PAVING THE WAY FOR A RICHER MIX OF RESIDENTIAL BEHAVIOR PROGRAMS

COMMENTS BY DAVID GERSHON – CEO, EMPOWERMENT INSTITUTE

1. ***What is your reaction to the definition of behavior proposed in the paper? How would you add to or modify this definition?***

The authors of this white paper have done an excellent job identifying various types of behaviors and interventions that could and should be part of a program addressing residential energy efficiency. Just addressing comparative usage feedback is far too narrow an intervention strategy, albeit it is a great illustration of a particular type of intervention using social norms to influence behavioral change. Another aspect of this white paper I liked is its emphasis on combining interventions. For example using social norms as part of in-person meetings of neighbors, in my experience, significantly enhances the behavior change possibility of this type of intervention. Ultimately it is by utilizing and experimenting with this full range of interventions provided in this paper and others, more out of the box which are not here, that we have the potential to achieve disruptive social innovations in this space. And to get the type of energy savings needed for California to achieve its Global Warming AB 32 goals and for California Public Utility Commission to achieve the energy efficiency goals of its strategic plan, we will need to do much social change experimentation. Which is another thing I liked about the paper. The encouragement it provides for social innovation and pilots so this type of experimentation can take place.

2. ***What information do you suggest should be added to achieve its goal of providing relevant and actionable information about behavior intervention strategies?***

The behavior change and community engagement work and research our Empowerment Institute has helped pioneer over the past three decades addresses the categories in this white paper called social psychology and diffusion of innovation and in particular "intrinsic rewards," "self efficacy," and "beliefs." But it starts with a different premise on what demand side means that is implicit in most of the interventions described in this white paper and this field in general. Most programs and interventions that would describe themselves as demand-side are in my opinion actually supply-side interventions. That is they are wishing to sell a person energy efficiency in some form or other and are looking for ways to get the person to buy it. This is fine, if people woke up thinking about how they wish they were more energy efficient and could save money by doing so. But unfortunately this in not the case as anyone in this field knows all to well. What people do think about is more personal. How do I create a better life for my children? How can I increase my social connections so I feel less isolated? How can I feel a greater sense of self-efficacy in my life? How can I find more meaning and purpose? In our work we call these types of needs *intrinsic motivators*.

Further, if we appeal to someone to conserve energy—an intrinsic motivator for the person with this value—conservation is about much more than just being energy efficient, it encompasses his or her entire lifestyle. This person wants to live a green lifestyle or a low carbon lifestyle. This means we need to look at conservation behaviors from their perspective, not that of the supplier of energy efficient solutions. Appealing to this person to just conserve energy does not fully address this larger need that they have.

Of course this bumps up against the single resource bias of most demand-side programs, which in my judgment, is the single greatest constraining factor in the effectiveness of these initiatives. Which brings me back to the notion that they are actually just trying to sell something, supply side if you will, rather than meet a genuine need in the end-user. As a result I believe this approach is destined, no matter how creative it gets in packaging and combining the excellent behavior change interventions described in the white paper, to have marginal impact in moving the dial on energy efficiency short of an energy or economic crisis. *Alas energy efficiency is just not something people want to buy!*

So what are the alternatives? Through using a multi-resource, peer-support group model that appeals to intrinsic motivations working with 20,000 people our behavior change program and community engagement strategy has been able to get an average of 14% energy savings per household (plus many other resource savings), 25% average participation rate per household on a block, with multiple studies indicating that these behaviors persisted over time. The most robust of these independent studies reported that this approach was "unprecedented in achieving behavior change."[1]

Further, research has demonstrated promising results for overcoming many barriers to getting households to take up retrofits. In a pilot in Marin County 106 households representing 270 people using Empowerment Institute's Low Carbon Diet behavior change program and participating in a peer-support group on average reduced their household carbon emissions by 28% (11,000 pounds) with 41% taking at least one substantive energy efficiency upgrade action. We had similar results with a 205 household pilot in San Antonio, Texas.

Another small pilot conducted in Sonoma with eight households has also shown promising results. Using the same behavior change program each of these households participated in Energy Upgrade California's audit program. They then used this information and impetus to take one or more energy efficiency measures in their homes. Additionally, they invited neighbors to learn about their results and many of them also participated in Energy Upgrade California.

Combining these results with Empowerment Institute's neighbor-to-neighbor block-based recruitment rate of 25% indicates that this approach is capable of achieving up to 10 times the best-case conversion rate of doors knocked on to retrofits installed of 1 to 2%. Additionally, because the household recruitment and support is done on a voluntary neighbor-to-neighbor basis, this approach in comparison to major marketing campaigns is very cost-effective. And it is scalable.

What exactly are we doing to get these results? Here is an excerpt taken from Chapter 2 of my book *Social Change 2.0: A Blueprint for Reinventing Our World* that describes this approach and our social learning process over time. The chapter is called "Environmentally Sustainable Lifestyles in America: Psst—Save the Planet, Pass it On."

A Change in Behavior

In the early 1990's America and the other industrialized countries were waking up to the realization that our environmental problems were not exclusively the result of pollution caused by big business, and that therefore the necessary solutions were not going to come exclusively from governments regulating those businesses.

Through the research I was doing I learned that America, as five percent of the planet's population, consumes *one third of the planet's natural resources*. We consume these resources – oil, timber, minerals, among others – directly through our daily lifestyle choices. We also influence the other two thirds indirectly through the products we buy. And here's the kicker. As Americans we waste up to seventy-five percent of what we consume through our lack of awareness and efficiency.

The bad news is that as individuals the ways in which we use the planet's natural resources on a daily basis are a major part of the problem. The good news is that if we are a major part of the problem, we can also be a major part of the solution*, if* we can adopt more environmentally sustainable lifestyle practices.

1. See Leiden study at http://www.empowermentinstitute.net/index.php/community/behavior-change-research.

So we needed to change our lifestyles. Simple enough. Earth Day 1990 helped spawn a cottage industry of "how to" books ranging from 50 to 1,000 things individuals could do to lessen their environmental toll on the planet and this seemed to be a promising start. But studies were coming out that reading books and media campaigns imploring people was not translating into changing behavior. Yes, we were beginning to leave our newspapers tied in bundles at the curb, but that was just the tip of the iceberg.

To better understand this disconnect between people's growing environmental awareness and their lack of behavior change I began asking a question of everyone I knew and even some I didn't: What would help you translate what you know about the environment into new behaviors in your life? Here's what came back at me.

- Where do I start?
- Which are the important actions?
- How do I implement these actions?
- Does what I do actually make a difference?

I knew that if people were to be a solution, there needed to be good answers to these questions and the frustration underlying them. The people I was speaking with were of good will and wanted to do the right thing. But they were frustrated and questioned whether or not change was really possible. Some had lost ground to cynicism.

I was getting clearer about what was needed.

Designing a Behavior Change Solution

I knew I had to develop credible answers to these four questions or I would be wasting my time. I began by organizing the plethora of existing "how to" environmental information so it could be more easily acted upon. I decided to use a design format we had developed for our Empowerment Workshop. In that training, to help people make changes we divided up life into seven areas: relationships, work, body, money, emotions, sexuality and spirituality. People focused on one area before moving to the next. In each area they developed a vision of what they wished to accomplish and then developed an implementation plan to achieve it.

Translating this design framework was straightforward. We developed a workbook based on the five major areas in which a household impacts the environment – solid waste, energy, water, transportation, and purchasing. We added another section on empowering others so that people could also encourage friends and neighbors to make changes too.

In each of these five topic areas we developed a menu of possible actions. Each action was written as a one-page recipe with the time and materials required, resources saved, number indicating its degree of difficulty and accompanied by a playful cartoon illustration.

This programmatic approach was a major improvement over a simple list of disconnected actions. But to get people to actually take action would require some form of motivation. Again I turned to our Empowerment Workshop for inspiration. What were the essential elements that motivated people to change? The empowerment tools we offered certainly were important, but they were not motivational. *What actually motivated people to change was witnessing and engaging with other people who were changing in front of their eyes*. Many workshop participants commented that they had had personal development breakthroughs in this group setting that they would never have had

on their own. It was the group format that inspired people to change. Yes, a support group might just be the yeast I needed to raise the dough into bread.

I called the support group an EcoTeam and developed basic guidelines for conducting meetings. Different team members would each lead one of the topic meetings every two weeks. At these EcoTeam meetings everyone would share which actions they would take before the next meeting. At the next gathering, they would then report on what they actually did. They would also tell the group if they had encountered any problems, and if so how they addressed them so others could learn from their experience. If they wished help in implementing a particular action they were encouraged to ask their teammates for support. They were also asked to take the program seriously by agreeing to be accountable for taking the actions to which they committed.

An environmental behavior change program was born. I called it *EcoTeam: A Six Step Program to Create an Environmentally Sustainable Lifestyle* (later changed to the *Green Living Handbook).* I started introducing the book at conferences in which I was speaking and through environmental networks such as the community of Earth Day organizers. People were immediately attracted to it. They liked the program structure; the support system that established accountability for taking action; the easy-to-use recipe format of the actions; and the opportunity to express their environmental values in such a concrete way.

EcoTeams began sprouting up all over the place. Within a few months there were more than fifty teams spread across the country, then a hundred. They continued to proliferate and soon were taking many different forms. They were occurring among friends, in faith communities, workplaces, neighborhoods and service organizations. The program was adaptable enough to fit into each of these unique cultures.

I also shared the program with my international colleagues. A number of them ended up asking if they could translate and adapt the workbook into their culture. I eagerly supported this adaptation process and the program rapidly spread in these countries as well. And as word got out, I started receiving more and more requests from different parts of the globe.

Getting Strategic

Management guru Tom Peters describes the typical creation process for new ideas as "ready, fire, aim." I had fired and now it was time to aim. This is the hard-work phase of maturing a social innovation. It meant I had to become strategic about what I was doing. Until now I had accomplished whatever I had accomplished with my own money and a small research grant. If I hoped to make any kind of meaningful change I needed to establish an international organization to implement it. I went about creating a non-profit arm to my Empowerment Institute so I could attract philanthropic support, and I called it Global Action Plan for the Earth or GAP for short. Although the means were limited at the moment, the vision was not.

Because I had established a successful track record by mounting the large global initiative called the First Earth Run, and because this program struck a chord in society, I was able to secure two six-figure foundation grants. I now had the financing for the "aiming" phase of refining and disseminating this program. It was time to address my next set of "how-to" questions.

- Was this program effective in helping people change their behavior and achieve substantive environmental improvements?

- If so, could these behavior changes be sustained over time?

- Could we develop a mechanism for taking it to scale?

The questions would take me most of the 1990's to answer.

This was an iterative and slow learning process. Because the program was four months long it took as much as a year, or in some cases two, to find out if a particular strategy was working. We would try out a new behavior change or organizing strategy, make some progress and then it would stall. We would tweak the strategy and have to wait another few months before we could find out if that change was successful. If not, we were back to the drawing board.

With the initial funding I was able to hire staff to help me track results. We developed a pre-and-post program participation survey called a Sustainable Lifestyle Assessment. We created a computer program to calculate the results we got from this assessment and then provided this feedback to participants.

While people were not interested in doing their own calculations, they were willing to fill out these pre-and-post program assessments. On the front end they found the process of assessing the environmental sustainability of their lifestyle fascinating and relevant for deciding which actions they would take. On the back end they were desirous to learn what resource savings they had achieved, provided we crunched the numbers for them. This was a win-win because we were eager to learn how effective the program was in achieving measurable behavior change.

The initial results from the first two hundred households we tested were very promising. These households on average reduced their annual solid waste by 40%, energy use by 14%, water use by 32%, vehicle miles traveled by 8%, CO_2 emissions by 15% and achieved financial savings of $255.

We were very heartened by these results. Because there is so much room for environmental improvement in the American lifestyle, these high numbers made sense intuitively. Having done the calculations ourselves we could vouch for their accuracy providing people were filling out the assessments honestly. Several of our funders, including the U.S. Environmental Protection Agency, studied these numbers and our process for crunching the data, and concluded that this data was trustworthy. That said, there was nothing to compare this against. We were blazing a new trail and learning as we went along.

As more people participated in the program, we kept getting consistent results. Eventually we would collect data from 20,000 people with comparable resource and financial savings. The program had passed its first test. It had demonstrated it could help people substantially reduce their environmental footprint.

The next big question was now upon us. Were these reductions in natural resource use being sustained over time? The greatest challenge in the behavior change world is recidivism. Think weight loss. Would people go back to their old environmental habits in six months or a year or two years? Or would they be able to keep the belt cinched once they reduced their use of natural resources?

My hunch was that they would. My reasoning was that once you develop a new household system, like recycling, it is actually hard to go back to the old system. And people were taking these actions because it was the right thing to do. No one was forcing them. They wanted to act on their values. I would ask people who were now recycling what it was like to go to a place where you couldn't recycle and the consistent response was a cringe. It was painful for them to throw away recyclable materials. But until I had some real data it was just my speculation – and perhaps wishful thinking.

Since everyone who funded this program wanted to find out if it was a worthwhile investment, there was no lack of opportunity to start answering this question. Over a number of years we conducted

eight independent longitudinal studies funded by foundations and government agencies both in the U.S. and Europe. The most in-depth study was a two-year longitudinal study funded by the Netherlands Ministry of Environment. It was conducted by Paul Harland and Henk Staats of Leiden University's Centre for Environmental and Energy Research.

They studied 150 households who had participated on EcoTeams as part of our sustainable lifestyle program. What they found was that on average these households adopted 26 new pro-environmental behaviors as a result of the program. Two years later they had sustained their changes in 19 of these behaviors and continued to improve in 7 of them. They had also adopted 4 new pro-environmental behaviors. In other words, not only had they sustained the behavior changes, they had advanced them. In addition, 53% of the people in the study transferred what they learned to their workplaces, further leveraging the positive impact of the changes. Based on a thorough literature search, Harland and Staats concluded that our sustainable lifestyle program "was unprecedented in achieving significant and sustainable behavior change." The other studies validated this conclusion.

Having an environmental program that can produce and sustain behavior change was exciting. I was now asked to speak at many conferences and my colleagues around the world were also getting much recognition. The funding for our sustainable lifestyle program was growing. In the Netherlands, the program received more funding from the Ministry of Environment than any other environmental initiative. The program also began winning environmental awards both in America and Europe.

In the U.S. there was now interest in implementing our program coming from local, state and federal government agencies. These agencies were increasingly confronting environmental issues that required citizens to adopt behaviors such as conserving energy and water; reducing or eliminating household and lawn chemicals that were polluting local water bodies; and being more efficient in driving to reduce air pollution, traffic congestion, road construction and greenhouse gases. The director of the Oregon Department of Environmental Quality, Lang Marsh, who we would work with in Portland, stated his agency's problem this way. "Citizen behavior change has been one of our most difficult challenges in advancing environmental protection."

From a systems point of view, the environmental outcomes these government agencies were seeking required a shift from first to second order change solutions. First order change solutions, in this context, addressed the low hanging fruit of obvious environmental problems and were focused on regulating easily identifiable polluting companies. Second order change solutions, on the other hand, were far more complex to implement because they involved getting millions of people to change their lifestyles.

The government's first order change tool of command and control was exactly right for addressing environmental protection when business was the problem. A company could be regulated and fined based on what came out of its smokestack. But when the daily lifestyle of individual human beings became the problem, the government was at a loss for meaningful action. You can't legislate lifestyle change. Financial incentives are not only just marginally effective, but politically difficult to implement. And information campaigns aimed at encouraging citizens to adopt more environmentally friendly lifestyle practices are also only marginal in their effect on behavior change. The research data on this last strategy is quite emphatic about its limitations.

Sharon Dunwoody, Professor of Journalism and Mass Communication at the University of Wisconsin states:

> "When social problems erupt, one classic response of governments and organizations is to wage an information campaign. The goals are often noble ones, the dollars spent gargantuan, and the

outcomes all too predictable: messages seem to change the behavior of some people some of the time, but have almost no discernible impact on most people most of the time. This situation has so discouraged policy-makers in the past that the pattern was given its own dismal label: 'minimal effects.'"

Local and state government agencies needed a better way to create behavior change and our sustainable lifestyle program was the right tool at the right time. As a result I soon had my first contract. The City of Portland, Oregon, having heard about our program from an enthusiastic EcoTeam member and respected civic leader, wanted the program.

I had now answered my first two questions in the affirmative. Could this program help people change their behaviors and achieve substantive environmental improvements; and were these behaviors sustained over time? My final question, which had been looming large in my mind, but never answered, was now upon me. Could I scale up this program?

Learning How to Scale

From my initial research I had learned that one of the biggest obstacles limiting people from taking action was their belief that they were just a drop in the bucket, so why bother? To address this issue we developed the final topic area in the EcoTeam's agenda which we called "Empowering Others."

The appeal to people was this. You want to make a difference or you wouldn't be doing this program. To make any meaningful positive impact on the environment, many of us need to make changes in our daily lifestyle practices. This program is designed to help *you* adopt sustainable lifestyle practices and then encourage *others* to do the same. We need to be role models and we need to get others involved. If enough of us do this*, rather than being drops in the bucket, our drops will actually fill the bucket.*

And reaching out to friends and neighbors is socially rewarding. We heard from many people who were grateful for the chance to create more of a sense of community where they lived. "I've lived in the neighborhood for 21 years, but getting to know my neighbors [only] started three years ago with an EcoTeam," wrote Sarah Conn on West Newton, Massachusetts in a representative letter. "There is a lot more friendliness on the streets now. It's given us the feeling of being embedded in the community and having roots." It was a sentiment we heard echoed again and again.

Through making the intention to multiply one's impact an explicit part of the program and providing people the tools to share their natural enthusiasm for their experience, many of the teams were spawning other teams. In several cases, as many as eight new EcoTeams came from a single team. This was, however, a hit or miss process. Was there a way to make this ripple effect more systematic and replicable?

We were lucky to begin this learning adventure in a city known for its environmental consciousness and accomplishments. There was a lot of buzz around the Sustainable Lifestyle Campaign; it was seen as the next new environmental thing. But could we build this buzz into something that was self-generating?

Hello, I Am Your Neighbor

By now I had discovered that while social networks of friends were naturals for starting teams, you soon exhausted the number of people in those networks. As a consequence this was not a strategic pathway for systematically expanding the program. The neighborhood, however, was attractive because there were no built-in limitations for expansion. On several occasions the number of teams being formed kept growing from block to block, as neighbors told other neighbors about the

program. It also provided people the very important motivating benefit of getting to know their neighbors.

It was a daunting thought, however, to imagine building this program around a neighborhood dissemination process. The conventional wisdom is that in America we don't know our neighbors and that's just fine; we are an individualistic society and people like their privacy. But my intuition told me this was not what people really felt. Given a chance, I believed, people really would like to know their neighbors. They just did not know how to go about it.

Prior to starting work in Portland, I had gotten a small grant to market test the idea of a neighbor-to-neighbor organizing model. We hired a market research firm to test a script for organizing at the most local of levels – the block. We developed the script based on what we learned from debriefing both those people who had successfully started teams on their blocks and those who had been unsuccessful.

> "Hi, I am your neighbor from up the street," the script began, "I would like to invite you to my home to here about a new program sponsored by (city's name). Its purpose is to help us better conserve our natural resources for the sake of our children, get to know each other better as neighbors, and make our neighborhood a healthier and safer place to live. The meeting is at (location, day and time). Can you make it?"

We had tested the script over the phone in four regions of the country: northwest, northeast, mid-west and southeast. 43% of the people we reached said they would be very likely to attend the meeting and 42% said they would be somewhat likely to attend. We were encouraged by this response, but of course this was a phone survey. We would soon find out if we could really get these results.

Michael was a natural born salesman. He used to be an evangelical minister, so he knew how to inspire people with his passion. Llyn was charming and had an engaging way of being with people. They were a perfect pair for recruiting EcoTeam leaders and they found them in a variety of places. Some were from likely places like environmental groups, but Michael and Llyn were also successful with neighborhood associations and civic groups. They recruited the first batch of ten EcoTeam leaders by offering the same three benefits used in the telephone script: learning how to conserve natural resources for the sake of their children; getting to know their neighbors better; and making their neighborhood a healthier and safer place to live.

These leaders all believed in the cause and were willing to reach out to others, but knocking on their neighbors' doors filled some of them with dread. Many of them admitted that they were afraid of being rejected or even worse, thought of as pushy. We tried to bolster their confidence by telling them about the very encouraging results from our market research. We also told them that if they were getting doors slammed in their faces, they certainly did not need to continue.

The big door-knocking event would take place on a Saturday afternoon from 11 am to 2 pm. The leaders were taught the simple script and Michael or Llyn offered to walk with any of them who needed their confidence bolstered. We were all eager to see what kind of response these brave souls would get reaching out, as they were doing, in a society acculturated to neighborhoods of isolation.

Michael and Llyn called me that night bubbling over with excitement and enthusiasm. "It worked so well," they exclaimed.

The feedback from the leaders was consistent. Rather than having doors slammed in their faces, they had been greeted quite warmly. In fact, almost everyone said they were interested in attending the

information meeting. Some had to check their calendars or speak with a spouse, but as the market research had predicted, there was clear and genuine interest.

Michael and Llyn debriefed the leaders carefully so we could learn as much as possible. The leaders reported that many of their neighbors said that no neighbor had ever knocked on their door before. They described how many of the people they spoke to were touched by this experience, and quite excited to meet other neighbors at the upcoming meeting. Many individuals told them they had wanted to do something for the environment but aside from recycling did not know how to go further. People consistently thanked these intrepid team leaders for taking the time to do this.

After our initial euphoria of thinking we might have a breakthrough for organizing EcoTeams, it occurred to me that this was a far more profound learning. We had touched a nerve in the modern American psyche. *I don't know my neighbors and would like to know them. I don't wish to remain isolated, but I don't know what to do about it.* Unwittingly, we had stumbled upon a way to reinvent community in our modern disconnected neighborhoods. I would spend many years unpacking this insight.

The neighborhood gatherings in the ten team leaders' homes were scheduled for one week later. The big question was: Would the people who said they were coming actually attend? The team leaders were instructed to call them the night before to remind them and to confirm their attendance.

The evening arrived. The market research had indicated that 43% of the people were "very likely" to come and that was exactly what happened. The "very likely" group came and the "somewhat likely" group did not. They were predisposed, but not quite ready to put this on the top of the list. They would, however, be good prospects for the next round of teams once this program was a more known commodity on the block.

Of those who attended approximately 75% decided to join a team. Some who did not choose to participate would have, but scheduling was an issue. For others, the time commitment was more than they were ready to make, or they felt they were doing enough already. *Ultimately, a remarkable 25% of everybody approached committed to participate in a seven-meeting program over four months!*

This was unprecedented in community organizing and we were thrilled. Equally important was the fact that most of these participants were not what one would call "true believer" environmentalists, but rather they were their *neighbors.* This neighborhood-based approach was able to tap into a much wider circle of possible participants than our previous approaches had been able to do. The additional benefits of getting to know your neighbors and improving the neighborhood were very strong motivators. We would come to see over time that they were actually the strongest motivators.

As this initial round of teams completed the program they were encouraged to reach out to others on their block. On some of the blocks most of the households ended up joining EcoTeams. The momentum began spreading to neighboring blocks and it became clear that we had laid the foundation for a repeatable way to grow the program. In a number of Portland neighborhoods, "EcoTeam" became a household word. Eventually this neighbor-to-neighbor recruitment model spread to many other cities that were not as environmentally oriented as Portland like Columbus, Ohio and Kansas City, Missouri with comparable results.

We discovered that no matter what city the program landed in, our three benefits were universally appealing. People everywhere care about the quality of life they will leave to their children, and they want to reduce the toll they take on the environment. If given the opportunity, they wish to know their neighbors and to build a greater sense of community where they live. Improving their

neighborhood is a wonderful extra benefit attractive to everyone. While there needed to be adjustments for the culture and environmental circumstances of each city, the program and recruitment process was successful in each of these very diverse communities.

We had proven this program was transferable and could be successful just about anywhere. It was hard work. It was labor intensive. It required the right people on the ground. It required a willing local government. Relative to media information campaigns aimed at changing behavior, it was very cost effective. And it actually changed behavior! In short, it was successful. We had set out to create a new social innovation to measurably reduce the significant impact our lifestyles take on the environment and successfully disseminate it and we had done it.

Sustainable lifestyle campaigns would continue to expand in these and other cities, both in the U.S. and throughout the world, ultimately encompassing some 200 communities with the participation of several million people in 22 countries. They would also provide a new policy option for local and state governments and undergird a budding sustainable community movement.

3. What additional topics or information do you recommend to help develop residential behavior-based programs?

From our experience eight core competencies are needed to create an effective and scalable behavior change and community engagement initiative.

1) How to open people's hearts and minds to change.
2) How to empower residents to adopt resource efficient lifestyles.
3) How to create a program that achieves measurable, substantive, and sustainable behavior change.
4) How to create a community engagement strategy that achieves deep buy-in from residents.
5) How to integrate existing programs and outreach efforts of government agencies, utilities, community-based organizations and local businesses to optimize synergy and cost savings.
6) How to design a training process that empowers staff and volunteers to deliver your program and outreach strategy in a consistently effective manner.
7) How to create and leverage neighborhood social capital.
8) How to take a behavior change program and community engagement strategy to scale.

4. How do you foresee the evolution of behavioral programs in the next 3 to 5 years, and how should we be planning for this?

We need to get out of the box in how we think about and design residential behavior change and community engagement programs. Based on the success of the behavior change and community engagement framework we have developed over the past several decades these are the principles I believe this new paradigm should include.

1) <u>From Partial to End-to-End Solutions</u>: Most behavior change programs cover only discreet parts of the behavior change and community engagement spectrum. An end-to-end solution requires a program that has proven it can achieve measurable, substantive and sustainable behavior change; is integrated into existing outreach efforts of various government agencies, utilities, community-based organizations and local businesses; has a repeatable strategy for engaging people to participate in the program; has a training process that builds the competency of staff and volunteers in program and outreach delivery; has a scaling strategy with metrics for measuring success; and has a mechanism for social learning so all these elements can be iterated upon based on feedback. In short: a well-conceived end-to-end solution.

2) From Short to Long Term Learning: A high impact behavior change program and community engagement strategy takes years to design and perfect. The key to getting an initiative to work is what I call social learning which is based on separating the key variables and carefully and iteratively learning which ones produce results based on trial and error. This requires patience, fortitude, skillful interpretation of feedback, and the temperament of the social entrepreneur.

3) From the Idiosyncratic to a Pattern Language: Many attendees of behavior change workshops and conferences are left at the end of these events to piece together an interesting project idea here, a fascinating piece of research there, a theory of change over there, but with no real sense of how to make sense of all these information fragments. The behavior change and community engagement model I have described can be applied in many ways and in many different situations because it is a set of integrated templates or what architect Christopher Alexander calls a "pattern language." These patterns or templates include how to create a behavior change program, peer support group, neighbor-to-neighbor recruitment strategy, whole system solution, and iterative social learning.

4) From Extrinsic to Intrinsic Motivation: One of the most important paradigm shifts that has been occurring of late through behavioral economics is the debunking of the rational actor model that is the underpinning of classical economics and its centerpiece social change strategy of financial incentives as a mechanism for changing behavior. When one does that it takes the legs out from underneath a core assumption of many behavioral change interventions – extrinsic motivation. If extrinsic motivators are not very effective at delivering behavior changes what about intrinsic motivators? And if so what might that look like?

   The answer to that question has encompassed almost three decades of my journey in the behavior change space. The three intrinsic motivators that allowed us to recruit 25% or more of the people on a block to participate and achieve significant behavior change were – the appeal to a person's need for *meaning and purpose, community*, and *self-efficacy*. How to best tap into intrinsic motivation to further behavior change and community engagement is an extremely fertile area for social experimentation and research.

5) From Social Norms to Social Impact: Our research on the power of peer support groups to enable and sustain behavior change combined with Tina Rosenberg's (*NY Times* "Fixes" columnist and author of *Join the Club*) research on the power of peer pressure to change behavior, embodied in her pithy aphorism that *identification not information* changes behavior, has created a well researched set of arguments for the importance of peer support systems to enable behavior change. Not taking advantage of this knowledge in designing behavior change interventions will hopefully soon become as much of an anathema as not taking advantage of the basic research on social norms. In fact these two social science insights are joined at the hip.

6) From Supply to Demand-Side Social Change: Behavior change program designers need to make a fundamental shift in thinking from a supply to a demand-side approach to behavior change. The traditional supply-side approach that has arisen over the past several decades around selling pro-social behaviors consists of *one* government agency, utility, or community-based organization selling *one* behavior they are charged with changing to *one* resident at a time using various social marketing tools and financial incentives. This is a plus for society if the person being sold the behavior is interested in buying it. But for the most part this is not the case for one-off energy, water or transportation efficiency behaviors. The reason is fairly obvious when we think about it; this approach gives the

person very little in return for doing something they have a borderline interest in doing. And we have learned that financial incentives are only marginally effective in driving demand.

However, something very profound occurs when we shift from approaching behavior change interventions as selling one person, on one resource, by one organization, through extrinsic motivation; to allowing the actions taken to be driven by the individual, socially reinforced and supported by a small group of peers, representing multiple resources of different organizations, and designed to meet the person's deeper needs. People are actually interested and adopt many pro-social behaviors.

7) From Separate Parts to Whole System Design: To achieve the level of social impact I have described required us to transform or evolve most of the traditional assumptions about how to change behavior and engage community members – no surprise here. But one surprise that did emerge was how the process that emerged through trial and error over the past several decades kept requiring us to operate at larger and larger levels of a system to get results. We were required to move from single behaviors to a constellation of behaviors, from single and separated households to multiple and connected households, from many single agencies operating independently to multiple agencies combining their "wares" through an integrated delivery platform.

   In each case, self-interest was furthered through the synergy created by being part of something larger than themselves and everyone benefitted – resource savings, cost savings, social connectivity, and agency efficacy. This type of approach to behavior change and community engagement requires a new skillset – what I call whole system design. To enable the widespread behavior changes needed, "it takes a village." This is one of the most salient things we have learned over the three decades of our behavior change and community engagement work. No surprise, it is also fundamental to the larger evolutionary journey humankind is embarked upon.

5. How should the impacts of behavior programs be measured?

Metrics should include specific and measurable behavior changes starting from a baseline, actions taken, program participation rates, conversion rates around retrofits from doors knocked on to retrofits installed, program costs in relationship to actual measurable behavior change versus information disseminated, resource and program cost savings achieved through multi-resource partnerships, behavior change and community engagement assumptions/variables/theories of change/strategies to be tested against concrete and measurable feedback from the social learning process.

6. *How would you ensure persistence of energy savings?*

The third-party evaluations of our behavior change program indicated that this approach changes behavior and it is sustained over time. The persistence in energy savings is based on the power of the peer support group and program design in embedding a conservation social norm and sustainability ethic among its members. To learn more visit the behavior change research section of out website http://www.empowermentinstitute.net/index.php/community/behavior-change-research.

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