

Five books reviewed by Besim S. Hakim:

**The Nature of Order:**

**An Essay on the Art of Building and the Nature of the Universe**

Christopher Alexander

The Center of Environmental Structure, Berkeley, California.

Book One: **The Phenomenon of Life**, 2002.

Book Two: **The Process of Creating Life**, 2002.

Book Three: **A Vision of a Living World**, 2005.

Book Four: **The Luminous Ground**, 2004.

**Delight's Muse:**

**On Christopher Alexander's The Nature of Order**

A summary and personal interpretation by Jenny Quillien

Culicidae Architectural Press, Ames, Iowa, USA, 2008

**The Architecture of Rasem Badran:**

**Narratives on People and Place**

By James Steele

Thames and Hudson, London, 2005

**Visualizing Density (with CD)**

Julie Campoli and Alex S. MacLean

Lincoln Institute of Land Policy, Cambridge, Massachusetts, 2007

**SmartCode and Manual:**

**Includes the complete SmartCode version 8.0**

Andres Duany, William Wright, and Sandy Sorlien

New Urban Publications Inc., Ithaca, NY, 2006

***The Nature of Order:***  
***An Essay on the Art of Building and the Nature of the Universe***  
**Christopher Alexander**

The Center of Environmental Structure, Berkeley, California.  
Web site: <http://www.patternlanguage.com>

Book One: *The Phenomenon of Life*, 2002.  
Book Two: *The Process of Creating Life*, 2002.  
Book Three: *A Vision of a Living World*, 2005.  
Book Four: *The Luminous Ground*, 2004.

All four books are bound in hardcover and are 20x28 cm in size. They are all profusely illustrated with color, B/W photos, and diagrams.

Bk1: 476 pages, Bk2: 636 pages, Bk3: 697 pages, and Bk4: 355 pages. Total: 2164 pages.  
Price for each volume: US\$ 63.75. Price for the set of four books: US\$ 250.00, plus shipping. Email contact: [natureoforder@patternlanguage.com](mailto:natureoforder@patternlanguage.com)

Reviewed by Besim S. Hakim, *Albuquerque, New Mexico.*

Christopher Alexander (henceforth CA) was born in Vienna, Austria in 1936. He and his parents moved to England when he was an infant. Although his parents were trained as archeologists, they became school teachers in England. CA graduated from Cambridge University with degrees in mathematics and architecture. He went on to Harvard in 1958 to pursue his doctoral studies. After completing his PhD dissertation and graduating he was appointed to teach architecture at the University of California, Berkeley in 1963 where he stayed until his retirement in 1998. He subsequently moved back to England and currently resides near Arundel, West Sussex.

CA established the Center for Environmental Structure (henceforth CES) in Berkeley, California in 1967, and used it as his office for practice and related research. Almost all of his work and research was undertaken under the auspices of this Center. In the fall of 2005 he established a European branch of the CES based in London and Cambridge.

When I started undertaking research in 1975 on traditional towns in North Africa, I became aware of CA's work and made use of his book *A Pattern Language* (1977) (henceforth APL) for explaining the high quality of the built environment of the village of Sidi Bou Sa'id in northern Tunisia. The book on Sidi Bou Sa'id was published in August 1978 and I sent a copy to CA in mid-1979. He invited me to speak to his graduate students on November 28, 1979 and I presented a summary of my research findings. Since then I have followed CA's work, with much interest, through his various publications, and I am now happy to present this review of *The Nature of Order* (henceforth TNO).

TNO is primarily based on the experience, experiments and most important the serious thought and observations over a period of about 30 years by CA and his various colleagues on their work and its implications on the theory and practice of architecture and the built environment, and how this work might point to an alternative path for

generating built environments that embody the high qualities found in most traditional settlements and towns in many parts of the world.

When confronted with this vast 4-volume work an obvious question arises which is: why four books and why over 2000 pages were necessary to communicate the theoretical arguments and the necessary supporting material that is needed? My own feeling about this question is that CA wanted to include as much evidence, detailed thoughts, observations, and discussions so as to fully persuade his readers. In my view he has achieved that very well, but it is also my opinion that it could have been done in possibly two volumes. Ideally a one-volume book would have been more effective in the long run, particularly if translations to at least the primary languages of the world of this important work is to be practically undertaken. It is also difficult to expect the average reader, however interested, to read and carefully study the material in over 2000 pages of the four books. I believe it is possible to summarize the essential arguments and the necessary supporting illustrations in one volume that I hope will be forthcoming in the future, at least for the purposes of translations to various languages.

What is CA's essential argument and how has it been allocated in the four books? This can best be understood from the 8-page mid-book appendix titled "Recapitulation of the Argument" in Book 4, pp. 135-142. CA says that he kept careful records and notes of his observations since about 1969, and he did that in the way a scientist does. His ultimate goal is to help people make better built environments that is good for the surface of the Earth and good for people. To avoid the potential problem that readers might grasp the many ideas in the four books as separate entities, CA is naturally concerned with disconnectedness. He has tried to emphasize the importance of understanding the details as part of a coherent larger picture, and attempted to do so in Book 4.

To begin digesting this vast material, the reader must first understand the system of centers. These are configurations in space, which have qualities that describe those centers as being alive. In fact we find in Book 1, chapter 5, pp. 143-242, CA clearly associates the 15 fundamental properties, which are rules that help create living centers, with geometric patterns as he and his colleagues put forward the idea of patterns and pattern languages in the late 1970s. In my study, with my senior architecture students, of the village of Sidi Bou Sa'id we clearly identified living centers at different levels of the built environment of the village and we explained those in light of the patterns in APL. We particularly emphasized in the conclusion the high quality patterns as they were corroborated in APL. The term "living structure" which CA uses implies that it contains living centers and that each center, depending on its size and scale, can be understood as a part of a field of other centers. So that a center is made of other centers tying together various levels of the built environment. This phenomenon may also be understood and appreciated as embodying "Wholeness", Book 1, chapter 3, pp. 79-108.

CA emphasizes that centers should not be viewed statically or as frozen objects in space, but should be viewed dynamically. So wholeness can only be understood as a dynamic phenomenon. Thus living structure, if viewed dynamically, can be comprehended as the result of structure-preserving transformations, i.e. every change tends to respect what came before it and preserves the qualities of what was there already and also enhances it, which is discussed in detail in Book 2. This is associated with the process of "unfolding" as CA uses the term. Therefore centers are fundamental building blocks of the phenomenon of wholeness. To pin down what a center is and further

elaborate on the nature of wholeness, CA provides four propositions on pages 139-142 of Book 4:

*“Proposition 1: Each center is a focused zone of space which may be characterized by saying that, to some degree, space in that zone itself comes to life.*

*Proposition 2: To the degree a center is a living center, it is also a picture of the true self, and - very startling - has this character for all people, not just for any individual.*

*Proposition 3: The structure-preserving transformations which continually modify one wholeness in space and replace it by another that preserves the structure of the first, slowly cause space to be filled with unfolded I-like centers.*

*Proposition 4: Only a deliberate process of creating being-like (or self-like) centers in built structure throughout the world, encourages the world to become more alive.”*

In the conclusion to the four books titled: “A modified picture of the universe”, Book 4, pp. 317-338, CA discusses the following topics: the nature of space and matter, wholeness as a physical structure in the universe, and consciousness as a physical feature of the universe. Then he proposes a “Modified physics”, as understood by 20<sup>th</sup> century physics, in which the following attributes of matter-space are added:

- 1- The existence of centers and wholeness.
- 2- Value and life as part of space itself.
- 3- Structure-preserving transformations as the origin of the laws of physics and biology.
- 4- The personal quality of space, and
- 5- The Ultimate “I”.

Thus the matter-space continuum, as understood by present day physics, is modified in its behavior so that:

*“1- We recognize the relative existence of value in different regions of space,*

*2- The value is personal and space is conceived as having some connection to our personal lives,*

*3- Space itself is viewed as having connections, or windows, to some undifferentiated plenum of light, or unity, or mind which lies beyond the space and is possibly even in another dimension, but is nevertheless connected to it at every point in the continuum.”*

In the concluding chapter of Book 4, CA also puts forward eleven new assumptions that present a new picture of a universe in which life and wholeness appear as the central features, Book 4, pp.330-331. They are:

*“1) Matter-space is an unbroken continuum which includes everything, both matter and the so-called space around it, all at the same time.*

*2) In varying degrees, any given portion of space may be more whole or less whole, more alive or less alive, more healed or less healed, connected or broken, separated or not separate.*

*3) Whenever we undertake an act of construction we have the ability to make the world more alive or less alive, more harmonious or less harmonious.*

*4) Everything matters.*

*5) Value is a definite and fundamental part of the universe, and of the scheme of things.*

*6) Ornament and function are indistinguishable.*

*7) Matter itself is not a mechanism: It is a potentially soul-like materiality which is essentially what we call self.*

8) *If self or I is woken up whenever living structure appears in matter, what we think of as value may then be described as the protection, preservation, nourishment, of the precious self of the universe.*

9) *The nature of space-matter, being soul-like, is such that the more whole it becomes, the more transparent, the more it seems to melt, the more it realizes itself, releases its own inner reality, the more transparent it becomes, the more transcendent.*

10) *Thus art is not merely pleasant or interesting. It has an importance that goes to the very core of the cosmology.*

11) *The unfolding of the field of centers, and the unfolding of the self, is the most fundamental awakening of matter.”*

CA ties together a number of disciplines to buttress his theory, chief among them is biology and physics, and he also links their foundations, as they are understood today, to the essence of being that he refers to as the “I” and self and its linkages to God. He does that also to provide a thorough insight on the “*Reasons for the good quality of traditional buildings and towns come into view simply and directly as a result of this dynamic analysis*”, Book 4, p. 137.

I am therefore personally grateful to CA for this most important work that sheds light on numerous aspects of my own studies of the processes followed in traditional societies to create built environments of high quality. I began to sense the contrast in the quality of traditional towns compared to modern constructions since I was a fourth year student of architecture in 1961. My thirst, since then, for finding out how traditional societies created built environments endowed with feeling which touches the human heart, continued until I had the opportunity to launch my life long research and love for this quest since 1975. CA’s work, primarily argued from the findings and insights of science now meshes nicely with my own empirical findings based on the knowledge available in the ancient literature and the built environments which traditional societies left for us.

Once the diffusion of CA’s theories become more understood, it will enhance the interest in traditional architecture and urbanism, and ultimately begin to induce changes in the way architecture and urbanism are taught and practiced.

## **Delight's Muse: On Christopher Alexander's *The Nature of Order*:**

**A summary and personal interpretation by Jenny Quillien**

Culicidae Architectural Press, Ames, Iowa, USA, 2008

ISBN: 978-1-4303-1317-5, paperback, 185 pages, profusely illustrated.

Large format of 8.5x11 inches, US\$ 65.95

Review by Besim S. Hakim, Albuquerque, New Mexico

The author worked as an editor and collaborator with Christopher Alexander during the last five years towards the completion of Alexander's manuscript of *The Nature of Order*. She is extremely well versed in the content of the work and the subtle nuances that such a large enterprise contains within its over 2000 pages in four volumes. This book under review must be viewed as a serious effort by someone who dug deep into Alexander's thinking process and ideas. It is in the end, as the sub-title indicates, Quillien's own interpretation. For views of others one must find and read the reviews of Alexander's *The Nature of Order* and/or read the four-volume work by allocating the extensive time necessary.

The author organized the book in four parts preceded by an Introduction on the Sources of Delight. Part I on Essential Observations is in five chapters: 1. Wholeness, 2. The Fifteen Properties, 3. Unfolding in Nature, 4. Man-made Unfolding, and 5. Color and Light. Part II on Paradise Lost and Found is in two chapters: 6. The Problem, and 7. The Solution. Part III Towards a Cosmology is in three chapters: 8. Epistemology, 9. Queerer World, and 10. The Numinous. Part IV is a collection of essays and conversations. The book ends with a bibliography. There is no index. Two glossaries can be found after chapters 3 and 7. A comprehensive glossary of terms at the end of the book would have been very helpful. Chapter one on wholeness appropriately starts the book and I wish it was more expanded as, in my opinion, it is a central overriding objective of Alexander's work.

Quillien's book is a wonderful personal interpretation and contains the essential building blocks, arguments, and suggestions made by Alexander in the *The Nature of Order*. The reader will enjoy and take away many of Alexander's notions in a short and accessible book that is heavily illustrated with mostly color photos that explain and complement the text very well. It communicates the essential ideas easily, which is not a simple task to accomplish given Alexander's work that is very long and complex. Quillien must be congratulated for taking the effort and time to produce this book and thus synthesizing her five years work and collaboration with Alexander. I recommend this book as a first step in the journey of studying Alexander's *The Nature of Order*. Once this step is completed it will provide the reader with the background necessary to indulge in the four-volume work should he/she decide to do so.

## **The Architecture of Rasem Badran: Narratives on People and Place**

By James Steele

Thames and Hudson, London, 2005

Large format, 256 pages, with over 360 illustrations, 348 in color

ISBN: 0-500-34206-7, hardcover, £ 36.00, \$ 60.00

Reviewed by Besim S. Hakim, FAICP, AIA  
Albuquerque, New Mexico

This book by James Steele on the work of architect Rasem Badran of Jordan is a wonderful contribution to architectural literature and a valuable documentation of the work of one of the most talented Arab architects of the current period. I know both the author and the architect, and it is indeed a pleasure to see the hard work of James Steele, over many years, brought to fruition.

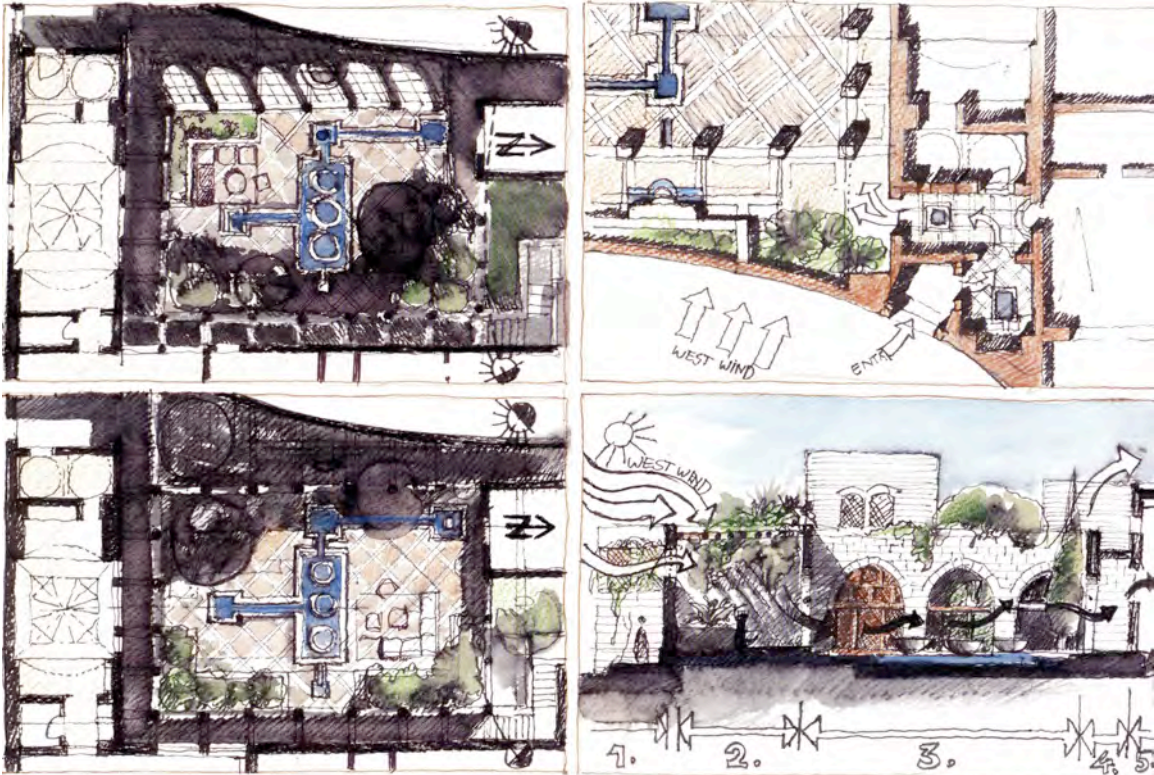
What are most refreshing in this book are not only the photos and discussion of Badran's built projects but the unique style of his sketches that were used to establish the design concepts and their subsequent development. The sketches are reproduced in their original color and some can be classified as works of art in their own right.

The book starts with an introduction, followed by seven chapters, a chronology of Badran's work, notes, bibliography, a glossary of terms, and an index. The chapter titles sequentially are: 1. A narrative on people, place and culture, 2. Creative heritage and the return to the east, 3. Houses and housing, 4. The fourth dimension is the spirit, 5. Preserving a living history, 6. An earthly paradise, 7. Rediscovering the Islamic city.

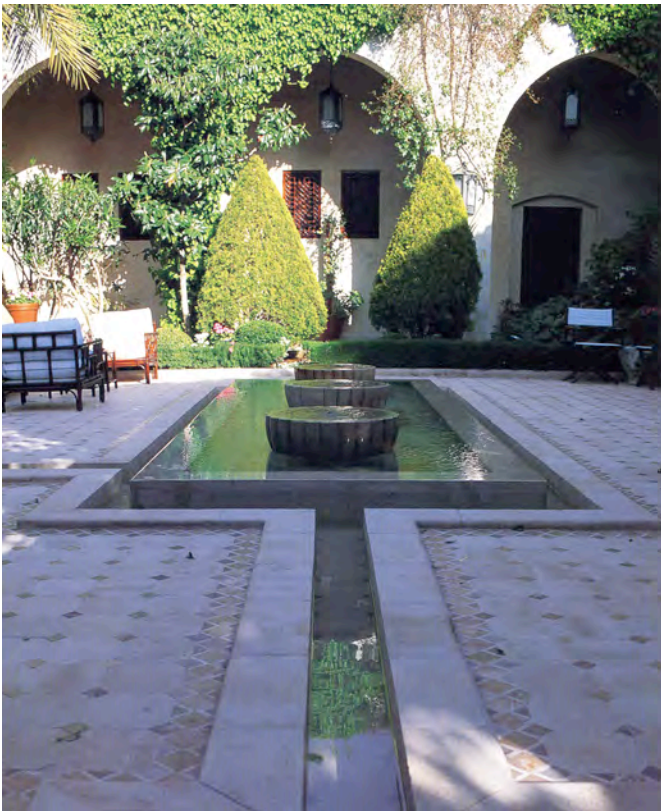
Chapter two is a testament to how important it is to understand one's background, such as Badran's, in shaping his views and outlook on how he uses his skills in forging forward with an architecture that is an important contribution to his region and the world at large.

To appreciate Badran's distinctive design process, I show the following sketches with Steele's commentary. These sketches conclude this review. It is only by a careful reading of this book and examining its illustrations, that one can truly appreciate the sensitivity of Badran's architecture.



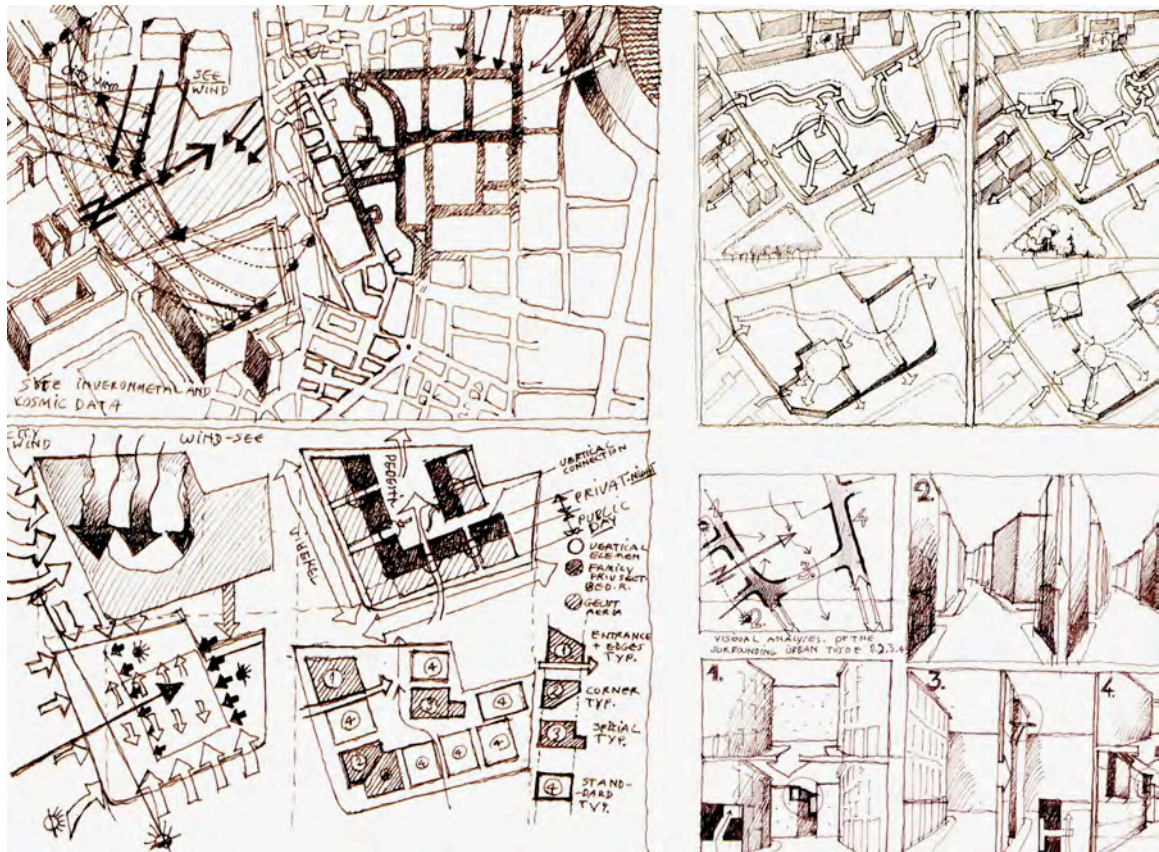


Page 70: Al-Talhouni residence, Amman, Jordan. The orientation of each courtyard must be carefully adjusted to permit maximum airflow, with sectional proportions adjusted accordingly.



Page 72: The beauty of nature and the art of reflection.



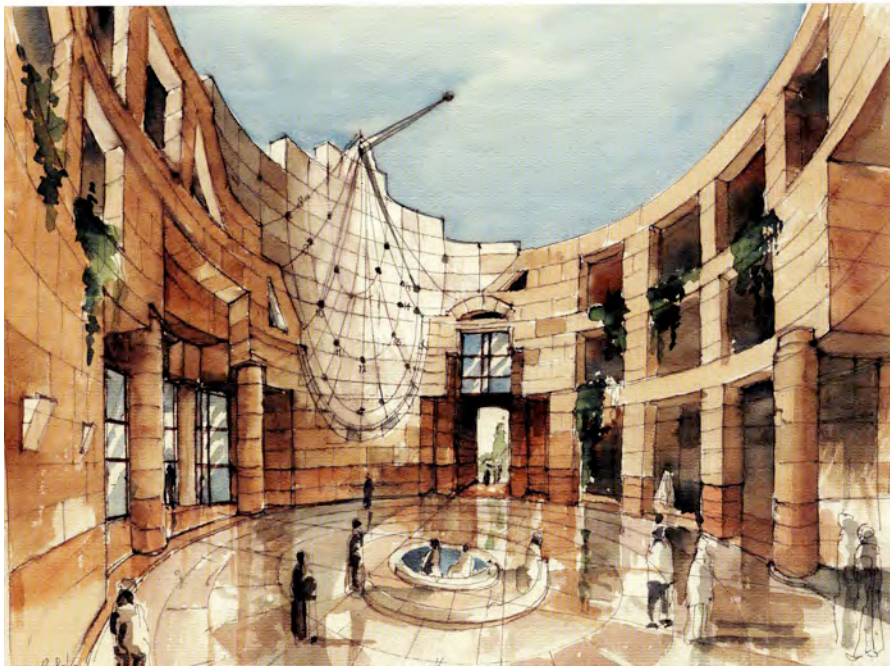
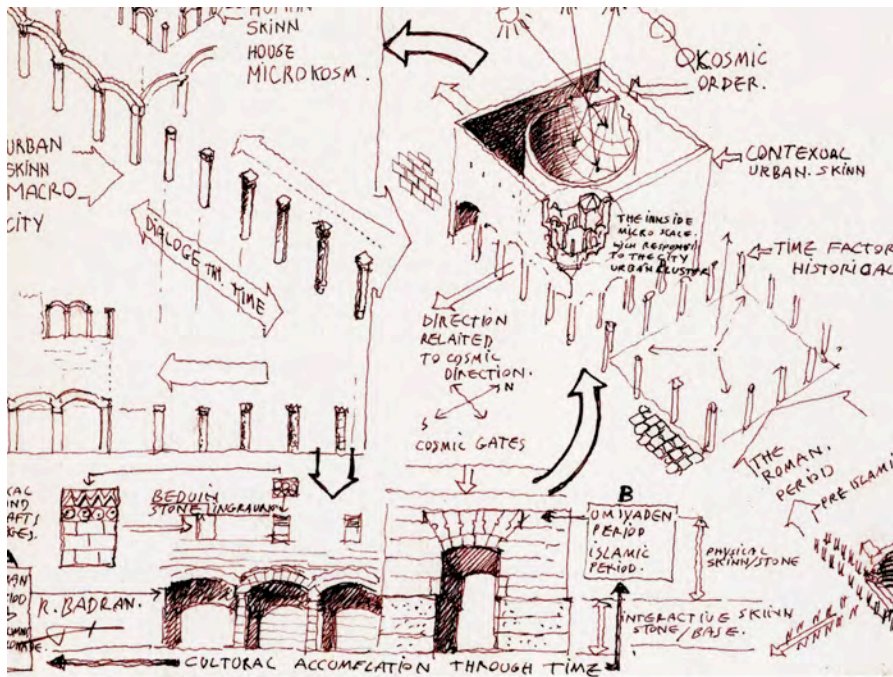


Page 60: Drawings for the Wadi Abu Jamil Housing project in Beirut, Lebanon, showing the physical constraints of the site. Sequencing and environmental factors are both important factors in the establishment of pedestrian and vehicular pathways. Intersections received special attention because they offer the best opportunity for orientation and place-making in addition to forecasting the future development of the surrounding urban network.



Page 65: One of two alternatives, shown in the book, developed for the Wadi Jamil Housing project in Beirut, Lebanon.

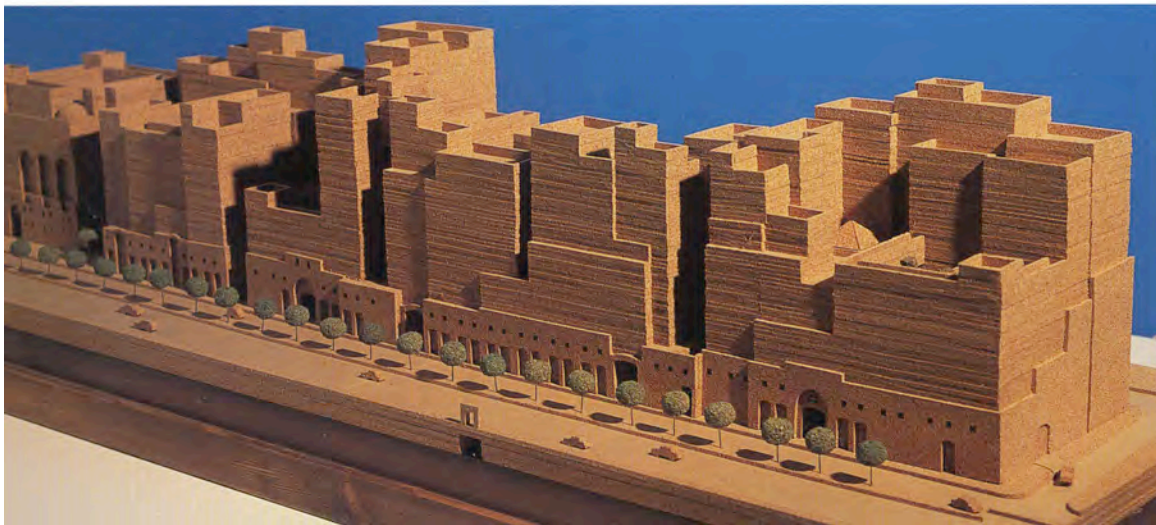
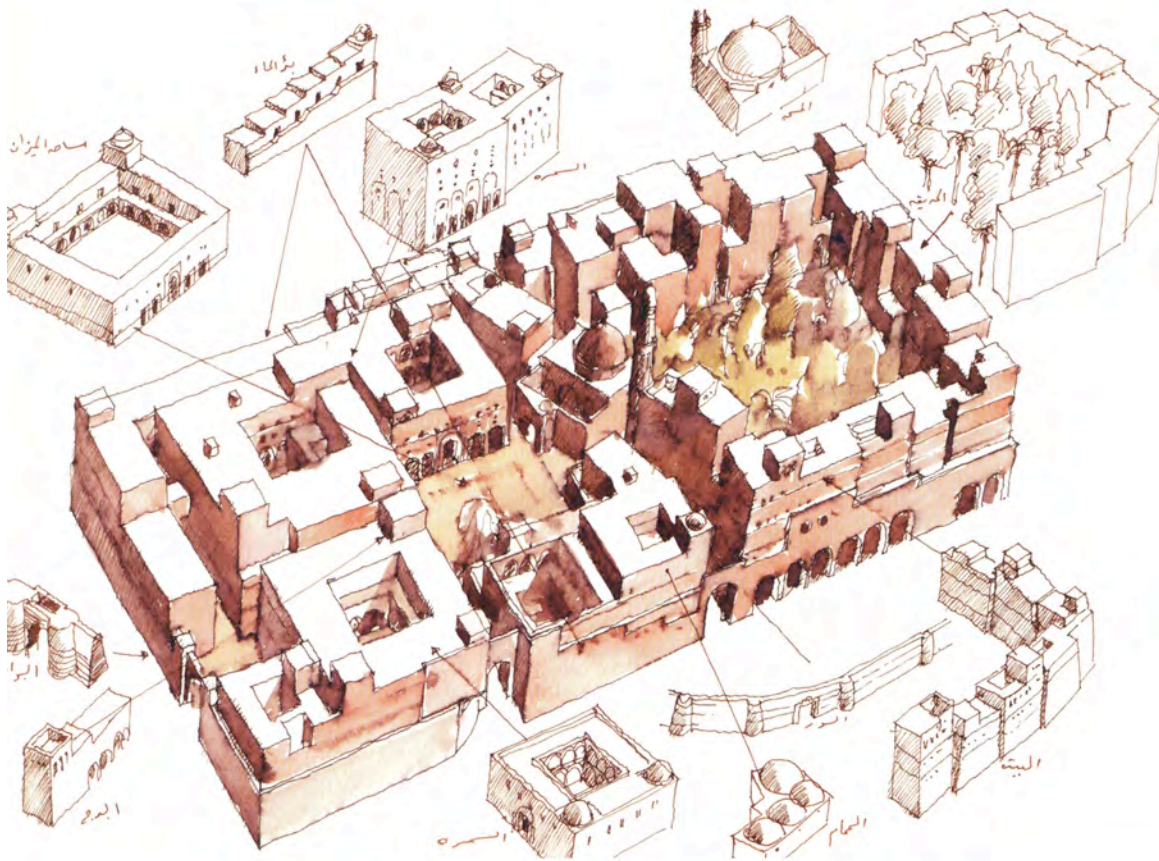




Page 42/Top: Amman City Hall. Analytical study of the morphology. The passage of time has been a constant theme in Islamic culture. Cultural accumulation is described here. Time is expressed visually and stylistically, through historical progression.

Page 42/Bottom: Amman City Hall. The cosmic plaza. A sundial mounted on the wall becomes an integral part of the spatial experience, intentionally making a cosmic connection then is extended into the placement of architectural elements.





Page 214: Ala-Beit Al-Kamal, Sana'a, Yemen. The final massing model is startling in its modernity, before the exterior wrapper is applied. This is a successful dialogue between the value of inheritance and the contemporary.





Page 74: Great Mosque, Riyadh, Saudi Arabia. The hypostyle, or many-columned hall, has a long history in Islamic architecture, even though the technology now exists to enable a more open structure to be used.

## **Visualizing Density** (with CD)

Julie Campoli and Alex S. MacLean

Lincoln Institute of Land Policy, Cambridge, Massachusetts, 2007

ISBN: 978-155844-171-2. Paperback \$39.95

160 pages, extensively illustrated with a majority of aerial color photographs.

Available from the Institute's web site: <http://www.lincolninst.edu>

By phone: 1-800-526-3873

Reviewed by Besim S. Hakim, FAICP, AIA, Albuquerque, New Mexico.

With the increase of population in the US and the demand for more housing, the issue of density re-emerges to be an important consideration that requires understanding and deliberation to facilitate intelligent decisions regarding development. The issues raised in this book are not new, in fact I am familiar with a booklet that is 55 years older dating back to 1952 in the UK titled: *The Density of Residential Areas* by the UK Ministry of Housing and Local Government, that addresses many of the issues and concerns raised in this book.

In *Visualizing Density* the measure used for density is units per acre that includes all streets and other public amenities within the measured area. It should be noted that the book is based on the American experience and addresses issues of relevance to the US context only. The book is divided into three parts: Part One-Growing Closer discusses issues related to the Count, the Coming Boom, Spreading Out or Growing In, Crosscurrents, The Benefits, Why We Hate Density, How We Can Love Density, and Visualizing Density. This first part of the book explains issues that are of importance to growth patterns in the US during the coming decades and argues for higher densities that is based on good design qualities rather than only increases in quantity. Air photos by Alex MacLean are used to communicate the points raised in the text.

Part Two is divided into two major sections: Planning for Density and Designing for Density. The latter also includes issues related to Building design and Parking layouts. Each of those sections is discussed by specific topics supported by photos from various parts of the US that illuminate the explanation in the text. Planning for Density is addressed by 18 topics, Designing for Density by 17 topics, Building by 9 topics, and Parking by 5 topics, a total of 49 issues raised each of which is supported by an illustration that clarifies the topic discussed.

Part Three, which makes up about 60 percent of the book, is The Density Catalog in 88 pages. It shows physical qualities and density measures in units/acre augmented by aerial photos of more than 250 neighborhoods from across the US. Four photos of each location are included: a close up view, a context view, a neighborhood view, and a plan view. Street pattern diagrams for each neighborhood is drawn to the same scale for all examples included in the catalog. However, it is difficult to use these diagrams for measurements because the scale bar is missing, a major omission in my view. The range of densities covered in the catalog is from 1 unit/acre to 296 units/acre. Many examples for the same density are included to provide a sense of difference due to layout and design. I would have liked to see photos from the vantage point of the pedestrian to help acquire a better feeling for the density of the development presented. The book is sold

with a CD attached to the back cover that contains all of The Density Catalog in a PDF file.

The primary message that comes through from this book is that density as a numerical statistical measure is not what should be emphasized, but rather it is the layout and design qualities of a development that is the critical aspect to consider. The book grew out of a series of Lincoln Institute courses of the same name taught by Campoli and MacLean since 2003. Julie Campoli is a landscape architect and land planner and Alex S. MacLean is an aerial photographer. I am happy to see their material in book format, with a CD, at a reasonable price available for everybody that is involved in or interested in issues related to density.

## **SmartCode and Manual:**

### **Includes the complete SmartCode version 8.0**

Andres Duany, William Wright, and Sandy Sorlien

224 pages, spiral bound, full-color SmartCode illustrations, 2006

ISBN: 0974502111

\$99.00 + Shipping and Handling (\$6 U.S., \$11 Canada, \$24 other countries).

New Urban Publications Inc., P.O. Box 6515, Ithaca, NY 14851

Web: <http://www.newurbannews.com>

Reviewed by Besim S. Hakim, FAICP, AIA, Albuquerque, New Mexico

This evolving and latest version of the SmartCode is the result of many years of application, revisions and fine-tuning. The authors and their collaborators are currently working towards version 9.0. The reason the word 'Manual' is added to the title is because it contains much supportive material to enhance understanding of the code and advice for its implementation. The pages of the code itself are only 75. The authors say in the Preface that "Because the SmartCode envisions intentional outcomes based on the essential components of urban design and planning, it covers all this material in very few pages."

The manual is divided into three parts: Part 1- Commentary in 17 pages provides valuable background information on the origins of sprawl, the alternatives to it, the proposed structure of the Transect and how it works, what the SmartCode does, its elements and structure, implementation and legal issues. Part 2 – SmartCode Annotated comprises the bulk of the manual and displays the annotations for each section and paragraph of the code on the opposite page, so that the text or an illustration of the code is on the right side page and its related annotations are on the left side page. This works well as long as the user of the manual keeps in his/her mind that they are separate entities. Within the language of the code there are words and sentences printed in light blue, which are intended to be replaced with language that is legally pertinent to the locality in which the SmartCode is to be adopted and used. It should be kept in mind that the code is written to fit and be adapted to the legal landscape of the United States.

The SmartCode is structured in seven articles: 1. General to all plans, 2. Sector scale plans, 3. New community scale plans, 4. Infill community scale plans, 5. Building scale plans, 6. Standards and tables, and 7. Definitions of terms. Once the user of the code is familiar with its intentions and nuances, the code can then be adapted to specific local contexts. The commentary in part 1 of the manual explains how this is to be accomplished. The term used for this process is 'Calibration' which, in my view, must be carefully and sensitively undertaken to achieve successful results. In certain cases this might necessitate deviating from and/or adjusting certain aspects of the code. In general the code illustrations are self-explanatory but some might require refinements to make them cognitively friendlier, others might require additional annotated explanations on the opposite page.

Part 3 – Appendix, contains 17 appendices many of them have useful illustrations and cover such topics as: analysis for infill, designing a Greenfield site, design and development center, sector plans, sample infill plan, sample regulating plan, sample enabling legislation and ordinance, and a list of case studies and resource references.



These collections of appendices are included to further clarify the workings of the code and provide examples of implementation. It would be worthwhile to expand this part 3 – Appendix to include successful prototypical projects that are already adopted and/or partially built by explaining in detail the calibration process that was followed to achieve the intentions of the code as it is implemented. In addition it is necessary to add comparative drawings and related legal texts of what a typical development would look like if conventional zoning is applied and how it might differ if the SmartCode is used for the same project. Ken Groves, Chad Emerson, and Scott Polikov recently presented a good example of such comparison for a project in downtown Montgomery, Alabama, at the SmartCode Workshop held in Austin, Texas on March 29-31, 2007. Clear comparisons such as this are vital for explaining the differences between conventional and SmartCode coding and their ultimate consequence on the resulting built environment.

This review is of the manual itself and is not an evaluation and critique of the SmartCode. That would be more suitable for an article to be published elsewhere. The manual is a must reading and study for those individuals who are interested in considering using the SmartCode in their communities, and for others who just want to understand its details.