

emerging

The newsletter of Plexus Institute • Spring 2011

Book Review:



Descartes' Bones

A new book explores the conflicted – and surprising – relationship between faith, reason, and science.

Complexity Ideas:

Reducing Infection through Behavior Change

Today, more and more health care organizations are employing the unique power of *Positive Deviance* as a way of creating broad-scale culture change. In the process, they're saving lives.

Feature:



"The Last Shot"

A family of inner-city activists reminds us that urban transformation is not a product of programs alone. It takes relationships... and some powerful storytelling.

Also:



Meet Our Members

Plexus Institute continues to attract innovative and inspiring thinkers from around the world.

emerging:book review

Descartes' Bones

A review by Robert Lindberg

In *Descartes' Bones*, author Russell Shorto re-examines the pivotal role of the often maligned René Descartes. Using as a clever device the strange story of why Descartes' skeletal remains were exhumed and then used as relics for over 3.5 centuries by atheists and Christians alike, Shorto follows the bones to intertwine history and philosophy, weaving parallel stories. First there is the story of how Descartes ignited the birth of modern science, the age of reason, and indirectly the rise of democracy. Second there is the story of the ongoing conflict between religious faith and scientific reason and how Descartes remains central to this discussion.

The First Philosopher

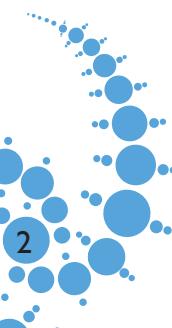
Descartes (1596 - 1650) was one of our great mathematicians. The father of analytical geometry, he gave us the ubiquitous X-Y axis and Cartesian coordinates. But Descartes is also credited with being the first modern philosopher. His fundamental gift to the world was spelled out in the treatise "Discourse on Method". In this intimate conversation with his readers, Descartes suggested that the path to truth begins with a simple rule: *Doubt everything*.

Four hundred years ago, this notion was both a startling revelation and heretical. As a follower of Descartes pointed out, "Doubt is the start of an undoubtable philosophy."¹ To complement

this skepticism, Descartes advocated using reason to establish what is certain and what is not.

For him, carefully applied reasoning trumped any established dogma. As an example, he realized that his sensory perceptions could be easily misled and therefore couldn't be relied on to establish certainty. He couldn't be certain about properties such as color or texture or taste, and so on. As he mused out loud, Descartes eventually comes to his famous assertion. He confided to his readers that the only thing he could be certain about as he put pen to paper was that "thinking is taking place, therefore there must be that which thinks." But this is too cumbersome for a t-shirt so it has been parsed down over the ages to "I think, therefore I am". But this latter translation does not fully encompass what Descartes intended and has been misinterpreted. "Cogito, ergo sum" implies that thinking and the awareness of thinking are the real substrates of being. Actually, Descartes was merely indicating that since he was thinking, he could accept his existence as a certainty.

Descartes' skeletal remains were exhumed and then used as relics for over 3.5 centuries by atheists and Christians alike.



Doubt, Reason & Science

Discourse on Method was pivotal because it introduced doubt as a tool, and validated the power of individual reasoning to establish the boundaries of what we can be certain about. This is not only the start of modern science but the start of the analytic, independent self.² When doubt and reason were combined with the soon-to-follow experimental method all the pillars of modern science were in place. The objective of the scientific method is to arrive at a sound theory that holds up to scrutiny. This theory is never assumed to be a certainty.

In addition to the foundations of modern science, Descartes' enthusiastic followers ushered in the Age of Reason of the eighteenth century. As rational thought began to dominate science and human affairs the seeds of democracy were sown. Jefferson, Madison and Hamilton worshiped at the alter of reason and despised both sloppy thinking and those agencies that imposed a body of thought on others.

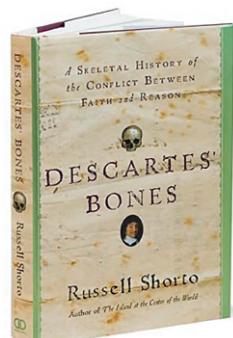
When Descartes advised that truth begins with doubting everything, including conclusions based on sensory observations, he was shucking off 2,000 years of entrenched Aristotelian scholasticism that relied on observation and deductive reasoning. This proved to be the easy part. But what about the closely allied Christian theology? Descartes walked up to the precipice, looked over, and took a step back. He was a contemporary of Galileo. By all accounts he was a devout Catholic and he realized that his work challenged the hegemony of religion. He pro-

posed a solution to accommodate both faith and reason: The dualism of mind and body. Descartes postulated that there were two substances in the world—matter and the mind. The human body was composed of matter just like everything else in nature. It was subject to the laws of physics and could be understood further by reducing it to its smaller parts. The mind was not matter, it was something else. This was a very sensible conclusion in 1637. After all, even today consciousness seems ethereal, otherworldly. For Descartes, it was an area that was impenetrable to reason. He assumed that the mind lived on beyond the death of the body and therefore supported the notion of a soul. Far from overturning Christianity, “the philosopher thought he was protecting it from the crumbling edifice of ancient natural science”. His mind/body distinction, Shorto notes, has long been invoked in defense of “an eternal realm of thought, belief and ideals that can’t be touched by the prying fingers of science.”

Let's remember
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important
transitional
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In Defense of Descartes' Legacy

Since Descartes argued that faith and reason were complementary he has somewhat of an ironic legacy. On the one hand during the seven-



“*Descartes’ Bones: A Skeletal History of the Conflict between Faith and Reason*” by Russell Shorto. [Find it at Amazon.com](#).

teenth and eighteenth centuries he was seen as the herald of the modern program, the breaker of all icons and traditions. (Despite his defense of Christianity, ‘doubt everything’ didn’t sit lightly with the ruling theocracy. Descartes had to hotfoot his way through Europe for the rest of his life and died a lonely death ten years later in Sweden.) By the nineteenth century he became part of the conservative program, used to support the argument that the mind is separate from the body and to preserve religion from the corrosive forces of modernity.

In recent years, he has been a convenient target for complexity science writers for his image of the clockwork universe.³ Similarly, writers in the neuroscience field have elegantly refuted the mind/body demarcation.⁴ But let’s remember that all important transitional figures have one foot in the old world, and one foot in the new. Furthermore, modern critics seem to forget that he did live in the 1600s. He needs to be judged in that context.

Why is the troubled relationship between religion and science still a topical issue? For Russell Shorto, the author of *Descartes Bones*, the answer can be explained as follows. “We are all philosophers because our condition demands it. We live every moment in a universe of seemingly eternal thoughts and ideas, yet simultaneously in the constantly churning and decaying world of our bodies and their humble situations. We are graced with a godlike ability to transcend time and space in our minds but are chained to death. The result is a nagging need to find meaning.”

In a recent essay in *Nature*, Pascal Boyer (author of *Religion Explained*), points out that data from neuroscience and cognitive psychology support a more modest conclusion. “Religious thoughts seem to be an emergent property of our standard cognitive capacities....atheism will always be a harder sell than religion, because a slew of cognitive traits predispose us to faith.” After re-

viewing these traits Boyer concludes that “some form of religious thinking seems to be the path of least resistance for our cognitive systems. By contrast, disbelief is generally the result of deliberate, effortful work against our natural cognitive dispositions—hardly the easiest ideology to propagate.”⁵

Footnotes:

1. Descartes' Bones; Russell Shorto; 2008. Doubleday
2. NY Times Book Review; Gary Rosen; Nov 2, 2008
3. The Blind Watchmaker; Richard Dawkins
4. Descartes Error; Antonio Damasio
5. Boyer, P. Nature. 455;1038-1039

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Behavior Change Helps Stop the Spread of Infections

by Liz Rykert

Infection control professionals aren't the only ones who fight infections. All kinds of work experience and knowledge can be engaged to combat dangerous pathogens.

Mohammad Salthia, a coordinator of volunteers at Toronto Western Hospital, first learned about Positive Deviance (PD) at an information session at his hospital in April 2009. Salthia, 26, who is working on a master's degree at the University of Toronto, was already interested in public health, organizational development and strategies for change. He was intrigued by the PD focus on front-line workers and the idea that solutions to problems may already exist in a community, just waiting to be discovered. It wasn't long before he was leading serious discussions about reducing infections in several hospital units.



Mohammad Salthia, coordinator of volunteers and Positive Deviance practitioner, Toronto Western Hospital

When the transplant team at Toronto General was struggling with an outbreak of Vancomycin-resistant Enterococcus (VRE), a drug-resistant infection that can be extremely dangerous for patients who are vulnerable because of serious and complex underlying conditions, Salthia was called. Through a connection on the Toronto General Infection Control Team, members of the transplant group learned that Salthia had been working with PD concepts and was skilled in sharing his knowledge and enthusiasm.

The two facilities are part of the three-hospital University Health Network, so such shared communication was natural. Toronto Western is known for its specialty in neurology, and Toronto General, six blocks away, is known for its expertise in cardiology and organ transplants. Princess Margaret Hospital, the third member of the network, is known for cancer care. He is now working on infection control with four units at Toronto General and Toronto Western, where is still a coordinator of the volunteer program.

Designing to the Worst-Case Outcome

In Mohammad's first session at Toronto General, ten or twelve people crowded into a small meeting room just outside the transplant unit on the seventh floor of the hospital. It was a regular unit council meeting, and the manager,

Coleen Shelton, invited people in to hear more about Positive Deviance.

Salhia was joined by Anthony Twyman and Leah Gitterman from Infection Control. Twyman took a minute to introduce Salhia and Gitterman, and then turned the meeting over to those who had gathered. Gitterman introduced the ideas and principles of PD and explained why the University Health Network was looking to this approach to make real change on the units. Then Salhia introduced TRIZ and the serious conversation and fun started. "It was a very interactive group" said Salhia, going on to explain how he noticed right away how the team "grasped the idea that this effort was for us and by us, that we can be agents of change in our unit."

TRIZ is problem-solving, analysis and forecasting tool developed by the Soviet inventor and science fiction author Genrich Altshuller and colleagues in the 1940s. The team was asked to think about an adverse outcome, the worst result it could possibly get. In this case the team was asked: "How can we make sure every patient and staff member gets VRE?"

By designing a system that would reliably get this negative outcome every time, the group quickly focused on all the things they would do. They laughed, and suggested perverse practices, such as removing all alcohol gel dispensers, never washing hands between patient contacts, and skipping cleaning protocols when a new patient arrived in a room. The list went on. As Leah Gitterman reflected on the conversation, it struck her that even amid all the joking and laughter, people really know and understand how infections are spread. If they can design a sure-fire system to spread infections then they know what to do stop the spread. The challenge is getting people to do what they need to do every single time.

A Readiness for Change: Discovery and Action

As the team exhausted the options for spreading infections Salhia gently guided the group to consider: "Now if you were to compare the parts of the system you just built with what you do today to stop the spread of infections what do you notice?" Peals of laughter ensued as people readily recognized how specific aspects of the system were actually part of their daily reality. Supplies were missing, hand gel dispensers were empty, people were just popping in briefly to a room and did not bother to don PPE. The list went on.

Salhia said he knew this team was ready to change: "The questions they asked each other, the openness to talk about anything, the respect for each other; you could tell right away this was a group that did not need any nudging to get started. Because it is the transplant team, they are highly motivated to not have infections transmitted."

As they moved from the TRIZ work into a Discovery and Action Dialogue (DAD), Salhia helped to guide the conversation by asking the team to think about what keeps them from following the practices they know need to happen all the time. Who do they know that seems to be doing a better job? What do they think needs to happen now?

They met together as a group for just under an hour. In the comfortable setting of the small meeting room and without power point slides or outside experts, the team came up with ideas for what to do next. A couple of people decided to work on reducing repeated ins and outs at patient rooms where precautions are required.

The team was asked to design to the worst-case outcome: "How can we make sure every patient and staff members gets the infection?"

Others would examine how equipment is best stored, maintained, and appropriately and consistently labeled. People realized it is often the small things that really make a difference.

At one point, the conversation shifted to try to assign blame to someone not present. Salhia reminded people one of the rules of PD: “Nothing about me without me.” They team decided the missing parties would be invited to the next conversation. The discovery work will need to continue until the team determines which of their many enacted ideas will actually cut the spread of infections. Evaluation of data will follow. But Salhia believes culture change has already taken place, and that bodes well for beating infections. “Culture is huge in this work, and when people can communicate openly with colleagues, come up with good ideas, and achieve something collectively, it makes a big difference,” Salhia said. “It’s the bottom-up aspect of PD, the solutions by and for the staff, that produce sustainability.”

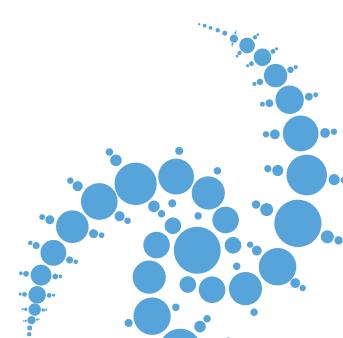
Positive Deviance and New Mental Models

Salhia says one unit manager told him she has changed the way she manages, more consciously seeking ideas and solutions from the front lines. He says PD has also influenced his own educational goals, and his work with the volunteer

program. “A huge part of my job is working with people, and PD concepts are beneficial in terms of recognizing things that can happen, being mindful in terms of interactions with others, keeping an open mind,” he said. “The applications of PD are endless, and I do believe we will see them spread far beyond infection control.”

[Salhia](#) earned a BSc degree with honors in biology and life sciences at the University of Toronto, and he is pursuing his masters’ degree in adult education, with an emphasis on leadership and organizational development. A Canadian of Egyptian descent, he is fluent in Arabic and he’s studying French. He’s fascinated by the nuances of PD, the impact of personal and group interactions, and the applications of other complexity-informed processes, such as liberating structures. He’s not sure the direction his career will take, but he knows where his interests are.

[Liz Rykert](#) is a positive deviance coach and president and founder of Metastrategies, Toronto, a firm that works with public, private and nonprofit organizations to achieve creative ways to collaborate.



emerging:practitioners

“The Last Shot”: An Artful Approach to Community Transformation

by Prucia Buscell

When street-wise neighborhood youths began coming to Findley House, a community center in the tough West End of Cincinnati, they didn't talk much to the adults there. They didn't use their real names; they'd use each other's names, and then they'd use nicknames.

“From meeting to meeting, they didn't know who we were trying to talk to, because they'd forgotten who they told us they were,” recalled Joan Hoxsey, one of the adult mentors. In one early session, the teenagers showed up wearing t-shirts bearing the name of Jason Warren, a 17-year-old friend shot to death in the city. It was a powerfully wrenching statement; but verbal communication was still subdued. “They didn't want to talk much about it. They seemed to have developed a sort of shell, or armor, and they

did, eventually, talk about that” she said. “They said if they worried all the time about what was happening in the street, or about their own safety, they would never leave their homes. They said they just don't spend a lot of time thinking about death.”

But the subject would come up again, and become part of pivotal conversations as the adults and teens took the many tenuous small steps that would in time make them part of each others' lives.

It Starts with Listening

In 2006, Joan Hoxsey, her husband Michael, and their daughter and son-in-law, Geralyn and Tom Sparough, four well-educated Caucasian adults trained in consulting and counseling, were asked to teach relationship skills two nights a week to African American inner-city youth. They soon realized they had to throw away their prepared curriculum and structured activities. In Joan Hoxsey's words, “We decided we needed hang out with these young guys, get to know them as people, and just listen.”

Joseph Prather, now a 24-year-old college student, recalls his early encounters with the adults at the center. “At first, I just didn't know what to think about them,” he said. Other youngsters



Joan and Michael Hoxsey's commitment to the inner city meant “staying around”... and ultimately coaching a group of young people to produce, direct, and distribute their own motion picture.

wondered whether these old white people would just tell them to pull up their pants. To Joan, Michael, Geralyn and Tom, listening meant being quietly attentive, and being willing to be changed by what they heard. Five years, and one very intense and demanding project later, all involved know they have been changed.

At first, the teens would hang out with the Hoxseys for a while so they could head into the gym and play basketball. They would cluster around the TV, watch MTV or BET and giggle about “cake.” Queried by Joan Hoxsey, they admitted that *cake* meant *girls*, so she began baking real cakes to share at every meeting. In time, seven or eight, or a dozen guys began hanging out, some just to keep off the street and out of trouble. Then they began coming because they wanted to. Guys just come for the cake, Joan Hoxsey once teased. But Joe’s younger brother Jerelle Prather, now 21, whom the Hoxseys describe as a charismatic kid with “street cred” in addition to being a scholar and athlete, insisted that was not true.

Death as an Ever-Present Reality

As the Hoxsey family and the youngsters shared more about each others’ lives, the adults learned that the murders of three young people in the neighborhood had touched the lives of their young friends. Nearly everyone knew someone who had been killed. The Hoxseys and Sparoughs talk about the stresses of inner city life—the kids never know who has a gun. They recall that in one discussion, one of the guys had said there’s no such thing as a bully anymore, because anyone can get a gun and if you’ve been a bully you’re going to get your head blown off. It’s not clear who can be trusted. The police aren’t trusted, and sometimes peers aren’t either.

The Hoxseys accompanied the boys to the funeral of Michael Carter, a strapping six-foot-

nine 18-year-old basketball star who had been nicknamed “Couch” because he always seemed tired. “We saw some of that same armor,” Joan Hoxsey said. “They didn’t want to spend a lot of time talking about this. Before he died, they had come to the conclusion that their friend just didn’t want to play basketball any more. It was incredibly hard to realize he was gone, and that he had been very ill and had died of heart trouble.”

One evening, Michael Hoxsey asked how long the boys expected to live. He remembers being blown away by the answers. One youngster thought he might make it to 25. Another thought 35 was old age, adding that’s how long his father might have lived. One guy with big plans for getting out of the neighborhood planned to live until 90, but most didn’t expect to live beyond their 20s.

Nearly everyone knew someone who had been killed. One kid thought he might live to 25. Another thought 35 was old age.

Guns, Sex, and Race

Other heartfelt discussions followed. One day one of the kids mentioned that a cousin had brought a gun to school and fired it. The kids pondered what, if anything, was worth dying for. A very serious question, seriously discussed. There were no easy answers. But the guys knew it was clear the kid with the gun in school had caused himself a great deal of difficulty. Another time, one of the older guys told the group he had just learned he was going to be a father. Michael Hoxsey remembers a discussion about when it’s the right time to have a child. “One said when the moment is right, you don’t plan it, it just happens,” he recalled. “Another guy said when you’re ready to take financial responsibility, but everyone else was laughing. What’s wrong with that answer? The others said the guy

already had two kids and wasn't financially stable. So the guy said, 'ideally you should be financially stable.' There was lots of playing and joking, but in every discussion there was some nugget, something profound."

On skin-color: did any of the young people have white friends? They knew white people, but not as personal friends. They talked about how you get to know people, how you choose friends, and how sometimes there are walls and barriers.

Tom Sparough noticed how respectful and thoughtful these youngsters were among themselves. They shared cell phones and other possessions, listened to one another and treated each other with consideration. These were wonderful kids, he thought, not unreachable, and not just a rude, reckless bunch.

Equalizing the Power through Disclosure

As relationships developed, members of the group asked questions about their mentors' lives, and as the Hoxseys put it, "we weren't allowed to not answer." Joan and Michael had been married 50 years, and Geralyn and Tom had been married 25 years, which surprised some of the youngsters who hadn't observed such enduring marital relationships.

The Hoxseys told how they had lost James, the youngest of their six children, when he was 33. He died very suddenly; went to bed one night and didn't wake up. He died of an arrhythmia. "One of the guys asked how we got through that," Joan Hoxsey said. "We realized one of the ways we go through it (in their earlier experience) was working with young people, especially young men. Because of Jamey, our home was a place where guys hung out. Michael had called them all our son's friends. So we were offered this opportunity, and it turns out it was all guys."

Let's Make a Movie!

When summer came, the money for the program was gone, but the mentors worried about what would happen to kids who had time on their hands and no jobs. They all wanted jobs, but jobs were scarce. The Hoxseys asked what they would like to do. Several said they wanted to make a movie. What about a documentary? *Boring*, said Jerelle and others.

It turned out Joe had already written a script. As Joe's cousin Demarcus Prather explained, he and Joe used to make up lots of stories when they were children, and Joe was always writing them down. The Hoxseys and Sparoughs read the script for a movie called "The Last Shot" and were amazed by Joe's talent, and by the content. It was an extraordinary resource. It was about love, loyalty, friendship, violence, respect, revenge, and hard choices—all the things they would have wanted to teach in their formal curriculum.

They taped a microphone to a broomstick, which crew members held aloft in order to capture the dialogue.

The movie portrays two high school basketball players who fall in love with very different girls and take very different paths. The character Chris is a good kid, good student and good athlete, who is led astray by the temptations presented by his materialistic girlfriend. For him, the last shot is the bullet that kills him. Demar, the other character, makes his last shot in the film on the basketball court. After the murder, some of Chris's friends want revenge, so they have to decide: Should they perpetuate the violence or stop it?

Joe, who co-stars as Demar, explains the message and the title, "You never know what will happen in your life, and one moment can change everything. Don't think you can do something tomorrow, because maybe you can't. Don't wait



A scene from the home-grown, youth-made motion picture, "The Last Shot."

around, because any chance you have could be your last shot." And think hard about choices, because sometimes they are irrevocable.

This Is Way Harder Than We Thought

They thought they had a quick project—just get a camera and start shooting. "It was way harder than that," said Joe, in earnest understatement. They borrowed a camera. They called and texted friends every day to find actors, get them to memorize parts, and show up for rehearsals and filming. They taped a microphone to a broomstick, and members of the crew would hold it aloft to try and catch the dialogue—a technique that was unreliable at best.

The sound wasn't right. Sometimes the lighting was wrong. They filmed scenes in streets of their neighborhood, in homes of families and friends, at the center, and they got permission to film some basketball scenes in Cincinnati's Taft High School gymnasium. Some scenes had to be done over and over. The cast and crew were growing, but technical misfires and scheduling glitches were exasperating.

Joe was the director, writer, actor, and the person driving the effort to get the film finished. In

addition to physical and equipment challenges, there were times some of the youngsters wanted to joke around and goof off when Joe wanted to work. The Hoxseys describe one stormy day when several participants didn't show up for a planned scene, and Joe's frustration boiled over. "We were at the neighborhood house, and he rushed outside, cursing and kicking over a garbage can, which was really out of character because he was usually the voice of reason. We were stunned. Some of the guys followed him out on the steps. There were eight or ten of us. He ranted and we listened. There was raging thunder and lightning, and Joe was raging," Joan Hoxsey said. "He talked about how much he loved his brothers and sisters. One of the things he said was 'I have eight brothers and sisters and they will not go through what I've been through. No matter what I have to do, they will not go through this. It doesn't matter if I get killed.'

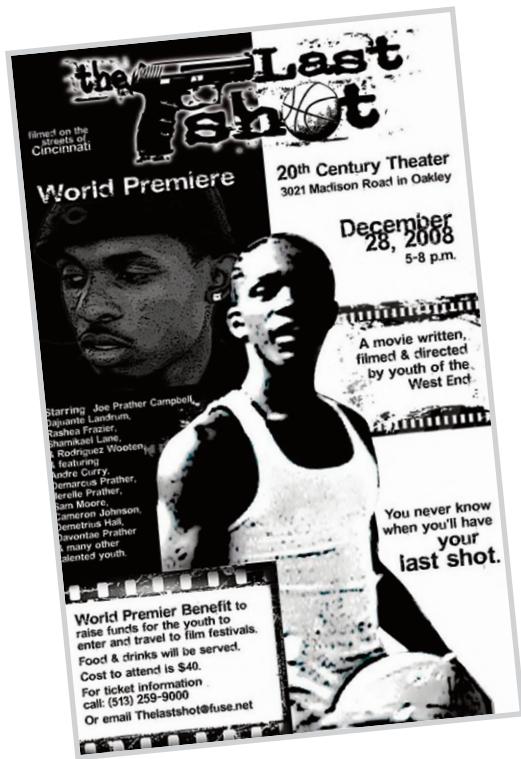
"I have eight brothers and sisters, and they will not go through what I've been through. It doesn't matter if I get killed."

Some individuals notorious in the local drug trade drove by in a van, and those gathered on the porch felt Joe was saying he might as well go into the streets and sell drugs.

Joan Hoxsey broke her silence to say, "It does matter. I care." She knew how difficult it was to lose a son. She also knew how difficult it would be to lose Joe. "Your mother cares," she said. At that moment, she recalls, Joe's uncle, Bryon Prather, who had volunteered to help as videographer, began to speak. Those present knew him as a kind, resourceful, soft-spoken man in his 30s who had a job, and had taught himself to do many different kinds of work. That day he described an earlier life they hadn't known about. As Joan Hoxsey recounts it, Bryon spoke intensely for 40 minutes, telling of his having

been involved with drugs in his late teens, having made poor choices, having been betrayed by friends, and spending time in jail. He said his past haunted him. Drugs can deceive you and ruin you, he warned. It's easy money, but easy money isn't worth what comes with it. The things worth having are worth working for. He said real friends mean a great deal. Street friends aren't real friends. The group remained huddled on the porch, in rapt attention, as rain and wind lashed the building and thunder and lightning surrounded them. In Geralyn Sparough's memory, "It was a grace-filled moment, when we were all there to let Joe know how important he was."

Friendships, discussions and work on the movie continued. The characters in the movie were important archetypes, because as Joe and Demarcus both said, good kids in impoverished inner cities go bad all the time. They get distracted, they are confronted with life situations beyond



The poster for the world premiere of "The Last Shot."

their control, and good intentions get lost. Sometimes they just make bad choices. And sometimes, kids overcome extraordinary obstacles, and turn negatives into positives. The movie deals with both. They had conversations about ambiguities and grey areas, in life and film. And the older people recall how hard the guys worked, how determined they were to create and share something good.

The Film Debuts

Eventually, some 30 relatives, friends, and neighbors joined cast, crew and supporters. In 2008, with the movie nearly done, the adult mentors arranged for a showing at the 20th Century Theatre, in the Oakley neighborhood, a venerable old building in Cincinnati. Families and friends arranged limousine service for the cast and crew, and tuxedos for the guys. The girls were all elegantly dressed. A graphic artist donated posters, and one of Joe's aunts interviewed the cast and prepared a listing with photos and biographies. At least 300 attended, and the theater was filled. The showing concluded with a standing ovation from the audience. Some in the audience offered technical help. Peter Block, the Cincinnati-based author, consultant and community activist, invested money and became the producer.

A more polished version of the film was shown March 25 at the Avalon Theater in Washington, DC, in an event sponsored by Plexus Institute. The sound and editing had been improved. The film was dedicated to the memory of their friends, Jason Warren, fatally shot at 17, and Michael Carter, dead of a heart attack at 18. The cast and crew introduced themselves briefly, and spoke of their efforts and goals. Joan and Michael Hoxsey explained they had been pressured to edit the movie to clean up the lan-

"The adults stayed around. They made us believe we could do something."

guage, but they insisted on keeping it as written because it was honest and real that way.

Dujuante Landrum played Chris, the good kid gone bad. Joe's mother, Terri Prather Kajake, who played Chris's mother in the movie, said she kept being chased away from the filming because she objected to actors using language she didn't allow in her house. Still, she attended both screenings and is proud of the work done by her sons and their friends. Despite its all-male beginnings, the group got Shamikael Lane to play Shante, the "good girl", and Rashea Frazier to play Monique, the girl whose interest in "bling" is a bad influence. Joan Hoxsey played the high school principal who walks the halls and tells boys to pull up their pants.

Reflecting on their project, several of the young film makers and the adults emphasized the value of showing up, staying engaged, and being open to change.

"The Film Changed Everybody in a Way"

"This film changed everybody in a way," Joe said. "There was always something that could go wrong, but they (the adults) stayed around. When we got frustrated, they stayed round. They made more people believe that we could do something." And he adds, with a grin, "we worked so hard we pretty much stayed out of trouble."

Demarcus, a presidential scholar in high school and now a 23-year-old college student, said, "We kept building up to make this movie. We'd build each other up. I'd tell people never quit. We'd see people trying to work effectively and we knew we could do things together.

"Where we come from, a lot of people get in trouble," Demarcus added, and the Hoxseys never disparaged those who did. Their attitude,

he said, was how might they help? They note one of the members of their initial group is now in jail on serious charges. "It's a test for us," Michael Hoxsey had observed in a 2009 conversation. "Are we still there to support him? We don't have a rosy picture painted for him. He was influenced by things in the street, and he's in very serious trouble. It would be possible for the guys to just step aside, but the opposite seems to have happened."

Demarcus had said then, "He was a good kid in the wrong place at the wrong time with the wrong people." That same description could fit the character Chris in the movie. Joe now says he writes six or seven letters a week to neighborhood friends who are in prison, adding that he's interested in how people can rebuild their lives after incarceration.

Bryon Prather, now 37, said the movie has been a positive thing for his nephews. He wants to see young people interested in planning to stay around for their future adult lives. "You don't want to go out early," he said. "I've been through the whole process. I did a lot of things in my youth, and I wanted to show these guys there is a different route. At the time, though, no one can tell you a thing. You just have to find some positive influences."

Joe now wonders what his life might have been like without the movie. It gave him focus for his many entrepreneurial and artistic skills—he performed and produced rap recordings to accompany the action, and he learned some things about editing, writing and re-writing, negotiating, and managing a project. He is studying business, but hopes to make more films, and has other scripts in the works.

Joan and Michael Hoxsey echo that same question for themselves. They explain how much they learned from these young guys, whose lives differed so much from their own, and how much they valued the fact that the guys kept showing

up. As Michael Hoxsey said, it was a joy every time they did.

The movie, its message and the friendships live on. The cast and crew, most of them now in their 20s, have moved on to school and jobs, but they visit and stay in touch with their older friends. "We always have a Christmas breakfast together," Joan Hoxsey said recently, "and it's fun to see them walk through the door. That's still there from those early days when they filled such a space in our lives."

The Hoxseys and the Sparoughs sum up their experience of support and cheerleading: it was "five frustrating, invigorating, enlivening, wonderful years of friendship and work, and worth every minute of it."

And by the way, Joan Hoxsey baked 72 cakes.

A Road Trip, Cinematic Art, and Cultural Encounters

"The Last Shot" is a powerful story about basketball, bullets and hard choices made by high school boys in a tough Cincinnati neighborhood who know very well the dreams and dangers of life in their home turf. It's a grainy, gritty 90 minutes of unnerving but inspiring cinematic fiction with intense reality.

The film was shown recently at the historic Avalon Theater in Washington, DC at a special event sponsored by Plexus Institute. The screening was followed by a discussion with the cast, the crew and their mentors. The local audience included educators, members of the Plexus community and movie buffs who regularly visit the Avalon, a theater built in 1923 and restored as a nonprofit film center. A group of teenagers from a local Boys and Girls Club entered boisterously, but fell into hushed silence as the movie began. Despite inconsistent sound and some technical imperfections, you can't watch this film without being drawn into the drama and feeling the fateful struggles of its young characters.

The film's title derives from sports, guns, and last chances in life. Joe Prather, now a 24-year-old college student studying business management, wrote the script when he was still in his teens. He sums up the message: "You never know when your last shot will be, so take advantage of the opportunities you have." During the discussion after the screening, he explained, "You can make good choices, or you can make bad choices... You can also find positive influences, and find ways to do something positive and turn away from the negative."

Six years ago, four well-educated white adults began a mentoring program for city youth. At first, the African American teens who came didn't want to talk much. So the mentors, Joan and Michael Hoxsey and their daughter and son-in-law, Geralyn and Tom Sparough, started listening. They began learning about these young lives, so different from their own, and friendships grew. When the teens decided they'd like to make a movie, they discovered Joe Prather, a member of their group, had already written a script. The adults were amazed at his talent and the complexity of the life issues in the plot—love, loyalty, friendship, violence, vengeance and hard choices. The story emerges through the experiences of two high school basketball players whose lives take very different trajectories.

The Hoxseys loaded a group of 14 young film-makers and supporters into two vans for a nine hour road trip from Cincinnati to Washington, where Plexus President Lisa Kimball had arranged for seven families to host the visitors. In addition to the screening at the Avalon, the group visited the Newseum and grounds around the White House, and spent time with their host families.

Lewis Smith, who hosted Joe, his mother Terri Prather Kajake and Joe's Aunt Kelly, found the movie grainy and rough, but very sincere. He was impressed by the cast and crew as they introduced themselves after the film, and enjoyed the longer discussions later at home with his guests. "They were the most gracious guests you can imagine," he said. "We had some nice conversations. One was about Jehovah's Witnesses, which they grew up with religiously, and the Quakers, of which I'm one, and the similarities between those groups. And

they were incredibly generous—they brought enough flowers for two big vases, and a beautiful basket of fruit on their last day here.”

Another host, David Coleman, also commented on the generosity of his house guests, who presented him too with fruit and flowers. As a regular host of international guests in his home, Coleman says he is conscious of cultural divides and different worlds within our own country as well as across international boundaries. He volunteers with CityatPeaceDC, an organization that brings inner city and suburban youth together through the arts, and he says he’s like to see the DC group, who recently presented a musical, get together with Cincinnati group.

John Cooney, another host, was interested to hear his guests talk about how difficult it had been to make the film, and he was impressed with the way they stuck with it. “They kept reorganizing themselves to get it done because they had such a strong desire to show their story to the world,” he observed.

“It’s wonderful when you have a chance to engage in real conversation with people whose experience is so different from your own,” Lisa Kimball commented later. “I think both visitors and hosts expanded their world views in some surprising ways. Creating space for this kind of conversation is one of the things Plexus is all about.”

Several hosts and guests mentioned unexpected encounters with police. A group of several young men—all African Americans—reported being stopped on Connecticut Avenue not far from the theater one afternoon, asked for identification, and queried about why they were there. Police also stopped at homes of the host families at night, having heard reports that “black men were entering homes.” While the hosts were distressed, the guests reacted with philosophical tolerance.

“I’m kind of used to this,” said Joe Prather, who was stopped by police twice. “It happens all the time. It’s not like it doesn’t effect me, but I understand the situation. When I explained why we were here, the officer seemed shocked, and even like he was interested in the movie.” Joe says he likes to turn negatives into positives, and he’s even happier when he can let others know that everyone is not bad. Police appeared at night when Joe and several friends got out of a van in a residential neighborhood to return to their host families. “They probably thought we were thugs. Or coming to rob someone,” Joe said. But again, he said, understanding and politeness prevailed as information was conversationally exchanged.

Joan and Michael Hoxsey say their young friends have been through so much they are numb to episodes they themselves find outrageous. These young men have a tremendously hopeful mindset, both said, and they have learned how to stay away from being too angry about things. “It’s wonderful on one level, and very sad on another, but it’s part of their story,” observed John Hoxsey.

What was very interesting to the group, the Hoxsey said, was seeing demonstrators outside the White House. On Saturday, they said, there were people demonstrating for and against intervention in Libya, for Israeli interest, and against genetically modified food, among other things. “I didn’t understand all the issues,” Joe Prather said, “but I really liked the fact that people were out there fighting for what they believe in. That’s encouraging.”

Meet Our Members

Diana M Crowell PhD RN NEA BC



My current work is the culmination of over 15 years of being a student of Complexity Science—even before it was called that—and teaching and managing to show others its beauty and applicability to our health care

practice and organizational life. I recently completed two years as chair of the University of New England's Department of Nursing, which rounded out my experience on both sides of administration: Service and education. I developed a Leadership Model, based upon complexity concepts, that includes the component *Personal Being and Awareness*, as I discovered that to be effective in employing complexity concepts to one's leadership, it must be more than an intellectual pursuit. Leading with complexity requires a major shift in one's personal way of being. The other two components of the model are *knowledge and understanding of complex adaptive organizations* and *a leadership style congruent with complexity*. So in addition to bringing these ideas to my consultation and workshops, I contracted with F. A. Davis to write a graduate nursing leadership textbook entitled *Complexity Leadership; Nursing's Role in Health Care Delivery*. Much of the last two years has been devoted to writing and the book is now in publication. This text

is intended for graduate nursing students such as Clinical Nurse Leaders, (CNL) and Doctors of Nursing Practice (DNP) as well as practicing nurses in leadership positions.

Coincidentally, *Nursing, Caring and Complexity Science: For Human-Environment Well Being* edited by Alice Davidson, Dee Ray and Marian Turkel—to which I contributed a chapter—has just been published. My connections and learning from those at Plexus and in the Nursing Network have been so very valuable. The Plexus book *On the Edge: Nursing in the Age of Complexity* by Claire and Curt Lindberg and Sue Nash was an inspiration to me and certainly informs my work. I believe we are forming a nexus of new thinking for nursing with these texts that have been generated by nurse members of Plexus. My first book signing was at the CNL conference in January. In my work as an ANA Magnet Hospital Recognition Appraiser, I believe that hospitals with nursing work environments achieving Magnet Status are indeed where complexity concepts are a part of the leadership character. CNOs of Magnet hospitals exemplify complexity leadership. I consider my work as helping nurses to see that Complexity Science is the foundation for understanding their organizations. It can, as well, help them to gain new insights into themselves as they strive to become especially effective leaders.

Joseph M. Ferraro



Joseph is currently employed as the Director of an analytics group for a major internet website ([Edmunds.com](#)) with the purpose of studying, understanding and mapping emerging properties in the patterns of internet user behavior.

This information is utilized to inform an executive group with high-level insights that inform their understanding of how visitors use the website and to ultimately improve the bottom line of the organization. He is studying not only the complexity of the individual user behavior on the website, but of the internet itself.

In addition, Joseph is interested in understanding the complexities of the dot-com environment itself through the study of organizational dynamics that occur across the 400+ employee company. Within the organization he is pioneering group dynamic ideas such as collaborative analytics based on design thinking principles and interactive, non-hierarchical learning structures in order to improve the effectiveness of analysis and to improve the overall knowledge and effectiveness of his staff.

Joseph's passion for analysis and understanding of complexity developed over a 15-year career of progressive management across various organizations both large and small in various industries, as well as from a fundamental affinity for math, logic and the scientific process. In addition, as a child he grew up all over the world and was exposed to many cultures and more importantly to many perspectives on humanity, and in later years many perspectives on methodical analysis and structured observation.

Outside of his employment, Joseph also enjoys studying complexity with particular emphasis on understanding the convergence of similar dynamics that occur in art, music, sports and science through participation in these disciplines.

He believes that complexity science is the key to not only future understanding in all disciplines of scientific and non-scientific research, but also the key to tying all research together into a more global understanding of the world. It is this global understanding that will ultimately bring exponential gains in our understanding of the world around us.

Joseph holds both a BA and MBA degree in International Business and is an active member of the International High IQ Society.

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Carol Geary



Over the years, through bedside and management roles in nursing, consulting roles for health care providers, insurers and pharmaceutical compa-

nies, and health economics and reimbursement roles for medical device manufacturers, I have viewed health care from many different vantage points. With each it became clearer that traditional philosophies and theories were not adequate to describe, support, or improve health care organizations. At the time, however, I did not see solutions.

Last year, Dr. Sheila Ryan introduced me to complexity. This introduction set off a process for me of exploration and discovery that continues today through the University of Nebraska, Plexus Institute and the many intriguing individuals that I have met along the way. This process requires re-thinking not only health care, but the majority of my business education, as well.

Now a first-year PhD student, I am planning research in health systems building upon the theory of Ruth Anderson and Ruben McDaniel on the role of relationships in self-organization and emergence. My goal is to further illuminate the

potential of administrative and management roles and functions to improve patient and system outcomes.

I am working to build my understanding of complexity through both business and clinical readings and courses on the topic. A recent reading which, once again, sparked much thought is Sandra D. Mitchell's *Unsimple Truths: Science, Complexity, and Policy* (2009, The University of Chicago Press). I am currently enrolled in Duke's "Managing Complex Systems in Health Care" through the School of Nursing, as well. This course is offering an expanded reading list and rich discussion. I would be delighted to learn of additional options to continue learning about complexity.

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Colleen Holt

My life has been an ever-unfolding process of emergence. Even so, I can look back and see that in my heart, I've always been a life coach and ever curious about the art of living. As a senior in high school, I had a special opportunity to participate in a program called "Advanced Communications", learning how to listen and genuinely connect with people, to give support, and better understand the human journey we are all on. From there, I became one of six peer advocates, acting as a life counselor available to students for anything they needed to express. Little did our group of advocates know that we would become 'life savers' for teens who felt they had no one else to turn to. This experience left a lasting impression and I remember sitting in the career counselor's office in college, expressing what I wanted to be, "a sort of spiritual but pragmatic counselor, a mentor to help people navigate the journey of life." The counselor looked at me with a puzzled expression and



with a laugh said, "I don't know what kind of career that would be but it sounds like something we could all use," so I ended up with a degree in psychology.

It was lucky for me that I could put my degree to good use since I had several years experience helping to raise my brother, diagnosed with autism. I began teaching and using applied behavior analysis for children with disabilities in the public and non-public school systems – a challenging yet fulfilling experience. Still, I hadn't found what I was looking for and I began searching the human sciences for clues. Three graduate schools later, I came across Master Coach, Maria Nemeth at the Academy for Coaching Excellence and instantly knew I had come home to my calling. The coaching model was the perfect blend of science and spirituality, clearly versatile for any audience and effective in leading the way through life's ever-present change and unpredictability. As I completed my life coach training and began to study the organizational track, my zest for knowledge grew as I was introduced to the science of complexity. My next adventure is to return to college for a master's degree in the complexity sciences and in the meantime, my reading list is long but begins with *Nexus: Small Worlds and the Ground-breaking Science of Networks* by Mark Buchanan.

Currently, I have returned to the world of education with a goal to introduce coaching in hopes that this invaluable service will become available on every college campus in America. I join my colleagues in studying the retention research literature and support them in a new empirical study measuring the effect of coaching on student success soon to take place at the University of Nebraska. It is evident that as we look upon our business practices, our world market, and our social structure, we are in need of a paradigm shift – one of collaborative creativity instead of competitive exclusiveness. I can think of no better place to start than our next generation. I extend the invitation to every

coach, educator, and individual who values our brave, young minds to come together and partner in cultivating an emergence of cooperative leadership. With organizations like the Plexus Institute and Positive Deviance Organization, I anticipate great shifts in the way we think and build our world.

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Richard N. Knowles, Ph.D.

I have been studying how organizations work from the inside for over 20 years. My approach is rather an anthropological one. The two driving questions for me have been:



"Why do people, so often, get all tangled up in organizations?"; and,

"What is it that happens when these same people are confronted with a crisis and instantly transform into a high-performance organization for the duration of the crisis and then revert back to the same old, balled-up way of behavior after the crisis passes?"

Many years ago I was introduced to the work of John Bennett, an English philosopher, regarding what he called "Systematics". In this work he studied the significance of number. I continue with this work with Anthony Blake, one of Bennett's students.

In the early 1990s I became interested in the studies of chaos and complexity and was able to participate in 13 of Meg Wheatley's Berkana Dialogues from 1992 to 1997 to explore these areas as they related to how organizations work. Many ideas about organizations behaving as if they are living systems emerged. In one of these sessions I discovered the connection of Bennett's work to these ideas and found that Ben-

nett provided the language and models for people to use to work in complexity. One of the powerful models I've been developing is the Process Enneagram©. I have written my book, *The Leadership Dance, Pathways to Extraordinary Organizational Effectiveness*, which develops the Process Enneagram and how it is used to build coherence into organizations, which helps to release great creativity and energy of the people in these organizations. The Process Enneagram is a model of action and describes how work actually unfolds. When a group of people accomplishes something significant, the details of the various activities leading to the accomplishment are often lost, yet it is the success of how these activities connect and unfold that are critical to a successful outcome. The Process Enneagram is useful in revealing and keeping track of these activities so we can learn from them and continuously improve.

In one Plexus Gathering I was able to hear Everett Rogers speak about the diffusion of innovation. He'd studied the activities of this work for over 40 years and discovered both the detailed steps of the process of innovation as well as the specific steps of the successful change agent. These are the critical activities in diffusing innovation. These are exactly the steps that are revealed in the Process Enneagram.

Recently I have been working with the ideas of Complex Systems Leadership that Jim Hazy, Jeffrey Goldstein and Benjamin Lichtenstein have written about in their recent book, *Complex Systems Leadership Theory*. These theories and the practical work of the Process Enneagram seem to be very consistent with each other. My passion is to continue to study these connections to further advance the understanding of leadership.

This way of leading is also very important as we consider the issues of sustainability. I have been working with a group of people connected with Fairleigh Dickinson University to write the Sus-

tainable Enterprise Fieldbook, which was published this June. In it I helped to write Chapter 1 on “Leadership for Sustainable Enterprise” to help people to see the critical role that leadership plays with all our efforts to improve the sustainability of the earth.

All this work continues to provide insights relating to the two questions I posed at the start of this article.

All the books I've mentioned are available from Amazon.

More information on this work can be found at www.centerforselforganizingleadership.com. The Center was started as a place where people could come together to explore these ideas relating to self-organizing leadership.

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Mary Learning

At 53 years old I decided to get an MBA. I graduated after a very intense two years in 2009. I do



administrative and management work for other entities. Some of my clients are in healthcare, some in entertainment and some in other services – a wide variety of clients.

I've been reading articles on complexity since my MBA project advisor, Dr. Eli Sopow (author of *Corporate Personality Disorder: Surviving & Saving Sick Organizations*) introduced the concept in our discussions.

I've been engaged by the variance/convergence of older management theory and complexity. Particularly as my healthcare client is under pressure to be involved in the ‘fix’ of healthcare, the potential is enormous for contemplation and discussion. Parties do seem to be some-

what intimated by the very mention of complexity though. Add *chaos theory* and they get freaked.

Working with physicians (radiologists) for over 17 years, I've come to acknowledge the complexity of their universe. (I'm still struggling with mine). They have a unique combination of interactions in human physiology, the science and art of medicine, complex technology and business. Most health organizations don't acknowledge the art of medicine, let alone credit or encourage it. The technology in Diagnostic Imaging is highly innovative, transformative and rapidly changing. There is a constant need to keep up with the science as it moves in leaps and bounds and patients are expecting them to do so. And well, business is business, sometimes easier to maneuver through than at other times. Throw into that mix, just to add another dimension, I feel that there is an identifiable ‘call’ to medical care, which pushes the practice of medicine into a spiritual world. My limited experience with complexity begins to meld the pieces a little.

The medical world is not at all linear and the prescriptive practices, particularly here in Canada with a single payer, don't seem to be able to capture the entire scope of medical practice. They try to measure bits and pieces “to gain the whole picture”, somewhat like the blind men with the elephant. Given the fact that medical practitioners, in the absence of the recognition of so much of complexity of their world (sometimes by themselves) one wonders why anyone survives a hospital visit. The focus of government still seems to be on ‘gaining control’. Why the definition of insanity (doing the same thing and expecting a different result), is oft quoted and not really considered is an interesting juxtaposition of information and lack of follow up. Complexity seems to offer a way to resolution but certainly means you have to at least tilt your head to see where the solutions might be. It certainly requires a high degree of trust that complexity is real and although that seems ob-

vious, it also is obscured by our desire to quantify everything, everywhere, in little bits and pieces. Moving patients through a physical, emotional and spiritual ‘system’, especially while trying to tend to cellular transformations, while only acknowledging one small aspect of the experience, does seem doomed.

I've also been exploring quantum physics which leads to marvelous mental gymnastics in the context of complexity (or complexity in the context of quantum physics). The contemplation of the role of the observer in complexity is endlessly amusing. And I've taken a side road into mental acuity studies which I won't go into as it will place me swiftly into the category of quack. In truth, I think what I enjoy most about complexity is the requirement to bend thought processes when considering complexity.

Listening to conversations on complexity on the archived calls on the Plexus site (I've yet to find the time to join one real time) has been interesting. I integrated thoughts from these articles and calls to facilitate the discussion in my final MBA project which was a question of communication, engagement and prioritization with physicians. I've used concepts from *Edgeware: Lessons from Complexity Science for Health Care Leaders* I find myself pulling concepts into discussions in my work. Admittedly without much success of adoption. (Another element of complexity, I guess. To everything is its season?)

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Robert William Prasaad Steiner, MD PhD, FAAFP FACPM

Co-mingling the bio-psycho-social theory of Family Medicine with concepts of cultural explanatory models in international population health, combined with an oral tradition of spir-



itual experiences of healing arts, are long time interests of Rob Steiner, MD PhD. He is currently Professor, Department Health Management and Systems Sciences, at University of Louisville (UofL) School of Public Health and Information Sciences (SPHIS), Louisville, Kentucky. He is certified by both the American Board of Family Physicians and the American Board of Preventive Medicine. He is the representative for UofL SPHIS to the Louisville Metro Board of Health. He married Cheme Jedung Steiner in India on November 23-25, 2005.

Dr. Steiner pursued several broad courses of study over more than 35 years with UofL: clinical and preventive medicine, local and international public health, psychosocial epidemiology and quality of life assessments, medical anthropology and traditional Asian healthcare models. Seeing opportunities to bring more benefits to more people was the primary motivating factor for him to pursue advanced studies in public health. He received the MPH and the PhD degrees in Epidemiology from UNC -Chapel Hill, NC (1988 and 1998, respectively), where he developed interests in methods for measuring quality of life. He entered into international public health in 1998, as Project Director for the Healthy Communities initiative to improve women's health in Constanta, Romania, funded by USAID and AIHA.

He served as Deputy Director Jefferson County Health Dept. in Louisville, Kentucky (1994 – 96), and implemented processes for strategic

change that resulted in the first series of Health Report Cards for Jefferson County, KY (1995 – 1999). He also collaborated with the Jefferson County judicial system to offer mindfulness meditation and acupuncture-assisted detoxification services linked with the Drug Court Diversion Program (1994 – 1995). He also served on the Board of Directors for Health Care Excel, Inc., the Quality Improvement Organization for Indiana and Kentucky (1999 – 2008).

Dr. Steiner is currently working with an emerging philosophy of science that might be called “Transcendental Humanism.” Perhaps using complexity approaches with scientists and clinicians about common topics in population health will facilitate the emergence of new awareness, innovative partnerships and novel styles of stewardship that may foster value transitions from current social health priorities favoring individualism toward the potential for a truly Enlightened Society that promotes values based upon the preciousness of our very human nature, especially within the collective social aspects of our global community, and beyond. Dr. Steiner continues to examine the interface of modern philosophies of science, including complexity, with the Teachings of Tibetan Buddhism and the practice Mahamudra meditations.

Sonali Vaid

Sonali Vaid started her career as a physician in India, initially working at a primary health center providing antenatal care and later at a tertiary public hospital in critical care and surgery. Her experiences in a clinical environment as an intern and medical resident had a deep impact on her and incited her interest in patient safety, quality improvement and health systems strengthening.



quality improvement and health systems strengthening.

She received her Master's in Public Health in Global Health Policy and Management from the Harvard School of Public Health in May 2010. She chanced upon ideas of complexity science after reading the book “Black Swan”. After exploring the subject further online, she felt an intuitive connection to the complexity view of the world. This led to her master's thesis which explored the application of ‘complexity science’ to the problem of rabies control.

She is currently working on improving health care quality in low and middle-income countries with University Research Co LLC, an organization based in Bethesda, Maryland (www.urc-chs.com; www.hciproject.org).

Over a short period of time, her interests have evolved to include many other subjects and themes. She is particularly interested in exploring health care and medicine from new perspectives afforded by other disciplines such as complexity science, communication, innovation, organizational learning, physics, information science, and philosophy. This involves questioning basic premises in health care and challenging established orthodoxies. She is currently exploring the monopoly of evidence-based medicine as the dominant paradigm in medical practice, to perhaps the exclusion of other ways of working which might be quite important to medical decision-making.

In one of the many serendipities of life, her elder brother, Deepak Vaid, a physicist, is also exploring complexity related areas. It is pretty intriguing how two siblings who took very different career tracks are now exploring the same subject and talking the same language.

Sonali is from India. She grew up in a beautiful town, Nainital, in the foothills of the Himalayas in northern India. She is the youngest of four siblings and her family is now based in New Delhi, India. She loves writing—it stems from a semi-obsession to store memories and thoughts.

Sonali is an ‘idea’ fan; she gets a thrill from new ideas, concepts or ways of looking at things. She is a people-person and loves interacting, engaging and learning from others. She is in the process of updating her blog with more thought pieces that link healthcare and complexity.

emerging thinkers:

Meet Plexus intern Aaron Lukse



“Research is easy,” says Aaron Lukse. “The challenge is implementing the resulting ideas.”

While at Yale University working on his master’s degree in public health, which he will complete this May, Lukse began researching the behavior change process Positive Deviance (PD). He has since enjoyed the vicissitudes of moving PD and other change processes from theory to action.

At Albert Einstein Medical Center in Philadelphia last summer, Lukse worked with staff members using PD to combat healthcare acquired infections. Assigned to Einstein’s organizational development department during an internship sponsored by Plexus Institute, he helped the radiology department implement effective infection control. He also worked on staff training, leadership development, and Discovery and Action Dialogues (DADs), in which employees in many disciplines propose and act upon solutions to difficult problems. While providing facilitation for a Myers Briggs Type Indicator workshop, he got practical understanding of how personality type influences the way people perceive and respond to work issues.

“A sensor might see more detail than a person who is intuitive,” he observed, “and a person who is a feeler might see more personal things, more values things, than someone whose thinking is more logic-based. But all types are needed in organizations.”

In a previous internship at Yale New Haven Hospital, Lukse worked on an initiative to reduce blood stream infections. Infection rates from all the units were gathered. In one unit with a low rate, high level managers had emphasized reduction. “They tried a lot of things, they brought in consultants, and they found that changing dressings every 24 hours resulted in fewer infections,” he recalled. “They also didn’t have much of a budget to buy additional supplies. But they had staff members who created their own in-house supply bags—workers who knew how to gather catheters and other supplies from other areas and package them differently so that they were readily available for nurses to use for the patients who needed them.” The new dressing change schedule, and the reorganized supplies were critical to reducing blood stream infections.

But he found other units didn’t welcome suggestions to follow suit. “There was a lot of push back,” he said. “They said they had a different patient mix, their staffing ratio was different, these things wouldn’t work for them.”

Lukse gained insights about implementation at Albert Einstein. “What I didn’t know at first was that when you go to an organization or a department, you don’t tell them what you have found, you ask them what they know,” he reflected. “It takes more time to do DADs. You ask people if they know which unit has the lowest rate, and then why that might be. They discover it themselves. At Albert Einstein people were trained in PD, and it was nice to see it done right and see the way it works.”

Cont.

Lukse's family moved from the Kerala state in India to the U.S. when he was 11, and he has spent most of his life in New York. He got a bachelor's degree in business administration from Pace University, but was uninspired by work in investment banking. "I wanted to feel my work was contributing something to society," he said. He now plans a career in healthcare, helping patients even though his skills won't place him at the bedside. He has applied to the Veteran's Administration because of what he sees as its valuable mission of serving all veterans. He would also like to see changes in health care generally: Greater access to primary care to avoid expensive and less effective use of emergency rooms, and more preventive care. He sees coaching, mentoring and other managerial skills as a way to get a job done.

"I'm really interested in how people work together, collaborate, come to consensus and find solutions to difficult issues," he said.

Last spring Lukse went to El Salvador through a Yale community health project. He worked in a small village, helping a local doctor and teaching children and adults about hand hygiene, the need to boil drinking water, and to get rid of standing water that breeds mosquitoes. That trip let him practice his Spanish. He is also fluent in Malayalam, his native southern Indian language. He loves music and travel, and ideas that can make people's lives better. He was recently fascinated by Daniel Pink's book *Drive: The Surprising Truth About What Motivates Us*. "People want autonomy, mastery and purpose," he observed. "They don't want to be micromanaged and told what to do. They don't want carrots and sticks. They want a high-level purpose."

Leading Change in Healthcare

- Friday, May 6, 2011
- 1-2 PM Eastern Time
- 641-715-3300, access code 485743#
- Guests: Anthony Suchman, David Sluyter, Penelope R. Williamson, and Curt Lindberg

Leading Change in Healthcare: transforming organizations using complexity, positive psychology and relationship-centered care, is a new book that offers new ways of seeing and leading, and hope for positive change. The authors will discuss their book and their findings about complexity and organizational transformation.

Anthony L. Suchman, MD, MA, FACP is a practicing physician and clinical professor of medicine at the University of Rochester. His work focuses on partnership process across all levels of healthcare. Dr. Suchman has studied patient-clinician relationships, medical decision-making, physician satisfaction, and the spiritual dimensions of medical care. Through his teaching and writing (more than 85 articles and two books) he has become leading proponent of a partnership-based clinical approach known as Relationship-Centered Care.

emerging:opportunities

Upcoming PlexusCalls Spring-Summer 2011

David Sluyter is the former president and CEO and senior advisor for the Fetzer Institute, a nonprofit operating foundation with a mission of “fostering awareness of the power of love and forgiveness in the emerging global community.” This mission rests on the conviction that efforts to address the world’s critical issues must go beyond political, social, and economic strategies to their psychological and spiritual roots. Two themes that run through Dave’s work over his fifteen years at the Institute are the role of social and emotional learning in K-12 education and the role of relationships in health care. His publications include journal articles, book chapters, and his book *Emotional Development and Emotional Intelligence: Educational Implications*.

Penelope Rose Williamson, ScD, is an internationally recognized facilitator, educator and coach. She is a founding consultant of Relationship Centered Health Care, Associate Professor of Medicine, Part Time, at Johns Hopkins University School of Medicine and a founding facilitator and advisor for the national Center for Courage and Renewal. She co-leads Courage to Lead, a leadership development and professional renewal retreat series for leaders in health care and other serving professions. Dr. Williamson co-founded and for its first five cohorts co-led Leading Organizations to Health (LOH), a 10-month institute for healthcare leaders. Dr. Williamson brings to her work an ecological worldview; belief in and attention to the inner life; expertise in the disciplines of Appreciative Inquiry, World Café, Open Space and Skilled Dialogue; and incorporation in the work of creative modalities including poetry, embodiment, movement, music and art.

Curt Lindberg, chief learning and science officer of Plexus Institute, is playing an important role in introducing complexity science concepts into health care thinking, organizational management and practice. He

is the author of several articles on complexity and co-author of the books *Edgeware: Insights From Complexity Science for Health Care Leaders*, *On the Edge: Nursing in the Age of Complexity*, and *Inviting Everyone: Healing Healthcare through Positive Deviance*.

Crisis Communication: A Chance to Grow

- Friday, May 20, 2011
- 1-2 PM Eastern Time
- 641-715-3300, access code 485743#
- Guests: Robert Ulmer and Arvind Singhal

Effective communication in a crisis may do more than address the issues of the moment. One communications specialist is convinced it can lead to renewal and growth.

Robert R. Ulmer, PhD, is Professor and Chair of the Department of Speech Communication at the University of Arkansas at Little Rock, if working on a theory that can provide ways for organizations, governments and communities overcome crisis and achieve positive change through learning, ethics, leadership and a vision for the future. He is an internationally recognized expert in risk and crisis communication, and one of the first researchers to focus on finding positive results from a crisis. His approach, called the discourse of renewal, is now used throughout the business and health industries as a way to communicate crisis-driven information effectively. He has co-authored 5 books and over 40 research articles focusing on effective risk and crisis communication. His latest book titled *Effective Crisis Communication: Moving from Crisis to Opportunity*

emphasizes how effective risk and crisis communication can be used to create opportunities to develop meaningful dialogue and shared understanding with stakeholders during risk and crisis events. Dr. Ulmer also holds a secondary appointment as Professor in the College of Public Health at the University of Arkansas for Medical Sciences.

[Arvind Singhal, PhD](#) is the Samuel Shirley and Edna Holt Marston Endowed Professor of Communication and Director of Research and Outreach , Sam Donaldson Center for Communication Studies, at the University of Texas, El Paso. He teaches and conducts research in the areas of organizing for social change, positive deviance and asset-based approaches, and the entertainment-education strategy. Dr. Singhal has co-authored or edited eleven books and monographs, and has written more than 150 peer-reviewed essays and articles. He has received several awards for excellence in scholarship.

Healing Conversations at the End of Life

- Friday, June 10, 2011
- 1-2 PM Eastern Time
- 641-715-3300, access code 485743#
- Guests: Tony Silbert, Joan Chadbourne and Jeffrey Cohn

People usually want to put off thinking about death, their own or anyone else's. [Tony Silbert](#) and [Joan Chadbourne](#) were both compelled by crisis to have meaningful and powerfully intimate conversations with parents before they died. Their experiences led to their book, *Healing Conversations Now: Enhance Relationships with Elders and Dying Loved Ones*. The authors discuss the kinds of appreciative and energetic questions and the qualities of attentive and connected listening that can lead them to healing conversations with loved ones. Their stories can give us all insights on things we can do to help healing conversations take place when crisis arise, and if we are think about it carefully, beforehand.

[Jeffrey Cohn, MD](#), is the chief quality officer for the Albert Einstein Healthcare Network in Philadelphia. As a physician he has thought deeply about end of life care, and the kind of communication that helps people confront the issues involved.

Artists and Innovators: Creative Surprises

- Friday, July 8, 2011
- 1-2 PM Eastern Time
- 641-715-3300, access code 485743#
- Guests: Michael Arena, Shaun Cassidy and Sharon Benjamin

Executives, entrepreneurs and innovators in many fields and organizations can take inspiration from artists and their work.

[Michael Arena, PhD](#), is an entrepreneurial social scientist who has given considerable thought to how lessons from creative disciplines of visual art can inform the business community. Arena is master of science in organizational development director at the McColl School of Business at Queens University in Charlotte, NC. His interest in innovation and connectivity led to a program called Hyper-connected Innovation that is dedicated to finding new ways of creating environments that generate new ideas and experimentation. He has served a visiting scientist at the MIT Media Lab within the Center for Future Banking, and has researched behavioral aspects and social dynamics of innovation in today's connected society. He has worked with large corporations to foster innovation and organizational change. In addition, he is a senior faculty member at the Innovation Institute of the [McColl Center for Visual Art](#), a contemporary arts center dedicated to connecting arts and artists with the community at large and helping the corporate community unleash creative abilities among leaders, executive and employees.

[Shaun Cassidy](#), a fine artist and sculptor whose works have been extensively shown in the US and abroad, is an associate professor of fine arts at Winthrop University in Rock Hill, SC. His work has been displayed at the Museum of Contemporary Art in Marseilles, France, The Grounds for Sculpture in New Jersey, and at the Socrates Sculpture Park in New York. He studied sculpture in England and Canada, worked as a studio assistant for Sir Anthony Caro in London. His work, which has been featured in Sculpture Magazine and The Wall Street Journal, spans a diverse range of materials, processes and ideas. He is also on the board of directors of the McColl Center for visual Art.

Sharon Benjamin is principal of Alchemy, a Washington DC based management consulting practice. She is a seasoned organizational executive who has served as a CEO and directed institutional development and finance. She has been active in the non-profit community, serving as Treasurer of the Board Earthworks.

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Ready for some Deeper Learning?

Plexus Institute's focus is on an *application* of complexity-based principles in organizations. That application is always rooted in the *science* of complexity, and we are honored to have as part of our organization many of the leading complexity thinkers in the field who lead us into a deeper understanding of this rich body of knowledge.

We invite you to access the thinking of these theorists, researchers, scientists, and organizational leaders through our *Deeper Learning* series.

This month, we are proud to present *Attractors and Nonlinear Dynamical Systems*, by Dr. Jeffrey Goldstein. It's a scientific look at the fascinating phenomenon of *attractors*. You've likely heard us use the term. Now's your chance to explore the science behind it!

[Download this and previous editions of Deeper Learning at our website today.](#)

