Reviewed by William S. Saunders

A Pattern Language

by Christopher Alexander, Sara Ishikawa, and Murray Silverstein, with Max Jacobson, Ingrid Fiksdahl-King, and Shlomo Angel

New York: Oxford University Press, 1977

Christopher Alexander’s *A Pattern Language*—I take the perhaps unfair liberty of ascribing authorship essentially to him—could very well be the most read architectural treatise of all time, yet in the architecture schools I know, it is as if this book did not exist. This guide to designing environments to encourage and enable certain qualities of personal and social life has been the best-selling theoretical work in architecture for at least ten years, but has never been cited in any article submitted to *Harvard Design Magazine* and has never been brought it up in conversations with me at Harvard Design School. Architects who were students here in the early 1980s tell me that no one read it then, and no courses assigned it (although an alumna of the architecture program at the University of Pennsylvania in the same period tells me that it was on almost every student’s desk; and it continues to be a major, although controversial, force at the University of California, Berkeley). Three highly respected scholars of architectural history and theory have told me they have never read the book; based on other evidence, they assume that Alexander is anti-intellectual, naive, soft-headed, conservative, and uninterested in architecture as art. On the other hand, a prominent philosopher/critic tells me the book is “seminal” for its grasp of the phenomenology of architecture, and a prominent critic has claimed to me that no other architecture book is as grounded in such abundant and acute *seeing* of the built world. Typically, Alexander is, for those who attend to him at all, either enrapturing or repellent. I want to argue that both extremes are unreasonable and unwarranted, that there is no reason why *A Pattern Language* should be either treated like a Bible or tossed in the trash.

Alexander has developed a rigid, messianic position, a belief that, if his ideas were followed by all, the world would be saved. He is deaf to other ways of thinking about architecture (by his own admission). Add to this the fact that he believes that the best architecture is not art (but a means of supporting and enabling “aliveness”) and is produced by ordinary people trying to make a good life, and you get a hint of why his ideas are celebrated more by do-it-yourselfers and building contractors than by architects. Then too, Alexander is seen as reactionary, as wanting to practice “timeless” ways of building, and as assuming that new ideas are almost never going to be as good as ideas that have evolved over centuries of vernacular building. And perhaps most important, the goals of his design prescriptions—comfort, ease, legibility, sociability, pleasure, mental health, peacefulness, opportunities for both solitude and participation in family and community life—can easily be seen as bourgeois, encouraging complacency, passivity, and parochialism. (In essence, this is Peter Eisenman’s criticism in his famous conversation with Alexander at Harvard Design School.)

So Alexander has a lot going against him; he has little “cultural capital,” particularly in architecture schools in which
newness, art, and complexity are valued, and belief in timeless and universal human needs is considered naive. Nothing seems more incompatible with the academic study of architecture than Alexander's idea that, at their best, buildings "are easy to understand, without conscious attention" (482).3

So how should scholars, architects, and critics of architecture respond to the fact that Alexander's ideas are exceptionally influential among Americans who are thinking about the design of their environments? Popularity is of course no measure of quality, but the book's huge popularity should at least make it important to students of architectural culture in general. A Pattern Language's sales have increased steadily since it first appeared in 1974.4 When another architecture book might be selling more, this other book is almost always a glossy coffee-table production quite unlike A Pattern Language, with its Bible-like 1,171 thin-paper pages interspersed with grainy black and white photographs and small, tossed-off line drawings. I have never gone to Amazon.com's Architecture/Criticism category without finding this book the number-one seller, and in Amazon's all-Of-Architecture category, I have always found it the first theoretical work to appear among bestsellers. Since 2000, a Pattern Language web site has been on line, offering several dozen pages, and, for a fee, entry into a computer program that walks the user through the design of environments using Alexander's matrix of rules. I have been told by one of the web site's staff that its users are, from most to fewest, laypeople designing their own houses, then builders and contractors, and (a distant third) architects. Is A Pattern Language's middle-brow popularity due to the fact that it offers rules? Should it be shelved among the _______ for Dummies books and seen as symptomatic of Americans' dependence on experts, our need, even with matters so delicate as intimate relationships, to rely on "how to" rules? Do so many buy it just because it is the most thorough "manual" out there?

"How to" rules. A Pattern Language is nothing but rules, often presented as commands, and given minimal support and elaboration. Two hundred and fifty-three rules. And if there is one thing that has been firmly established by the last century of intellectual endeavor, it is that there can be no rules. Not only is reality seen as too indeterminate, changing, and unknowable to make rules stick, but also rules are seen as tyrannical, blocking creative freedom.

The authors of A Pattern Language claim not to be authoritative or authoritarian. "We have tried to write each solution in a way which imposes nothing on you" (xiii). "You can use this solution a million times over, without ever doing it the same way twice" (x). The book emphasizes the constant participation of owners and users in the making of buildings; insists that design be utterly site-specific and constantly modified during the building process (essentially designed as it is built); claims that all town and city planning should be from the bottom up, done entirely by neighbors for their neighborhoods; and celebrates anarchic, spontaneous ways of living in positively Dionysian tones: "Set aside some part of the town as a carnival—mad sideshows, tournaments, acts, displays, competitions, dancing, music, street theater, clowns, transvestites, freak events, which allow people to reveal their madness. . ." [300]). Alexander's sense of good street life is similar to that of the Situationists: "Public places are meant to invite free loitering" (494). He is—in part—a wild anarchist.

But A Pattern Language is overwhelmingly authoritarian: a typical sentence is "Buildings must always be built on those parts of the land which are in the worst condition, not the best" (509). Its ambitions are totalitarian, to prescribe patterns at all scales in one monolithic system. Following its dicta at scales larger than the individual house would require top-down control ("Give every neighborhood at least one corner grocery" [442]). Yet the life it imagines resulting from its thoroughly planned world is one of total individual freedom and maximum choice: "A setting that is full of chairs, all slightly different, immediately creates an atmosphere which supports rich experience; a setting which contain chairs that are all alike puts a subtle straight [sic] jacket on experience" (1159). Alexander never resolves this central contradiction: the only model for a free, vital life he can imagine is his own. And he imparts it to us as if we should have no minds of our own; he repeats its dicta and bangs them loudly by summarizing each in large, bolded letters.

But no one has to obey his rules. They can be entertained as ideas, as proposals—"what about this, or this, or this?"—thought through open-mindedly, then accepted, modified, or discarded. A Pattern Language should not be taken so literally by either its detractors or its disciples. Approaching it with the intention of using whatever seems useful, one will find many good and some brilliant specific ideas and reminders, which need not be diminished because the ideas surrounding them are sometimes nutty, unfeasible, and/or naive. Given the book's endless detail, such an approach is bound to put A Pattern Language among the few books about architecture that won't and shouldn't go away.

Both the intelligence and the foolishness of A Pattern Language are inseparable from its radical utopianism, its authors' belief in and attempt to create an ideal world. Alexander is one of the last of the earnest and influential utopians; his goal is to "repair the world"
(xiii). Although he combs exhaustively through pre-modern places to find examples of good design, he does so to better define an ideal future, what he believes we should do to make a good life. Patterns from the past are not the same as styles from the past: he sees no reason why bay windows should look like Grandma’s, only that there should be bay windows for the experiences they enable.

At the same time, however, the Alexander of A Pattern Language is indifferent to the feasibility of his proposals. Since in his mind they unquestionably should be implemented, whether they can be implemented without a radical restructuring of contemporary economic systems, governmental rules, and deeply ingrained morés (most can’t) is not something he considers. For example, his assertions that every family should own its home (393) and every store manager his or her store (433) are two of many patterns that imply the need for a massive government intervention that would be intolerable to Americans.

Alexander’s starting point is his particular ideal of a well-lived life. His life well lived is Californian/Mediterranean—slow, relaxed, sociable, pleasure-seeking, affectionate, spontaneous, healthy, communal, cross-generational, sensually gratifying, comfortable, and full of leisure time for mingling and for solitude. Assisi without the tourists. Frequent and unsuperficial social contact is his primary value: “the whole meaning of life shows itself only in the process of our intimate contacts.”5 And Alexander’s goal is always to give people what they prefer, if given a choice. The point here is that Alexander presumes to know what people want. He can’t seem to imagine that some people might not share his values and might want lives that are, say, monastic, work-centered, or fast-paced.

Could we live Alexander’s ideal life? Not without a good income, accommodating friends and family, and some willingness to cut ourselves off from the common world of telephones, long work days, popular culture, environmental and social problems, and so on. In the world Alexander imagines, there is neither debilitating poverty nor isolating wealth, only easy-going lower-middle to upper-middle class people. Alexander’s life well lived—precisely because it is so utopian—is disengaged, so pleasant and comfortable that the world’s problems can fade from attention.7

Perhaps the most disturbing qualities of Alexander’s thought are its absolutism and essentialism. Alexander can be a sententious preacher, moralizing castigator, and foggy generalizer, particularly in A Timeless Way of Building (1979) and The Nature of Order: An Essay on the Art of Building and the Nature of the Universe, Book One: The Phenomenon of Life (2002).8 He has the answers. And the answers do not change, because he thinks that human nature and needs don’t change: based in biological constants, human life is much the same anywhere and anytime. The Pattern Language web site speaks of “thinking correctly about the nature of life.” Alexander’s environmental determinism is disconcertingly simplistic: “I shall show that, in order to overcome the autonomy-withdrawal syndrome, a city’s housing must have twelve specific geometric characteristics. . . .”9 “If the building is placed right, the building and its gardens will be happy places full of activity and laughter” (514). How odd it now seems that even after the fractured, multiple perspectives of early modernism in the fine arts and literature, structuralist ideas—like those of Claude Lévi-Strauss (Structural Anthropology, 1963), Noam Chomsky (Syntactic Structures, 1957), Carl Jung (Collected Works, 1953)—were so strong in the ’50s and ’60s. Alexander is a structuralist, and has been since his first book. Like all structuralists, he tries to identify fundamental realities beneath all the sound and fury. “No people who turn their back on death can be alive,” lectures Alexander (354); “Without communal eating, no human group can hold together” (697); “These kinds of windows which create ‘places’ next to them are not simply luxuries; they are necessary” (834). While we can understand and generally agree with these adages, it is their extremism—“No people . . . no human group”—that seems not just shrill but also nutty—as nutty as this preposterous sentence: “There is abundant evidence to show that high rise buildings make people crazy” (115).

Since the mid-’70s, the pendulum has swung to the other side, from structuralism to poststructuralism and the dogma that reality is a social construction, determined and explained by the contingencies of its time and place and based on no underlying constants or essences. Yet were that true, Homer’s Odyssey would not have the power it does to make us weep, nor ancient Japanese gardens their power to soothe. So while it is appropriate and indeed inevitable to recoil from Alexander’s absolutism, our very rejection of absolutism should leave us flexible, open to both the idea that some human needs (like many patterns of habitation) are pretty consistent over time and distance. To repeat: we should be able to entertain and make use of whatever is useful in Alexander’s rules. We don’t have to be as deadly serious with him as he is with us.

Structuralism is only one aspect of A Pattern Language’s fit to its time. As a utopian tract filled with faith in the natural goodness of humanity and set in rebellion against the anomic, regimentation, mechanization, and consumerism of mid-20th-century America, the book falls in line with other books on architecture and urbanism that broke from pseudo-Modernist dogma so prevalent in American architecture from the 1940s through the 1960s. William H. Whyte was one of the first to articulate values and concerns—about spontaneous social life and the kinds of environments that foster it—that are now commonplace. In 1958, he published Open Spaces and Urban Sprawl, and in 1964 Cluster Development. In the same period came Jane Jacobs’ devastating assault on urban planning and redevelopment, The Death and Life of Great American Cities (1961), again a book that celebrated spontaneous and warm social life in small urban areas. In 1963, as a Harvard Ph.D. student, Alexander was sec-
A major weakness in *A Pattern Language*’s utopianism is that many of its rules are not based on hard critical thinking or careful research but instead on a New Age flower-child wishfulness, one grounded in a Wordsworthian belief in a pure natural state only disrupted and corrupted by civilization. People need contact with trees and plants and water. In some way, which is hard to express, people are able to be more whole in the presence of nature, are able to go deeper into themselves, and are somehow able to draw sustaining energy from the life of plants and tress and water” (806). Most of us would probably agree, and in that respect the statement is a truism. But what is troubling is the attempt to get away with inarticulateness and intellectual looseness: “in some way, which is hard to express . . . somehow . . . ” We see it here too: “We guess that people who swim and dive often . . . may be closer to their dreams, more in contact with their unconscious, than people who swim rarely. Several studies have in fact demonstrated that water has a positive therapeutic effect; that it sets up growth experience” (324). This starts with the feeble “we guess” and runs for hollow “scientific” support to the equally evasive “several studies have demonstrated.” This kind of looseness—an inadequacy of imaginative rigor—lets through Alexander’s most dreamy specific pattern proposals: naked bathing with family and friends; dancing in the streets; a separate living quarters for teenagers; communal sleeping (after the dinner party, the guests retire to beds in their alcoves); sleeping.
in outdoor public spaces; high schools run by students; open universities without official teachers. These proposals reflect the naive trust in human goodness that has led many a commune to dissolve in acids of interpersonal conflict. Alexander is out of touch, in such cases, with what makes at least the “ordinary” people I know comfortable. But he wants to represent collective urges and values that are beyond any wishes he alone might have (to create an “egoless architecture”).

In other cases, the dreaminess stems not from a Pollyannish view of human nature but from an extreme indifference to realism, to imagining what is even remotely possible: shared swimming pools on every block; farm animals near all houses; “an endless local texture of small pools, ponds, reservoirs, and streams in every neighborhood” (323); no (“isolating”) private offices; deliberately irregular construction without precise right angles and truly flat planes; and so on. These and most other patterns stem from Alexander’s judgment that we are most fully alive when we are closest to nature and to others, in touch with elemental realities—our bodies, water, sunlight, etc. One may not agree. But there are too many powerful thinkers in this tradition (among dozens, Thoreau, Tolstoy, and D.H. Lawrence) to dismiss it out of hand, and Alexander occasionally expresses this elementalism strikingly well: “But man has a great need for mad, subconscious processes to come into play, without unleashing them to such an extent that they become socially destructive. There is, in short, a need for socially sanctioned activities which are the social, outward equivalents of dreaming” (299).

Alexander and his co-authors assert that A Pattern Language is a recipe book that can be used in toto, going from start to finish. But the rules, although meant to fit together like pieces in a puzzle, would, if all followed, produce impossible conditions, ridiculous overlaps, chaos, jumble. They cannot be adopted all at once—following some rules prevents following other rules. For instance, although Pattern 3 prescribes “fingers” of farmland at least one mile wide “even at the center of the metropolis,” subsequent drawings of urban centers show no such fingers, which would interfere with other patterns.

Fragmentation and hodgepodge would be the results of following the book’s proposals for town design in particular. All town residents must have easy walking access to impossibly many things (take a deep breath): the countryside, agriculture, a town hall, a high place, a sacred place, a neighborhood commons, a health center, residences for old people, bike paths, gravestones, diverse small stores, natural bodies of water, small squares, carnivals, playgrounds, street theater and games, animal pens, outdoor cafés, clusters of eating places, a mix of household types, travelers’ inns, specialized and corner grocery stories, beer halls, schools, dance halls, birthing centers, workplaces, nodes of activity that gather and serve diverse subcultures, swimming pools, sports facilities, clusters of night entertainment spots, bus stops that are small centers of public life, food stands, places for public sleeping, and so on! Try drawing that in plan.

The method is additive, not interdependent, as the authors claim. The whole created is not greater than the sum of its parts, and in fact is less, since the parts crowd and conflict with each other. The same would be true for a house designed following the book’s prescriptions: with so much emphasis placed on discrete elements, stand back to work out how the parts can be made to form a pleasing whole is neglected. (Alexander’s combative collaborator Ingrid King points out how he goes on to realize in later work that something more than the aggregation of patterns is necessary for a satisfying architecture: order and unity—the subject of his most recent book, The Meaning of Order.)

But I would argue that following A Pattern Language’s rules (not Alexander’s architecture) would produce a certain kind of beauty, precisely the beauty of insouciant love of parts, of each crafted detail, of the incongruous, the unexpected nooks and crannies, each with its own delightful role and effect—a beauty like that of a New England farmhouse added onto several times over centuries, the beauty of a rambling, anarchic jumble, totalitarian Gesamtkunstwerk be damned.

I have been contending that A Pattern Language cannot and should not be treated as a Bible. Now I want argue that not only can it provide a great deal of pleasure, but also that it deserves the attention and respect of sophisticated designers and architectural theorists. Such readers will be familiar with many (certainly not all) of the good ideas in A Pattern Language; maximizing southern exposure and letting in daylight from at least two sides are not exactly new ideas. But the strengths of the book are to flesh out the social and experiential reasons for such designs so that they are less likely to be neglected. Showing in a photograph how light from one side for a person further from that window creates situations in which a face looking away from the window is obscured in shadow provides a strong incentive to follow the “light from two sides” pattern. The book can be useful to experienced architects because it provides reminders, a kind of checklist of things one wants to be sure not to neglect (or at least consider). (These commonplaces are often forgotten: I recently stayed in a new upscale house in which all ten rooms had light from only one side—even big rooms felt constricting.) I also want to argue that people well educated in architectural matters should be grateful that A Pattern Language is influencing many people uneducated in architecture—builders, developers, and homeowners—to design houses with more thought and care than they otherwise would.

Some of the book’s valuable ideas not often or elsewhere articulated include: make row houses wide and shallow to increase their interior daylighting; create “a loop which passes through all the major rooms, public and common, [establishing] an enormous feeling of generosity” (630); in small buildings string out rooms horizontally or vertically to increase the privacy of each; create conspicuous and gradual transitions at building entrances to increase the “feel-
ing of arrival”; use low ceilings to increase intimacy and high ceilings to increase formality. Nowhere have I read an articulation as convincing as Alexander’s of how one might create a “sacred space”—with a connected series of “nested precincts” that become progressively more private and end in a sanctum sanctorum (334).

Alexander’s best ideas about town making in A Pattern Language are found later in William H. Whyte’s The Social Life of Small Urban Places (1980), in Alex Krieger’s book on Andres Duany and Elizabeth Plater-Zyberk’s Towns and Town-Making Principles (1991), and in Peter Calthorpe’s The Next American Metropolis (1993): the promotion of mixed use, pedestrian convenience and zones, ample public transportation, non-exclusive zoning, cluster development, workplaces near and in homes, limited automobile access, small architectural scale, “activity nodes,” town greens, small public squares, street cafés, and so on. But more than these books, A Pattern Language is imaginative, lively, spontaneous, and abundant, overflowing with quickly sketched, informed intuitions. Alexander keeps his eyes on the prize of particular daily experiences; this gives the book a pervasive warmth and humanity. (Several of the book’s photographs are by Henri Cartier-Bresson, whose obvious affection for “ordinary” people is much like Alexander’s; a friend has told me he thinks the book is worth its high price for its hundreds of photographs alone.)

Some of Alexander’s ideas are now certainly politically incorrect: his encouragement of separation of subcultures (76), gated communities (89), and, indirectly, sprawl (17). But his fierce independence helps one see realities that political correctness has pushed out of focus. “A person will only be able to find his own self, and therefore to develop a strong character, if he is in a situation where he receives support for his idiosyncrasies from the people and values which surround him. . . . Self-actualization . . . can only happen, when people are in familiar territory, among people of their own kind, whose habits

and ways they know, and whom they trust . . . .” Anyone who has been in an organization filled with people whose values and interests are alien will know the resulting painful feeling of nonbeing and will recognize the truth of these statements. Alexander quickly adds the caveat, “we certainly do not want to encourage these subcultures to be tribal or closed. . . . It must be possible, therefore, for people to move easily from one subculture to another, and for them to choose whichever one is most to their taste” (48), but even here he is provocatively out of tune with contemporary thinking that different subcultures should be made part of our everyday experience.

He is, on the other hand, in tune with the cherishing of the everyday in the thinking of Henri Lefebvre, Michel de Certeau, John Stilgoe, J.B. Jackson, Margaret Crawford, and others; this kind of focus leads him to respect for and interest in interior decoration, ornament, and sensuously pleasing materials—soft, warm, “feminine” things often banished in the machismo and minimalism of neomodernism. And despite the bourgeois tenor of many of his ideals, Alexander is antisuburban: on the privacy to community spectrum, his enthusiasm is strongest for the connectivity of lively, mixed-use, in-town streets.

Another strength of A Pattern Language is its breadth of focus and supporting reference. Since for Alexander, the quality of architecture depends on the quality of life that it influences, his work naturally expands to include psychology, anthropology, history, literature, sociology, and religion. It is an impressive labor of synthesis, even if it has been justly criticized as using other sources (as well as empirical studies) strictly to shore up thoughts he already has.

One of Alexander’s main ideas seems particularly important to me: people have opposite needs that should both be satisfied in building design, needs for being public and private, with others and alone, casual and formal, intimate and detached, sheltered and out in the open (350, 610, 628, 831). “A good house supports both kinds of experience: the intimacy of a private haven and our participation with a public world” (665). “It is essential that each person feels free to make connections or not, to move or not, to talk or not, to change the situation or not, according to his judgment” (628). Alexander responds to these needs by arguing for spaces of gradations (e.g., from rooms for several people to rooms for one person) and combinations (e.g., porches participating equally in the street and the home) between the extremes.

Readers who dismiss A Pattern Language for its dogmatism and architectural exclusivity are depriving themselves of a chance to savor its bounty of delightful details and insights; they are being as rigid as they think Alexander is. And if only because A Pattern Language is a perennial best-seller, architectural curricula have some obligation to study it as a cultural phenomenon. On the other hand, if just three copies of A Pattern Language were selling each year, it would deserve, despite all its serious problems, to be treated as a “classic.”

Notes
1. “I have always begun from first principles, assuming nothing, and certainly not assuming that what passes for accepted wisdom in the profession is true or useful. This has, sadly, often brought me to a point of view which seems distant, or opposed—in language, thought, terminological, and sympathy—from the other architects of my own era. . . . I have been forced to take an extreme position, simply to allow my thought to remain uncontaminated by what I view as the profoundly dangerous elements in present day mainstream professional architecture.” A + U, August 1993, 4.
3. Numbers in parentheses in this essay refer to pages in A Pattern Language.
4. Also according to www.patternlanguage.com.
6. J. P. Prosen articulated the narrowness of Alexander’s definitions of appealing environ-
ments shortly after the book first appeared: “But what kind of choices does this language offer to those who do not appreciate gingerbread dollhouses? What kind of options does it leave to those who find virtue in a common space that is large, generous, and unadorned; a space with uninterrupted hard walls, level floors and ceilings, no nooks, no crannies, no trim; that has a terrazo floor and a glass ceiling, the orientation of which is not confused by light from two sides; and which has no window . . . and no fireplace?” “The Poverty of The Pattern Language,” Design Methods and Theories, September-December 1978, 191-192.

7. While Alexander’s models for healthy, balanced life come mainly from environments and mores of the European lower class, his proposals for houses could only be afforded by the upper and upper-middle class: separate cottages for children and the elderly, alcoves and window seats, dressing rooms, greenhouses, a room of one’s own, a variety of ceiling heights, and so on. So much does his view that mental health requires opportunities within families for the privacy of individuals and couples that he, ipso facto, dooms poor families to mental illness.


10. Patricia Leigh Brown, New York Times, November 23, 2000, House & Home: “The purpose of this room is to make you feel centered when you’re in here,” he said. ‘It’s all gauged by feeling rather than theory.’” This is most fully articulated in Alexander’s A Timeless Way of Building.

11. “In our design experiments, where lay people have used these patterns to design their own houses, we have noticed a rather strong urge to give the bed a nook of its own” (869). This hardly qualifies as an experiment: after all, the patterns call for beds having nooks, and the “experimenters” were with the “laypeople” as they designed and surely conveyed their biases.

12. One of Alexander’s basic assumptions has been criticized by J. P. Prozen: “I certainly object to the logic which would conclude that because everybody wants something we ought to have it, or, conversely, that because everybody hates something we ought to do away with it. History is witness to the fact that people can agree to do the stupidest and most horrendous things, and that they have been reinforced in that precisely because they all have been in agreement.” Prozen, “Poverty,” 194.

13. Koolhaas and Alexander could not be further apart in their responses to modernity. Koolhaas accepts and even enjoys the anomic and impersonality of big structures, whereas Alexander writes, “Any monolithic building is denying the facts of its own social structure . . . Monoliths induce a kind of feeling of free-floating anxiety in people” (470).

14. During an intense encounter between Koolhaas and Cornel West at the conference on pragmatism and architecture at the New York Museum of Modern Art in November 2000, Koolhaas had no rejoinder to West’s assertion that nostalgia is not always bad, that remembering what was best about situations and environments of the past is our way of defining what we seek in the future.

15. “The geometrical coherence associated with the high-marks of the various cultures represented a kind of phenomenon that clearly lay outside the concept of pattern language. Buildings as different as the Parthenon, the Alhambra, and Notre Dame . . . possessed an order of geometry that could not conceivably originate in ‘function.’” Ingrid King, “Christopher Alexander and Contemporary Architecture,” A+U, August 1993, 7.
A pattern is a regularity in the world, in human-made design, or in abstract ideas. As such, the elements of a pattern repeat in a predictable manner. A geometric pattern is a kind of pattern formed of geometric shapes and typically repeated like a wallpaper design. Any of the senses may directly observe patterns. Conversely, abstract patterns in science, mathematics, or language may be observable only by analysis. Direct observation in practice means seeing visual patterns, which are widespread in