

Lifestyles

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Change is Irene Sanders' business. The Evergreen consultant's book tells how to make sense out of

Chaos

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Somewhere in the jumble of words on the paper lay Stephanie West-Allen's future.

It was a mishmash. Nothing more than random thoughts jotted down on paper, really. No order. Just stuff, . . . stuff she saw out there in the world around her, that might somehow remotely affect her life: friends, colleagues, clients, changes in the business environment, changes in the law, hobbies, goals, irritants.

It was chaos. But as Irene Sanders keeps telling everyone, there is opportunity in chaos.

Sanders, 44, is an Evergreen management consultant who's taking one of the hottest topics in science — chaos theory — and applying it to the business world. She helps both organizations and individuals feeling buffeted by change start focusing on what's going on around them, see how things may be connected in ways they'd never considered, and look for helpful patterns that may emerge from seemingly random events.

"If you can identify the issues that are perking out there, see things as they are emerging, then you can begin to apply your resources to influence the future," says Sanders, who is working on a book to be released next spring that outlines her philosophy.

Chaos is no easy theory to grasp, but it is stunning in its implications. The pre-eminent book on the subject, James Gleick's *Chaos*, spent months on the best-seller charts in 1987, and spawned several other, less successful attempts to broaden the topic's appeal and make it accessible to non-scientists.

Here's the gist of it: Nature is disorderly. In many areas, things never happen the same way twice.

Take the weather. You have the same mountains, the same oceans, the same speed of the Earth rotating on its axis. Given the constant nature of these factors, you'd think meteorologists would have detected some unchanging pattern and could accurately predict what the



Irene Sanders helps businesses apply the "chaos theory" to help solve the problems brought on by change.

weather will be a week, a month or a hundred years down the line, much as astronomers can tell us when to expect eclipses.

But they can't. And the reason is "the butterfly effect." Scientists can't accurately predict the weather more than a few days in advance because there's no way to take into account what effect a butterfly flapping its wings in Russia will have on wind patterns over the Rockies. The butterfly creates just a tiny disturbance, but that tiny puff of wind may disrupt some other air current just a hair, which may alter some other current, until the initial wing flap is magnified a zillion times and becomes a snowstorm over Denver.

Thanks to supercomputers that can crunch more numbers than the human brain can comprehend, scientists have begun to spot patterns in things that previously appeared to be utterly random. They do this by abandoning old-fashioned linear math (A plus B causes C). Instead, chaos theorists study "non-linear systems."

The math is intimidating, but it basical-

ly involves going beyond simple cause-and-effect equations. "Non-linear means all the variables are constantly interacting," Sanders says.

Transfer this to real life. People often get so focused on their normal patterns that they don't see the person or event just beyond the horizon that may create the disturbance that's going to plunge their pattern into chaos.

"Everywhere, organizations and individuals are being blindsided by change they hadn't counted on," Sanders says. Sanders directs clients through an exercise she calls "environmental scanning." You put down — on paper, where you can visualize it — everything you can think of that might be out there, every butterfly that might flap its wings in your direction.

That's what West-Allen, a professional mediator, did to help her clarify her career goals. Once she had everything down where she could look at it, where she could see possible linkages, she realized she didn't have to be a mediator the rest of her life.

"It really widens your thinking," West-Allen said. "Rather than looking at one factor or aspect, you expand to where you're much more creative. Sometimes people get this narrow focus about what they need to be dealing with, and don't look at what other things are affecting them. For me, it just opened up the horizons."

Likewise, when the Colorado Trust, a health-related foundation, brought together leaders from the health field with local officials to brainstorm better ways of promoting wellness in the state, they picked up some insights they hadn't counted on, via environmental scanning.

"We were seeing these new trends, going deeper and seeing linkages we hadn't seen before," said Doug Easterling, director of the trust. "We were looking at how unemployment has an impact on violence, how commuting patterns affect latchkey kids."

Visualizing the environmental scanning "map" seems to be a key to its success, Sanders says. "Once an issue is 'on paper,' you can let it go, you don't have to keep it in your head," she said.

STRATEGIC THINKING

Chaos, complexity and change: A context for strategic thinking:

■ A small event in one sector can cause tremendous turbulence in another.

■ There is a relationship between order and disorder, and self-organizing change occurs as a result of their interactions.

■ Maps, models and visual images make it easier to see connections and emerging patterns.

■ Look at whole systems, not just their parts.

■ Scanning across disciplines and industries is the key to seeing emerging trends, paradigm shifts and opportunities for innovation.

■ Non-linear thinking is critical to recognizing clues about changes in the environment.

■ Perspective is important when viewing chaotic events.

Source: The forthcoming book by Irene Sanders, to be published by John Wiley & Sons, (Spring, 1997)