



Environmental & Architectural Phenomenology Newsletter

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Winter 2002

This issue marks the start of *EAP*'s 13th year. We thank the 52 readers who have renewed their subscription. Those who have not will find a renewal form inside. *Please renew!*

In this issue, *EAP* editor David Seamon reviews architect Christopher Alexander's *The Phenomenon of Life*, the first volume in his "The Nature of Order" series. Next, graphic designer Loretta Staples provides a kind of first-person phenomenology of her contrasting experiences of designing on the computer vs. freehand drawing.

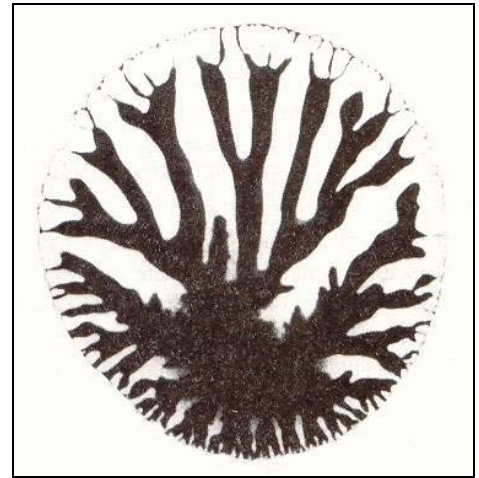
Our feature essay this issue is by lawyer and environmental activist Chris Desser, who offers a probing commentary on the nature of environmental reality and artifice. She speaks of an "experience of relationship" and indicates how the choices we make as individuals and as a global society blur the differences between artificial and real in regard to both nature and the built world.

PHENOMENOLOGY CONFERENCES

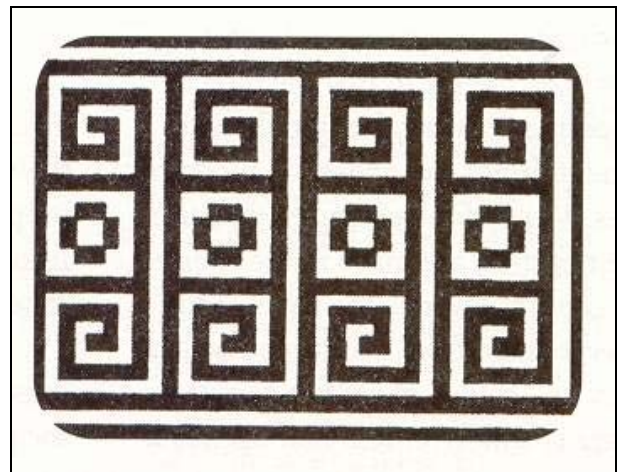
The 41st annual conference of the **Society for Phenomenology and Existential Philosophy (SPEP)** will be held at Loyola University in Chicago, 10-11 October 2002. For information, contact James Risser, Philosophy Department, Seattle University, 900 Broadway, Seattle, Washington 98122 (206-296-5473; spep@seattleu.edu).

In conjunction with these meetings will be held the annual conference of the **Society for Phenomenology and the Human Sciences (SPHS)**, scheduled 11-12 October and also at Loyola. SPHS is the leading academic society in the U.S. concerned with the continuing theoretical development and practical application of the phenomenological tradition to the human sciences. Contact Philip Lewin, 865 Shalar Court, Eugene, Oregon 97405 (541-485-3541; pml Lewin@yahoo.com).

Below: Two of the 15 "structural properties" that Christopher Alexander claims contribute to wholeness. From *The Phenomenon of Life*, the first book in his four-volume "The Nature of Order." See review, p. 4.



No. 5. Positive Space refers to the way that all parts of a well-made artwork, building, or place contribute to its beauty, life, and sense of well being.



No. 8. Deep Interlock and Ambiguity refers to how an intentional spatial and visual interconnectedness among parts joins those parts into a larger whole.

DONORS, 2002

We are grateful to the following readers who have contributed more than the base subscription for 2002. As always, we couldn't continue without your generous support. Thank you.

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Jerome Tognoli	Ed Tuter
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ITEMS OF INTEREST

The North American Interdisciplinary Conference on **Environment and Community** will be held 7-9 March 2002 at Weber State University in Ogden, Utah. Topics include environmental activism in developing nations, environment and the visual arts, indigenous cultures and natural resources, and the arts and community building. Event contact: 801-626-7471; www.weber.edu/wildmcvause.

The **Development of Urban Green Spaces to Improve the Quality of Life in Cities and Urban Regions (URGE)** is an international project involving 12 partner academic institutions from six European countries. The aim is to initiate cooperative work and to improve urban green space, "thus enhancing the quality of life of the urban population and contributing to the sustainable development of European cities." www.urge-project.org

The environmental journal **Ecumene**, published by Arnold, has changed its name to **Cultural Geographies**. Its focus continues to be "the cultural appropriation and politics of nature, landscape, environment, place and region." The journal works to be "an interdisciplinary forum for the growing number of scholars and practitioners interested in the ways that people imagine, interpret, perform, and transform their material and social environments." Editors are Philip Crang, Geography Department, Holloway College, London; and Don Mitchell, Geography Department, Syracuse University, Syracuse, NY. Contact: subscriptions@turpinltd.com.

The **Spiritual Alliance for Earth (SAFE)** is an interfaith ecology movement that aims to bring together people from all spiritual traditions to find a common cause in caring for Creation. The group recognizes "a spiritual dimension to Earth activism" and believes "that caring for Creation is at the heart of what it means to be fully human and spiritual." 707-765-1530; www.earthday.net

Schumacher College is an international center in England for ecological studies and includes among its programs a MSc in what is called "holistic science," offered in partnership with the University of Plymouth. In its 2002 course program, Schumacher lists "Seeing with New Eyes: Science and the Nature of Life," co-taught by Goethean-science scholar Arthur Zajonc. Schumacher College, Old Postern, Dartington, Devon TQ9 6EA, Great Britain; www.gn.apc.org/schumachercollege/.

The 2002 **International Human Science Research Conference** will be held 19-22 June at the University of Victoria, British Columbia. The theme is "traditional and cutting-edge modes of human science research." Contact: www.uvic.ca/ihsr2002; ihsr@uvic.ca. This group also publishes the *International Human Science Research Newsletter* which is available by contacting Editor Steen Halling at shalling@seattleu.edu.

CITATIONS RECEIVED

A.F. Bales, 2001. "Mapping Rituals in a Carthusian Monastery: *La Certosa Di Calci*. *Journal of Architectural Education*, 54 (4): 264-67.

This architect uses on-site documentation and analytical drawings to map the architectural setting for a monk's daily rituals and customs at a Carthusian monastery in Calci, Italy.

K. Franck & R. B. Lepori, 2000. *Architecture Inside Out*. NY: Wiley Academic.

This book describes "an attitude to architecture that recognizes the value of people and matter not only as inspirations for design but as the very reasons for architecture to exist at all....[A]rchitectural schools stress formal issues over human experience and activity.... So much of the stuff of life, indeed the stuff of architecture, is given cursory attention while a more abstract approach to design is pursued and celebrated."

S. Psarra & T. Grajewski, 2000. "Architecture, Narrative and Promenade in Benson + Forsyth's Museum of Scotland," *Architectural Research Quarterly*, 4 (2): 122-136

Using space syntax theory, these architectural researchers examine the relationship among architecture, viewer, and educational message for this prize-winning Edinburgh museum (opened in 1998) presenting the natural and cultural history of Scotland. Exceptional conceptual drawings and a powerful demonstration of the ways in which space syntax can be used to clarify the nature of architectural experience.

N. A. Salingaros, 2000. "The Structure of Pattern Languages," *Architectural Research Quarterly*, 4 (2):149-61.

"Design that wishes to connect to human beings needs information contained in a pattern language. This paper describes how to validate existing pattern languages, how to develop them, and how they evolve. The connective geometry of urban interfaces is

derived from the architectural patterns of Christopher Alexander."

M. Gelernter, 2000. "Sun-Filled Windows," *Architectural Research Quarterly*, 4 (2):190-93.

A supportive "look back" at Christopher Alexander's *Pattern Language* (1977): "...[D]espite the continuing popularity of *A Pattern Language* in the world at large, neither it nor its underlying concepts shows up in architecture schools today. By the early 1980s, the two key beliefs that drove the Pattern Language—that architecture should improve people's lives, and that bodies of research can enhance design decisions—had faded from avant-garde architectural thinking. The emerging post-modern outlook... doubted whether there could be objective or rational answers to anything in a world now considered chaotic and morally relative. A trendy cynicism... also belittled the idea that we could or should try to improve people's lives through design. The profession retreated to the conception of design as abstract sculpture and personal, artistic expression."

L. H. Lofland, 1998. *The Public Realm*. NY: Aldine.

This sociologist and author of *A World of Strangers* (1973) examines how "the city provides, on a permanent basis, an environment composed importantly of persons who are personally unknown to one another—composed importantly of strangers." The book explores this "public realm"—"its history and geography and inter-realm relations, its culture, about the images of it—positive and negative—that people carry in their heads, and the very real consequences of these images."

M. E. O'Neill, 2001. "Corporeal Experience: A Haptic Way of Knowing," *Journal of Architectural Education*, 55 (1): 3-12.

This study draws on case studies of ranchers in rural Montana to examine how they "accumulated their place-based experiences." The ranchers "demonstrated a strong tendency to rely on geographic contact and movement in space to inform them about the places in which they lived and worked."

MEMBERSHIP NEWS

Ricardo Nemirovsky is a physicist who has directed educational projects in Argentina, Mexico, and the United States. He works at TERC, which is a not-for-profit research and development institution devoted to math and science education in Cambridge, MA. His research focuses on the learning of mathematics and system dynamics.

Together with other colleagues, he has developed a body of work that supports the creation of a

longitudinal strand on the mathematics of change across educational levels, highlights the centrality of bodily and kinesthetic activities in the learning of mathematics, and articulates a perspective on the role of tools for student learning.

His current research explores the relationships between the phenomenology of place and the teaching and learning of mathematics.

ricardo_nemirovsky@terc.edu

Juhani Pallasmaa, Finnish architect and architectural writer [see *EAP*, spring 2001, p. 5] sends word that his *The Architecture of Image: Existential Space in Cinema* has just been published by the Finnish publisher *Rakennustieto* (PO Box 1004, Helsinki 00101 Finland).

Pallasmaa uses the notion of existential space to explore the shared experiential ground of architecture and cinema. Films that he examines include Alfred Hitchcock's *Rope* and *Rear Window*, Andrei Tarkovsky's *Nostalgia*, Stanley Kubrick's *The Shining*, and Michelangelo Antonioni's *The Passenger*. A central focus is the crucial role of architectural image in cinematic expression.

pallasmaa@architecture.wustl.edu

For the past 15 years, **Kingsley K. Wu**, Professor in the Department of Creative Arts at Purdue University in West Lafayette, Indiana, has photographed, sketched, and lectured about the *Camino de Santi-*

ago, Spain's medieval pilgrimage road to St. James. He writes:

This July, my wife and I took our sixth trip to Spain. We visited San Sebastian and the Guggenheim Museum in Bilbao. We joined some friends from Barcelona at Frómista and began our pilgrimage by walking to Carrion de los Condes the first morning out.

We had just returned from a ten-week trip to China and we felt we could handle the walk. Actually, what did us in was not so much the walking but the backpacks (for the first time in our lives) and extra luggage! So, we turned tourists and rode a bus to Sahagún to wait for our walking friends to catch up. We kept this scheme until we reached León then took a train to Santiago. Being on the "Road" was a wonderful experience, since this was the first time my wife had ever been to any part of the Camino.

"My way of commemorating the Camino is to have some of my sketches printed on note cards. They are \$6.50 per set of 12 cards (four different drawings) plus postage. If any organization or group would like to sell these cards for fund raising, I would be happy to supply sets. 1431 Woodland Avenue, West Lafayette, Indiana 47906; kwu@peoplepc.com.

BOOK REVIEW

Christopher Alexander, 2002. *The Phenomenon of Life*. NY: Oxford University Press.

For the last twenty years, manuscript drafts of architect Christopher Alexander's "The Nature of Order" have circulated informally among his students, colleagues, and friends. Now, exactly 25 years after the appearance of his hugely influential *Pattern Language* (Oxford University Press, 1977) comes the publication of his masterwork, not as one volume but four.

The first of these volumes, entitled *The Phenomenon of Life*, will be followed by book two, *The Process of Creating Life*; book three, *A Vision of a Living World*; and book four, *The Luminous Ground*. The table of contents for book one lists the chapters and headings of the three other books, so one assumes they will all be published in the near future.

As with all his work, the aim of these four books is to explore the nature of a particular kind of order that Alexander calls *wholeness*, which, whether in nature or humanmade, is the "source of coherence in any part of the world" (p. 90). Moreover, says Alexander, this coherence offers a sense of harmony, which "fills and touches us" (p. 15). He also argues that, wherever there is wholeness, there is *life*, which

involves such qualities as good health (e.g., a flourishing wetland), well being (e.g., a robust urban neighborhood with a bustling street life), handsomeness (e.g., a well crafted door), or beauty (e.g., an elegant glazed bowl, a fine oil painting, a splendid soaring cathedral).

According to Alexander, humanmade wholeness in the past largely arose *unself-consciously* through the doing of the making itself. He also argues that, particularly in the 20th century, the ability to sustain and create wholeness has largely disintegrated (according to the table of contents, the reasons for this collapse will be discussed in book two). Alexander's aim is to study and understand wholeness so that, whether in our theory or practice, we might find a way *self-consciously* to allow wholeness to arise again in our world. In short, he hopes to resurrect explicitly a way of understanding and making that in the past mostly happened tacitly.

UNDERSTANDING WHOLENESS

As a means to introduce readers to the idea of wholeness, Alexander's most important tool in *Phenome-*

Fifteen Properties of Wholeness

1. Levels of scale
2. Strong centers
3. Boundaries
4. Alternating repetition
5. Positive space
6. Good shape
7. Local symmetries
8. Deep interlock & ambiguity
9. Contrast
10. Gradients
11. Roughness
12. Echoes
13. The void
14. Simplicity & inner calm
15. Not-separateness

non is over one hundred photographs and drawings, many in color. Throughout the book, these illustrations are Alexander's primary evidence for wholeness and also his primary vehicle for demonstrating ideas that otherwise are extremely difficult to grasp. For example, in chapter two, "Degrees of Life," he provides 16 pairs of photographs, in terms of which readers are to determine for themselves which of each pair is more alive and whole and which is less so (e.g., a "road in the trees" vs. a "road in the hills," a "Bangkok slum house" vs. a "postmodern house").

Alexander's reason for asking readers to look and see *for themselves* arises from his own long experience of seeking to understand wholeness. He explains that this learning process has largely been an arduous, trial-and-error effort of examining objects, buildings, and places that appeared to have a sense of life and wholeness. In time, he came to realize that there were certain identifiable properties that appeared over and over again. He writes:

For twenty years, I spent two or three hours a day looking at pairs of things—buildings, tiles, stones, windows, carpets, figures, carvings of flowers, paths. Seats, furniture, streets, paintings, fountains, doorways, arches, friezes—comparing them, and asking myself: *Which one has more life?* And then asking: *What are the common features of the examples that have most life?* (p. 144).

CENTERS

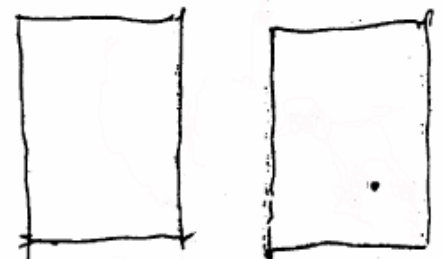
Out of this lengthy process of study, Alexander eventually distilled 15 "structural properties" that he claims reoccur in all things, buildings, places, and situations that evoke wholeness and life (see table, left). Of these 15 properties, the most significant is number two—*strong centers*—which, in the rest of the book, becomes Alexander pivotal conceptual and practical means for clarifying and grounding the much murkier notions of wholeness and life.

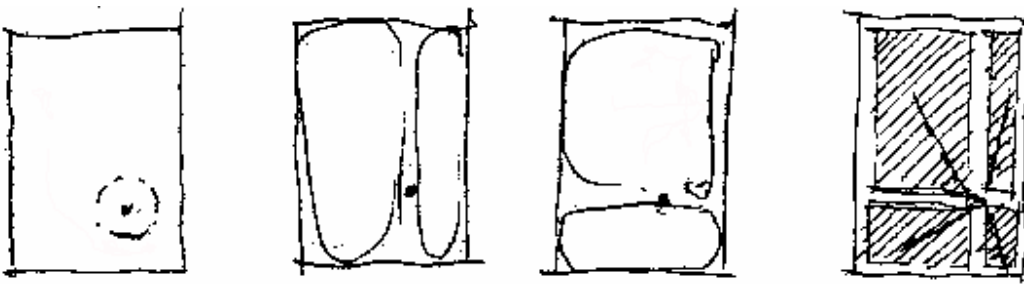
Most simply, a center is any sort of spatial concentration or organized focus or place of more intense pattern or activity—for example, ornamental shapes in a carpet, columns of an arcade, or a lively plaza full of people enjoying themselves. Whatever its particular nature and scale, a center is a region of more intense physical (and often experiential) order that provides for the relatedness of things, situations, and events (p. 85).

In this sense, the strongest centers gather what is apart and provide all parts with a place to belong (interestingly, the table of contents indicates that the themes of "belonging" and "not belonging" will become central themes in book three). Further, where one finds life and wholeness, centers are never alone but mutually implicated at many levels of scale: "The wholeness of any portion of the world is the system of larger and smaller centers, in their connections and overlap" (p. 91).

Phenomenon's emphasis on centers is not new. Already, in his *New Theory of Urban Design* (OUP, 1987) and *A Foreshadowing of 21st Century Art: The Color and Geometry of Very Early Turkish Carpets* (OUP, 1993), Alexander has developed the notion of centers in considerable detail. What is useful about his discussion of centers in *Phenomenon* is that it is simply presented and perhaps more readily understood by newcomers than in his earlier accounts.

A good illustration of this simplicity of presentation is Alexander's introducing the link between wholeness and centers. He begins by drawing a blank sheet of paper on which he then marks a single dot in the lower right-hand corner (right). He emphasizes that, when the dot ap-





pears, there is a “subtle and pervasive shift of the whole” (p. 81).

In terms of centers, it can be said that the whole sheet of paper is a center as is the dot, but Alexander also emphasizes that there are many other centers (above)—a “halo” around the dot; four latent rectangles—two horizontally sensed, two vertically sensed—that in turn evoke four corner rectangles; “rays” from the dot extending up, down, left, and right as well as diagonally toward the far corners of each of the four separate rectangles. If we tally all these centers, Alexander demonstrates that we find as many as twenty, and this in an example involving only a blank sheet and a dot!

USING THE PROPERTIES

In understanding the relative power of a particular center and the larger and smaller sets of centers of which it is a part, the fourteen other properties offer considerable assistance. For example, “local symmetries” says that the intensity of a center is partly increased to the extent it contains smaller centers arranged in locally symmetrical groups. In a parallel way, “contrast” indicates that a center is strengthened to the degree its character is different from the character of surrounding centers.

Alexander then proceeds to demonstrate how these and the other properties can be discovered, for example, in the 16th-century mosque tile (p. 198) illustrated right—e.g., the way that all parts of the design, whether lighter or darker, evoke positive space and interweave and interlock, partly through boundary lines that edge both lighter and darker portions.

In later chapters, Alexander examines how buildings and places can be spoken of in terms of centers and the other 14 properties. One of his most powerful examples is the terrace of a small Italian hotel overlooking the Bay of Salerno. In this one small place, says Alexander, there are hundreds of centers, some

more architectural and geometric (e.g., bays formed by four columns, repetition of the bays, the chamfered corners of each column, grapes growing on a trellis), others more place-grounded and experiential (e.g., tables in the

bays helping them come to life, a low wall helping the view, the trellis with vines providing a sense of enclosure).



Ultimately, says Alexander, his 15 properties are much more heuristic tools than real structures actually in the world. He explains:

...what really matters is the person's ability to see the centers, to make more and more centers, and to make them come to life...By following the properties, even if blindly, like a mechanical tool, we gradually come to know more and more and more about the life of centers—we appreciate the way that centers interact, we learn to make the life of one center more intensive by adding, or providing other centers—and the property thus teaches us, concretely, more and more about how we can make centers come to life. This is the whole ball game in the end (n. 9, p. 242).

NOT SIGHTING THE GLOBAL?

A cursory glance at Alexander's 15 properties of wholeness might lead one to conclude that they are entirely geometric and little more than variations on standard formalist design principles like symmetry, hierarchy, rhythm, repetition, and so forth.

In fact, these properties are much more than formalist, and two of their most striking recognitions are that: (1) material and living worlds are intimately and mutually implicated in each other; and (2) space and place are an integral part of what it means to be human. In this sense, Alexander's work is close conceptual kin to: (1) architectural theorist Bill Hillier's theory of space syntax; and (2) work on the phenomenology of place, which claims the notion of place as a central ontological structure of human existence.

In regard to space syntax, it is encouraging that, in *Phenomenon*, Alexander briefly discusses Hillier's work as demonstrating, like his own, that "it is not really possible to keep function and space separate" (p. 417). In introducing Hillier's work, however, I also think that Alexander unintentionally identifies a major weakness of his 15 properties and of his wider efforts to use "centers" as the core notion for understanding and making wholeness.

As Hillier's space syntax conclusively demonstrates, the people/space intimacy, whether for buildings, neighborhoods, or complete settlements, must be understood *both locally and globally*. For Hillier, the central local structure is *convex space*—the quality of local space that relates it to its immediate surroundings. On the other hand, the central global structure is *axial space*—the quality of a local space as it is integrally interconnected with the much larger pathway fabric of which it is part.

Though Alexander briefly discusses the differences between Hillier's two types of space, he does not seem to realize that his 15 properties are largely *local* in their interpretation of wholeness. For sure, "levels of scale," "interlock," and "gradients" speak partially to the way a center relates to other centers larger and smaller (though it must be emphasized that these properties interpret this interconnectedness mostly *in terms of parts*). The much larger dilemma is the core notion of "center," which by its very nature of involving focused intensity is much more local than global in its conception and effects.

In short, I worry that, in Alexander's explication of wholeness, the underlying degree of global interconnectedness (what Hillier refers to as relative "integration") is left largely out of sight. In his discussion of art works, decorative objects, and buildings as static architecture, this emphasis on the local qualities of wholeness provides powerful insights because these things are more or less independent physical entities that do not house human lifeworlds.

On the other hand, the 15 properties may cast an incomplete understanding when one attempts to apply them to the larger-scale environmental fabric around and within which the lifeworlds of real human beings actually unfold. The failure closest at hand is the project at the heart of Alexander's *New Theory of Urban Design*—a redevelopment design for an urban district in San Francisco.

Though there is much about this urban design to praise, its major failing is a poorly envisioned street grid that inhibits interconnections and movement among its various building and pathway parts. As the *New Theory* account of this design process shows, the project participants had little conscious awareness of the crucial significance of the global structure of the district's pathway system or of how a permeable, interconnected street grid might provide a vital foundation for neighborhood activity and street life.

A WORLD MORE ROBUST AND KIND

It may well be that this lack of global pattern is a major flaw of the broader theory of wholeness that the complete "Nature of Order" will provide. What is so praiseworthy about Alexander is his willingness to continuously reconsider and revise his work, so it could well happen that in time he will reconstitute his theory of wholeness so that it places the local in relation to the global just as presently it so forcefully depicts the global as it is composed by the local.

Alexander has always been as much a philosopher as an architect, and *The Phenomenon of Life* releases his conceptual powers to their fullest extent yet. He has always sought to build as well as design and to design as well as think. The result is a remarkable reconnaissance into the nature of architecture, life, and creative will. If this reconnaissance includes an occasional misstep, as I've suggested above, the fault is small in comparison to the wealth of awareness, stimulation, and hope his designs and writings offer.

In these postmodern times of distortional postructural theories and cynical deconstructivist designs, Alexander's work is a beacon illuminating a way to make the world more robust, beautiful, and kind. Such a world is utopian, of course, and never really gained in real life. Yet books like *Phenomenon* and real-world projects like his Mexicali experiment

and Japanese Eishen School demonstrate at least a partial actualization of his extraordinary vision. In turn, this vision and work may well inspire a new generation of practitioners and thinkers, and so a virtuous circle may proceed.

--David Seamon

Slower

Loretta Staples

Staples wrote this essay while a Managing Director at Scien, a New York City e-business. She continues to study drawing and now painting. Address: 80 Charles Street, 1E, New York, NY 1001. EAP editors thank Design Michigan Director Jack Williamson for bringing Staples' essay to our attention. © 2002, Loretta Staples.

In fall 2000, I enrolled in a beginning drawing class. After 11 years designing software interfaces, I was growing weary of all that clicking and dragging. Newly relocated to New York City after four years teaching design, my days as an eBusiness consultant were now consumed by email and teleconferences.

Something was amiss in all that high-tech interaction. Some part of me had had enough. I wanted to get back to the basics. The basics of what, I didn't quite know, but I did know I was weary of the ongoing intermediation of my eyes and hands. I knew I didn't want typing or mousing or a cool blue light staring me in the face. Drawing seemed like it might be just the thing. And it was.

I drew with charcoal, soft vine and compressed—thin sticks like branches, squared off stubs, big blocky lengths of burnt wood.

Drawing was slow. Slower. Slower than the computer. Slow because of the sheer resistance of the paper, in contrast to the slipperiness of the virtual page. Slow because no computation augmented the directness of my marks. Slow because there were no undos, no control points, no show or hides, no snap-to grids, no layer management, no copy-and-pastes.

Slow because my eyes followed the edges of the forms I drew as if there were time to do so (there was time in the three-hour session). Slow because my hand moved as slowly as my eyes following the forms I observed. Slow because observation was demanded. Slow because nothing began or ended quite as discretely as the pixels I was used to editing.

Slow because the entire context of history and medium that I now engaged emerged out of a different time, a different world. Slow because in this particular setting I was allowed to dwell in the moments as they unfolded in the act of drawing. Where else in the world would I have been allowed to do so, sheltered in collective company and under the watchful eye of an unhurried teacher?

Somehow the speed of drawing always felt mysteriously appropriate. A one-minute pose yielded exactly a one-minute drawing. And the drawing felt complete in all its one-minuteness. The same with five, ten, and twenty minutes. None of my drawings felt unfinished to me.

Conversely, everything I'd produced on the computer as of late felt incomplete, as though demanding a level of polish and finality that I never had time for, ironically, despite all that computational quickness.

What was it about microprocessing speed that disincited me? It was as though the smallness of my human effort was no match for the vast potential enabled by those ever-efficient megahertz. It discouraged me. I could never master all the computer was capable of, nor did I feel the desire to do so.

And while every artist comes to terms with the gulf between one's own creative capacities and what-the-medium-is-capable-of, somehow I'm sure that the gulf with this particular medium is unlike any other.

Then there was the out-of-the-box problem. In the year before, I'd produced a couple of computer models for sculptures I was eager to make. But for

some reason, I couldn't seem to get them out of the box (the CPU) and into the world.

All that interfacing. Inputs and outputs. Cables and devices. Preparing files for stereolithographed output. Yes, this was technological magic. I just didn't want to do it. It's not where I wanted my time to go. The sculptures are languishing in the box still, mere digital files. I'll get them out eventually though.

In drawing, there's no box to be inside or outside of. No phantasm to make real. In my drawing, nothing was pre- or post-. Nothing fx-driven. There was just the drawing, nothing more, nothing less. I hadn't known completeness like this in so long.

Sometimes while drawing, I would experience an analogy to my computer-based experiences. Following a form while doing a contour drawing, I'd notice my attention jumping ahead, from the top of the model's head to the shoulder, for instance. My vision traversing like this, from point to point, I understood vectors—the plotting of two points joined by an elegantly fitted line.

Plotting points like this gave me an appreciation of graphs and planes, Cartesian coordinates and mapping. But it showed me too, the artifice of systematized seeing, because drawing was so much more than picture planes and plotted points. Drawing was looking for something and finding it in the looking.

I hadn't really drawn much before, and in general, my experiences had been discouraging, daunting. In a drawing class twenty years before, I stared bewildered at the model before me. Somehow I was to transpose her to the sheet in front of me, with no guidance from my teacher (who appreciated my “sincerity” of line). But my sincere lines were fraught with anxiety and apprehension, and my struggles to map the figure to the plane yielded an unconvincing scene, embarrassing to my fellow students and me.

Somehow, this time in drawing I let my eyes and hand wander and grope for something. This wasn't an exercise in transposition, in plotting points on a plane. This wasn't a mapping exercise. I tried to find a form in a tangle of lines and was content to let my tangle of lines be the starting place for the form I was seeking to find.

Years ago, I thought a good drawing resulted from foreknowledge, awareness of how to see something

or do something. Now I was discovering that a good drawing required nothing in particular ahead of time. Nothing about form or vision or media. Nothing about software or hardware. Nothing about geometry or Cartesian space or XYZ. Just a willingness to look and see if something might be found in the looking.

I was used to staying clean. The grime of charcoal was new to me. I'd return home from class smudgy. I liked it. All that smudging left a friendly trace of where I'd been, in sharp contrast to an Edit menu undo—that cleanly deceptive erasure of trace and with it, time, as if nothing had ever happened in the first place.

Charcoal was all about laying bare everything that had transpired. All the decisions and reworking. Doubt. Hesitation. To witness a completed drawing was to see a final form enveloped lovingly in its web of tentative states.

I realize that in all of this I'm talking about drawing as though it doesn't happen in the computer. Of course it does. Artists and designers have always engaged technology and pushed the boundaries of its possibilities.

I don't mean to dismiss those efforts as “not drawing,” but I do mean to make a distinction between the “experiential physics” of drawing through the computer and what I might call “disintermediated” drawing—that is, drawing with “traditional” media. They are distinct kinds of physical experience: one, predominantly tethered, the attachment between mouse and machine; the other prosthetic, the drawing implement handheld and thus more an extension of the hand.

“The digital” has so convinced us of the interchangeability of things that we risk losing sight of such fundamental distinctions. Lived experience is precisely situated in the world, and the situational differences modulate our senses in very different ways.

What I most embrace in drawing is the physics of a kind of relationship I'd lost sight of. When I draw it's as though I'm remembering—in a very direct, bodily way—something about the very nature of being in the world, seeing and touching the world. Through drawing I get at contemplation and action, history and the moment, all at once. I meet everything right on the page.

No Surprises: Manufactured Reality and the Extinction of Experience

Chris Desser

Desser coordinates the Biotech Working Group, an international effort among foundations and activists to raise awareness and activism on health and policy issues concerning transgenics, terminator technologies, and genetically modified foods. Trained as a lawyer, she has practiced environmental law, working in the private, non-profit, and public sectors. This essay appeared in the Winter 2000 issue of Wild Duck Review and is reprinted with the permission of Editor Casey Walker. © 2000, C. Desser. chris@iqc.org

Growing up in California, I spent many summers backpacking and rock climbing in the Sierra Nevada. Like most hikers, I kept a stainless steel cup hooked to my belt by its crooked handle so I could dip into a stream whenever I was thirsty. That mountain water, running black and deep or white and frothy, was icy, sweet, and delicious.

It never occurred to me then to wonder if the water were safe to drink, but today I would have to wonder. Grazing and erosion have polluted most Sierra streams with giardia, an intestinal parasite. Drinking from these streams will surely make you sick. But it's not the pollution I'm interested in, it's the loss of freedom to experience a world we can call natural, a world in which our deepest instincts and individual lives still count.

Living in or near cities, as most people do, we dwell in increasingly self-referential environments. Streets, buildings, cars, billboards, airplanes, and helicopters – nearly everything around us has been made by humans, and we forget with astonishing ease that the world is, or ever was, otherwise.

For several weeks in April, 1997, the Hale Bopp comet was a bright smudge in the western night sky. I was captivated – it appealed to a wordless and primordial place within me – as I crossed the Golden Gate Bridge on my way home. Knowing its visit brief, I felt sharply present. Like a mariner using the constellations, I located myself by it. I also felt related to the ancients who had been awed by it and to those yet to come, who would, if they could, witness its next visit. The comet stood out in a sky that was otherwise opaque, devoid of stars, the depth of dark space replaced by the smear of bright city lights.

To look at a sky filled with stars is to be reminded that humans did not create most things – that there are other forces at work – a humbling and inspiring perspective, and one easily lost. As people migrate to cities, and cities engulf wilderness, the

experience of looking up into the night sky and seeing stars is becoming extinct.

My grandparents lived in Mexico when I was growing up, and I spent part of every summer with them at the beaches of Guaymas, Mazatlan, and Acapulco. I loved to sit on the warm sand, lean against a palm tree, and sip coconut milk from a coconut plucked from the shadow of the fronds high above. Today 29 percent of the palms in the world are endangered. But a plant doesn't disappear without wider ramifications – the whole web of relationship within which it exists is affected.

That same grandmother loved roses, from the big, blood red, and lustily overripe cabbage roses to the small, fragile, pale pink dog roses on climbing vines. When I went to Russia as a teenager, the only thing she wanted me to bring back was an attar of rose that could only be found there. Since that trip, 14 percent of rose species, with their unique fragrances, have joined the endangered species list. Right now one out of every eight plants on the planet is imperiled – nearly 34,000 plant species at the last count – including 14 percent of the cherries, 32 percent of the lilies, and 32 percent of the irises. The experience that shaped my grandmother's life and character (and through her my own life and character) may be unknown to her great-grandchildren.

These experiences – drinking Sierra stream water, seeing the multitude of stars in the sky, smelling the fragrance of a wild rose – let me know with a cellular certainty that I am part of something greater than myself. Some may say that my attachment to these experiences is vestigial, that we are evolving away from the need for such unmediated experiences in nature.

But my interest in these extinct and disappearing experiences is not nostalgia. It is rooted in my concern about how the choices we make as individuals and as a global society are reshaping the world – the actual sensual and conceptual context – in which we live. Perhaps more importantly, I am concerned about who we are, what we are becoming, and what it means to live a human life.

As the global natural environment becomes ever less diverse, global culture becomes ever more homogenized; the diverse, dynamically feral world is being replaced with a samer, tamer, humanly-constructed world. These changes are not simply ones of values and rights that can be adjudicated in courts of law.

We must recognize we are redirecting evolution away from a predominantly wild process to one that is predominantly artificial. This redirection carries profound consequences for any developing human consciousness, now and in the future. What will happen to an individual human life and to the human species as a whole without exposure to and participation with a world larger than ourselves?

We have good reason to feel viscerally repulsed by the kinds of experiences rapidly being made for “global villagers.” The global economy systematically reduces the functions of human beings to one of spending money via commercial enterprise to support a transnational economic superstructure.

This superstructure constricts the boundaries of our experience to serve its own economic purpose. Requiring a constant infusion of capital to survive, it effectively channels all experience into an economic one. Our money is its lifeblood, and we are being programmed to spend. As this happens, human behavior globally becomes more uniform, more predictable, and more marketable.

This, of course, is the basis of “branding,” the golden goal of global business. A Starbucks or McDonald’s or Holiday Inn offers the comfort of familiarity, providing essentially the same experience whether we are in Los Angeles, Beijing, Milan, or Hong Kong. When we walk into a Target, a Burger King, or a Banana Republic – no matter where we are in the world – we are in the “same place,” and we know why we are there, what we expect of

others who are there, and what is expected of us. The Holiday Inn Hotel chain understood this early on; their motto was “No Surprises.”

Although many people clearly take comfort in this predictability of experience, these manufactured experiences condition an ever deepening acceptance of environments designed to do two things: encourage spending and provide entertainment.

Architect John Jerde specializes in creating environments that generate these programmed and packaged experiences. In assessing his work in the *New York Times*, Las Vegas developer and impresario Steve Wynn boldly asserts that Jerde “is the Bernini of our time... These are the cathedrals of our time.” The “cathedrals” he refers to are Disneyland, the Mall of America, and the Bellagio Hotel Casino in Las Vegas, a total environment developed by Mr. Wynn according to Jerde’s design.

Clearly Mr. Wynn is suffering from confusion between two very distinct categories: the spiritual and the commercial. How might we reasonably compare, for example, our experiences of the cathedral and the casino? One arises out of an intention to create a spiritual experience and a monument to God; the other out of an intention to create an entertainment experience within which people will be parted from their money as quickly, mindlessly and in as many ways as possible. Bellagio boasts of its \$1.6 billion budget, \$3 million art collection, 1,800-seat theatre, expensive restaurants, and long list of luxury businesses. In these “cathedrals,” only money is on the altar.

Cathedrals have served as places of respite, succor, and inspiration for believers and non-believers alike. The architecture of a cathedral creates space and opportunity to encounter the unknown; it allows the unpredictable to occur.

Every element of a cathedral connects us to those who have come before: the stone tiles underfoot worn smooth by thousands of feet over time, the wood pews with their mellowed patina of age, the myriad candles flickering with the prayers of thousands of people over hundreds of years. Every visitor participates in and contributes to the deepening quality of that experience.

Disneyland, the Mall of America and Bellagio, on the other hand, do not co-evolve with their visitors. Bellagio's environment will not deepen over time as a result of the people who pass through; indeed, it is expressly designed not to age.

Rather than providing an experience of relationship, it reinforces the myth of discrete individuals dwelling in a world made just for them-in large measure that is its appeal. Bellagio's hotel rooms make visitors feel as if they were the first and only people to inhabit that space. Its newness is carefully controlled and so is the experience it engenders. Bellagio is "just this moment" frozen in time. It doesn't change-and thus doesn't allow us to change. For that reason alone, it is particularly pernicious and misleading.

Jerde and Wynn build on another confusion between two distinct categories: the authentic and the artificial. Mr. Jerde asserts that his projects "capture the essence of their environments." Precisely what environments does he imagine he is capturing?

There is a real Bellagio – a small town nestled in the Italian Alps beside Lake Como. Its character arises from a combination of many things: its human-scale buildings and cobblestone streets, its lush gardens, a feeling of its existence over time, and perhaps most importantly the natural beauty and setting of its Mediterranean environment.

Bellagio, Italy, arose as an environmentally appropriate and culturally authentic expression directly related to place. Bellagio, Las Vegas, Mr. Jerde's bogus replication, is completely artificial. Jerde has (in part) captured the form of Bellagio, Italy, but not its essence.

Only vast wealth and modern technology allow the Bellagio Hotel Casino to exist in its real environment, the eastern Mojave Desert where Las Vegas is located. The Bellagio Hotel Casino exists in spite of its natural context, it does not arise out of it. Like Bellagio, Italy, Bellagio, Las Vegas, is also "nestled" next to a lake. But this one came into existence at the expense of 11 acres of sand and plants and myriad creatures in a place where water is scarce and lakes are ecologically antithetical.

In its indoor botanical "experience," Bellagio, Las Vegas, replicates the seasons with four different

scenes – summer, fall, winter, and spring. "Every 90 days we change for the season and then in each of the four seasons the blooms last for 30 days...We can make a season change in 18 hours – three nights, six hours a night...In the spring, we've got full size cherry trees-like in Washington."

But not like in Nevada – cherry trees do not typically grow in Nevada. And not like in the natural world, where things do not spring into being fully grown, but are born and grow and wither and die. There is no birth in Bellagio, Las Vegas, and no death. At the Bellagio Hotel Casino everything exists always and only in its fullest, most beautiful moment, sustaining the illusion, the insidious delusion, that such an existence is real.

Jerde comprehends the power of the natural environment. His goal is "to imbue commercial, modern environments with a sense of the organic, of having accreted over time." Nature as design element. Bellagio reflects this understanding, which Wynn shares. An article in *Vanity Fair* reports the following exchange between Wynn and his associate, Sandy Gallin:

"Steve, am I right in saying that the difference between this hotel and the other hotels in Las Vegas," asks Gallin, "is that everything here is real?"

"Everything," says Wynn.

"Real plants," says Gallin.

"Yes, and real limestone," says Wynn.

"Real tile," says Gallin.

"Not the look of," concludes Wynn. "Now what's not real is this rock wall of the side of the driveway... that's FGRC. Fiberglass-reinforced concrete."

But it looks real.

Wynn's reality is all illusion, and because he can differentiate between fiberglass-reinforced concrete and real rock, he believes he still knows the difference. Like a movie set, everything about the Bellagio Hotel Casino is real except the place itself. As architectural historian Ada Louise Huxtable notes in the book *The Unreal America: Architecture and Illusion*:

What concerns me...is the American state of mind, in which illusion is preferred over reality to the point where the replica is accepted as genuine and the simulacrum replaces the source. Surro-

gate experience and surrogate environments have become the American way of life. Distinctions are no longer made, or deemed necessary, between the real and the false; the edge usually goes to the latter, as an improved version with defects corrected – accessible and user-friendly – although the resonance of history and art in the authentic artifact is conspicuously lacking.

Like Huxtable, I agree that these manufactured contexts are “impoverished versions of the real thing” and that as they proliferate, our powers of discernment and discrimination atrophy.

Bellagio is the architectural equivalent of transgenic technology. The gardens, the architecture, the lake – everything about the Bellagio Hotel Casino is invasive of the indigenous natural environment. The lake and the botanical garden exist as discrete, unrelated objects; they do not function as ecosystems. They are robbed of meaningful purpose beyond providing observers with amusement and gratification. Reconstructing the environment to serve these ends reinforces the view that the natural world exists solely for our entertainment.

Manufactured contexts like Bellagio server people from direct experience of the natural world where they actually live and are thus slyly dislocating and confusing. As systems become objects in the service of consumerism and commerce, we, too, are affected. No longer participants in an evolving process, we are merely observers, watching the movie. Having lost our bearings, we succumb to the mediated, manipulated experience leading us where the designer wants us to go.

Mr. Jerde’s self-described “experiential” architecture transforms experience from a verb into a noun. In turning Bellagio into what Wynn calls “a sort of universal symbol for the good life, of a place to get away,” (*Vanity Fair*), he robs Bellagio, Italy, of its particularity. It becomes fungible; place becomes brand.

Before Bellagio, Jerde redesigned Fremont Street, Las Vegas’s downtown main street, into the “Fremont Street Experience,” a covered “destination.” The Fremont Street Experience is something that you are definitely going to have if you go there; everybody who goes there is going to have it – you can count on it. It can be described before you have it and you can describe it to someone afterward in

precisely the same way. The experience and our behavior within it are completely predictable. Experience becomes quantitative, rather than qualitative – a thing to collect. And the collection, of course, costs money. When it is over we will buy the T-shirt or the mouse ears.

In giving it a name, the unfolding mystery of any experience is diminished. But mystery is something for which Jerde and his peers have little regard. They reinforce the deep and disturbing belief held by many Americans that we live suspended between the poles of boredom and stimulation and that a context of entertainment must be manufactured to give us something to do.

This assumption supports Jerde’s motivating concept that “the consumption addiction is what will bring people out and together.” As in Bellagio and The Fremont Street Experience, the value of experience is reduced to distraction, *divertissement*, rather than the opportunity to discover what it means to be human in a particular and unique place at a particular and unique time.

I recognize that Bellagio, the Fremont Street Experience, and Disneyland are vacation spots, places where we go to escape. And I confess that I, too, like to buy beautiful objects. I like to be entertained. I love to gamble. But I know that these diversions are not the purpose of my life. I know that “essence” is unlikely to be revealed to me at the Bellagio Hotel.

If Bellagio were an isolated example, maybe it wouldn’t matter. The problem is that Bellagio and its variations are fast becoming the dominant context – for some the primary world they know. And if Jerde has his way, such places could be the only world we know.

As it turns out, Jerde’s Las Vegas projects are “small-fry compared to his Big Idea: the remaking of cities with entertainment as the core.” Mr. Jerde has projects underway in Kansas City, Missouri, and Salt Lake City, real “lulus,” necessary in these cities, Mr. Jerde believes, “because they are the ones with the least to do.”

These manufactured environments are invading our homes as well. “Americans are Being Branded Where They Sit” headlines an 8 October 1998 *New York Times* article describing the trend in home fur-

nishings toward “branding... attaching a name or trademark to a product to give it an aura of value and a sales hook.”

The Cole Porter Memories collection offers reproductions of zebra cloth chairs from Porter’s Paris apartment at \$1900 a chair and a \$142,000 replica of the Steinway he played at the Waldorf Astoria. There is also an Ernest Hemingway brand. Brands under review include Marilyn Monroe, Amelia Earhart, and Greta Garbo. The F. Scott Fitzgerald branding would offer “a line that would be a mix –from Art Deco to Ivy League...*The Great Gatsby* is America’s favorite novel – and there’s going to be a made-for-television movie next year.”

In a world of increasing corporate concentration, it is likely that the company that manufactures the furniture also owns the network that broadcasts the movie (which becomes a 90-minute advertisement for the furniture) as well as the corporation that publishes the book. As the natural environment gives way to the manufactured one, our reality is increasingly based on a self-referential feedback loop from which there is no escape.

If our environment shapes us, who do we become when we purchase the living room context of someone else? What is it that we are buying? The ethos and aura of a person other than who we are? A context other than our own? Are we to accept that by partially and imperfectly inhabiting a Xeroxed copy of a room, by sitting in the counterfeit furniture of a celebrity, the experience of that celebrity (which itself is an artificial narrative manufactured by the media) will become our own? That our own original “inferior self” will morph into another and that we will be redefined into something better?

The implication is that our individual lives, the ones that we are actually leading, are empty of value – just not good enough. But we are led to believe that we can remedy this void if we fill our lives with the flotsam and jetsam of lives of established value by buying things, by joining a brand club.

Although blurring the boundaries between oneself and Ernest Hemingway by purchasing replicas of his living room furniture may seem trivial, the implications of this kind of boundary confusion and violation are profound. At every turn we are being

conditioned to accept this. Genetic engineering of plants and animals falls into the same category. Such boundary violations threaten the very conditions necessary for a thing to be itself: a strawberry, a flounder, a pig, a functioning ecosystem. A human. The permeable boundaries that define a thing – whether a gene or an ecosystem, are violated under the delusion that the consequences of our actions can be completely known and are completely predictable. No Surprises. But nature rarely works that way; it surprises us all the time.

“Symbols like brands have become a part of reality, a halo,” says Dr. Richard Shweder, a cultural anthropologist at the University of Chicago, in the same *New York Times* article on branding. “In India, where I work,” Dr. Shweder continues, “people believe water from the Ganges has a potent positive power.”

But this is hardly an apt analogy. The Ganges is not a generic brand – it is unique and its power is connected to the experience it evokes. To experience the Ganges in Varanasi or to hold a vial of its water is not to flatten life into a counterfeit reproduction of the experience of another; the experience of the Ganges is the experience of all life.

The Ganges and its water are embedded in the natural environment – the Ganges derives its cultural significance from that fact. Ganges water comes from the mountains and flows to the sea: a drop of that water connects and contains them both. Its source in the Himalayas is part of its power and mythos. It is not about creating artificial, one-step-removed experience; it induces a wholly different kind of experience – the kind that expands rather than reduces what it means to be human.

Dr. Shweder’s analogy minimizes the significance of the Ganges just as a John Jerde “Ganges Experience” would. The evolving experience of real life and real death would be replaced with a sanitized tableau of a pristine river. Fragrant flowers would replace the mingling smells of smoke and incense and the stench of rotting cow and dog carcasses floating by. Beautiful women in bright saris would obliterate the men and boys squatting as their hair is shorn to prepare them to tend to their fathers’ cremation. Visitors would float in brand new boats with comfortable seats and hot chai rather than rickety wooden vessels rowed by toothless old men.

We would emerge from the experience entertained but not more keenly aware of the brevity of our own lives and inevitability of death, or any more connected to the world in which we live, or with any deeper understanding of our kinship with people who live in another place on the other side of the earth. We would not be challenged to consider the meaning and purpose of our short, precious existence.

But the designers of our future are looking to shield us from such challenging and distasteful matters through an even deeper invasion of our boundaries. Michael Saylor, CEO of the multibillion-dollar company MicroStrategy, is one of these designers, and he counts on nanotechnology to provide the implantation of devices that predict our every experience and control our every move.

Saylor was profiled by Larissa MacFarquhar in the 3 April 2000 issue of *The New Yorker*. In the long term, Saylor envisions a world in which everyone will have a tiny device implanted in his [sic] ear that will whisper advice to him as he needs it. If a crime is taking place near him (the device will know where he is), the voice in his ear will warn him. If he is on the way to the hospital, the voice will inform him of the success rate of each of its doctors.

Saylor imagines that his customer of the future will travel through a world in which guesswork – and the inefficiencies and risk that accompany it – has been eliminated. He will save himself time and money and thus, as Saylor likes to think of it, life. No surprises.

Saylor's is a risk-free, solipsistic world, a world without relationship. A completely controlled and managed environment. It is a world without the unpleasantness of the unexpected, but also missing the delight of serendipity. In Saylor's world the unpre-

dictable path of curiosity, the path of our own personal development and evolution, surrenders to the stagnant but more comfortable path of undeviating certainty.

The article continues, "Saylor sees his services as insurance against unpleasant surprises. What are you afraid of? I'm afraid of missing my plane. I'm afraid I'll be outside when there's a crime in my neighborhood." In Saylor's fear-based life, he doesn't concern himself with helping the victim or discovering who is committing the crime or why. He just wants to make sure that he is not in that unpredictable "outside" place when it happens.

And he wants to make sure that those of us who have not yet cultivated these fears do so: "Even if you're not afraid of these things, the beauty is, with proper marketing, we can make you afraid."

If Jerde, Wynn and Saylor prevail, we will soon find ourselves with a cacophony of voices in our head telling us what to do as we sit in our living rooms pretending to be someone else, like Jay Gatsby, who never existed in the first place. Or, we will be roaming the seasonally perfect gardens of Bellagio smelling the cherry blossoms in the eastern Mojave. Or, we will be living in a world defined by anxiety and the tools manufactured for its relief.

It is not an appealing world to me. This insulation from suffering and unpleasant experience comes at too high a price. I need – as I believe all humans do – to risk and cope with the particulars of all that is unknown.

If we cannot take in the shock of icy Sierra water, and infinity of stars, or the fragrance of a wild rose, and if we cannot lose and find ourselves in the face of terror, how can any of us claim to be living our own brief life?