Social Entrepreneurship Forum

The Great Hall, UCSD

October 7, 2010

Panelists

Marty Cooper
Co-founder, Dyna LLC

On April 3, 1973, standing on Sixth Avenue in New York City, Marty Cooper held up a prototype telephone to his ear and placed the first cellular call in history. At the time, he was heading systems operations for Motorola's communications division, and he knew there was a fundamental problem with standard "land line" telephones: they were connected to places, not to people. "We changed the concept of the phone call", Marty says. "Today if you place a call and someone other than the intended recipient picks it up, you are surprised. Previously, that was the norm – because calls were made to places, not people."

With that phone call, Marty and Motorola catalyzed a boom in cell phone technology, and, so, a revolution in personal productivity that forced enormous cultural change. The difference between place and person was, it turned out, profound. "We have always lived in a mobile culture but our phones trapped us to our desks," Marty says. "After 1973, we could be on the move while on the telephone, not sitting around waiting for a call. As a result, productivity leaps. GNP skyrockets. Organizational structures change."

That wasn't the plan per se. In fact, Marty says he never planned anything in his life apart from wanting to be an engineer. As a child, he remembers watching older boys using a lens to burn a piece of paper through sunlight. It astonished him. Attempting to replicate it with a piece of glass, Marty failed – an early lesson in the risk inherent to experimentation. But he remained obsessed with taking things apart to see how they worked. So when it came time to leave grammar school, Marty chose trade school. It was "the smartest thing I ever did. Everyone's talking about diversity in education these days, about the value of a multidisciplinary education. Going to trade school gave me the opportunity to work in every type of shop, which was invaluable."

Marty's life has been self-organized. And self-organization, he believes, is going to describe the future of work, of society, of democracy itself. Self-organizing flows naturally from the re-orientation that happens when we shift from place to person. The current trend that most encapsulates this reorientation is social networking, which is based on simple frameworks that enable self-organizing systems for creativity. There is a huge business opportunity here for the companies that can move social networking into the enterprise, and that's an area where Marty is increasingly beginning to focus his time.

What else is left to achieve for a former naval officer who became head of Research & Development at Motorola, set off the cell phone revolution, and described a phenomenon of radio spectrum usage that is now called "Cooper's Law"? "The most important thing in life", Marty responds, "is ideas. I play tennis, I ski, but these are just hobbies. The excitement that comes from thinking about something new is unbeatable. Ideas make me shiver."

Teddy Cruz
Principle,estudio teddy cruz

A distinctive characteristic of the social entrepreneur is the ability to see, amid a thicket of complex problems, the germ of opportunity. When Teddy Cruz looks at the neighborhoods along the border of San Diego and Tijuana, he sees poverty and hardship, but also the dynamism of entrepreneurship, an energy that can be harnessed to solve social problems. By designing housing structures that reflect and enhance the vibrant cultural life present within the neighborhood, Teddy is showing us how to re-think not just the way immigrants are perceived but also the role of neighborhoods in our lives.

Teddy collaborates with architects, activists, and government officials to design new housing structures. But they also are designing political and economic mechanisms to make these at-risk neighborhoods more sustainable and better integrated. This is of critical import because, as Teddy says, "even in the biggest housing boom ever in this city, we still haven't figured out affordable housing. The problem with current affordable housing mechanisms is that they're geared towards generic customers based on need and do not target their entrepreneurial energy." In his view, a collective kitchen in San Isidro can become a lever to unleash the entrepreneurial energy of the whole neighborhood.

Teddy gravitated toward design at an early age. But growing up amid a brutal civil war in Guatemala, he also had "this tickle in my stomach," as he says, about injustice and impunity. These twin instincts, one artistic and the other concerned with social justice, merged to produce a unique insight when Teddy began visiting the Tijuana-San Diego borderlands. In a relatively compact area, he found "all the issues that confront border-cities everywhere, a petri dish for the world. If we can figure out solutions here, we will have figured out ways to solve global problems."

Teddy founded the Center for Urban Ecology at UCSD's Visual Arts Department . In his classes, he helps students re-frame their thinking to ensure their ideas can gel with the cultural idiosyncrasies of the worlds in which they operate. Thus, the nature of the classroom is transformed and "the city becomes a laboratory, with the border as a primary site of investigation".

Teddy is a master at asking the questions that enable us to see a situation in a new way. For instance, he wonders: Can we start to see climate change not as an environmental crisis but as a cultural crisis – stemming from the collisions of competing ideologies? For a specific example of this type of collision, look at where the freeway system clashes with the watershed system. "What are the institutions that would allow this kind of disaster to occur? How can we mobilize the political entrepreneurship to make the changes we need?"

As Teddy becomes more adept at shaping institutional structures towards unleashing neighborhood energy, the borders of his own work expand as well, towards other pressing problems. If his work succeeds, he believes, it won't just solve problems, it will create a new solution architecture, transforming the institutional processes that confront social and cultural challenges.

Philip Low
Founder, Chairman & CEO, NeuroVigil

Philip Low believes that sleep is the gateway to the brain, just like blood is the gateway to the body. Exploiting that gateway has become urgently important, given that it is estimated 2 billion people suffer from a neurological disorder of some sort. Just in the United States, over 4 million Americans suffer from Alzheimer's disease, requiring care that costs upwards of $100 billion a year.

Testing for Alzheimer's in current practice is based on self and physician evaluations. "Wouldn't it be more effective," Philip asks, "to get the data directly from the brain? We do this for all other aspects of the body, so why not the brain?" Philip's company NeuroVigil produces a tiny device that wirelessly transmits neurological signals from a single channel during sleep – in itself an advance on the tangle of wires that researchers have been using to detect sleep patterns. With scientists at the Massachusetts Institute of Technology, NeuroVigil is building a database to which people can upload their brainwaves – a crowd-sourced research laboratory, if you will.

The healthcare ramifications of this are profound. Disorders such as Alzheimer's can be diagnosed far more efficiently. Potentially dangerous drug interactions can be anticipated and prevented. More important, the combined data of thousands or millions of people can be combed for intelligence that helps scientists discover cures more rapidly and at lower expense.

If it sounds like an uncharted future, well, that's how Philip likes it. "I believe that to do something well, we shouldn't know too clearly why we do it. If we do, it's hard to get the required level of passion to push yourself to succeed." While working on his Ph.D (studying brain activity in birds), he discovered that the science used to analyze neurological patterns was flawed – and that there was an opportunity to apply mathematics to a problem previously addressed by physical observation. But many had walked that path before, crashed and burned. Philip's academic advisor opposed his research, fearing he would meet the same fate. Undeterred, he shut himself away in the Salk Institute until he figured out how to do it, in the process solving one of the most vexing problems in the field.

That moment represented an entrepreneurial turning point. Philip wasn't simply challenging scientific orthodoxy for its own sake. "I believed I knew more about the problem and understood the risks and opportunities better than others, and that the chance of success was worth the risk."

Even before he was finished with his thesis, the offers began pouring in. Harvard was calling. Caltech was calling. Oxford and Max-Planck were calling too. Yet rather than join a prestigious university, Philip decided to start NeuroVigil, the world's first wireless neurodiagnostics company, financing it mostly with his credit cards as well as business competition award money and small loans from his family and friends, including his erstwhile advisor. "I wanted to walk a path nobody had ever walked before, even if it was a greater risk. My sense at the time was that if I didn't try this, I would never know what it could have become. And choosing to lead my life without knowing what it could have been was not a choice I wanted to make." Besides, clinical research needn't be confined to the laboratory. In a company, Philip could touch the world and be touched by it in a more direct and impactful way.

Was it the right decision? Well, NeuroVigil is a very rare entity – a self-started biotech company that went cash flow positive without selling any equity. But success, as Jonas Salk himself said, is the opportunity to do more. Having enabled pharmaceutical companies to make safer drugs, Philip now has his sights on the larger markets – hospitals and, ultimately, individuals. So a few years from now when you are uploading your brainwaves and sending them off for neurological analysis to NeuroVigil, remember that it's possible because a young graduate student by the name of Philip Low dared to ignore his advisor's wishes, refused to stay on the middle road and ventured on a path nobody had before.

Sandra McBrayer
CEO, The Children's Initiative

California is the only state in the country to provide $550 million in after-school care for children, a pool of funds that cannot be touched even during a budget deficit. This is the case, in part, because of Sandra McBrayer's work. Her Children's Initiative after school work has supported programs in over 300 schools, serving 44,000 children in San Diego County with annual state funding of $56 million. More profoundly, her development of the San Diego After School Consortium has created a partnership among school districts to develop and share money and resources, previously unheard of in the education system.

Not what you'd expect from someone who nearly dropped out of high school. One of six children of Marine Corps parents, Sandra grew up in -- and regularly resisted -- a tightly structured environment. Her parents still joke that she was the first child who ever said "no" or "why?" to them. In school, Sandra rarely was engaged by teachers who insisted on "sitting, listening, and regurgitating."

College was a much better fit for her inquiring mind, but Sandra needed a job. She landed almost accidentally in a children's group home as a teacher's assistant -- and quickly discovered her calling. In her at-risk students, she recognized kindred spirits, curious learners ill-served by a system rooted in hierarchical structure and authority. In order to reach them, she had to break out of the teaching orthodoxy. "I had to show them how learning is important even if they don't realize that's what they're doing – for example, showing that when they divided 'white powder', they were really doing fractions. They already knew math – they just didn't know they knew it."

After three years of teaching, and of continually butting up against convention, Sandra understood that working with individual children could change their lives -- but wouldn't fix a fundamentally broken system, one that was "institutionally afraid of life." She lobbied for change in the system but nobody believed it possible. Eventually, "I heard *no* so often I just said "Watch this" and dedicated myself full time to my idea, even though it meant foregoing things like weekends or vacations." She founded what's now called Monarch High School, dedicated to teaching homeless and other unattended kids.

Always more concerned with those not in school than those who are, Sandra pursued children sleeping in underpasses or on rooftops. "If you don't have a high school diploma," she says, "your success in life is severely constrained. I simply had to get them through high school – it wasn't their fault that they had these awful circumstances that didn't let them grow. I don't think there's a child that can't learn – there may just be a 100 different ways to get there." So Sandra's team fed their students, but offered math lessons along with the food; they did the children's laundry but taught measurement with the whites and colors; taught reading by encouraging magazines and comic books. Simply put, they brought learning to the kids, rather than forcing students into a standard curriculum.

Monarch proved that unconventional teaching methods could engage untraditional learners. It also demonstrated that classroom instruction had to be supported by and integrated with a host of strategies across the community and society. The Children's Initiative coordinates programs in juvenile justice, poverty, youth suicide, and substance abuse, among others. It has engaged business leaders who want a stronger workforce and police officers looking to lower crime. Sandra has reached out to the other stakeholders as well - educators, politicians, families. "I wanted them all in the room, because they all own part of the system."

Or rather, they represent the many complementary but typically disconnected systems that together determine the quality of children's future. Sandra understands that her success hinges on helping these systems work together. "Many programs fail because they just focus on one thing and not the broader picture. There's a shared responsibility for every social issue – and you need all stakeholders at the table."