

Christopher Alexander and the Center for Environmental Structure Archive



Christopher Alexander and his one Theory

*The way Alexander's thoughts evolved
from the 1960's to 2000's*

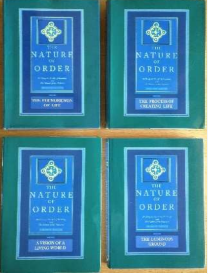







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CES board member

Christopher Alexander and the Center for Environmental Structure Archive

The ultimate purpose of the archive is to preserve Chris' legacy and spread it further to younger generations of architects, scholars and researchers

Alexander's Professional, Scientific, and Hands-on Disciplines

<i>The Scientist and Author</i>	<i>The Teacher and Professor at UCB</i>	<i>The CES Chairman</i>	<i>The Architect, the Builder and General Contractor</i>	<i>The Public Figure</i>	<i>The Art Collector</i>	<i>The Craftsman and Painter</i>	<i>And Chris</i>
1959 First Article published in RIBA	1963	1967	1962 Village Elementary School, Brava, India	1962 Conference on Design Methods, London	1970s ???	1970s ???	born on 1936 in Vienna, Austria
Research and Writing	Teaching and Research	Founding and running CES	Design and Construction	Participating in Public Events	Collecting Great Art	Making Art	
							
<p>Did research, wrote and published:</p> <ul style="list-style-type: none"> * 18 books * over 200 articles in technical journals <p>Wrote, but did not publish:</p> <ul style="list-style-type: none"> * numerous CES papers and reports <p>Others wrote and published about him:</p> <ul style="list-style-type: none"> * two books * over ten dozens of articles reviewing his writings * more than 300 articles on him and his works 	<p>Taught Architecture for 38 years:</p> <ul style="list-style-type: none"> * numerous students from all over the world <p>Held research positions in institutions of great renown:</p> <ul style="list-style-type: none"> * Visiting Fellow, Rockefeller Foundation * Research Professor in the Humanities, UCB * Center for Cognitive Studies, Harvard * Joint Center for Urban Studies, Harvard & MIT 	<p>On Etna Street, on Shasta Road, in Martinez, close to the corner of Cedar and Shattuck, on Shasta again, then in Meadow Lodge. In Japan also in between...</p> <p>And over hundred staff and students; Americans, Israelis, Canadians, Indians, Greeks, Japanese, Germans, French, English,</p>	<p>Built works in four continents:</p> <ul style="list-style-type: none"> * 35 building projects with over 50 individual buildings <p>Promoted active experimentation on construction techniques, details, materials and color</p> <p>Design projects in four continents:</p> <ul style="list-style-type: none"> * Over 100 projects - public structures * - town and community planning schemes * - neighborhood design - office furniture design - public buildings * - low cost housing - private houses 	<p>Participated in conferences and gave lectures:</p> <ul style="list-style-type: none"> * approximately 30; he declined a lot <p>Organized & participated in exhibits:</p> <ul style="list-style-type: none"> * the first one in Japan in 1970 * in total about a dozen <p>One publized debate and many interviews</p> <p>One film was shot on his life and architecture</p> <p>Was on radio and TV broadcasts in the US, Japan and Finland</p>	<p>Bought some 40 carpets over a period of thirty years....</p> <p>Almost all early Turkish carpets</p> <p>"...so the carpet, as an artifact, is a teacher,</p>	<p>Oil paintings and watercolors</p> <p>Wood carving</p> <p>Painting on wooden panels</p> <p>Hand-painted tiles</p> <p>Hand-made terrazzo tiles</p> <p>Making of furniture pieces and objects</p> <p>Poster designs</p>	<ul style="list-style-type: none"> * Raised in Oxford and Chichester * Top open scholarship to Trinity College, Cambridge in chemistry and physics * And went on to read mathematics and * He earned his doctorate in architecture at Harvard (the first awarded there) * And was elected to the Society of Fellows at Harvard University * He received numerous and prestigious awards and honours

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The archival material

1	2	3	4	5	6	7	8
BOOKS AND ARTICLES	UNIVERSITY & TEACHING RECORDS	OFFICE RECORDS	PROJECT RECORDS	PUBLIC EVENTS RECORDS	RECORDS OF ART COLLECTIONS	PERSONAL WORKS OF ART	PERSONAL RECORDS
<ul style="list-style-type: none"> * Books * Book Translations * Published Articles * Unpublished Papers * Manuscripts * Contracts with Publishers 	<ul style="list-style-type: none"> * Course Teaching Material * Students' work * Ph.D Dissertations * M. ARCH Thesis * University Records * Teaching Awards * Notes 	<ul style="list-style-type: none"> * Office Legal Records * Office Financial Records * Office Administration Records * Correspondence * Contracts * Portfolios * Grant Proposals * Photographs * CES Colleagues * Computer Backup Tapes, CDs, Disks, etc 	<ul style="list-style-type: none"> * Projects * Drawings * Models * Project Reports * Project Photographs * Project Awards * Pieces of Mockups * Engineering Reports * Engineering Data & Calcs * Project Contracts * Project Budgets * Correspondence * Project Notes * Project Meeting Notes * Presentation Boards * CAD Files 	<ul style="list-style-type: none"> * Exhibits * Charettes * Conferences & Symposiums * Lectures & Seminars * Interviews * Seminar Proceedings * Lecture Transcripts * Interview Transcripts * Debate Transcripts * Films * Videos * Audio Tapes * Correspondence * Brochures * Posters * Exhibition Boards 	<ul style="list-style-type: none"> * Very Early Turkish Carpets * Paintings * Unique Artifacts * Design Tools * Construction Tools * Correspondence * Purchase Deeds 	<ul style="list-style-type: none"> * Works of Art * Works of Art Embedded in Projects 	<ul style="list-style-type: none"> * Personal Notebooks & Sketchbooks * Student Works * Personal Photographs * Personal Notes * CVs * Awards

There are thousands of objects in the archive

Each one will be listed in its appropriate group

Each one will be described in all available detail

Each one will be digitized as per experts guidelines

Each one of the originals will be filed in the proper cabinet

Each one of the originals will be diligently preserved; damaged ones will be restored

Each one will be easily traceable

The archive will be kept both in physical and digitized form; obviously each one will be structured differently

Items will be linked to each other, so that connections and relationships among relevant items will be set up for cross reference and overview

and the ultimate goal is the archive to be accessed by the public through a new CES website and other social media in parallel

What the digital archive will offer

One will be able to find easily the one particular item searched for

Also one will be in a position to find all items related to a particular Project(basic info, reports, drawings, photos, etc), or a particular Book(basic info, previous manuscripts), or a particular Exhibit, and so on.....

And obviously one will find groups of similar items: all books, all projects, all articles, all drawings, all photos.....

But more importantly, due to the "links" introduced in the system, one will be able to find and realize the interconnectedness among different items.

One is interested in the **Mexicali Project** and is searching for it in the archive. Besides the relevant drawings, photographs, agreements, cost analysis etc. related to the project, the following items will also appear:

One Book: "The Production of Houses", published by Oxford University Press

Seven Articles about the project written by others in various magazines

A Master of Architecture Thesis at U. C. Berkeley

An Interview with Christopher Alexander about the project

Eleven Articles reviewing the Book

We also envision that at some point virtual exhibits on a project or on a theme will be available

The aspiration of the CES board is to enable visitors of the archive to comprehend to the extent possible the magnitude, extent and diversity of Alexander's & CES work

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However, one important element needs to embrace the whole archive and be its overarching structure.

And this is how Chris' theory, deep thoughts and provocative ideas evolved and unfolded during the fifty years of his intense work and research.

Certainly, all is in the books and projects, in his writings, buildings; but for a novice it will not be easy....

The challenge is whether the archive could guide a novice through a sequence of "gateways", starting from the "Systems Thinking" approach of the 1960's, all the way to the "Process of Creating Life" which shaped the design and construction of buildings and projects in the 1980s and 1990's

Actually this virtual trip through the "gateways" is important to all researchers, and architects, and people caring for their homes and cities; because one will realize that Chris understood deeply, and early on the importance of many aspects of design and building which today have become "hot issues" in the community of architects, planners, urban designers, as well as for community leaders, townships, activists, people who care for the quality and life of the places they live and the world they inhabit, such as sustainability, constant repair, respect for the land, involvement of the users, growth in small increments, "good materials", just to name a few.

And he advocated a new way, and did whatever it takes to prove its validity and its fitness to the world, because of its strong penchant for practical application of the theory.

His multi-faceted studies, research, experiments and buildings have afforded the foundation for his evolving understanding of a new scientific and empirical basis for judging, building and modifying the quality of our environment

The virtual trip through the "gateways" is based on the premise that there is one theory that evolved during these fifty years, with the following being the three fundamental & guiding ideas, with always kept the target bright and clear:

★ **The Quality**

★ **The Building Blocks of the Quality**

★ **The Process which Generates the Quality**

The attempt will be to show the development of the main thoughts and ideas through time; the formulations and results of each one; how success and failure led to further development.

For this purpose I used, to start with, the following eight books.

1964_Notes on the Synthesis of Form

1975_The Oregon Experiment

1977_A Pattern Language

1979_The Timeless Way of Building

1985_The Production of Houses

1987_A New Theory of Urban Design

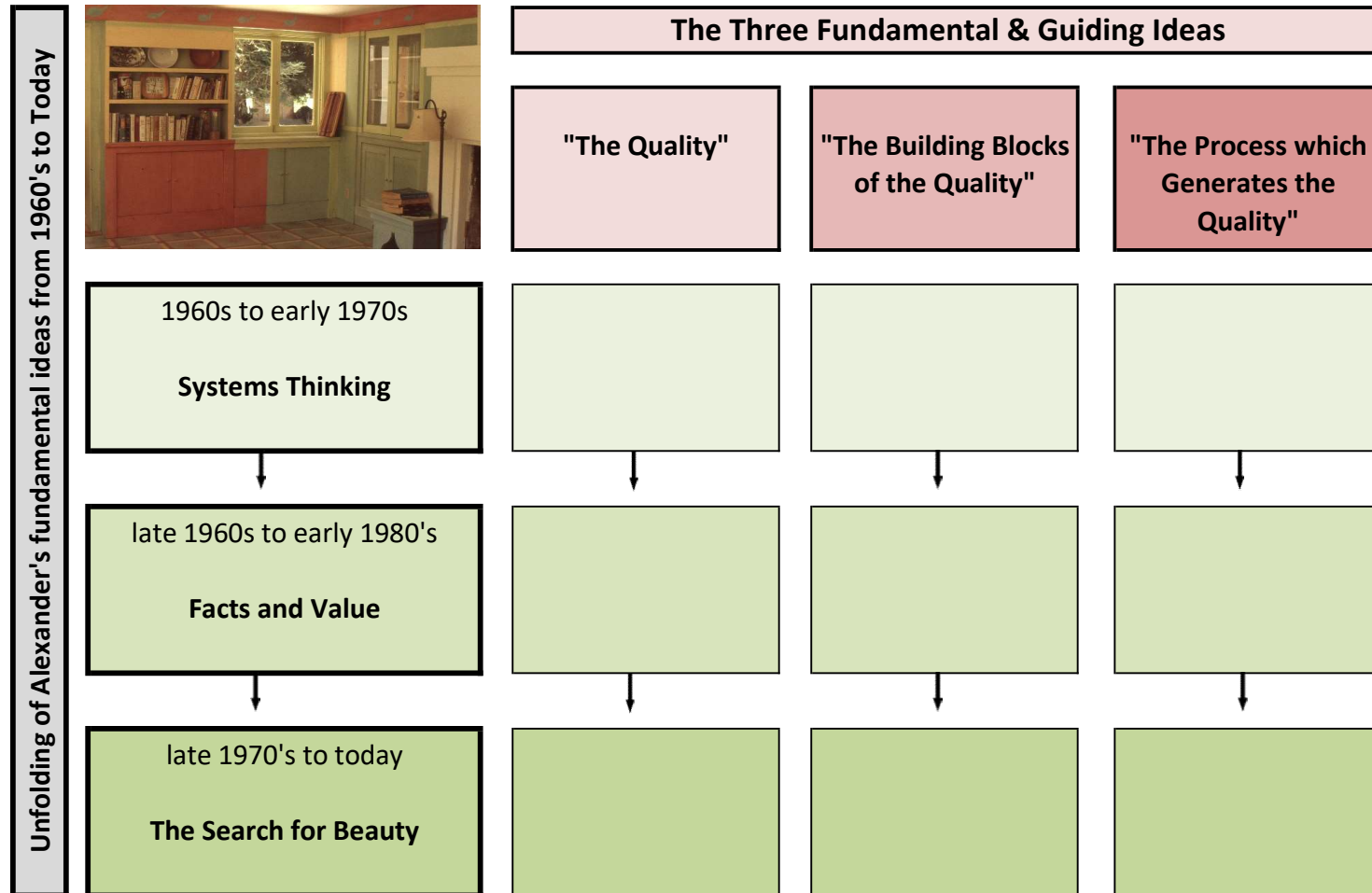
1993_A Foreshadowing of 21st Century Art: The Color and Geometry of Ver Early Turkish Carpets

2001-2005_The Nature of Order

The ultimate task will be to add all published books, the major CES reports and the most important articles and papers; all these works which display the development of Chris' thoughts and ideas

In the following slides I will show you a summary of the analysis I did, which led me to a possible structure of the "gateways" and their potential content.

THE WAY ALEXANDER'S THOUGHTS EVOLVED



THE WAY ALEXANDER'S THOUGHTS EVOLVED

Unfolding of Alexander's fundamental ideas from 1960's to Today



The Three Fundamental & Guiding Ideas

"The Quality"

"The Building Blocks of the Quality"

"The Process which Generates the Quality"

1960s to early 1970s
Systems Thinking
Function and Requirements
 1964_ *Notes on the Synthesis of Form*

Good Fit between Form and Context
The Ultimate Object of Design is Form

The Source of Good Fit
"The Unselfconscious Process"

The Program
Problem & Solution; Analysis & Synthesis

late 1960s to early 1980's
Facts and Value
Patterns & Pattern Languages
 1979_ *A Timeless Way of Building*
 1977_ *A Pattern Language*
 1975_ *The Oregon Experiment*
 1985_ *The Production of Houses*

The Quality Without a Name
This quality is objective and precise, but it cannot be named

The Gate
A Living Pattern Language as a Gate

The Way
Generative Patterns

The Process of Building and Planning in a Community
Six Principles of Implementation

Grassroots Housing Process
The Seven Principles of Control

late 1970's to today
The Search for Beauty
Wholeness & Geometry
 1987_ *A New Theory of Urban Design*
 1993_ *A Foreshadowing of 21st Century Art: The Color and Geometry of Very Early Turkish Carpets*
 2001-2005_ *The Nature of Order*

The Idea of a Growing Whole

Wholeness
The Overriding Rule

Wholeness Comes from the Process
The Seven Detailed Rules of Growth

The Original Creature
Beauty Depends on the Fine Structure

The Building Blocks of Wholeness
A "Center" and the Multiplicity of Centers

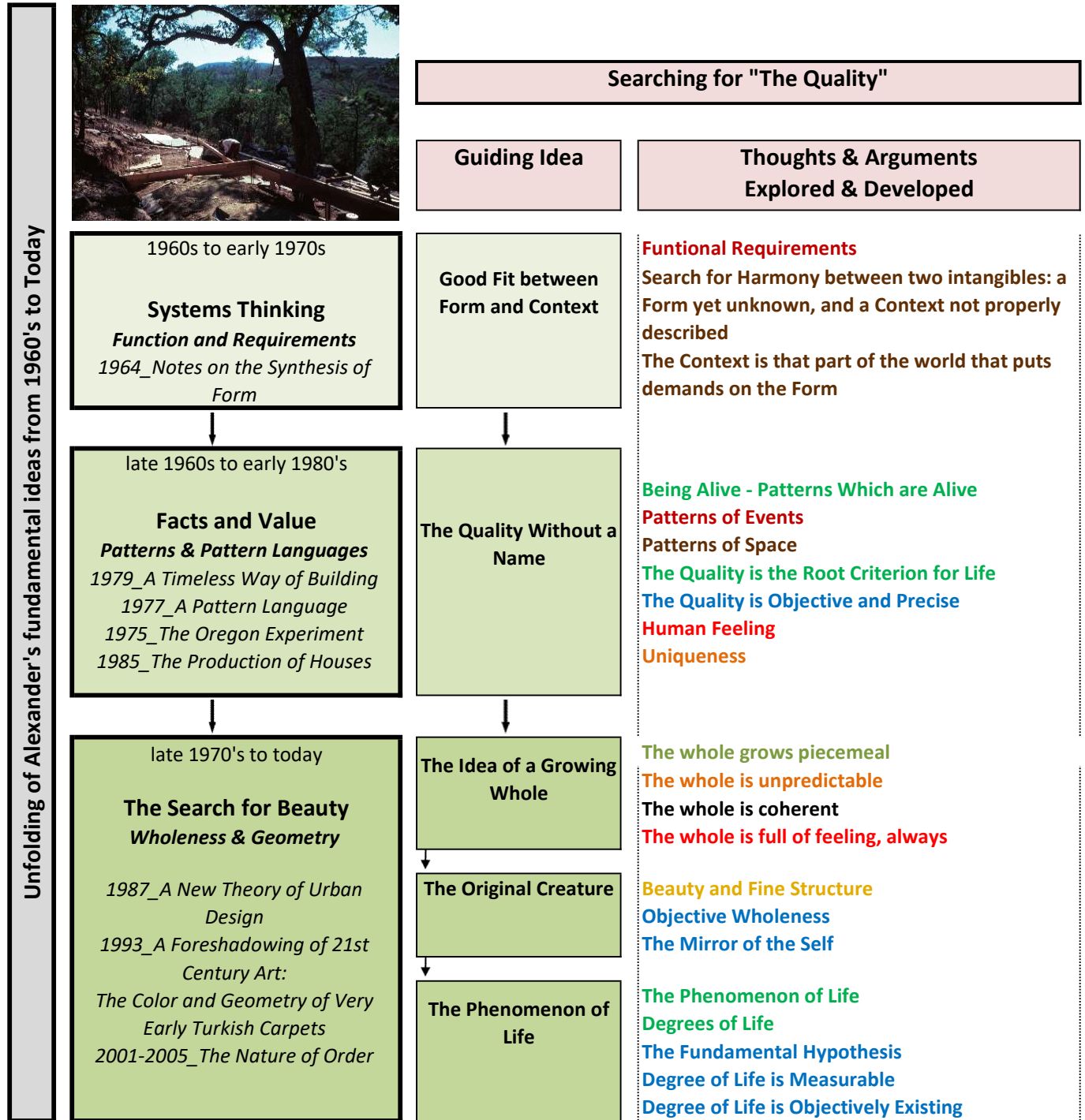
Differentiation Process
The Process by Which a Center is Made Distinct

The Phenomenon of Life
Degrees of Life

Wholeness and the Theory of Centers
Wholeness as a Structure

The Process of Creating Life
The Principle of Unfolding Wholeness

THE WAY ALEXANDER'S THOUGHTS EVOLVED



* General Framework of particular era

* Titles of Books, Articles, Papers, etc.

* Reference to relevant parts of books, articles, research, teaching material, etc

* Reference to relevant examples; primarily sketches, photos, carpets, art works, etc.

THE SEARCH FOR BEAUTY - WHOLENESS AND GEOMETRY: As Evolved from the late 1970s to today



The Three Fundamental & Guiding Ideas

"The Quality"

"The Building Blocks of the Quality"

"The Process which Generates the Quality"

1987_A New Theory of Urban Design

The Idea of a Growing Whole

The whole grows piecemeal
The whole is unpredictable
The whole is coherent
The whole is full of feeling, always

Wholeness
The Overriding Rule

Wholeness as an Objective Condition of Spatial Configuration
The Structure Which Produces Wholeness is Specific to its Circumstances
The Process Works Incrementally, Producing a Structure Defined as "Field of Centers"
The Field of Centers is Produced by the Incremental Creation of Centers, One by One

Wholeness Comes from the Process
The Seven Detailed Rules of Growth

1. Piecemeal Growth
2. The Growth of Larger Wholes
3. Visions
4. The Basic Rule of Positive Urban Space
5. The Layout of Large Buildings
6. Construction
7. Formation of Centers

1993_A Foreshadowing of 21st Century Art: The Color and Geometry of Very Early Turkish Carpet

The Original Creature

Beauty and Fine Structure
Objective Wholeness
The Mirror of the Self

The Building Blocks of Wholeness
A "Center" and the Multiplicity of Centers

The Building Blocks of Wholeness are Called "Centers"
The Multiplicity of Centers and Degree of Wholeness
A "Center" is a Structure Which Possesses Wholeness "in the Small"
Centers and Local Symmetries
Centers are Defined Recursively
The Density of Local Symmetries
Positive Space
Levels of Scale

Differentiation
The Process by Which a Center is Made Distinct

The Process by Which a Center is Made Distinct
Introducing Centers in all Levels of Scale
The Creation of a Complex Center - Complex Circularity
The Differentiation Process
The Emergence of a Being

2001-2005_The Nature of Order

The Phenomenon of Life

The Phenomenon of Life
Degrees of Life
The Fundamental Hypothesis
Degree of Life is Measurable
Degree of Life is Objectively Existing

Wholeness and the Theory of Centers
Wholeness as a Structure

The Concept of a Center
The Subtlety of Centers
Recursive Definition of a Center
Each Center as a Field
Wholeness as a Subtle Structure
Wholeness as a Fundamental Structure of Space
How Life Comes from Wholeness
Each Center Has its Life
Fifteen Fundamental Properties
The Personal Nature of Order - Wholeness and Feeling
The Mirror of the Self - Liking Something from the Heart
An Empirical Test for Comparing the Degree of Life of Different Centers
New Method of Observation

The Process of Creating Life
The Principle of Unfolding Wholeness

The Principle of Unfolding Wholeness
Structure-Preserving Transformations
The Fundamental Differentiating Process
Step-By-Step Adaptation -- Gradual Progress Toward Living Structure
Step-By-Step Adaptation -- Feedback
Step-By-Step Adaptation -- The Result Must be Unpredictable; even During Construction
The Whole -- Each Step is Always Helping to Enhance the Whole
The Idea of Morphological "Ripples"; A Vision in the Mind's Eye, not in Sketches on Paper
At Each Step Decide Only What you Know With Certainty - This is an Empirical Matter, to be Discovered by Experiment; in the real place, or in a model, or in other "real" simulations
The Process of Capturing the Whole
Always Making Centers -- So that Every Center is Shaped by the Next Step in the Differentiation
Emerging Centers which Help the Whole
An Operational Basis: How each Center, as it is Formed, May be Chosen to Help Increase the Life of the Whole
Emergence of Strong Centers at Fine Scale: The way that the space of details needs to be unified and made coherent, in order to give it life
The Sequence of Unfolding - Generative Sequences are the Key to the Success of Living Process Whenever Complex Structure is Being Formed
Vital Importance of the "Right" Sequence
Every Part is Unique -- A Process so Finely Tuned to Circumstance that Every Part Becomes Unique
Geometry: Uniqueness, Regularity, Differentiation
Uniqueness Arises Naturally from Sequence; from Doing Things in the Right Order and from the Appropriateness of Repetition
Respect for What Exists
Patterns -- Generic Rules for Making Centers or "Making Life Enjoyable"
Pattern Languages
Patterns as Generic Centers
Deep Feeling -- The Aim of Every Living Process is, at Each Step, to Increase the Deep Feeling of the Whole
Wholeness and Feeling
Design and Construction at the Same Time

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The Three Fundamental & Guiding Ideas

"The Quality"	"The Building Blocks of the Quality"	"The Process which Generates the Quality"
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RELATIONSHIPS & LINKS TO:

Projects and Project Designs
Exhibits, Lectures, Conferences, Interviews
Books, Articles, Papers, Project Reports
Teaching Material
A few indicative examples below:

1960s to early 1970s
Systems Thinking
Function and Requirements
1964_ *Notes on the Synthesis of Form*

Good Fit between Form and Context
The Ultimate Object of Design is Form

The Source of Good Fit
"The Unselfconscious Process"

The Program
Problem & Solution; Analysis & Synthesis

1962 Village Elementary School, Brava, India
1962 Master Plan for Village Brava, India
1964 BART System
etc.....

late 1960s to early 1980's
Facts and Value
Patterns & Pattern Languages
1979_ *A Timeless Way of Building*
1977_ *A Pattern Language*
1975_ *The Oregon Experiment*
1985_ *The Production of Houses*

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This quality is objective and precise, but it cannot be named

The Gate
A Living Pattern Language as a Gate

The Way
Generative Patterns

The Process of Building and Planning in a Community
Six Principles of Implementation

1968 *A Pattern Language which Generates Multi-Service Centers*
1968-73 Multi-Service Center, Hunts Point, The Bronx, NY
1969 Master Plan for the University of Oregon
1969 *Houses Generated by Patterns*
1969-73 The Peru Project
1972 Community Mental Health Center, Modesto, CA
1974 Etna street Cottage, Berkeley, CA
1976 The Mexicali Project
1978-83 Martinez House
1980 Linz Café - Part of the Forum Design Expo
1981 *The Linz Café*
1981 Master Plan for the Community of Omaha, Nebraska
etc.....

Grassroots Housing Process
The Seven Principles of Control

late 1970's to today
The Search for Beauty
Wholeness & Geometry
1987_ *A New Theory of Urban Design*
1993_ *A Foreshadowing of 21st Century Art:*
The Color and Geometry of Very Early Turkish Carpets
2001-2005_ *The Nature of Order*

The Phenomenon of Life
Degrees of Life

The Building Blocks of Wholeness and the Theory of Centers

Wholeness Comes from the Process
The Seven Detailed Rules of Growth

Differentiation Process
The Process by Which a Center is Made Distinct

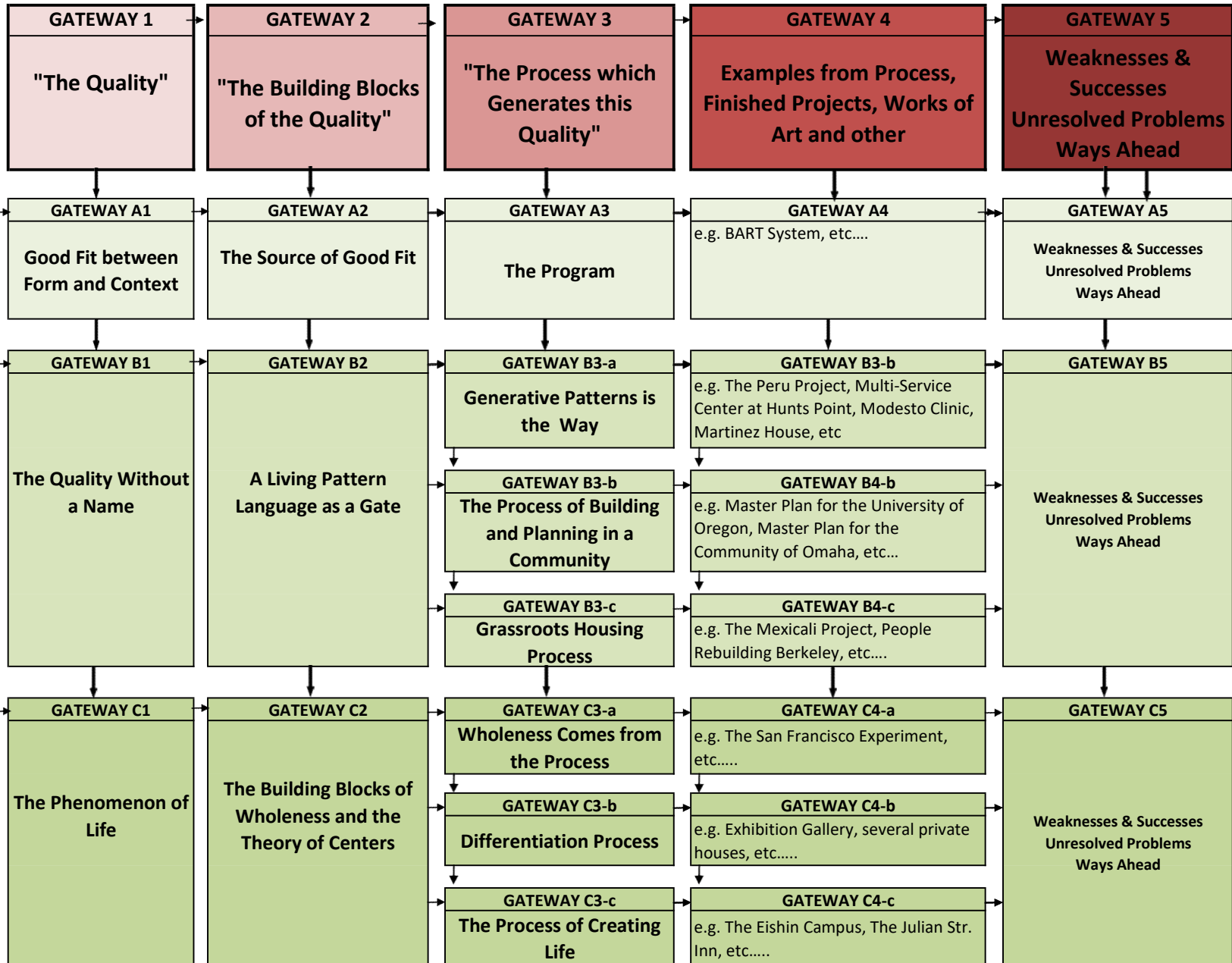
The Process of Creating Life
The Principle of Unfolding Wholeness

1978-79 The San Francisco Experiment_UBC Arch Studio
1982-96 A dozen Private Houses Built in the US
1982-96 Several Private House Designs in the US
1982-83 Neighborhood Plans for the Guasare New Town, Maracaibo
1982-84 Moshav Shorashim, Galilee
1982-87 The Eishin Campus, Tokyo
1984-87 Apartment Buildings, Tokyo
1984 Farmer's Market, Fresno, CA
1984 The Fort Mason Bench, SF, CA
1985 Sweet Potatoes Clothing Factory, Berkeley, CA
1986-89 Architectural Competitions
1987 A City of Cardens - Design Ordinance for Pasadena
1987-88 The Julian Street Inn - Shelter for the Homeless, San Jose, CA
1988-89 New Systems of Office Furniture
1988-90 Low-cost House Neighborhood, Santa Rosa de Cabal
1990-91 M. H. DeMuseum, Exhibition Gallery for the Alexander Carpet Collection
1991-93 Student Housing in Oregon
1993 West Dean Visitor Center & Gardens, UK
1994 Mary Rose Museum, Portsmouth, UK
1990-99 Several Community Design Projects in Japan, Europe, US
2012 *The Battle for the Life and Beauty of the Earth: A Struggle Between Two World-Systems*

THE WAY ALEXANDER'S THOUGHTS EVOLVED

Unfolding of Alexander's fundamental ideas from 1960's to today

Proposal for "Gateways" Through Which Alexander's Theory and Thoughts Will Unfold



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Summary notes:



Archival material still in a transient state



- * The archive, as all archives, will include in a factual manner all items and objects created by Alexander and CES, described precisely as per the records held
- * The archive will be organized in material form with all its originals. All archival materials will be digitized as well, to ensure longevity. And both forms are currently being developed in parallel
- * The digitized archive will be made available to the public through the CES archive web site, to be launched progressively, as soon as the "kernel" of the work is ready
- * The CES archive web site visitor will be presented with different choices to explore it, depending on his/her interest; find one particular item, or multiple items related to a subject, or projects built in a particular area, or the work done in a specific year, and so on.
- * Further to the above, the "Gateways" will present the evolution of Alexander's theory and thoughts and will be the tool to organize the experiential virtual trip through time
- * Also, the "Gateways" will provide tags to each project, each work and event, so that the visitor can relate the actual making of the work with the theoretical background that generated it

A brief account

- In October 2017 the Center of Environmental Structure board of directors convened in the U.K. and decided that preserving Alexander's legacy to future generations led directly to preserving the archives and making them available to the public. That was the beginning of the Alexander/CES archives project.*
- * The president of the CES board of directors is Maggie Moore Alexander, and its members Lily Alexander, Hans Joachim Neis and Artemis Anninou.
 - * Howard Davis is participating in the advisory board of the Alexander/CES archives project.
 - * Artemis Anninou is the manager of the Alexander/CES archives project.
 - * Athens Technology Center has joined the project since Sept. 2018 as CES' consultant providing services for the organization of the archives digital platform and for the development and launching of the CES archives web site.
 - * The Center of Environmental Structure is currently the sole funder of this project; however, additional funding will be necessary for its completion and finding resources will be one of CES' primary tasks.