

The Power of Positive Deviance



In the world's poorest communities, enabling change can be a vexing problem. But activist scholars Jerry and Monique Sternin have generated sustainable results through a process they call *positive deviance*. It works. And the implications for your organization are tantalizing.

[Click here or turn to Page 8.](#)

Positive Deviance at Work

Today, *positive deviance* is finding its way from the rural communities of Vietnam to the executive suites of our organizations. In this report from the field, catch a glimpse of positive deviance in practice... and then make the connection to your own world of work.

[Click here or turn to Page 16.](#)

The Wisdom of Crowds

Conventional wisdom warns us not to follow the crowd. But in a new book, author James Surowiecki illustrates that in many cases, "the crowd" deserves a little more respect.

[Click here or turn to Page 2.](#)



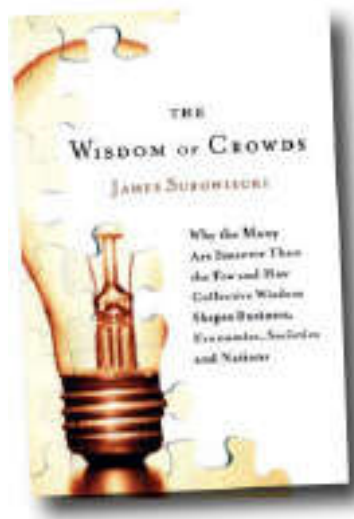
plus

Revisiting *The Soul at Work* • New Members • PlexusCalls
Plexus Conference • A Tribute to Everett Rogers

Following the Crowd

Turns out that “following the crowd” may have gotten a bad rap. In “The Wisdom of Crowds,” author James Surowiecki shows that group intelligence may be greater than we know.

One day in the fall of 1906, British scientist, Francis Galton set off to a county fair to prove a point. Galton came from the elitist school of thinking – believing that a small percentage of people were intellectually superior to the masses and that we were all better off letting those folks run things. To make his case he focused on a contest at the fair. He chose one where people were trying to win prizes by betting on the weight of a fat ox (after it was slaughtered and dressed). Galton felt these non-experts would show their collective ignorance and he tried to prove it by collecting all the guesses (around 800) and averaging them. The crowd’s guesses averaged out to 1197 pounds. The actual weight...1198. He was perplexed to say the least.



This is how James Surowiecki introduces his book, *The Wisdom of Crowds*, from Doubleday Publishers, 2004. I should state up front that my strong populist beliefs predisposed me to like this book as soon as I heard the title. Mr. Surowiecki’s main point is that for many challenges we face, there is strong argument for tapping into the collective wisdom of the people associated with that challenge, rather than turning to experts.

He takes a storytelling approach to his work, which I found enjoyable. Some may find the amount of detail he delves into around the backdrop of each story a bit too much. He cites quite a number of studies to support his claim “the simplest way to get reliably good answers is just to ask the group each time.”

Mr. Surowiecki also makes some helpful distinctions about which types of problems most benefit from the “ask the crowd” approach, specifically:

- *Cognition problems* – where you are trying to determine the most effective course of action and many people have some understanding of the situation but no one has a complete one.
- *Coordination problems* (negotiating traffic, getting the right amount of product to customers at the right time) – where you need to consider how your actions impact others who are involved in the same “dance.”
- *Cooperation problems* (paying taxes, curbing pollution) – where people need to think beyond their own self-interest and look out for “the whole.”

“For many challenges we face, there is strong argument for tapping into the collective wisdom of the people associated with that challenge, rather than turning to experts.”

For each of these situations, Mr. Surowiecki provides examples and outlines the conditions required to make the sure the group approach to decision-making is the best of all alternatives. There were a few passages that very much resonated with my own corporate experience, including the following:

“The old corporate model and what happened to it is still worth paying attention to because in some deep way, the assumptions that underwrote that model – that integration, hierarchy, and the concentration of power in a few hands lead to success – continue to exert a powerful hold on much of American business...and the practices and systems that arise from those assumptions keep the truth from getting to the top of the hierarchy...to state the obvious, unless people know what the truth is, it’s unlikely they’ll make the right decisions. This means being honest about performance. It means being honest about what’s not happening. It means being honest about expectations. Unfortunately, there’s little evidence that this kind of sharing takes place. As Chris Argyris (an organizational theoretician) has noted ‘inauthentic behavior’ is actually the norm within most organizations.”

Overall, I found this to be an affirming read, with ideas and stories that reflect my own business experiences.

Reflections & Connections

In the late 80’s, I worked for a large professional services firm in the corporate

education function. The corporate staff group of the business unit that provided audit services for small businesses was finishing a large marketing study in which many of the firm's clients were interviewed about where else (besides auditing) our company could serve them. Several specific themes that emerged from the survey data pointed to nine additional services the company could develop. The staff group, which was only ten people (including the managing partner of the entire practice) in a division of about 4,000 across the U.S., faced a decision. The efficient thing to do would be to publish the results of the data along with an announcement of the formation of teams from different offices to develop the nine new service lines. This would have followed the principle of "go fast to go slow." Luckily, the managing partner of the practice knew that approach wouldn't work. He knew that telling the managing partners at the different offices around the country to just do what they were told and trust that these nine ideas were right would generate resistance, no matter how sound the ideas were. He realized that the best thing to do would be to share the survey data with the group, ask them for their ideas, and trust that they would probably reach the same conclusions the corporate group did.

"This approach is slower (on the front end) than just telling people what to do. But it honors the principle of *go slow to go fast.*"

They decided to run an NGT (nominal group technique) session with all 80 of the Office Managing Partners from around the country. NGT is nothing more than a structured brainstorming technique that enables what the entire group feels are the best answers to emerge as the top priorities to be worked on. We ran four sessions with 20 partners in each. I was one of the facilitators. The corporate group wanted to make sure their nine ideas at least made the list of ideas to be considered, so they gave their list to one of the partners in each group to offer during the collection phase.

Sure enough, the top ideas that each of the four groups generated were very similar to what the corporate group had generated initially. The key here, though, is that all 80 partners came up with it so they all owned it. This approach is slower (on the front end) than just telling them what to do, but it honors the principle of "go slow to go fast". Now when the corporate group went to the partners at the different offices looking for people to work on these new initiatives, they got a quick positive response. As James Surowiecki argues in *The Wisdom of Crowds*, when you trust the group's wisdom and involve them in the decision-making process, you not only ensure that you are probably making the best decision, you are also building immediate ownership for implementing and sustaining that decision. ■

By: Rich McLaughlin, Principal, The McLaughlin Community

Relationships – The DNA of Business

In this new edition of a complexity classic, only the title and cover art have changed. The connections remain as vital as ever.

Andy Law likes to compare his innovative advertising agency to an “upside-down swan.” He explains that more linear companies like to appear as a graceful swan, “an image of beauty and order, attractive and in control” with feet paddling frantically under the water to make the organization move. But for his organization, the upside down swan metaphor is a better fit. Law and colleagues named their agency for Saint Luke, the patron saint of artists and



doctors, and structured it as a cooperative with the idealistic goals of creativity and healing. An outsider might see a chaotic workplace, but the people who work there focus on developing their contribution, their potential, and their mission rather than a well-crafted public perception.

The upside down swan as a metaphor for the innovative and “playful” Saint Luke advertising agency.

“Deep down,” Andy Law says, “we know where we’re going and we think of ourselves as attractive. But all you see are the feet waving around crazily. I think it’s more playful that way.” Playful? Sign me up.

In stories like these, Roger Lewin and Birute Regine lead us to surprising insights and a fundamental principle of business in *The Soul at Work: Embracing Complexity Science for Business Success*. The principle is *relationship*, the DNA of business and the major focus for a leader’s attention. Business is, after all, fundamentally about a relationship in which each party has something the other wants and they make a mutually-beneficial exchange. “Relationships,” rather than money, they assert, “are the bottom line of business, and creativity, culture and productivity emerge from these interactions.”

This book is now out in paperback with a “more businesslike” title (say the publishers): *Weaving Complexity and Business: Engaging the Soul at Work*. Aside from the new title, the only other difference is the cover art which, in the paperback edition, depicts hands weaving a cat’s cradle—an illustration of people working together in a web of connection.



The discussion is set in our nonlinear, dynamic business world, and they talk about genuine relationships, caring relationships, authentic relationships which become the source of novelty, creativity and adaptability. They believe that people’s deep desire to contribute, make a difference and belong is the real leverage a leader has in creating change. Listen, understand what people really care about, make it part of their work, and stand back out of their way, focusing on the larger picture in your industry’s economic web, and you’ve got the makings of a successful change and a leadership style that embraces the principles of complexity.

The book has three parts. As one rather new to complexity science, I appreciated *Part 1: The World of Complexity Science*. In it, Mr. Lewin and Ms. Regine create a primer of the science with clear explanations of the vocabulary and concepts I’ve heard and come to use at local fractal meetings. They clarify emergence; complex adaptive systems; the edge of chaos, which they have renamed ‘the zone of creative adaptability’; spontaneous organization; small changes; attractor; distributed influence or distributed leadership; and many other principles of complexity science and properties of complex systems.

In *Part 2: The World of Complexity Experience*, the authors illustrate complexity science in nine live examples of leaders heading into the unknown without answers but with faith and trust in the people of their organizations. These narratives bring us unusual insights with the compelling stories of leaders, the dynamic teams they set in motion, the apparent chaos that they faced and often dramatic business results. Some of these leaders are students of complexity science, braving the unknown with theory and action. Others arrive at their new leadership styles more intuitively or because they have found that command and control does not work in a dynamic, changing economic web. In the narratives of Part 2 you’ll read about the Muhlenberg Medical Center in New Jersey, Babel’s Paint and Decorating Stores in Massachusetts, Monsanto, DuPont, the Verifone division of Hewlett Packard, and Greenwich Village restaurants on Cornelia Street, among others. You’ll read that Andy Law of Saint Luke’s likes to ask “What is the most fun project you ever worked on?” Ask that question of your business experience and see how many you come up with. Can creating the conditions for powerful relationships within your company and fun on projects produce a more successful business? Mr. Lewin and Ms. Regine and Andy Law say, “Yes.”

In much of the book and especially in *Part 3: The World of Relationships*, Mr. Lewin and Ms. Regine outline a different way of being a leader, a more organic way of focusing on one's relationships to people, of working with and for them. When one honestly admits that one is not the ultimate authority with the answers, one realizes leadership rests in the ability to see the wholeness of the organization and the capacity to cultivate people's potential within it. With such a viewpoint, a leader can listen without pre-judging and identify where the organization is not whole—where it disconnects, is blind to its issues or constricts its processes—and unearth the ambiguity, contradictions, mistakes and failures. Ensuring that there is diversity in the interconnections among people and connecting people through conversation enables people to experiment, allows the organization to evolve and leads to the constructive emergence of new ideas. A relational leader wants surprises and new ways of thinking that emanate from employees working together. To get them, one has to focus one's leadership behavior on one's own relationship to people and work hard on the three A's— *allowing*, being *accessible*, and being *attuned*. And everyone within the organization is guided by the four A's of relational practice: being *authentic*, *acknowledging* others, being *accountable* and being *attentive*.

“Relationships, rather than money, are the bottom line of business; and creativity, culture and productivity emerge from these interactions.”

Whichever version you read, there is much more in these editions to delight your soul and give you concrete examples and the few core practices of relational leadership. Mr. Lewin and Ms. Regine's well-written exploration leads us from the linear plan-design-build mode of working to the iterative cycle of speculate-collaborate-learn. If you're already more sophisticated in complexity science but still struggle with explaining it to others, consider suggesting this book to them, as Mr. Lewin and Ms. Regine make this complex subject clear. The authors' website, www.thesoulatwork.com, adds a treasure of practical and inspirational articles that help us continue to reframe our thinking and action at the level of a business' DNA—where all work is relationship. ■

By: Linda Barker.

Linda is the founding partner of *Business Impact Associates*, which uses a conversational and mathematical model to define the influence people working together have had on business results. She is also a principle in *Ethical Capital*, a firm that helps organizations develop the leadership and organizational systems and structures that support and encourage ethical choices at all levels of the organization.

Swan artwork contributed by Nancy McDonough, artist, Herndon, VA

The Power of Positive Deviance

Positive Deviance. Haven't heard the term? You will. It is a powerfully simple process that has enabled results in the world's poorest communities. And it may be coming to a board room near you.

When Jerry and Monique Sternin faced a daunting deadline to show improved nutrition among impoverished children in Vietnam, desperation gave birth to innovation.

The Sternins were staffers with *Save the Children* when they went to Vietnam in 1990 to help fight malnutrition in the country's villages. Typically, it takes a year get a program started, Mr. Sternin says now. But they weren't given the luxury of such leisure. The Vietnamese government issued a tough order: produce results in six months or go home.

In the Chinese language, the term "crisis" is represented to two characters—danger over opportunity,



Jerry demonstrating how little water is required to wash a child's hands at a Positive Deviance workshop focusing on hygiene and worm infestation in Armenia . (Parents were concerned that it would be impossible to bring sufficient water to school to enable kids to wash hands)

Mr. Sternin muses, and that “fortunate act of desperation” inspired a swift transformation from theory to action.

“We had been acquainted with ‘positive deviance’ as a research tool,” he recalls. “The idea had been around since the 70s. People had looked at children who were malnourished, children in hospitals, who bounced back from the malnutrition quicker than other kids, and had identified positive deviant factors. We thought if we could take this research tool, and turn it into an action tool—use it to discover, to create a program, a model—maybe we could show impact in six months.”

The idea was to find people who, despite poverty and meager resources, somehow managed to have well-nourished children. Their team, which included Vietnamese staffers, went to four villages and found that some families with well-nourished young children were doing something different—feeding the children more often and supplementing their rice-based diet with fresh water shrimp and crabs and the vitamin rich leaves of sweet potatoes. These foods were free and easy to get, but stigmatized as “poverty fare.” The villagers and *Save the Children* staff designed a program where mothers of malnourished kids met every day and practiced hand washing, active feeding and cooking, and feeding children the new foods. Mothers eager to see their children thrive began to adopt the practices of their successful neighbors, and within six months, two thirds of the children gained weight. After 24 months, 85% were adequately nourished. A study done years later by the Harvard School of Public Health showing that successive generations of still-impoorished Vietnamese children in the program villages were still well nourished. In other words, the behavior was sustainable, and lives were being changed.

For more than a decade, Mr. Sternin has been refining the concept of positive deviance (PD) for application in diverse settings all over the world. As a result of their work in Vietnam, the Sternins met Tufts University Nutrition Professor Marian Zeitlin, a pioneer of the theory. Three years ago when the Sternins returned from work in Burma, they received a Ford Foundation grant to begin the Positive Deviance Initiative at Tufts, which asked them to be visiting scholars. The objectives of the initiative are to document current uses of PD, train a new cadre of practitioners, and investigate new uses.

Enthusiasm for their work is spreading. Mr. Sternin and his wife have worked in 20 countries and other practitioners are using PD in another 15 countries.

“The Sternins went to Vietnam to help fight malnutrition in the country’s villages. Typically, it takes a year to get a program started... The Vietnamese government issued a tough order: produce results in six months or go home.”

The Sternins have been consultants for the World Bank, CARE, UNICEF, USAID, and have given workshops for Harvard, Princeton, Brandies and other institutions. Governmental agencies and dozens of non-governmental organizations have made the PD approach prevalent internationally, and it is gaining attention in the U.S. in educational, medical and corporate milieus.

Positive Deviance Defined and Applied

Positive deviance is the behavioral difference that allows a person or group to overcome some adversity that harms people with the same resources who behave in conventionally expected ways.

Sociologists began debating the concept of “positive deviance” decades ago. Some scholars thought deviance is always negative, making the phrase an oxymoron. Others suggested *deviance* is a continuum with evil on one end and sainthood on the other.

The Sternins pioneered the use of the concept as a model for social and behavioral change. The phrase is disconcerting to people who just don’t like the word *deviance*, Mr. Sternin notes, but people remember it because of its inherent dissonance. When the Sternins are working they like to let others describe what they are trying to do. “In Bangladesh they call it *keno parbo na*—why not?” Mr. Sternin says. In Mali, people produced another expression: “A far away stick can’t kill the snake.”

Today people using PD are making inroads in seemingly intractable social ills. In addition to sustainability, PD embodies the promises of practicality, self-discovery, and respect. “It means the problems and the solutions share the same DNA, and therefore there is no rejection by the ‘social’ immune system defense response,” Mr. Sternin says. “As a PD facilitator, I have the role of trying to help you discover the resource. But you have the answer. The wisdom and the answers exist within your community. I’ve seen this work all over the world. It generates more respect and wisdom than ‘best practice’ because it’s not like having some expert come in and tell you, hey dummies, look how much better someone over there is doing.”

When experts try to impose externally devised solutions, community resistance can be akin to bodily rejection of foreign tissue. In expanding



Women share special Positive Deviant maternal and newborn care strategies at a “Healthy Baby Fair” in Pakistan

the Vietnamese children's nutrition effort, for instance, mothers weren't simply told to add shrimp and sweet potato greens to their children's diet. Mothers of well-nourished children helped neighbors in new program villages discover for themselves the nutritional value of previously under-used foods available in their own environments. In one village, that might be sesame seeds and in another it could be dried fish or a previously unnoticed crop of edible greens.



Monique and young friend during a Growth Monitoring session in West Irianjaya, Indonesia.

Nutrition projects have reached millions of children in 41 countries around the world. The nutrition efforts have reached 2.2 million people in Vietnamese communities alone, dramatically improving the lives of countless children who would otherwise not have reached their full physical and intellectual capacity. The Sternins have also used PD concepts as a powerful catalyst for helping communities change such ancient and culturally entrenched practices as female genital mutilation and the sale of young girls into sexual servitude.

Knowledge does not by itself change behavior. The conventional expectation, Mr. Sternin explains, is that knowledge will change attitudes, which will then change practice. But efforts that put knowledge first have been disappointing. Take smoking. Does anyone on the planet not know that smoking is detrimental to health? Yet smoking continues. The question has long perplexed activists and theoreticians dealing with obesity, contagion, and a host of other conditions that involve harmful habits among people who know better.

Positive Deviance vs. Female Circumcision

“With the positive deviance approach, the sequence is practice, attitude, then knowledge. The practice changes the attitude, and then you internalize the knowledge. When people start practicing successful behavior, and see that it works, that's more effective than just knowing about it,” Mr. Sternin says. “It's easier to act your way into a new way of thinking than to think your way into a new way of acting.”

Visceral experiences people discover themselves and the social proofs they witness also promote behavior change, Mr. Sternin suggests. For instance, he says, there has been 90 percent compliance for 4,000 years on female circumcision in Egypt, even though modern science acknowledges the practice is painful and harmful. While males are circumcised as infants for medical and religious reasons, girls and young women are genitally mutilated for social purpose—so that disinterest in sex will foster fidelity. Persistent myth also instills the notion that circumcised girls will be more beautiful. Exhortations from educated sheiks and doctors have tended to go unheeded. “If you love your daughter, and want her to get married, this is something you do. There is no choice,” Mr. Sternin explains. “But when you realize someone ‘just like me’ hasn’t circumcised her daughter, and the daughter is not immoral, she is virtuous and she has gotten married, that raises a question mark. Suddenly there is a choice.”



Monique and Jerry meet with Positive Deviant Volunteers advocating against female genital cutting in Egypt.

Girl trafficking is an ancient tragedy sustained by modern desperation. Poor people sell their daughters into the sex trade when they believe they have no other choice. “Yet through PD, villagers discover there are some people just like us who have the same tiny piece of land and the same number of kids and the same meager resources, and they’re not sending their daughters out. That’s social proof that it’s possible to do something different. Social proof is a very potent part of PD—someone just like me, someone who isn’t smarter, richer, or better educated, is able to do something different.”



Primary school students Misiones, Argentina: Participants in a PD project to enhance student retention in grade schools in rural Argentina.

Mr. Sternin tells the story of Pak Darma, a poor Indonesian farmer who agreed to publicly address this taboo topic, and who worked to protect his daughters. He planted cash crops that could be harvested in different seasons to earn money for their education, and he monitored their activi-

ties. On child rearing, he cites the Javanese proverb, “You need to let go of the head but hold on to the tail.”

The Myth of “Expertise”

PD isn’t meant for every problem. Mr. Sternin explains that it is important to separate technical challenges from adaptive ones. If you’re looking for the best way to repair an engine, people generally won’t resist advice from a mechanic who is very different. Diffusion of innovation and knowledge may need experts who are different. But for adoption of practice, you need people like you, people who don’t have access to special economic, social or educational resources that you lack. When people need to change behavior or values, Mr. Sternin says, it helps if the solution and the problem share the same DNA and if both are working parts of the same complex system. He notes that a Bangladeshi mother who has saved her family during a flood will be the world’s finest expert on surviving disaster.

“It’s easier to act your way into a new way of thinking than to think your way into a new way of acting.”

Sometimes professionals—the experts from health ministries and clinics – resist the idea that troubled communities hold their own solutions. “You recognize that professionals have a contribution, but you are also trying to have people witness themselves—knowledge isn’t convincing, but experience is,” Mr. Sternin says, “There is often amazement on the part of professionals that the community really does have the answer...that people who are illiterate, who are not articulate, have strategies we would never know about because we have different sets of intellectual and material resources, so there is no way we could know what they are doing.”

Jerry Sternin, who has a master’s in Asian studies, and Monique Sternin, who has a master’s in education, met in Cambridge where both earned degrees at Harvard. They are veterans of the Peace Corps and worked for 16 years for *Save the Children*. Monique Sternin worked to halt female circumcision in Egypt and improve neonatal health in Pakistan, and Jerry Sternin worked against girl trafficking. They worked together on nutrition projects and on current adolescent and early education projects in the US and South America.

In a project to reduce the student dropout rate in Argentina, Mr. Sternin and colleagues discovered one school doing much better than similar schools in retaining students. “That school had a big party or picnic once a month for kids and parents in the gym,” he recalls. “Initially, one of the participant teachers thought that was TBU (information that is true but useless). Not every school has a gym that can accommodate a crowd. Someone else said the gym is not important, what matters is that they are bringing people together. That’s what

makes the difference, and we can adopt that strategy to our own situation. We have a tree—we can do it outside.”

Positive Deviance in Health Care

Applications for PD are very broad. Some now underway include improved asthma management and greater adherence to medication regimens for people with HIV/AIDS. Many people who use maintenance medication don't comply with the proper protocol because of inconvenience, forgetfulness, discouragement or scarce supplies. Yet among people facing the same barriers, some succeed. A person who takes medication properly because a supportive partner helps administer it is not a positive deviant, Mr. Sternin explains, because the helpful partner is a resource not available to everyone. If people say compliance comes from faith and daily church community attendance, further investigation may find PD. “You need to look closely at what is happening,” Mr. Sternin says. If the person gets a daily phone reminder from a church friend, it may be the call that is the key to success, and that strategy can be replicated for others outside the church community.

“A Bangladeshi mother who has saved her family during a flood will be the world's finest expert on surviving disaster.”

The possibilities of PD in medicine are just emerging. The Sternins and John Tobin, president and CEO of Waterbury Hospital Health Center in Waterbury, CT, are exploring the possibility of a project on hand washing.

“Hand washing is a classic example,” Mr. Sternin says. “How many doctors don't know that it is important to wash hands? None. Yet according to the literature, improper hand washing on the part of doctors and hospital staff is a major issue in infections.” Mr. Sternin says doctor friends have admitted privately there are times when they should have washed their hands and did not, and have also suggested that reminders wouldn't have worked because they were rushed and busy. However, he says, they agreed that if they witnessed a ward with a very low infection rate, where 100 per cent hand washing had been the key, their behavior would probably change. Again, proof and self-discovery are decisive.

Sometimes conventional wisdom masks details that hold solutions. Mr. Sternin recalls working on a nutrition project in Bolivia where everyone ate the same food—a broth made with pieces of potatoes, carrots, green vegetables and bits of meat. Common sense predicted no positive deviance relating to food would be found. Yet some young children were better nourished than their neighbors. Everyone was feeding the kids from that same pot, Mr. Sternin says, but there was a difference: The common practice for kids under 3 was to ladle out liq-

uid. The PD moms were scooping the bottom of the pot and serving their children nutritious solids.

Mr. Sternin found that when commercial sex workers tried to get their clients to use condoms, phrasing of the request mattered. Successful workers didn't mention their own fears, but instead stressed that a condom could protect the client from disease.

Ordinary language can have unexpected impact if cultural context is overlooked. Monique Sternin was surprised when Cambodian villagers seemed resistant to finding nutritional successes among the poor. A Cambodian facilitator explained that in the days of dictator Pol Pot, the impoverished were idealized and intellectuals were exterminated. A successful program was established after the historically loaded terminology was changed.

Monique and Jerry Sternin both are multi-lingual. Mr. Sternin modestly says he says he can “get by” in English, French, Spanish, Chinese, Vietnamese, Nepalese, and Bengali and can speak some Arabic. Both can recall events from early childhood that enlivened far-reaching interests. When Jerry was about 5, he received a children's book, *Around the World with Bob and Betty*, and remembers fascination with pictures of Hong Kong and the Gate of India in Bombay. Monique, who was born in France, remembers a gift her father brought from the US—a box of 50 Crayola Crayons. She said she wanted to live in a country that had crayons of so many different colors.

Now both find that the exciting aspects of PD are its vitality and its promise for uncovering life-changing secrets that lie in front of our eyes. “You walk into a new community with your local partner, with a new problem you know nothing about, and really know that in a week, or a month from today, these folks will start to address that problem, because you know these folks have the answer,” Mr. Sternin says. “The exciting thing is the notion of enabling those communities to discover the wisdom that they already have, watching them discover it and then act upon it.” ■

By: Prucia Buscell, Plexus Institute

For more on the Sternins and their work, see www.positivedeviance.org

“There is often amazement on the part of professionals that the community really does have the answer...that people who are illiterate, who are not articulate, have strategies we would never know about because we have different sets of intellectual and material resources.”

Positive Deviance at Work

Positive Deviance has found its way from the poorest communities of Vietnam to the corporate boardroom. And it turns out the two worlds aren't as different as they may seem.



The first thing a community organizer learns is that the people in the community have the best sense of what they need.

That realization has guided Rita Saenz through a distinguished social service career. Ms. Saenz, now chief executive officer of the Academy for Coaching Excellence in Sacramento, CA, formerly headed the California Department of Social Services, an agency that had a \$21 billion budget, and more than 4,600 employees. Insights learned as a community organizer in Spanish-speaking neighborhoods when she was very young have become even more manifest through the years. “The community has its own answers,” she observes, “but often members are short of the data that would help them solve the challenge. That’s one of the reasons the positive deviance approach makes so much sense to me. I have seen it work.”

Positive deviance is *the uncommon behavior that holds a key to success*. It is the behavioral difference that helps a person or group overcome the same adversities that overwhelm most of the neighbors. For example, Ms. Saenz says, in a neighborhood where parents are working two or three jobs and a dozen people are crammed into a tiny apartment, unsupervised children are apt to get in trouble after school. A “block grandmother” who welcomes youngsters in her home after school can keep them safe until their parents get home.

Ms. Saenz also describes the PD approach used in evaluating the needs of teenagers leaving foster care. Some older teens don't want to be adopted, she says, but they navigate the perils of independence best when they have a supportive relationship with an adult who is committed to them and not being paid for the effort. One of the bright spots for foster children in California, she

says, has been mentoring programs that have attracted thousands of dedicated volunteers.

The PD approach has been used successfully to tackle social issues throughout the developing world, and its applications in medical, educational and corporate settings are gaining more attention in the US.

One tactic used by a group of stakeholders who spent three years under Ms. Saenz's direction working toward redesign of California's child welfare system was a search for pockets of excellence—examples from around the nation of instances in which more children flourished despite obstacles to their success. These included a close cooperation between welfare to work services and child welfare that helped families with employment and child care issues, an initiative that encourages foster parents to support each other and jointly find resources for their foster children, and interventions to help families when they first came in contact with protective services rather than waiting until an episode of abuse or neglect had been substantiated.

“Positive deviance is the uncommon behavior that holds a key to success. It is the behavioral difference that helps a person or group overcome the same adversities that overwhelm most of the neighbors.”

She recalls meeting with Colorado welfare officials who had found ways to help troubled families, without violating confidentiality rules, when children faced danger of abuse. One area with the strictest confidentiality requirements is alcohol and drug abuse—which are often factors in mistreatment of children. But if parents are respectfully asked, Ms. Saenz says, most would prefer a helpful intervention to the likelihood of a punitive interaction with a drug court, and skilled non-punitive interventions can help families in ways that promote child safety.

Positive Deviance and The Corporate Connection

The use of PD concepts to further organizational goals is being explored in the corporate world.

Grey Warner, senior vice president for Latin American Human Health for Merck & Co. says what appeals to him is the idea that an organization can seek improvement by finding what is already there. Working with what exists is a concept that has been described creatively by Arvind Singhal and Everett Rogers in their book *Combating AIDS, Communication Strategies in Action*. Chapter 5 of the book tells how cultural strengths can be marshaled to foster life-saving behavior. “We advocate looking at local culture as an ally, working

for and within the local system to create possibilities for change, and then amplifying those possibilities,” Dr. Singhal says.

As Mr. Warner puts it, “I’m interested in seeing if there is behavior that exists within organizations where people are more actively and more positively engaged with customers than would otherwise be the norm. I’m sure it does exist, so the idea is to create an environment where it is brought to the surface. We’re in discovery mode with this now. We’ve just begun talking about the concept with different people, and it is getting traction.”

Explaining a potential for exploration, he points to sales operations, which tend to be fairly structured. “People are expected to make a certain number of calls to a certain number of doctors every day. It’s a model that has worked well, but does not differentiate us from the competition, because everyone does the same thing,” he says. “I am sure there are people who have chosen a different approach. The magic is to find the processes that allow different practices to surface. The difficulty is that we have required people to perform a certain way. We’re hired them, and trained them to do it. Then you create a situation where people come and talk about nonconformity. I’m sure there are people doing wonderful things that could get them in trouble if certain managers knew about it.”

Mr. Warner, who is philosophical and widely read, notes the hidden social contradictions described in the work of Peruvian political scientist Hernando DeSoto, who suggests that the wide-spread inability to get clear title to private property is what makes capitalism fail in non-Western societies. Roadblocks to goals are not always simple or obvious, Mr. Warner says, and it is possible that corporations can inadvertently set up barriers to the kinds of successful behavior they want.

In the late 1980s. Merck, a global research-driven pharmaceutical company, discovered that its drug Mectizan could successfully treat river blindness, a debilitating parasitic disease that causes pain, itching and ultimately blindness. Since 1987 Merck has offered the drug free to governmental and non governmental organizations in Latin America and Africa. Millions have been treated and Merck has been credited with helping to virtually eliminate the disease in the Americas. Merck’s effort has been described as an example of positive deviance in business. Mr. Warner suggests that while praise for its humanitar-

“I’m interested in seeing if there is behavior that exists within organizations where people are more actively and more positively engaged with customers than would otherwise be the norm. I’m sure it does exist, so the idea is to create an environment where it is allowed. We’re in discovery mode with this now.”

ian effort is well deserved, it is not really PD because Merck's research capabilities are an exceptional resource not available to others.

New Realms for Positive Deviance

Keith McCandless, a consultant whose firm, Oblique Strategies, is based in Seattle, WA, is also interested in how positive deviance concepts can work in organizational change and transformation. Appreciative inquiry focuses on what is already working, he says, and PD can complement that approach with a focus on things that are different and on the outer edge. "The mantra of organization-based complexity work is that it's the edges, the fringes, where you look for innovation," he says. "Another interesting element is that PD is a form of heresy. As an organization matures and grows, it learns that some of the practices that helped it grow start to crowd out difference, including positive innovations from many sources. Success becomes the source of failure to adapt. This situation is perfectly paradoxical and pure heresy in many organizational or community settings."

The PD approach provides the language and processes to find and amplify what is heretical and positive at the same time. Innovations always have an element of heresy that challenges the reigning pattern for success. He recalls consulting with a large agricultural corporation that endured a difficult year-long strike. During the year, corporate leaders were forced to make rapid decisions closer to the front lines, relying on many people in separate functions and disciplines to collaborate. Silos dissolved. Self organizing blossomed. Innovations sprouted in all directions. The company suffered financially, but shifted away from the former patterns of succeeding. When the strike ended, many of the executives wanted to return to what they knew best, rather than recognizing the positive shifts in practice.

John Tobin, CEO of Waterbury Hospital Health Center, Waterbury, CT, has met with PD pioneers Monique and Jerry Sternin to explore the possibility of using a PD approach in a quality issue common in hospitals.

"The importance of good hand hygiene in preventing infection has been known for a century, and the emergence of antibiotic resistant strains of bacteria, easily spread through direct contact, has created a major problem in our

“Positive Deviance is a form of heresy. As an organization matures and grows, it learns that some of the practices that helped it grow start to crowd out difference, including positive innovations from many sources. Success becomes the source of failure to adapt.”

hospitals. If caregivers—doctors, nurses and others—don't wash their hands after each patient contact, they surely are spreading infectious organisms. Despite ample scientific evidence to support that contention, many hospitals have an ongoing problem in convincing people to wash their hands." he says. "Our chief of infectious disease learned about PD at a Plexus conference, and is interested in giving it a try here in Waterbury. Monique and Jerry will be visiting Waterbury Hospital in October to present PD in 'Grand Rounds' and conduct two staff workshops in the PD process. We are looking at both hand hygiene and patients' overall experience with their hospital stays as possible problems around which to design a PD intervention, and we hope to share our findings with anyone else who may be interested."

Mr. Tobin says he is intrigued by how change arises in social processes, why some interventions have sustained success and while others don't, and why some very compelling scientific evidence seems not to result in behavior change. "Conventional wisdom in our society is that rational individuals will change behavior in response to factual evidence, but our actual experience tells us that this is frequently not so," he says. "PD, which builds on positive behavior, 'bottom up' interventions, and learning through action offers a new way to think about social change." ■

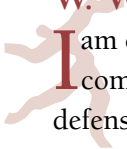
“Conventional wisdom in our society is that rational individuals will change behavior in response to factual evidence, but our actual experience tells us that this is frequently not so.”

By: Prucia Buscell, Plexus Institute

Meet Our New Members

Meet the most recent theorists, practitioners and learners to become part of the Plexus journey.

W. Warren Riffle


 I am currently a doctoral candidate at the University of Texas at Austin. I have completed my course work, comprehensive exams, and research proposal defense. My dissertation research includes the domains of complex adaptive systems, knowledge work, knowledge management, expert and expertise, and physician and patient relationships. The purpose of my study is to create a knowledge work and knowledge management framework from which to study physician and patient relationships. My dissertation study consumes nearly all my awake time. I expect to complete my doctoral work in the spring of 2005.

Complexity science, chaos theory, and complex adaptive systems more closely describes the world for me as I live in it. The dominant themes for me are emergent patterns, self-organization, learning, making sense, space between and around “things,” the influences of context, and the influence of structure on behaviors.

I was introduced to the Plexus Institute by Reuben R. McDaniel, Jr. Reuben is a highly regarded member of my dissertation committee. My connecting with Plexus is an emerging experience. The people I met during the spring conference at Mayo Clinic were delightful, affirming, and made sense.

e-mail address: wwriffle@mail.utexas.edu

David Keifer

 I am very excited about joining Plexus and am looking forward to attending the meeting at the end of the month. Currently, I am working on project and portfolio management. We have been using ideas from complexity science while we are working on creating a more project focused organization. We have

been able to identify complex adaptive systems in many of the areas which our project involve and that insight has help with managing projects, the project portfolio, and business environment in which our IS department operates. Using complexity has helped us while working to understand how business process develop over time and how that can be updated to achieve outcomes.

Personally I am most interested in emergence. Looking at organizational change through a complexity lens and knowing that changes will emerge naturally and trying to guide them. Dave Snowden's @ Cynefin Centre is also very interesting. Once I "discovered" complexity I read Waldrop, Holland, Edgeware, Lissack, papers from SFI - anything I could get my hands on. I also followed Google through the web and kept reading. That's how I found the institute.

Complexity is fascinating and I am regularly amazed at how I can use the things I have learned to understand what's going on in the world.

e-mail address: DKeifer@Christianacare.org

Larry Peterson

I'm an organizational consultant who works with clients in emergent planning, strategy implementation, organizational change and transformation. My website www.spiritedorg.com describes some of my work and ideas. I find Open Space Technology to be a valuable perspective and approach and the most emergent; and I make use of my 35 years of experience in design and facilitation to work with a variety of clients. I have a degree in Electrical Engineering from 1966 where I began my awareness of general systems theory leading to my current interest in complexity science. I also have a Doctorate in Religion where I studied Whitehead's philosophy of process and reality leading to my current fascination with the philosophy of Ken Wilbur. The two are directly connected. My practice takes me into businesses, health care, education, government and a variety of other organizations. I've been following the Plexus institute since its beginning through colleagues who have been more actively involved. I'm now taking the plunge to make a stronger connection to the creative conversations it has inspired.



e-mail address: larry@spiritedorg.com

Improving Health of the Chronically Ill:

Insights From Complexity Science:
A Plexus Conference



The care and treatment of people afflicted by chronic illness and the prevention of chronic disease are clearly very complex processes. Exploration of these processes requires an understanding of many factors and many levels. Some challenges related to chronic disease also demand insights into the dynamics of human physiology, human organizations, and human relationships. Despite advances in medical knowledge, however, such chronic afflictions as diabetes and childhood asthma are increasing in prevalence. Perhaps much human suffering could be diminished if the complexity of these unhealthy conditions were matched by the complexity of our interventions.

At this upcoming Plexus event, hosted by the Agency for Healthcare Research and Quality and held December 7-8 in Rockville, MD, you will be able to learn with leading researchers, scholars and healthcare practitioners, all whom have deep knowledge of complexity science and health. Come explore:

- Dynamics and variability in health and chronic disease: a complexity perspective – Ary Goldberger, MD
- How complexity concepts have guided the operation of the Stroke Center at Saint Luke's Hospital – Marilyn Rymer, MD
- Research on complexity based management practices in primary care practices: the connections with outcomes for the chronically ill – Benjamin Crabtree, PhD
- Research on nursing, care systems, management practice and quality of care in healthcare organizations: implications for participation – Ruth A. Anderson, PhD, RN, FAAN

- Understanding the patient–clinician relationship and human physiology from a complexity science viewpoint - Robert Lindberg, MD and Pat Rush, MD
- Relationships and connections as a source of health and adaptability - Norbert Wetzel, PhD

You will also have abundant opportunities to learn through conversation with other participants who share your interest in bettering the lives of people who suffer from chronic disease.

Full details about the Plexus conference Improving Health of the Chronically Ill: Insights From Complexity Science and the introductory workshop which precedes it on December 6th can be found on the Plexus Institute website - www.PlexusInstitute.org.

Please feel free to contact Curt Lindberg (Curt@PlexusInstitute.org) or Kate Randolph (Kate@PlexusInstitute.org) with any questions or suggestions. They can both be reached by phone at 609-208-2930.



PlexusCalls Fall 2004 - Spring 2005

Bringing People Together in Conversation

November 12, 2004:

“Distributed Adaptive Problem Solving: Harnessing the Potential for Success in Business”

Guest will be Eric Bonabeau, PhD, Chairman and Chief Scientific Officer of Icosystems, Corporation, a team of scientists and technologists dedicated to harnessing the power of their expertise and technology to identify significant economic opportunities. He is an expert in complex systems and distributed adaptive problem solving. He has a Ph.D. in Theoretical Physics and is also co-editor-in-chief of the *Advances in Complex Systems*. He serves on the editorial board of the journals *Artificial Life and Information Sciences*, is editor and co-author of the book *Intelligence Collective* (Hermes Sciences, Paris) and the co-author of *Swarm Intelligence* (Oxford University Press) and *Self-Organization in Biological Systems* (Princeton University Press). Eric's commercial experience includes years of research and development in US and European telecommunications and software companies.

December 10, 2004:

“Revolutionizing the Art of Personal Health Care”

Guest will be Dr. Rushika Fernandopulle, a practicing physician who serves on the clinical staff of Massachusetts General Hospital and the faculty of Harvard Medical School. He was the first executive director of the Harvard Interfaculty Program for Health Systems Improvement, an effort to engage top faculty members and senior health care leaders in tackling the country's most pressing health problems. He is currently building a prototype primary care practice called Renaissance Health in Boston, which is designed to involve patients in maximizing their own health through the use of new technology and innovative medical staffing. Dr. Fernandopulle is the co-author or editor of several publications, including journal articles and a medical textbook, and has a new

book, *Uninsured: Life and Death in the Land of Opportunity*, due in January 2005. He has spent much of the last decade in efforts to improve the quality of health care delivered to patients. He envisions qualitative change through redesign of current primary care processes.

January 14, 2005:
“The Way of Go”

Guests are Troy Anderson, an author, entrepreneur and theoretician who is managing director of Knowledge Initiatives at the Fannie Mae Foundation in Washington DC, and Lisa Kimball, the owner and Executive Producer of Group Jazz, a Washington –based consulting firm. Mr. Anderson is the author of *The Way of Go*, Simon & Schuster, a book that looks at the game of GO as a way of understanding strategy in any field. He is one of only five Americans permitted to train at the Japanese Professional GO Academy. He is a former senior executive with Red Herring Communications and The Industry Standard. Group Jazz is devoted to supporting the efforts of teams, task forces, communities and organizations. Ms. Kimball is active in online community work, organizational development and is skilled in using complexity-inspired principles. She is a member of the Plexus Institute Board of Trustees.

February 11, 2005
“Positive Deviance”

Guest will be Jerry Sternin, a scholar and practitioner who has pioneered the use of the concept positive deviance around the world in projects ranging from improving nutrition of impoverished Vietnamese children to prevention of girl-trafficking in Indonesia. The idea is as simple as it is brilliant: the wisdom and skill to solve problems exists within the communities that have the problems. We can learn, for example, from the poor mother who successfully nourishes her children despite having no better resources than neighbors whose children are starving. Mr Sternin knows how to find those who succeed and enable them to share their wisdom with others hoping for the same results. Jerry Sternin and his wife, Monique Sternin, are visiting scholars at Tufts University and have a Ford Foundation grant for the Positive Deviance Initiative, which aims to document current uses of positive deviance, train new practitioners and investigate new uses.

March 11, 2005:
“Power Laws: There is More to Life than Just the Bell Curve”

Guests will be Dr. Bruce West, senior research scientist at the mathematics division of the US Army Research Office, and Dr. Larry Liebovitch, a professor at Florida Atlantic University, with appointments in the Center for Complex

Systems and Brain Sciences, the Center for Molecular Biology and Biotechnology, and the Department of Psychology. Dr. Liebovitch has degrees in physics and astronomy. He has used nonlinear methods, including fractals, chaos, and neural networks to study motions in proteins, the timing of heart attacks, the swimming of one-cell organisms, the function of genetic regulatory networks, and the spread of biological diseases and computer viruses. He is also developing mathematics curricula for non-science students, and is the author or co-author of 2 books and 65 articles. Dr. West has deep understanding of complex networks and their significance to the scientific community as well as their implications for real world organizations, communities and politics. He has given presentations that include theoretical discussions of networks and the physical aspects of multi-scale modeling.

PlexusCalls are all scheduled for **Fridays from 1 PM to 2 PM Eastern Time.**


Please check www.PlexusInstitute.org for further details, additions or changes to the schedule.

If you would like to listen to these provocative conversations:

- Dial (641) 594-7500
- Enter the access code 85392, followed by “#”

Opportunity Granted

Recently, the Robert Wood Johnson Foundation validated the work of Plexus Institute with a grant for \$214,440. How will Plexus use this opportunity? Read on.

 Plexus Institute has received a \$214,440 grant from The Robert Wood Johnson Foundation to pursue two 24-month initiatives using complexity science to probe the mysteries of chronic illness and improve health care quality.

Health care experts believe complexity science, the discipline that explains how living systems self-organize, evolve and adapt, offers insights needed to deepen understanding of human physiology and human organizations. Complexity science suggests the same deep underlying principles apply to the human body and such human organizations as hospitals, nursing homes and primary care practices. In fact, the Institute of Medicine (IOM), in its *Crossing the Quality Chasm: A New Health System for the 21st Century* report embraces complexity “as a guide in formulating its agenda for change.” The IOM is an organization founded by the National Academies of Science and chartered by Congress to advise the federal government on policy matters pertaining to the health of the public.

Plexus Institute, a non-profit organization devoted to fostering the health of individuals, families, communities and organizations through the use of complexity science principles, has sponsored several initiatives and conferences that address chronic illness and quality. The Robert Wood Johnson grant will support the acceleration and expansion of these efforts.

Two of the most daunting and complex health problems in America are treating and preventing chronic illnesses and improving the quality and safety of

health care. An aging population and the increased prevalence of asthma, diabetes and some forms of cancer are increasing the human and economic cost of chronic afflictions. The drive to improve quality of care and reduce errors is another challenge with a high human and financial toll. Both problems are compounded by the shortage of experienced highly skilled nurses.

Plexus Institute cites research findings that show a loss of physiologic complexity, as measured by heart rate variability, is linked to both aging and chronic disease. Likewise, the Institute reports, early research shows complexity-inspired management practices, such as extensive engagement of nurses and physicians in organizational decision making, improve patient outcomes.

Two learning networks will enhance the work of these parallel initiatives. Learning Networks are created and facilitated by Plexus for groups of individuals interested in learning together and discovering novel approaches to challenging issues. Diverse participants will be sought from the health care community and related disciplines, abundant interactions will be encouraged, and activities will be guided by complexity science. Two recent workshops, *Complexity Science and Healthcare Quality: Crafting an International Research Agenda* and *Creating Healthcare Organizations Where Nurses Thrive* are a source of ideas, momentum and membership for the networks.

The Complexity and Healthcare Quality Learning Network and the Complexity and Primary Care Learning Network are expected to have ten to 20 members each. Goals of the networks will be to:

- Uncover, create and test new strategies suggested by complexity science for reducing the impact of chronic illness and improving healthcare quality, and
- Raise awareness within the nursing, medical and healthcare management communities of complexity science and the promise it offers.

The networks will be supported by Plexus Institute staff, including Curt Lindberg, President; and Kate Randolph, Managing Director of Learning and Education. The networks also will receive expert guidance from distinguished scholars and researchers, including Dr. J.A. Scott Kelso, Director of the Center for Complex Systems and Brain Sciences at Florida Atlantic University; Dr., Reuben R. McDaniel, Professor of Management Science and Information Systems at the University of Texas at Austin; Dr. Ruth Anderson, Associate Professor at Duke University School of Nursing, and Dr. Ary Goldberger, Associate Professor of Medicine at Harvard University.

The Robert Wood Johnson Foundation, based in Princeton, NJ, is the nation's

largest philanthropy devoted exclusively to health and health care. It concentrates its grantmaking in four goal areas: to assure that all Americans have access to quality health care at reasonable cost; to improve the quality of care and support for people with chronic health conditions; to promote healthy communities and lifestyles, and to reduce the personal, social and economic harm caused by substance abuse—alcohol, tobacco and illicit drugs.

A Tribute to Everett Rogers

From an Iowa farm field to the far reaches of six continents, Everett Rogers's understandings and insights have taken root and grown.

Everett M. Rogers, an internationally recognized scholar and communications pioneer, former chair of the University of New Mexico's Communications and Journalism Department and a Plexus Institute Trustee, died October 21 at his home in Albuquerque, NM, after a two-year-battle with kidney cancer. Everett was 73.

Dr. Rogers wrote more than 400 refereed journal articles and 32 books, including his recent *Combating AIDS: Communication Strategies in Action*. As his former student, coauthor and friend, Dr. Arvind Singhal, Professor and Presidential Scholar at Ohio University, observes, that's a hard work ethic. Dr. Singhal notes that Dr. Rogers' work has shaped and influenced the fields of communication, sociology, marketing and political science. He taught at six American universities, including Stanford, and six universities in Europe, Latin America, and the Far East, and was fluent in several languages. He worked on family planning communication projects in Korea, India, Indonesia and Tanzania, and conducted research on HIV/AIDS prevention in Thailand, India, South Africa, Kenya and Brazil.



Dr. Everett Rogers at home reflecting on feedback from his presentation at the Plexus AIDS conference.

Introducing Dr. Rogers at a recent conference, Plexus Institute President Curt Lindberg told the audience, "This is a humanitarian scholar, a man with a brilliant mind and a big heart."

Dr. Rogers began his life during the Depression. He attended a one-room school and came home to milk cows, feed chickens and do chores at the family's Pinehurst Farm in Carrol, Iowa. His early interest in agricultural innovations, and his intuitive curiosity about why some farmers adopted them while others resisted, led to the scholarship that eventually produced *Diffusion of Innovation*, the second most cited book in the social sciences.

Dr. Singhal, who was Dr. Rogers' PhD student at the University of Southern California nearly 20 years ago, pays affectionate tribute to Dr. Rogers as a teacher, mentor, and academic and philosophical guide. "People marvel at the ease with which he will bring his research experiences to the classroom," Dr. Singhal wrote in a testimonial, recalling how "200 eager-beaver (USC) freshman journeyed with Ev to all parts of the world. He discussed his work in Nigeria, Colombia, Korea, Pakistan, and Egypt. He told about his work in Indonesia, and how he narrowly escaped a simmering volcano."

Describing Dr. Rogers' gift of inspiring others, Dr. Singhal recalls how Dr. Rogers answered when a former student asked him the secrets of mentoring. He replied, "I like to plant little acorns and watch them grow into trees." His original insights about diffusion have been born out in the influence of his own ideas and the world-wide distribution of the people he taught. As just one example, Dr. Singhal recalls recently meeting a Ford Foundation representative in Nairobi, Kenya, who told him she had been in one of Ev's classes 29 years ago.

The colorful leaves on the cover of the fifth edition of *Diffusion of Innovation* in part reflect Dr. Rogers' intellectual rigor, creativity and adventurous spirit. "I chose multi colored spring-to-fall eucalyptus leaves because of their nature," he once explained. "They are interesting leaves. The koala bear eats only those leaves. The eucalyptus began in Australia, but it is a very diffusible tree. It is now everywhere in the world. It will grow from a leaf, a seed, a piece of bark or a root. A leaf or a piece of wood can float down a river and there will be more eucalyptus trees. Early explorers repaired their ships with eucalyptus wood, and after shipwrecks off the coast of South America, the eucalyptus grew there. Those leaves tell us a lot about the nature of diffusion. It's a wild process, not always predictable or linear. Who adopts first, who adopts later...which innovations reach critical mass...these things are not always explainable."

Like the eucalyptus leaves that captured his imagination, Dr. Rogers ideas, insights and inspirations have captured the imaginations of generations of scholars and readers of his work. ■