROUGH PROGRESSIVELY DECOMMISSIONED APPARATUS SYNCHRONIZED WITH PROGRESSIVELY COMMISSIONED NEW APPARATUS, AND THEN ONLY IF THE RAMIFICATIONS OF INDIVIDUALLY ASSUMED TELEOLOGIC DESIGN RESPONSIBILITY WERE UPPED TO INCLUDE THE LOOMING MINIMUM CONFIGURATION OF FULL WORLD INDUSTRIAL NETWORK INTEGRATION, - ON A REALISTIC BASIS OF OMNI-BOUNTIFUL ADVANTAGE ACCELERATION, - IN TURN TO BE GAINED ONLY THROUGH TOTAL COMMONWEALTH REGENERATIVE CYCLING ADVANTAGE, - ITSELF IN-TURN ACCRUING ONLY TO AN ADEQUATE STATEMENT OF THE ORIGINAL DESIGN PROBLEMS, - A BIG ORDER, BUT A FUNDAMENTAL AND THEREFORE CONSERVATIVE MINIMUM.

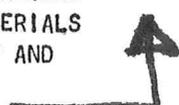
IT WAS VISIBLE TO ME THAT THE 1922 DEATH OF OUR CHILD IN HER FOURTH YEAR RESULTED FROM THEN UNHEEDED ENVIRONMENT PROCESS INTEGRATIONS OF COMPREHENSIVELY UNATTENDED YET DESIGN PREVENTABLE FACTORS. THIS AT-THE-TIME CLAIRVOYANT-TO-ME PREMISE HAS BEEN ADEQUATELY PROVEN TO BE CORRECT, WITHIN ONLY THE SHORT THIRTY-TWO YEARS SINCE HER DEATH, BY THE INTERIM ELIMINATION OF THOSE EPIDEMICS FROM THE "FATAL" LIST. POTENTIAL PREVENTIVE SUCCESS WAS VISIBLE TO ME AS INHERENT IN THE ADVANCED PRACTICAL TECHNOLOGY OF THE PREMIUM WATER AND AIR-OCEAN TOOLING AND THEIR RELATED BALLISTICS AND NAVIGATION SCIENCES, IN ALL OF WHICH I HAD EXPERIENCED AN INTIMATE FORE-IMAGINING OF THEIR IMPLIED LAND-LIFE APPLICABILITIES. BECAUSE THE POSSIBILITY WAS VISIBLE TO ME, WHEN THE UNATTENDED FACTORS IMPINGED ON THE LIFE FOR WHICH WE CARED THE MOST, THERE THEN OCCURRED THE IMPORTANT BEGINNING OF THE NEGATIVE STIMULUS OR VACUUM INTO WHICH MY INCREASING PRESSURE OF TELEOLOGICALLY INDUCED DESIGN INCREMENT TENDED TO EXPLODE.

THIS PRESSURE DIFFERENTIAL GREW FINALLY TO CRITICAL DETONATION POINT IN THE SUBSEQUENT FIVE YEARS' EXPERIENCE WITHIN THE MOST IGNORANT AND MOST PRODIGIOUS OF MEN'S FUMBLING ACTIVITIES: - THAT SUB-INDUSTRY ACTIVITY OF MEN, IN FORTUITOUS AGGLOMERATION OF SHELTERING AND DWELLING FACILITIES. I LEARNED HOW THESE WERE GLEANED OUT OF THE INDUSTRIAL AND DEFENSE LEFT-OVERS, WITHOUT BENEFIT EITHER OF SCIENCE OR OF ADVANCED TECHNOLOGY, - HOW ALL BUILDING ENTERPRISE WAS EXPLOITED ON A GROSS TRIAL AND ERROR BASIS, - HOW ALL BUILDING WAS BESET WITH ARBITRARY RULES DESIGNED TO AVOID POLITICAL MISFORTUNE WHILE PROMOTING CORRUPT EXPLOITATION OF ECONOMIC MONOPOLIES STAKED OUT IN THE RUBBLE AND WEED TRAFFIC, - HOW BUILDING ACTIVITY WAS NURTURED WITH SUPERSTITION, BUSYBODIEDNESS, VAIN REFLEX PATRONAGE AND, ABOVE ALL, FIXED WITH THE PRIOR NECESSITY TO DESIGN WAYS TO MAKE MONEY FIRST, - WITH WHICH HOPEFULLY TO BUY LIVING MEANS AFTERWARD, - RATHER THAN MAKING BETTER LIVING ITSELF, THROUGH DIRECTLY APPLIED DESIGN COMPETENCE, AND UNPATRONIZED DESIGNER INITIATIVE, - UNDERTAKEN IN EXPLORATION FOR AN ART AND SCIENCE OF A GENERALIZED ANTICIPATORY DESIGN COMPETENCE THAT WOULD CONVERT SOCIAL CYCLING FROM AN EMERGENCY AND CURE SEQUENCE TO AN ANTICIPATING AND LABORATORY EXPERIMENTING COMPLEX DESIGN DEVELOPMENT SEQUENCE, AKIN TO SHIP BUILDING, WHICH WHEN APPROPRIATE INTRODUCES THE NEW PROVEN ADVANTAGES INTO THE COMPLEX BEFORE EMERGENCY SETS IN, - EVEN AS TODAY WE REPLACE AIRCRAFT PARTS PRIOR TO PROBABLE FAILURES THROUGH SCIENTIFICALLY EVOLVED SCHEDULING.



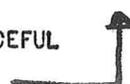
THIS BUILDING WORLD WHICH I MET WITH DISMAY IN THE "TWENTIES" WAS THE PARADOXICAL WORLD IN WHICH THE "PATIENT" DIAGNOSES HIS OWN AILMENTS AND BY VIRTUE OF HIS DOLLAR AUTHORITY COMMANDS THE RETAINED AND MUTED "PHYSICIAN" AND "SURGEON" TO PERFORM, WITH THE "DOCTOR'S" FEIGNED PLEASURE AND ADMIRATION FOR THE CLIENT'S "SAGACITY", - OPERATIONS DESIGNED BY THE PATIENT'S OWN LIMITED, PERSONAL, TRAUMATIC CONCEPTIONING.

BETWEEN 1922 AND 1927 I TOOK PART IN BUILDING OF TWO HUNDRED AND FORTY STRUCTURES IN THE EXPENSIVE RESIDENTIAL AND SMALL COMMERCIAL BUILDINGS CATEGORIES, - BUILDINGS ERECTED THROUGHOUT THOSE OF THE UNITED STATES LYING EAST OF THE MISSISSIPPI RIVER. DURING THIS TIME I ORGANIZED FIVE REGIONAL FACTORIES AND INVENTED THE MACHINERY FOR THE PRODUCTION OF THOSE BULK MATERIALS WHICH I INTRODUCED INTO THE 240 STRUCTURES. THERE I MET WITH THE CHAOS OF THE BUILDING AND HOME IMPROVISING WORLD.



AFTER FIVE YEARS OF PRODIGIOUS AND INFORMATIVE WRESTLING WITHIN THIS ARENA OF INCREASING INEFFICIENCY MY THOUGHTS WERE SUDDENLY BROUGHT INTO NEW FOCUS BY AN INDEPENDENT EVENT. A NEW DAUGHTER WAS BORN TO US AND WITH HER BIRTH ALSO SUDDENLY WAS BORN MY RESOLVE TO ADOPT A WHOLE NEW STRATEGY OF THOUGHT AND ACTION PREDICATED UPON THE ASSUMPTION THAT IF AN AS YET UNATTENDED BUT INTEGRAL FUNCTION OF THE INDUSTRIAL COMPLEX BE ADOPTED FOR RESPONSIBLE ATTENTION, - AND IF DESIGN COMPETENCE IS DEMONSTRATED IN THE ORIGINAL STATEMENT AND PURSUIT OF THAT UNATTENDED PROBLEM, - THEN EVEN THOUGH THE WHOLE SEARCH AND DEVELOPMENT WAS UNDERTAKEN WITHOUT ANY RECOGNIZED PUBLIC OR PRIVATE CREDIT AND ECONOMIC AUTHORIZATION, - ITS HUSBANDING WILL INDUCE SPONTANEOUS AND UNPREDICTABLE SUPPORT BY SOCIETY.

MY BLIND DATE WITH PRINCIPLE SEEMED THE ONLY WAY FOR ME TO SERVE THOSE PROCESSES MOST POTENTIAL OF ACCELERATING THE OVER-ALL TECHNICAL ADVANTAGE NETWORK TOWARD REALIZATION FOR OUR NEW CHILD AND ALL NEW CHILDREN OF COMMONLY GAINED PARTICIPATION IN SPONTANEOUS, ANTICIPATORY ECONOMIC AND TECHNICAL PATTERN ADOPTIONS, BY INDUSTRY AND BY SOCIETY, WHICH WOULD ERASE FROM "PROBABILITY" THE RE-OCCURRENCE OF THE UNATTENDED ENVIRONMENT-BRED HAZARDS FATAL TO OUR FIRST CHILD. I RESOLVED TO APPLY THE REST OF MY LIFE TO CONVERTING MY EXPERIENCE-GAINED PATTERN SENSE, - THROUGH TELEOLOGIC PRINCIPLE INTO DESIGN AND PROTOTYPING DEVELOPMENTS GOVERNING THE PERTINENT, BUT AS YET UNATTENDED ESSENTIAL INDUSTRIAL NETWORK FUNCTIONS; - NECESSARY TO REMOVAL OF SUCH HOUSING CHAOS BY PHYSICALLY EFFECTIVE AND LASTING TECHNOLOGY. AS A COROLLARY I RESOLVED TO: ESCHEW FURTHER ACCEPTANCE OF CONVENTIONAL RECOURSE TO POLITICAL OR MORAL REFORMS WHICH, LACKING PHYSICAL ENERGY EFFECTIVENESS, MUST IN THE FACT OF PHYSICAL INADEQUACY ADOPT PEACEFUL OR FORCEFUL PALLIATION THROUGH POLITICAL ACTION.



IT SEEMED CLEAR TO ME THAT ONLY A TRANSCENDENTALLY TO-BE-ESTABLISHED OVER-ALL ENGINEERING DESIGNED TECHNICAL PROCESS PATTERN, PREDICATED UPON A WORLD-AROUND DYNAMIC TOWN PLAN, COULD

HERE SUCCEED. IT WOULD HAVE TO BE A PATTERN OF ACCELERATING AND ANTICIPATING DESIGN EVOLUTION TO SUPPLANT, BY ECONOMIC SUPERIORITY, THE CONSTANT INNOCUOUS DESIGN "REVOLUTIONS" ACCRUING AT AT INCREASING EXPENSE THROUGH THE SUBSTITUTION OF NEW MATERIALS IN THE PRODUCTION OF PARTS FOR OLD FUNCTIONS WITHIN AN INCREASINGLY OBSOLETE TOTALITY, ERGO, BY EVERMORE EXPENSIVE CHEMISTRY INVESTMENT IN EVER LESS VALID FUNCTIONS.

MY ENVISIONED TRANSCENDENTAL WORLD DESIGN PLAN WOULD BE INHERENTLY NONPOLITICAL BECAUSE IT WOULD BE UTTERLY INDEPENDENT OF ANY NEED FOR AUTHORITY BEYOND THAT TO-SELF-BY-SELF FOR INITIATION OF ITS STUDY AND DEVELOPMENT. IT PERMITTED ON THE INDIVIDUAL'S OWN INITIATIVE, CONVENING OF ALL THE APPROPRIATE DOCUMENTED KNOWLEDGE OF MAN AND UNIVERSE IN INTEGRATED TELEOLOGIC OBJECTIVITY. IT PERMITTED PRIORITY OF ATTENTION TO DESIGNING THE ESTABLISHMENT OF A WHOLE NEW WORLD INDUSTRY CONCERNED ONLY WITH MAN'S UNAVOIDABLE NEEDS AND IMPLEMENTATION OF HIS INHERENT FREEDOMS. SUCH AN INDUSTRY COULD WELL BE THE MOST IMPORTANT PHASE OF APPLICATION OF THE VERY PHENOMENON "INDUSTRY" ITSELF, TO WIT: THE FIRST-HAND APPLICATION OF ALL ADVANCING FACETS OF KNOWLEDGE TO THE DESIGN OF IMPLEMENTS FOR DIRECT SUPPORT OF THE REGENERATIVE PROCESS "MAN", - WITHIN THE KNOWN AND ECONOMICALLY REALIZABLE RESOURCE LIMITS.

BY INDUSTRY I MEANT IN 1927 AND AS YET MEAN THE FOLLOWING:

"THE INTEGRATED, TELEOLOGIC OBJECTIVITY OF THE FULL GAMUT OF THE EXACT SCIENCES,"
NO MORE - NO LESS.

CLEARLY IT WOULD BE ESSENTIAL TO SUCH COMPREHENSIVE PERFORMANCE THAT STRUCTURAL AND MECHANICAL COMPLEXES BE DESIGN-ADOPTED WHOSE HIGH PERFORMANCE, PER UNITS OF INVESTED RESOURCE, WOULD RENDER THE TOTAL TONNAGE OF WORLD RESOURCES EFFECTIVELY DISTRIBUTABLE TO THE PHYSICAL ADVANTAGE OF THE TOTAL WORLD POPULATION, IN EVER IMPROVING WAVES OF STANDARDS OF SATISFACTION. THIS, IT WAS SEEN, COULD BE BROUGHT ABOUT ONLY BY THE SYNERGETIC (BEHAVIOR OF THE WHOLE UNPREDICTED BY THE BEHAVIOR OF THE PARTS) EFFECTIVENESS ACCRUING UNIQUELY TO THE RELATIVELY LARGE ART OF SEA AND AIR-OCEAN'S VESSEL BUILDING, WHEREBY KEELS AND RIBS, WHICH THOUGH INDEPENDENTLY INADEQUATE TO SUBSEQUENT STRESS-FUNCTIONS, GAIN ADEQUATE EFFECTIVENESS ONLY THROUGH MEANS OF ASSEMBLY WITHIN JIGS, OR CRADLE, WHICH LOCALLY AND TEMPORARILY POSITION THE COMPONENTS UNTIL THE COMPLEMENTARY INTERACTIONS AND SHORTENED MODULAR BRACINGS ARE COMPLETED, WHEREBY THE STRUCTURAL BEHAVIOR PATTERN OF THE RESPECTIVE SINGLE COMPONENTS IS ALTERED INTO COORDINATE ACTION OF ASSOCIATED VECTORS, INTERACTING TO EXPONENTIALLY AUGMENTED TOTAL ADVANTAGE. VESSELS, AS A TOTALITY OF EXQUISITELY DIFFERENTIATED AND REINTEGRATED FUNCTIONS, - COACTIVE AS A COMPLEX OF EFFICIENTLY RESOLVED FUNCTIONING MAY, WHEN COMPLETED, BE LAUNCHED INTO A TOLERABLE STRESS DISTRIBUTIVE MEDIUM AND BROUGHT THEREBY TO AN ADEQUATE PLURALITY OF APPROPRIATE WORK FOCI, - WITHIN THE GREAT TURNOVER-TURNAROUND PRECESSIONAL GEARINGS OF TOTAL WORLD PATTERNING THEREBY ALSO TO EFFECT FURTHER AUGMENTATION OF THE WORLD'S TAPPED RATIO OF UNIVERSALLY AVAILABLE ENERGY, - VALUABLE-ONLY-WHEN-VALVABLE, - AND WHEN VALVABLE, ACCOUNTABLE AS EXPLICIT "WEALTH" INCREASE.

THE TRANSCENDENTAL PARTICIPATION OF THE SHELTERING STRUCTURES AND DWELLING MECHANISMS IN THE COMPREHENSIVELY GESTATING ADVANTAGES OF THE INDUSTRIAL NETWORK OF WORLD DESIGN EVOLUTION, IT WAS SEEN, COULD BE EFFECTED THROUGH THE TELEOLOGIC DESIGNING PROCESSES OF MAN WHICH PROGRESSIVELY CONVERT HIS PATTERN PARTICIPATING FROM SUBJECTIVE TO OBJECTIVE, - I.E., FROM SUBCONSCIOUS TO CONSCIOUS ADOPTION. FOR THE TRANSCENDENTAL PLAN TO BE CONSISTENT WITH LESSONS OF MOST PROFITABLE SYNERGETIC AND PHYSICAL EXPERIMENT IT HAD TO INVOLVE DIRECT AIRBORNE DELIVERIES OF JIG BUILT STRUCTURES, COMING AS AN EAGLE TO FIRM POISE AT LOC OF PROGRESSIVE ADVANTAGE, WITHIN THE REGENERATIVE MAN-PATTERNING OF GEOGRAPHY, WHILE EVER INCREASING MAN'S CONCOMITANT DEGREES OF FREEDOM AND PROSPECTIVE ADVANTAGE.

TO SUCH A COMPREHENSIVE TRANSCENDENTAL DYNAMIC DESIGN COMPLEX, THE SUBSYSTEM PROBLEMS, - GOVERNING LOCAL DIFFERENTIATIONS OF DESIGN FUNCTIONING, AS FOR INSTANCE, IN DWELLING DEVICES AND THEIR CONTROLLED ENVIRONMENT EFFECTIVENESS, ARE SEQUITOR BUT NOT INFERIOR, TO CONSIDERATIONS OF THE DESIGN EVOLUTION OF THE SURROUNDING PLURALITY OF ENERGY VALVING MECHANISMS OF THE TOTAL INDUSTRIAL PROCESS. THIS IS TO SAY THAT: THE DWELLING DEVICES ARE ESSENTIAL AND

ATTENTION-WORTHY AND ONLY SUBSIDIARY IN SCHEDULE OF PRIORITY-FOR-DEVELOPMENT CONSIDERATION WITHIN THE GREATER PATTERN OF DYNAMIC TURNOVER AND TURNABOUT OF THE MECHANISMS' TOOLS-TO-MAKE-TOOLS EVOLUTION. THIS "TOOLING-UP" EVOLUTION IS EMERGENT IN INTERMITTENTLY PROGRESSIVE WAVE PEAK CONGRUENCES HISTORICALLY DETECTABLE AS UNIQUELY VISIBLE ERAS OF THE PERFECTING EFFICACY OF THE TOTAL NETWORK SERVICE INTEGRATION, - AS THE INTEGRATION IMPINGES UPON THE CONSCIOUS REFLEXES OF MAN, AS PERIODIC FRAMES OF INFOCUSNESS OF OBJECTIVE MEN UPON SUBJECTIVE ECONOMIC MAN. BUT BETWEEN SUCH GLIMPSED FRAMES MEN ARE PRONE TO RETURN TO IRRESPONSIBLE PREOCCUPATION WITH MINOR, LOCAL ASPECTS OF THE RECIPROCATING MECHANISMS.

HOWEVER, THE SUBSIDIARY SYSTEM'S DWELLING DEVICES, RESULTANT TO COMPREHENSIVE PROCESSING, ARE EQUIVALENT TO ELECTRONIC TUBES WHICH MAY BE PLUGGED INTO THE GREATER REGENERATIVE CIRCUITS OF THE ELECTRONIC COMMUNICATING SYSTEMS. "HOUSE", IN COMPREHENSIVE DESIGNING, WOULD BE AS INCIDENTAL TO THE WORLD-AROUND NETWORK DWELLING SERVICE AS IS THE TELEPHONE TRANSCEIVER INSTRUMENT TO THE OVER-ALL ENERGY PROCESSING IN COMMUNICATION SYSTEMS, WHICH ARE IN TURN WITHIN THE LARGER OVER-ALL SYSTEMS OF INDUSTRY, AND INDUSTRY IS SUBSIDIARY ITSELF WITHIN THE UNIVERSAL SYSTEMS OF MACROCOSMICALLY AND MICROCOSMICALLY PERTINENT EVOLUTION.

THE DYMATION TECHNOLOGY AND DESIGN FORMULATIONS OF 1927 WERE EXAMPLES OF SUCH INCIDENTAL DESIGN EVENTS WITHIN THE FRAME OF "DESIGNING A NEW INDUSTRY", THE CONCEPT WHICH I PUBLISHED IN MAY, 1928. (SEE ENCLOSED INDEX AND CHRONOLOGY OF PUBLISHED ITEMS SINCE THAT TIME.)

IN 1929 IN CHICAGO, ILLINOIS, U. S. A., STUDENT DESIGNERS, EXCITED BY FAVORABLE RESULTS ALREADY VISIBLY ACCRUING TO EXPERIMENTAL TESTS OF THE ECONOMIC EFFICACY OF MY NONGEOGRAPHICAL AND GENERALIZED THEORIES, INFORMED ME OF A SEEMING REVOLUTION IN EUROPEAN DESIGN ACTIVITIES IN SWEDEN, FRANCE, HOLLAND, DENMARK, - AND IN GERMANY AT THE BAUHAUS. IT WAS EVIDENT IN THE PICTURES THEY SHOWED TO ME THAT THE EUROPEAN ARCHITECTS WERE BEGINNING TO EXPERIENCE WITH COGENCY THOSE SAME VITAL STIMULATIONS THROUGH PRIVATIONS PERSISTENT WITHIN THE PARADOXICAL ENVIRONMENT OF HIGH POTENTIALS WHICH HAD COME FLOODING UPON ME A FEW YEARS EARLIER AS I CAME TO MATURITY IN THE ACCELERATING INDUSTRIAL FRONTIER ECONOMY OPENING NEW MAGNITUDE CHAPTERS UPON THE SHORES OF THE AMERICAN CONTINENT.

THE INDUSTRIAL FRONTIER WAVE ON THE AMERICAN CONTINENT HAD BEEN REGENERATED FROM ITS FORMER EUROPEAN AND EVEN EARLIER ASIATIC BEGINNINGS. ON ITS AMERICAN REBIRTH THE INDUSTRIAL EQUATION WAS APPROXIMATELY DISEMBARRASSED OF THE PROGRESSIVELY PARALYZING SECONDARY CREDIT BREAKING DEVICES WHICH HAD BEEN PUT UPON EUROPEAN INDUSTRIAL FACILITIES BY CARTELSMS STATICIZING EXPLOITATION SCHEMES, WHICH SOUGHT OF COURSE TO PERPETUATE SECURITY OF INCOME PATTERNS, THOUGH THAT PATTERN WAS INHERENTLY INCIDENTAL TO PASSING PHASES OF FUNDAMENTAL, UNIVERSAL, AND EVOLUTIONARY TRANSFORMATIONS.

ERGO, THE NEW CARTEL SHUNNING INDUSTRIAL WAVE, ADVANTAGING THE HIGHLY COMPETITIVE U. S. A.'S EARLY TWENTIETH CENTURY ECONOMY, WAS ALSO A WAVE WITHIN WHICH MY UNFORGOTTEN EXPERIENCES WITH BROKEN PARTS OF INDUSTRIAL TOOLING RECEIVED FROM EUROPE, - WHICH I HAD LEARNED TO REPLACE WITH IMPROVED PERFORMANCE PARTS IMPROVISED IN AMERICA, - PUT ME ON NOTICE THAT THERE WAS MUCH ROOM FOR ORIGINAL DESIGN IMPROVEMENT, MADE INCREASINGLY REASONABLE AND POSSIBLE BY THE EVOLVING INVENTORY OF POTENTIAL DESIGN RESOURCE GROWTH WITHIN THAT PART OF THE WORLD IN WHICH IT WAS MY GOOD FORTUNE TO BE LIVING.

IT WAS ALSO EVIDENT TO ME THAT THE 1920-30 WAVE OF ARCHITECTURAL AWARENESS REGARDING IMPORTANT DESIGN POTENTIALS, REALIZABLE AS DESIGN SIMPLIFICATIONS AND IMPROVEMENTS, HAD BEEN GENERATED IN EUROPE IN THE POST-WORLD WAR I DECADE BY THE EUROPEAN'S 3,000-MILE PERSPECTIVE-CLARIFYING REVIEW OF ARCHITECTURALLY UNENCUMBERED GIANT SILOS, WAREHOUSES, AND FACTORIES IN THE CLEANLY EMERGENT U. S. A. ENGINEERING DESIGNED STRUCTURES WHICH HAD BEEN DISEMBARRASSED IN UNIQUE DEGREE, - IN THE SPACE RICH AMERICAN SCENE, - OF ECONOMICALLY UNESSENTIAL AESTHETICS. THIS AMERICAN INSPIRATION WAS WELL DOCUMENTED BY THE EUROPEAN INTERNATIONAL STYLE PROTAGONISTS WHOSE ORIGINAL PUBLICATIONS INVARIABLY FORTIFIED THEIR ARGUMENTS FOR DESIGN REFORM BY PHOTOGRAPHIC EXAMPLES OF AMERICAN SILOS AND FACTORIES AS CONSTITUTING SOURCES OF

THEIR EUROPEAN REALIZED INSPIRATION. THEY STILL FURTHER FORTIFIED THEIR ARGUMENT WITH PICTURES OF THE GENERALIZED MORPHATION IN DESIGN COMPLEX, DEMONSTRATED BY THE NAKEDLY FUNCTIONAL SUPERSTRUCTURES OF SHIPS OF THE ALL-OCEAN ALL-SKY CATEGORIES, - AS FOR INSTANCE IN THEIR TIERED, OUTSTRETCHED, CANTILEVERED, CONNING-BRIDGE WINGS, - DEVELOPED A HALF CENTURY EARLIER WITH THE FIRST IRON TORPEDO BOATS AND SUBSEQUENT BATTLESHIPS (THE "BRIDGE" HAVING ORIGINATED MUCH EARLIER IN GUNWALE-TO-GUNWALE BRIDGING SUPERSTRUCTURE-WALK-WAYS OVER CROWDED DECKS). IT WAS ALSO AMUSINGLY CLEAR THAT THE EUROPEAN DESIGN REVOLUTION PROTAGONISTS OF THE 1920'S HAD GLIMPSED AND COMPREHENDED THE DESIGN PARADOX WITHIN THE AMERICAN CONTINENT COM- PRISED OF THE AESTHETICALLY PURE SILOS AND FACTORIES CO-EXISTENCE WITH THE AESTHETICALLY IMPURE ARCHITECTURAL NONSENSE BESHROUDING AMERICA'S DWELLINGS AND PATRON-OCCUPANCY BUILDINGS. AS THE LATTER WALLOWED HYPNOTICALLY AND SUPERSTITIOUSLY WITHIN THE EUROPEAN ORIGINATED ARCHITECTURAL GARMENTURE.

IT WAS ALSO EVIDENT THAT THE GOING DESIGN BLINDNESS AT THE LAY LEVEL IN THE U. S. A. AFFORDED EUROPEAN DESIGNERS AN OPPORTUNITY NOT ONLY IN EUROPE BUT ALSO MORE IMPORTANTLY DOLLAR-WISE IN AMERICA, TO DEVELOP THEIR PREVIEW DISCERNMENT OF THE MORE APPEALING SIMPLICITIES OF THE INDUSTRIAL STRUCTURES WHICH HAD INADVERTENTLY EARNED THEIR ARCHITECTURAL FREEDOM, NOT BY CONSCIOUS AESTHETICAL INNOVATION, BUT THROUGH PROFIT-INSPIRED DISCARD OF ECONOMIC IRRELEVANCIES IN NONPOPULAR OCCUPANCY STRUCTURES. THIS SURPRISE DISCOVERY, - THE EUROPEAN DESIGNER WELL KNEW, - COULD SOON BE MADE UNIVERSALLY APPEALING AS A FAD, FOR HAD THEY NOT THEMSELVES BEEN SO FADDISHLY INSPIRED. THE "INTERNATIONAL STYLE", THUS BROUGHT TO AMERICA BY THE BAUHAUS INNOVATORS, DEMONSTRATED A FASHION INOCULATION EFFECTED WITHOUT NECESSITY OF KNOWLEDGE OF THE SCIENTIFIC FUNDAMENTALS OF STRUCTURAL MECHANICS AND CHEMISTRY WHOSE UPPED PERFORMANCE ABILITIES HAD BROUGHT ABOUT THROUGH ECONOMIC SPONTANEITY OF ENGINEERING COST LIMITS THAT NEW FACTORY DESIGN REVOLUTION WHICH HAD A QUARTER CENTURY LATER SUCH SUPERFICIAL APPEAL TO THE EUROPEAN ARCHITECTS AS A "FUNCTIONAL" STYLE FORMULA.

PARADOXICALLY THE INTRODUCTION OF BAUHAUS INTERNATIONAL TO AMERICA WAS ACCOMPANIED BY A SCHOOL ROUTINE OF MANUAL-SENSITIVITY TRAINING, WHEREAS THE FUNDAMENTAL OF THE DESIGN REVOLUTION INHERENT IN INDUSTRIALIZATION, - WHOSE SUPERFICIAL ASPECTS HAD INSPIRED THE INTERNATIONAL STYLISM, - WERE PREDICATED UPON GRADUATION FROM MANUAL CRAFTS, AND "SEAT-OF-THE-PANTS" CONTROLS ONLY WITHIN THE SENSORIAL SENSITIVITY LIMITS, - GRADUATED INTO THE INFRA AND ULTRA DIMENSIONAL ADVANTAGES GAINABLE ONLY THROUGH SENSITIVE INSTRUMENTS OF MATHEMATICAL EXPLORATION OF THE INVISIBLE BEHAVIORS OF NATURE'S "GENERALIZED PRINCIPLES". THE INTERNATIONAL STYLE'S "SIMPLIFICATION" WAS THEN BUT SUPERFICIAL. IT PEELED OFF YESTERDAY'S EXTERIOR EMBELLISHMENT AND PUT ON INSTEAD FORMALIZED NOVELTIES OF QUASI-SIMPLICITY PERMITTED BY THE SAME HIDDEN STRUCTURAL ELEMENTS OF MODERN ALLOYS WHICH HAD PERMITTED THE DISCARDED BEAUX-ARTS GARMENTATION. IT WAS STILL A EUROPEAN GARMENTATION. THE NEW INTERNATIONAL STYLISTS HUNG "STARK MOTIF WALLS" OF VAST SUPER-METICULOUS BRICK ASSEMBLAGE, WHICH HAD NO TENSIBLE COHESIVENESS WITHIN ITS OWN BONDS, BUT WAS IN FACT LOCKED UP WITHIN HIDDEN STEEL FRAMES SUPPORTED BY STEEL WITHOUT VISIBLE MEANS OF SUPPORT. IN MANY SUCH ILLUSORY WAYS DID THE INTERNATIONAL STYLE GAIN DRAMATIC SENSORIAL IMPINGEMENT UPON SOCIETY AS DOES A TRICK-MAN GAIN THE ATTENTION OF CHILDREN. AS WITH THE TRICK-MAN, TOO, THIS NEW ARCHITECTURE AND FURNISHINGS FAD CONTRIVED SEMANTIC DECEPTION BY USING FAKE WORDS TO DESCRIBE THIS DESIGN AS BEING "TENSED" OR "SUSPENDED" CURTAIN WALLS.

AS THE PRESTIDIGITATOR PUTS OVER HIS TRICKS BY FOCUSING ATTENTION OF THE AUDIENCE'S SENSORIAL REFLEXES UPON HIS DECOY FUNCTIONS IN ORDER TO RENDER THE TRUE FUNCTIONS INVISIBLE, SO, - (DESPITE THE INDIVIDUAL EXPLORATORY INTEGRITY OF THE ARTISTS THEMSELVES), - WERE INTERNATIONAL STYLE ARCHITECTURE AND THE QUASI-ABSTRACTIONS OF MODERN ART AESTHETICALLY PROPAGANDIZED AND PATRONIZED BY THOSE WHOSE LARGER PATTERN SECURITY SEEMED CHALLENGED BY THE SCIENCE INITIATED TRANSCENDENTAL TRANSFORMATIONS OF THE INDUSTRIALIZING WORLD'S UNHALTABLE TREND TO CONSTANTLY ACCELERATING CHANGE. PARADOXICALLY THE EXTREME LEFT AND THE EXTREME RIGHT (WITH NO FUNDAMENTAL SYMPATHY FOR THE ARTIST-EXPLORER) BOTH, HOPEFULLY, PROMOTED THE ATTEMPT TO DETOUR

AMERICA'S DYNAMIC-FUNCTION DESIGNED PHILOSOPHY OF EVOLUTIONAL ACCELERATION INTO WHAT THEY HOPED MIGHT BE AN INNOCUOUS CUL-DE-SAC, - THE EXTREME RIGHT BECAUSE IT HOPED TO KEEP THE DESIGN CHANGE SUPERFICIAL IN ORDER TO PROLONG THE TOOLED-UP PAY-OFF, WHILE THE EXTREME LEFT CULTIVATED IT WITH THE HOPE OF SLOWING DOWN THE INDUSTRIAL EVOLUTION WITHIN AMERICA AND POSSIBLY EVEN CAUSING ITS BREAKDOWN THROUGH RESULTING COMMON IGNORANCE REGARDING FUNDAMENTALS OF THE TIMES CAMOUFLAGED BY THE NONSENSE.

HISTORY SHOWS THAT ALL THOSE PERIODS OF FADDISH NONSENSE WHICH PROMOTED "GETTING INTO THE KNOW REGARDING NAUGHT" EVENTUALLY BRINGS ABOUT COMPREHENSIVE VITIATION OF A WHOLE SOCIETY, AS IS RELATED IN THE TALE OF THE EMPEROR'S CLOTHES. WHAT WAS GOING ON IN A FUNDAMENTAL WAY IN THIS SECOND QUARTER OF THE TWENTIETH CENTURY WAS THAT: WORLD-AROUND ECONOMICS WERE SHIFTING FROM THE STATIC NORM OF CLASSICAL SCIENCE TO THE DYNAMIC EVOLUTIONARY ACCELERATION NORM OF RELATIVITY'S REALISTICALLY REAPPRAISED PHYSICAL EXPERIENCE. THE PRESENT ECONOMIC REVOLUTION THAT RENDERS INCOME FROM "CAPITAL GAINS" MORE UNIVERSALLY ATTRACTIVE THAN INCOME FROM SECURED EARNINGS DIVIDENDS, AND CONVERTS YESTERDAY'S "FOOLHARDY" INTO THIS DAY'S SAGACIOUS, DEMONSTRATES THAT NEGATIVE STRATEGY HAS BEEN ABANDONED AND THE DYNAMIC RELATIVITY OF VALUES ESPOUSED. THE PROSPECTS OF SOCIETY ARE NOW PROPITIOUS TO A RE-WELCOMED EVOLUTION BY FUNDAMENTAL DESIGN WHICH IN TURN PROMISES ADVANCE IN WORLD DESIGN AND ECONOMIC AFFAIRS.

HOWEVER, IN THE MEANTIME THE MOMENTUM OF THIS SUPERFICIAL MODERN FAD NONSENSE HAS INFLATED THE U. S. A. "SUCCESS" CATEGORY OF SUBURBAN "INTERNATIONAL-RANCH" CONSTRUCTION, FROM THE TEN THOUSAND DOLLAR TO THE FIFTY THOUSAND DOLLAR RANGE FOR EQUIVALENT CUBAOE INCREMENTS. THIS HAS HEIGHTENED THE EMOTIONAL CONFUSION OF THESE DWELLERS IN NONSENSICAL STRUCTURES WHO ARE ALREADY DIZZIED ENOUGH BY THE PARADOX OF THE EVER AUGMENTED BUYING POWER OF AN INDUSTRIALLY ADVANTAGED COMMONWEALTH, SUCCEEDING DESPITE THE COMMONLY ACCREDITED MALTHUSIAN ASSURANCES OF INEVITABLE FAILURE OF THE INVENTION"MAN" WITHIN AN ALLEGED INHERENTLY HOSTILE, MAN-DESTROYING UNIVERSE.

I HAD TO CONCLUDE WHEN CONFRONTED BY IT IN 1928 THAT AS FAR AS THE INTERNATIONAL STYLE AND ITS INFLUENCE WAS CONCERNED WE WERE IN FOR NEW EDUCATIONAL DECADES IN WHICH WE MUST LEARN TO DO ALL THE LITTLE WRONG THINGS FIRST IN ORDER TO LEARN BY DIRECT EXPERIENCE THAT WE MUST TAKE BROAD COMPREHENSIVE AND INCISIVE RESPONSIBILITY IN THE FORMULATION OF OUR OVER-ALL STRATEGIES, IF WE IN AMERICA ARE TO MAINTAIN RESPONSIBLE GROWTH HUSBANDING FUNCTION IN THE HISTORY OF MAN.

IF WE HAVE NOT ALREADY SCUTTLED OUR OWN HISTORICAL "SHIP" IN THE PROCESS OF LEARNING HOW NOT TO OPERATE IT, WE MAY BE ABLE TO BRING IT INTO PORT DESPITE ALL THE VIGOROUS NONSENSE ORGANIZED TO REDIRECT MAN'S EMERGENT COMPETENCE INTO BYPATHS OF VANITY AND SELF-INFERIORITY CODDLING WHICH SQUANDERS THE POTENTIAL ADVANTAGE IN SUPERFICIAL IRRELEVANCIES.

IN SPEAKING IN SUCH A DIRECTLY CRITICAL AND UNFRIENDLY WAY OF THE "INTERNATIONAL STYLE", I DO NOT HOLD MYSELF A PARAGON AND AM SURE THAT THERE ARE MANY WHO FEEL THAT THEY CAN SHOOT MORE HOLES INTO MY DOMED OVER GARDENS OF EDEN OR MOUNTAIN TOP MOORABLE SKY-HOUSEBOAT KIND OF PHILOSOPHY AND RECORD THAN CAN I IN THEIRS OR OTHERS.

I HAVE SPOKEN IN THIS BLUNT WAY TO DEMONSTRATE THE REMOTENESS OF BAUHAUS' CONCEPTS FROM THOSE I HOLD. HOWEVER, SIMPLEST DEMONSTRATION OF THE FUNDAMENTAL REMOTENESS OF OUR WAYS IS THE LACK OF SCHEDULES OF RATIO OF INVESTED RESOURCES PER UNITS OF PERFORMANCE ABILITIES CONCERNING STRUCTURES DESIGNED BY INTERNATIONAL OR BAUHAUS SCHOOL ARCHITECTS. DO ANY OF THEM PUBLISH WHAT THEIR STRUCTURES WEIGH AND WHAT THEIR ORIGINAL MINIMUM PERFORMANCE REQUIREMENTS MUST BE, AND LATER PROVE TO BE, IN RESPECT TO VELOCITIES OF WINDS, HEIGHTS OF FLOODS, SEVERITY OF EARTHQUAKES, FIRES, PESTILENCE, EPIDEMICS, ETC., AND WHAT THEIR SHIPPING WEIGHTS AND VOLUMES WILL BE, AND WHAT MAN HOURS OF WORK ARE TOTALLY INVOLVED.

WHAT CONVINCED ME THAT THE INTERNATIONAL AND BAUHAUS DESIGNING WAS OF SECONDARY RANK AND LIMITED TO INTERIOR FURNITURE SCULPTURE, FABRICS, AND BRIC-A-BRAC PATTERN VARIATIONS, AND TO

EXTERIOR DE-DECORATING TO REVEAL THE STRUCTURAL FACTS THAT HAD BEEN INSINUATED BEHIND THE OLD-TIME FACADES, WAS THE FACT THAT THEIR TAUGHT DESIGNING CONSCIOUSLY LIMITED ITSELF TO FORMULATED EMPLOYMENT OF THE COMPONENT ITEMS MANUFACTURED BY THE GOING OLD-LINE BUILDING MATERIALS WORLD. THE BAUHAUS AND INTERNATIONAL USED STANDARD PLUMBING FIXTURES AND ONLY VENTURED SO FAR AS TO PERSUADE THE MANUFACTURERS TO MODIFY THE SURFACE OF THE VALVE HANDLES AND SPIGOTS AND THE COLOR, SIZE, AND ARRANGEMENT OF THE TILES. THE INTERNATIONAL BAUHAUS NEVER WENT BACK OF THE WALL SURFACE TO LOOK AT THE PLUMBING, NEVER DARED TO VENTURE INTO "PRINTED" CIRCUITS OF MANIFOLDLY STAMPED PLUMBINGS. THEY NEVER INQUIRED INTO THE OVER-ALL PROBLEM OF SANITARY FUNCTIONS THEMSELVES. THEY SETTLED UPON THE REAL ESTATERS' SEWERS LIKE HENS ON GLASS EGGS. THEY DID NOT INQUIRE INTO THE ECONOMIC PATTERNS GOVERNING RESEARCH, PRODUCTION, TOOLING, AIRFRAME AND POWER PLANT, AND DISTRIBUTION. IN SHORT, THEY ONLY LOOKED AT PROBLEMS OF MODIFICATION OF THE SURFACE OF END PRODUCTS, WHICH END PRODUCTS WERE INHERENTLY SUBFUNCTIONS OF A TECHNICALLY OBSOLETE WORLD.

FINALLY THE BAUHAUS INTERNATIONAL UNDERTOOK DESIGN ONLY AS COMMISSIONED BY DIRECT PATRONAGE AND ESSENTIALLY FOR CRAFTED PRODUCTION OF LIMITED EDITION PRODUCTS CLAIMING THAT BECAUSE THE CRAFTSMAN USED MODERN MACHINE TOOLS (DESIGNED TO MAKE MASS-PRODUCTION TOOLS, - NOT END PRODUCTS) THAT THE DESIGN MUST BE MODERN.

THIS DIRECT PATRONAGE DESIGNING WAS IN DIRECT CONTRAST TO THE KIND OF "GENERALIZED CASE" DESIGNING EFFECTIVENESS TO WHICH I SUBSCRIBED. THE "GENERALIZED CASE" DESIGNING HAD TO ASSUME COMPLETE LACK OF DIRECT PATRONAGE IN ORDER TO FIND THROUGH SCIENTIFIC COMPETENCE THE WAY IN WHICH ULTIMATELY TO SERVE THE GENERAL PUBLIC IN THE MANNER MOST EFFECTIVE TOWARDS GENERAL MAN'S IMPROVING SURVIVAL AND HAPPINESS. IT WAS CLEAR THAT THE "GENERALIZED CASE" MEANT FORSWEARING OPPORTUNISM, AND STRICT ADHERENCE TO THE PROGRAMING INDICATED BY THE FULL GAMUT OF LABORATORY PRODUCED DATA COVERING THE GENERALIZED PROBLEM OF EFFECTING HIGHER STANDARDS FOR ALL REALIZABLE FROM OUT THE FULL INVENTORY OF HISTORY'S AND GEOGRAPHY'S RESOURCES.

I COULD SEE AS IMPLICIT IN THE "GENERALIZED CASE" THAT NOT UNTIL THE COMPREHENSIVE PROBLEM HAD BEEN WORKED THROUGH IN SUCH A MANNER THAT THE GOING RESOURCES COULD MATCH THE COMPLEX OF REQUIRED TASKS AND THE ECONOMIC CRITERIA HAD BEEN GRADUATED FROM MYSTICAL HOPEFULNESS TO DEMONSTRATABLE ADEQUACY THAT THE FIRST PRESENTATION OF THE CONCEPT, - IN ITS ENTIRETY, - COULD BE MADE AND THAT WHEN IT COULD BE MADE THAT IT MUST BE SO OBVIOUSLY OF GENERAL ADVANTAGE THAT IT COULD BE AND MUST BE BROUGHT IN THROUGH THE FRONT DOORS OF CIVILIZATION BECAUSE TOO BIG FOR THE CELLAR WAY OR SIDE PORCH. IT WAS CLEAR THAT THE FRONT DOOR INTRODUCTION WOULD BE REACHABLE ONLY BY THE "HARD WAY AVENUE" OF BROAD INTEGRITY, UNIVERSAL TOLERANCE, EDUCATION BY EXPERIMENT, AND DUE (I.E., THOROUGHLY INTEGRATED) PROCESS.

NOW THAT I HAVE FINISHED STATING ALL THE HOWS AND WHEREFORES OF MY PRIMARY DESIGN-INFLUENCE-ENVIRONMENT, I MUST ALSO SAY THAT I ALWAYS HOLD IN DEEP RESPECT, OFTTIMES WITH ENTHUSIASM, AND SOMETIMES WITH GREAT AFFECTION ALL THOSE OF WHOM I AM AT TIMES MOST ARGUMENTATIVELY CRITICAL, FOR IT IS THEY IN PARTICULAR WHO HAVE TAKEN THE DESIGN INITIATIVE AFTER THE URGINGS OF THEIR HEADS AND HEARTS. I WARM TO ALL SUCH INITIATIVE. I FIND NO MEN "BAD". I AM CONVINCED BY MY OWN FREQUENT STUPIDITIES THAT THE HELL'S-FIRE-TO-BE-KNOWN BY HIM WHO CALLETH HIS BROTHER A FOOL IS A HELL-OF-THE-MIND RIGHT HERE IMMEDIATELY UPON EARTH. I AM CONVINCED OF THE UTTER INTEGRITY OF THE TOTAL EXPERIENCE, AND OF THE INDICATED EXTENSIBLNESS OF THE COMPREHENSIVE INTEGRITY--APPARENT UNIVERSE--, EXTENSIBLE FURTHER TO MAN, AS ALWAYS, ONLY THROUGH THE CONGRUENT INTEGRITY OF THE INDIVIDUAL. ERGO, I AM CONVINCED OF THE INTEGRITY OF THE INFINITUDE OF COMPLEMENTARY FUNCTIONINGS IDENTIFIABLE IN PRINCIPLE.

I HAVE ENJOYED THIS MOMENT'S REINSPECTION OF "MY OWN CASE HISTORY", - AS PERMITTED BY YOUR EARNEST INQUIRY, FOR ALL OUR "IN MY OWN CASE" HISTORIES ARE THOSE UNIQUE CASE HISTORIES WHERE NONE RESPECTIVELY MAY TRESPASS AND WHEREIN ALL MAY PROFIT THROUGH THE INCREASING LUCIDITY OF THE OPERATIVE PRINCIPLES OF THE COMPREHENSIVE INTEGRITY IMPLICIT IN EVERY SELF-ERROR-REVEALED STUMBLING.

FAITHFULLY YOURS,

R. BUCKMINSTER FULLER