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The "Poverty Stoplight" Approach to Eliminating Multidimensional Poverty

Business, Civil Society, and Government Working Together in Paraguay

Innovations Case Narrative:
Fundación Paraguaya

Over the past few years, my team at Fundación Paraguaya (a 28-year-old nonprofit development organization that works in Latin America and Africa) and I have been developing a practical methodology and tool that allows poor families to self-diagnose their level of poverty as a first step in developing a personalized strategy to lift themselves permanently out of poverty. We call it the "Poverty Stoplight" approach to eliminating multidimensional poverty. Our tool uses stoplight colors (i.e., red, yellow, green), photographs, maps, electronic tablets, and simple software to create innovative maps that enable the poor to see and understand the ways in which they are poor. The methodology and tool also allow businesses, nonprofits, and governments to support families' efforts to pull themselves out of poverty in efficient, targeted ways. Our 20-minute visual survey methodology simplifies gathering data on poor families while encouraging and facilitating a focus on the gaps these families need to close to overcome their various poverty-related challenges. Not only the poor stand to benefit from this social innovation; governments and other actors in the field, such as businesses and social-minded software developers, can benefit as well. This tool also can be useful and cost effective for microfinance institutions that are in the business of fighting poverty but often find it difficult to address the chronic social problems affecting their clients.

EPIPHANY

In December 2008, right after the evening graduation ceremony held at our self-sufficient agricultural high school in rural Paraguay, I witnessed an event that would change the way I thought about development and social change. On the

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school patio, under the mango trees and surrounded by classrooms and dorms, the 50 students had, on their own initiative, set up a gala dinner: 50 tables were covered with white cloths and set with wine glasses, silverware, and plates for the main course and bread. Led by valedictorian Liz Marina Gonzalez, the students, their parents, and their guests promenaded out of the chapel where the graduates had received their high school diplomas, while the master of ceremonies asked the public to sit at designated tables. As the afternoon gave way to a pleasant summer evening, the recently graduated students appeared wearing dark suits and long dresses. The loudspeakers began playing a waltz, and the students walked to their parents and invited them to dance.

As strains of "The Blue Danube" waltz surrounded us, I couldn't help but think how far these students had come. Most of them had arrived at our school essentially barefoot and hungry merely three years earlier, cashless and owning only the clothes on their backs. Most had barely finished ninth grade in a precarious rural school. Now they were performing ("mimicking" is probably a better word) a typical middle-class tradition in Paraguay, turning a graduation celebration into a prom. Of course, no one on the floor that evening—neither the students nor their parents—had ever participated in such an event before. Most likely they had seen something similar on Paraguayan TV or in the Sunday paper.

But there they all were, dancing in formal dress. Liz Marina, who graduated first in her class and would become first a teacher at the Curuguaty Agricultural School and then an agricultural extension agent for the Ministry of Agriculture and Livestock, danced with her father. Maricel Merlo, who had arrived penniless three years earlier from the San Pedro region and would become a microfinance and "village bank" microcredit advisor after graduation, danced with her brother. Sebastian Escobar, a member of the indigenous Enxlet tribe, who would return to his community and develop his family's farm, danced with his mother.

These were a group of extraordinary achievers born to poor farmers. If there is one precondition to being poor in a country like Paraguay, it is to be born a *campesino,* or rural peasant. Being an adolescent girl or a member of a native indigenous community practically ensures this outcome. And yet, these young people had overcome the odds and were off to a promising future. I was reminded of a TED talk in which Sir Ken Robinson explained that, for people to learn most effectively, they need to be in their own element—in the place where a person's natural talent intersects with their passion.

Standing in awe at this most unusual event, I had a flashback and a moment of clarity. I was reminded that, a few years earlier, Lourdes Aguero, one of our microfinance loan officers working in an extremely poor urban slum near Asunción, had told me that women participating in our village bank program were developing unexpected extracurricular activities. "One group holds tea parties every month," she told me, "and the 15 women members of the group lock themselves in a house, dress up, and parade in a fashion contest among themselves. They award themselves prizes for best smile and best dressed and most sophisticated." I remember that I had laughed at Lourdes when she told me this. Now, watching these extremely poor adolescent rural girls and boys acting as if they were middle- or upper-class Paraguayan professionals, I felt I was witnessing their need and desire to transcend one economic and social class and rise to another.

Despite any opinions I had about bourgeois activities such as teas, debutante balls, and waltzing, I was forced to see that many poor deeply aspire to become middle class. I also began to understand that many poor must first *believe* they can move into the middle class before they can accomplish it.

That was my epiphany, my moment of clarity—that people could move out of poverty when they began behaving as if they were not poor. I felt that what was needed was not so much understanding of the culture and standards of poverty but of "nonpoverty." We needed to contrast poverty with nonpoverty and then take action to address the difference. We needed to understand that the poor could be motivated to pull themselves out of poverty. Once we had this clear, all we had to do was look for a tool. The Poverty Stoplight approach would prove to be that tool.

BACKGROUND

As a Paraguayan who has dedicated his professional career to "cracking the code" on how to eliminate poverty in his home country, I always had been frustrated by the difficulty of grasping the various, and often contradictory, solutions to poverty offered by different schools of thought in the development field. Is it possible, I wondered, to combine apparently different strategies? On the one hand, economic growth helps reduce poverty, but it generally does not extend to the invisible, hard-to-reach extreme poor. Unmotivated and unskilled people find it difficult to hitch their wagons to the engine of economic growth. On the other hand, government handouts and welfare programs provide a needed safety net for many vulnerable families but they can create perverse incentives that appear to destroy economic self-reliance. In addition, waste, corruption, and political cronyism appear to be the unavoidable consequences of large conditional cash-transfer programs, at least in my country.

In Paraguay, social unrest and political tension will continue to plague rural areas unless new formulas are found to address extreme poverty and massive rural-urban migration. Our economy is booming, thanks to growth in the export of commodities such as soybeans, beef, and corn. With a population of just 6.6 million, the country produces enough food to feed 47 million people.[1] And yet, 32 percent of the population live below the official poverty line and 18 percent go hungry; that is, they cannot afford enough food to provide each person with 2,500 calories per day, a measure that defines extreme poverty. As of 2013, some 205,000 Paraguayan families live in extreme poverty. But thankfully, consensus is emerging that, if the private sector and government are to enjoy a future of peaceful prosperity, business as usual must end: government, business, the nonprofit sector, and the poor themselves must work together to bring these families permanently out of poverty.

As Paraguay prepares itself for a prosperous future, the business community, social organizations, and the government are coming to an agreement that new methodologies and technologies are needed to address seemingly intractable poverty issues. The Poverty Stoplight approach is such a tool. Our tool uses cheap, easily available technology to help people understand complex poverty problems, to simplify previously cumbersome processes, and to implement effective poverty-elimination strategies. With mobile technology available to practically everyone in the world today, we feel that the solution to extreme poverty may be at hand.

EVOLUTION FROM SELF-SUFFICIENT MICROFINANCE TO SELF-SUFFICIENT SCHOOLS FOR THE POOR

In 1985, a group of local business and civil society leaders, my friends Steve Gross and Bill Burrus from Accion International, and I started Fundación Paraguaya, Paraguay's first microenterprise development program.[2] We set out to provide loans and training to help poor people working in the informal sector of the economy achieve three things: increased family income, strengthening of their precarious jobs, and the creation of new jobs for others. We measured our impact and found that, on average, for every person we supported we created 1.3 jobs per year. Providing working capital freed our clients from having to depend on loan sharks, and that this, too, had a positive effect on their income. While some of our clients grew to become small businesses and "graduated" to the formal banking sector, many others stayed behind and either became resigned to, or could not overcome, the poverty in which they lived. We considered this unfortunate, but we came to believe that there was little or nothing we could do about it. Maybe, we pessimistically thought, there are people in this world who, by virtue of their culture and/or lack of proper nutrition, are destined to be stuck in poverty forever.

Like similar programs in Latin America, Fundación Paraguaya dedicated its first five years to reaching its break-even point and thus achieving financial self-sufficiency. At the time, the fact that a development program could pay for itself with the interest derived from $100 loans was a huge paradigm shift in the world of development. To achieve this financial self-sufficiency, which was a significant social innovation at the time, most microfinance organizations like ours opted for a minimalist strategy—access to credit—rather than the integrated strategy of rural and urban development programs that were generally floundering throughout the region. The latter was considered time-consuming, inefficient, impractical, and frustratingly ineffective, and, at the time, governments all over Latin America were beginning to abandon these complex approaches and opt for simpler, pointed, short-term projects.

Our strategy at Fundación Paraguaya was to concentrate solely on providing financial services and let the client take care of the rest. The idea was that clients would increase their family income and then be able to pay for their educational, housing, and health needs. As part of this process, we dropped education and training for our microcredit clients. Business management training was expensive and time-consuming, and it was difficult to assess its effectiveness. As long as clients were repaying their loans, we considered their knowledge and skills sufficient to manage their microbusinesses.

Not completely happy with our minimalist approach and feeling that if we invested in education we might enable the next generation of Paraguayans to overcome poverty, Fundación Paraguaya brought Junior Achievement's financial literacy programs to Paraguay in 1995 as a complement to our microloan programs. Thanks to two local college students, Pancho Peroni and Yan Speranza, we were introduced to this nonprofit that had developed a methodology that brought trained volunteers to the classroom to deliver a hands-on entrepreneurship curriculum. These extracurricular elementary and high school programs proved to be extremely popular, and we partnered with business leaders to reach hundreds of schools throughout the country. Through a cross-subsidization strategy, we used the income obtained from business-sector sponsors who wanted to support Junior Achievement in private schools in the capital city to pay for introducing the same programs in the poorer public schools that our clients' children attended. In this way, we were able to train thousands of poor students to write business plans and set up for-profit microbusinesses. The press, parents, educators, and the students themselves loved these programs, which provided a much-needed complement to the otherwise traditional curriculum offered in schools.

In 2002, I returned to Fundación Paraguaya after a five-year stint as mayor of Asunción, at which point two interesting events occurred. First, we decided not to accept the offer of our friends at Accion International to help us raise capital, become a regulated bank, and follow the path that most microfinance programs in Latin America were taking. Among other factors, Paraguay was in the middle of a huge banking crisis, and Fundación Paraguaya's board members were not sure that the time was right to become a bank. Instead, we decided to concentrate on "ruralizing" our microfinance loan and youth entrepreneurship programs in order to reach the poorest segment of the Paraguayan population. Second, Fundación Paraguaya was approached by a group of La Salle Christian brothers, who suggested that we take over their bankrupt, 60-hectare agricultural high school for poor rural youth. They had run out of the cash and people needed to run the school properly, and the government subsidies that paid teachers' salaries were arriving with frustrating irregularity and delays. The La Salle brothers saw Fundación Paraguaya as an organization that could provide the ideal solution to the school's two main problems: its lack of capital for operations and its graduates' lack of employable skills.

Fundación Paraguaya took over the San Francisco Agricultural School in 2003, with the idea of combining the foundation's two skill sets (financial inclusion for the poor and entrepreneurship training) and applying them to a new field: education for rural adolescents. We knew that microfinance worked, not just because of its financial strategies and strengths but also because it tapped into poor clients' dignity, self-respect, and self-reliance. We used high-quality, personalized approaches geared to clients' needs; for example, by making $40 loans that were to be returned in weekly installments. We thought that, if a financial development program to assist the poor could, by virtue of having a sufficiently large loan portfolio, cover its own costs, why couldn't an agricultural school cover its own costs? Indeed, why couldn't education for the poor (which is the lowest priority for governments in developing countries and thus has insufficient and irregular government funding and a history of poor quality) pay for itself?

Armed with these questions, and with the support of foundations such as Avina, Schwab, and Skoll, we applied what we knew worked in microfinance to the field of high school education. In 2007, five years after Fundación Paraguaya took over the San Francisco Agricultural School, the school generated $300,000 in income and covered 100 percent of its costs. With a market-based curriculum and the eggs, cheese, vegetables, and other products and services offered by 15 school-based microenterprises run by teachers and students, the school proved that it could survive. The school also proved it could guarantee almost 100 percent employability for its graduates.

How did we accomplish this? First we had to put ourselves in the shoes of poor rural youth. We knew that most young people in Paraguay, if not all, were coming of age with little or no prospect of economic prosperity. Why? Because they had little or no access to a high-quality, relevant education that would provide them with bankable skills. Thus they faced lives of chronic unemployment, poverty, environmental degradation, and migration as they moved as unskilled workers to overcrowded urban slums. For girls the problem was worse. A huge percentage of the country's out-of-school high school-age youth were girls. We were convinced that, with entrepreneurial training in a high-quality school, young people could create their own employment and transform their communities.

We knew that, given Paraguay's small industrial base and therefore its few factory-related jobs, creating jobs required creating entrepreneurs. We also knew that educating entrepreneurs required a school that practiced what it preached—entrepreneurship. We were convinced that by incorporating small businesses into the educational program the school could teach students practical skills and entrepreneurship while generating income to cover operating costs. Students thus would obtain the skills and knowledge needed to find jobs, create their own jobs, or continue their education—and the self-confidence and motivation to do so.

The small businesses we established on campus were all related to market demand and to fulfilling the agricultural curriculum established by the ministries of agriculture and education, which provide accreditation to our school and permission to grant high school diplomas, respectively. We established an organic vegetable garden; grew field crops such as sugarcane, cassava, and beans; raised chickens, goats, milk cows, and pigs; and set up a small cheese and yogurt factory. We also set up a roadside grocery store and converted an old dormitory into a small rural hotel. Teachers and students developed business plans and, working together, took turns running these income-generating educational enterprises.

So, how does our school work? In the classroom, students learn the underlying concepts of business and organic agriculture alongside general education courses.

Then in field-based classes they learn how these concepts work in practice and how to use them effectively. Through learning by doing, selling, and earning, students gain the practical and technical skills needed to master each discipline. Students rotate through the school's 15 business units and then choose a specialization and take on greater responsibilities. They also learn to how to manage financial transactions, monitor profitability, market and sell their products, and provide good customer service.

In 2005, our experience led us to establish (together with Nik Kafka, a former volunteer at Fundación Paraguaya, and a few British fellow social entrepreneurs) a UK–based social enterprise called Teach a Man to Fish. Its mission is to disseminate the concept of financially self-sufficient schools for the poor worldwide, including the lessons learned from the Paraguayan experience, and to support self-sufficient startup schools and on-campus educational enterprises throughout Latin America, Africa, and Asia. Thanks to foundations such as MasterCard and Saville, there are now more than 27 schools in 10 countries in the process of implementing Fundación Paraguaya's financially self-sufficient school model. Thousands of other schools throughout the world are establishing school-based educational enterprises. In all, more than 4,000 member organizations from 200 countries are participating in Teach a Man to Fish activities, thus demonstrating the growing worldwide interest in creating effective educational programs for the poor.

What have we learned in the process? Among other things—amazingly—we have seen how our high school graduates in Paraguay move almost seamlessly from poverty into the Paraguayan middle class. We have seen many adolescent boys and girls from backgrounds of extreme poverty almost levitate materially and mentally into a nonpoor state. We saw dignity at work, fueling students' motivation to take on huge challenges and seize spectacular opportunities. Through learning not just how to grow tomatoes but also *how to make money* from growing tomatoes, our graduates acquired the motivation and skills needed to find decent jobs, go on to university, or return to their family farms to implement the income-generating practices they learned at the San Francisco School.

Since students graduate with business plans and small loans to finance their future business endeavors, parents usually welcome their trained daughters and sons with open arms back to the family farm. In one case, a young woman convinced her father to switch from planting cotton (a back-breaking job) on five hectares to growing a half-hectare of chili peppers for greater profit. In another case, a young man convinced his father to visit supermarkets in the capital city to see for himself how much middlemen were taking advantage of him by buying his products without any value added.

QUADRANTS, PERSPECTIVES, AND INFLUENCING CHANGE

Encouraged by these new insights and lessons learned, and with support from the Peery Foundation, we shifted our attention back to our microfinance program. Just as we had used our microfinance experience to help us change the way rural schools for poor farmers can be conceptualized and run, we were now in a position to enrich our original flagship program. We asked ourselves why more of our microfinance clients weren't lifting themselves out of poverty. Why were some clients stuck below the national poverty line despite years of financial inclusion and paying back their loans successfully? What was the intrinsic difference between our clients who overcame poverty and those who did not? How could we reconcile the differing theories and schools of thought related to poverty? Is poverty only about income or about other things as well? Where does the "culture of poverty" fit in? Are some poor people lazy, or are they "damaged merchandise," forever limited by the effects of malnutrition or a family mindset of resignation they learned in childhood? Or is poverty, in fact, a structural consequence of exploitation?

Around this time I met two great American thinkers who helped me organize my thoughts. The first was Ken Wilber, from Denver, Colorado, whom I first heard about through Jorge Talavera, one of our Fundación Paraguaya board members. Wilber wrote about integral theory in his book, *A Brief History of Everything*.[3] Wilber maintains that it is not only possible but advisable to simultaneously consider the multiple viewpoints and perspectives inherent in any debate. He maintains that systems theory is limited because it explains the "map" but fails to consider the perspective of the "mapmaker." Since "perspective is rationality," Wilber proposes that four quadrants can be drawn to help address the four major factors that affect any given issue.[4] He assigns the following names to these quadrants: behavior, system, culture, and intention. The first two quadrants represent views external to a person, and the latter two represent internal views. Wilber explains that behavior and intention are personal views, while the system and culture are collective views shared by a community. In this way, Skinner's behaviorism can be analyzed side by side with Freudian psychoanalysis, Marxism, and anthropology in trying to understand poverty. Wilbur advises that, to understand a problem from all standpoints, it is necessary to include the valid perspectives of everybody involved: the poor person, their family and community, the social activist, the nonprofit attempting to aid the poor, the microfinance institution, the social entrepreneur, the government agency, and the international donor. These "mapmakers" also shape the spectrum of possibilities and expectations about the "poverty map."

This easy and comprehensive analytical tool and conceptual framework allowed us to consider a much broader set of possible explanations for any question at hand. For example, in the case of a microcredit client who had no front teeth, we could formulate the four questions: Is it because she does not take care of her teeth and does not go to the dentist (i.e., a behavioral issue)? Is it because there is no dentist in her village (a systemic problem)? Is it because in her community a complete set of teeth for an older woman is not really valued (cultural)? Is she afraid of going to the dentist (intention)? We can understand why she is missing teeth and come up with an effective solution only if we can answer these four questions.

Of course, the same questions can be applied to a person's income or lack thereof, or to their access to drinking water, housing, vaccines, education, and other similar poverty indicators. Why is it that a woman earns only $2 per day, when earning $3.50 per day would bring her out of poverty? Is it because she does not produce enough tortillas to sell? Is it the lack of a market where she can sell the tortillas she produces? Is it that she believes no matter what she does she will always be poor, like her ancestors before her? Or does she not want to work more hours to earn extra money because she puts a higher value on staying at home and being with her grandchildren?

The other author who shaped my views and helped me grasp the complexity of poverty was Joseph Grenny, whom I met at Sundance Village, Utah, thanks to my friends Todd Manwaring and Dave Peery. Grenny is the coauthor of several books, including *Influencer: The Power to Change Anything.*[5] Grenny explained to me that research showed that, for people to change, they must answer yes to two questions: Is it worth it? Can I do it? These relate to motivation and skills, which apply at the individual level, the group level, and the structural level. Grenny says that six sources of influence must be addressed if personal change is going to be permanent.

What do these theories mean for the poor and for an organization such as ours? Well, combining the four quadrants of integral theory and Grenny's two key questions reveals six sources of "positive influence." These sources can make it much easier for an individual to overcome poverty or, as Grenny and his coauthor Kerry Patterson like to say, to change anything. At the individual level, motivation entails learning to do things one does not normally like to do, and skills require overcoming personal limitations in terms of know-how. At the group level, motivation involves harnessing group pressure to motivate the poor to persevere in the pursuit of their goals, and skills involve enlisting group support so that others (e.g., friends, family, and other members of the community) can help them achieve their goals. At the structural level, motivation entails using strategies such as incentives and rewards to motivate the poor (as well as our loan officers), while skills relate to changing things about the physical environment or the system that prevent the poor from acquiring the skills needed to achieve their goals.

Grenny encourages us to pay attention to the "positive deviants" in any given rural village or urban community.[6] These are the people who should be poor, given their background and the communities in which they live, but are not. He urges us in particular to observe, study, and understand their "vital behaviors," or the habits that allow some people to overcome poverty while their neighbors remain poor, and the "crucial moments" in which they perform these vital behaviors. Grenny helps to define specific, measurable, and time-bound results for helping our clients rise out of poverty permanently.

Income & Employment

1. Income/earnings above the line of poverty	2. Stable employment (stable business activity)	3. Credit
4. Savings	5. More than one source of income	6. Personal Identification

Health & Environment

7. Potable Water	8. Health care center close to home	9. Nutritious diet (No malnutrition/ obesity)
10. Personal Hygiene and Sexual Health	11. Ophthalmologist and Dentist	12. Vaccination
13. Garbage Disposal	14. Unpolluted Environment (no deforestation/	15. Insurance (health and burial)

Housing & Infrastructure

16. Housing with secure roofs, doors, and windows	17. Sanitary latrines and sewers	18. Electricity
19. Refrigerator and home appliances	20. Separate bedrooms	21. Elevated stove and ventilated kitchen
22. Tables, Chairs, Cutlery, and basic comfort	23. Access to roads in all weather conditions	24. Regular means of transportation
25. Police station and physical security	26. Telephone or cell phone	27. Sufficient and adequate clothing

Education & Culture

28. Spanish literacy	29. Children educated through 9th grade	30. Knowledge and skills to generate Income
31. Ability to plan and budget	32. Communication & social capital	33. School supplies & Books
34. Access to information (radio & TV)	35. Entertainment & Liesure	36. Values cultural traditions and heritage
37. Respects other cultures	38. Human rights awareness	

Organization & Participation

39. Forms part of a self-help group or other organization	40. Ability to influence the public sector	41. Ability to solve problems and conflicts
42. Registered to vote and votes in elections		

Self-awareness & motivation

43. Self-awareness & self-esteem	44. Awareness of needs: personal goals	45. Moral consciousness & important values
46. Awareness of the emotional- affective spectrum	47. Aesthetic self-expression, art, and beauty	48. Psychosexual awareness
49. Entrepreneurial spirit	50. Autonomy & ability to make decisions	

Table 1. Six dimensions of poverty and 50 poverty indicators

Table 1 shows the 50 indicators Fundación Paraguaya uses to assess poverty levels. (See also appendix.) These are grouped under 6 dimensions: Income & Employment, Health & Environment, Housing & Infrastructure, Education & Culture, Organization & Participation, and Self-awareness & Evaluation. The original version of this table uses the colors of red, yellow and green to categorize these dimensions into either extreme poverty (red), poverty (yellow), or non-poverty (green). In this version of the table, the darker grey represents the color red, grey represents the color yellow, and white represents the color green. This table is an example of what a "Poverty Stoplight" survey would look like for one typical family with different poverties.

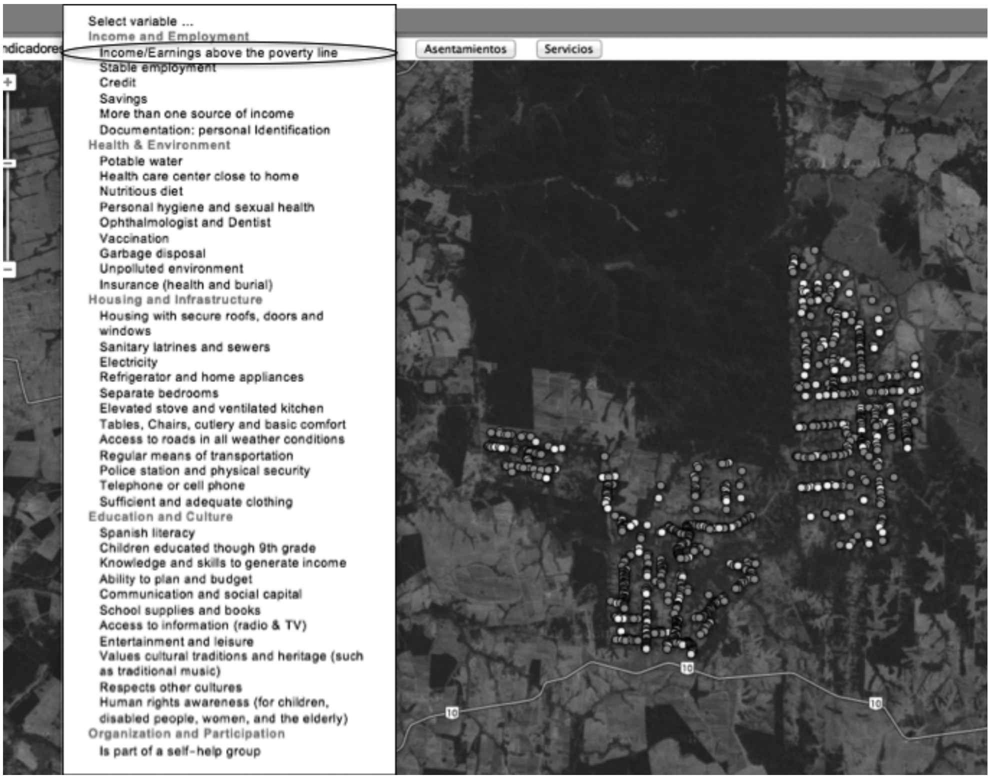

Figure 1. Poverty Map

Figure 1 is an example of the mapping software the government of Paraguay uses to geo reference families and their levels of poverty. Each point on the map represents a family home that has been surveyed with the "Poverty Stoplight" methodology. The drop down tab allows the user to select any of the 50 poverty indicators. After the selection, the map will change colors accordingly, representing the level of poverty for each family in that specific indicator. The original version of this figure uses the colors red, yellow and green to categorize these dimensions into either extreme poverty (red), poverty (yellow), or non-poverty (green). In this version of the table, the darker grey represents the color red, grey represents the color yellow, and white represents the color green. For example, in the indicator of "Income/Earnings above the Poverty Line" one can see that in this village there are families that are extremely poor, poor, and non-poor living next door to each other.

THE POVERTY STOPLIGHT APPROACH FOR POVERTY ELIMINATION

Armed with the integral theory and positive influence approaches, and thus not needing to simplify or find proxies for our work, we set out to identify various dimensions in which we could group different types of poverty indicators. We reviewed the development literature and opted for six poverty dimensions, believing that for practical purposes they could be sufficiently comprehensive yet manageable: (1) income and employment, (2) health and environment, (3) housing and infrastructure, (4) education and culture, (5) organization and participation, and (6) interiority and motivation.

Once we were comfortable addressing the multidimensionality of poverty, we compiled a list of 50 indicators that operationalized the six dimensions (see table 1 and appendix). We also identified three conditions for each poverty indicator (nonpoor, poor, and extreme poor), attaching the corresponding colors of green, yellow, and red to each. Knowing that our students' families and our microclients were mostly functional illiterates, we decided to include a photograph representing each of these conditions in the Paraguayan context. For example, to represent the three conditions in Paraguay for access to drinking water, a poor person taking our baseline survey can look at a photograph of a woman carrying a bucket of water on her head (extreme poor), a woman drawing water from a well outside her house (poor), and a woman turning on a faucet at home (nonpoor) and quickly indicate which photograph best represents her family's situation in terms of access to potable water. This is how the Poverty Stoplight was born.

In 2010, thanks to my friends Mirjam Schoening and Abigail Noble from the Schwab Foundation for Social Entrepreneurship, I met two people at the World Economic Forum in Davos, Switzerland, who would provide invaluable technological advances for the Poverty Stoplight approach. One of these persons them was Paul Ellingstad of Hewlett Packard's Sustainability and Social Innovation Team, who offered to help us develop an application that would serve as a platform for our baseline visual surveys to establish the level of poverty of each family across 50 indicators. We wanted our clients, as well as our loan officers, to be able to collect, "geo-reference," and transmit data from the field easily, using either cell phones or tablets.

The other person I met was Juliana Rotich, the founder of the nonprofit software company Ushahidi, Inc. In the aftermath of the 2007 political and humanitarian crisis in Kenya, Rotich and her team had developed a crowdsourcing methodology to collect information via text messages to locate and visualize data on political violence on a Google map. Juliana and I immediately saw the potential of using and applying her "activist mapping" (using geospatial information together with citizen journalism and social activism) for an equally grave and intractable problem in the world today: extreme poverty. If victims or witnesses of political violence could use their cell phones to transmit the location and seriousness of an event, why couldn't poor people use the same technology to transmit information about their own conditions? Figure 1 (previous page) is a screenshot of a rural settlement in Paraguay that shows homes in different colors, according to income.

Starting in 2011, Fundación Paraguaya staff members began surveying the level of poverty of our microfinance clients across 50 poverty indicators in the six poverty dimensions. The results were so powerful that we were forced to reexamine our mission and strategy. We realized that we, like most governments and nonprofits around the world, had been caught up in a false dilemma when it came to poverty issues. Until then, our antipoverty initiative had been limited to helping reduce or alleviate poverty by increasing family incomes. But if being "not poor" was never defined, how would we ever know if we had been successful? In contrast, with the Poverty Stoplight approach we could develop a results-oriented strategy and monitoring and evaluation systems for permanently eliminating poverty across six dimensions.

As such, the Poverty Stoplight approach is based on the following propositions. First, poverty has many more dimensions than simple insufficient income. A family may have per-capita income above the national poverty line yet still be poor due to a lack of decent housing, clean water, access to education and quality health care, or other requirements for a decent life. Second, poverty does not affect families uniformly. Each poor family is poor in its own way and therefore has a different set of poverty-related problems to resolve in order to overcome poverty. Third, the main protagonists in eliminating poverty must be the poor themselves. Institutions, however far-sighted or well funded, do not have sufficient insight into the poverty-related problems of individual families or sufficient resources to permanently eliminate poverty on their behalf. Moreover, an individual must adopt certain behaviors and attitudes in order to overcome poverty in all its dimensions and to maintain a standard of living that is not poor. Finally, a poverty-elimination strategy must be scalable, which implies that it must cost very little to implement and, ultimately, must be financially self-sustaining.

Fundación Paraguaya's Poverty Stoplight approach incorporates these four propositions into its strategy to eliminate poverty. The centerpiece of this approach is the self-evaluation visual survey tool, which allows each low-income person (typically a member of a women's microcredit village bank) to measure, take stock of, and plan how to resolve the poverty-related problems that affect her family. The tool is unique in that it enables the poor themselves to become aware of and measure their poverty in all its dimensions; it provides feedback in a form that low-income village bank members can readily understand; and it therefore empowers microfinance clients to become both the chief architects and protagonists of their own poverty-elimination strategy. At the same time, at very low cost, the stoplight tool can provide practitioners and change agents with detailed, family-by-family information on clients' poverty-related problems. With this information, we can provide products and services that serve individual clients' need most effectively; we also can identify client needs that go beyond the scope of our own activities but could be served through alliances with other organizations.

After forming a microfinance village bank, the bank advisor administers the Poverty Stoplight survey to each member. The survey consists of 50 questions in the form of sets of photographs. Each survey question has three possible answers, represented by three pictures: one shows the situation of a typical family living in extreme poverty; one a family living below the national poverty line; and one a family that is not poor in this particular respect (see figure 2, next page).

To complete the 20-minute survey, the poor person identifies the picture that best represents her family's situation for each of the 50 indicators. The village bank advisor enters this information into an electronic notebook, using software developed pro bono by Hewlett-Packard, and later downloads the data into Fundación Paraguaya's Stoplight database. The data from this initial survey provide the baseline against which to measure each client's progress in overcoming poverty. The

Indicator 7: Access to Potable Water	Dimension: Health and the Environment	
Definition: Water that can be consumed by people and animals without risk of contracting illnesses because it has been treated for human consumption according to quality regulations. It can also be water that is drinkable without previous treatment that doesn't contain substances that are dangerous to health. It should not have any odor, color, or flavor.		
LEVEL 3: The home has constant access to water during most of the day within the house. The source is reliable. The house has a faucet.	LEVEL 2: The home has access to water, but (1) does not have access all day long, or (b) has no faucet, or (c) water is located outside the home's property but within 100 meters of the house.	LEVEL 1: The water the family drinks is not potable, or it is located more than 100 meters away from home.

Figure 2. An example from the Poverty Stoplight survey

Figure 2 is an example of one question, out of 50, on the "Poverty Stoplight" survey. Each head of household that is surveyed completes the survey themselves, with the help of a loan officer or social worker, and uses the touch screen technology to complete the visual survey in an estimated 20 minutes. The person surveyed simply selects which of the three situations is most similar to their day-to-day life. In this example, the person surveyed selects their level of poverty in the area of "Access to Potable Water" by simply selecting whether they 1) have at least one faucet in their home-green-, 2) retrieve water from a well within 100 meters of their home -yellow-, or 3) retrieve water from a well that is more than 100 meters from their home -red-. By understanding what is to be poor (or not poor) in the indicator of "Access to Potable Water", each of our survey participants can evaluate their level of poverty in each indicator in a few seconds.

data also is geo-referenced in a Google map using the Ushahidi crowdsourcing platform.

After completing the survey, the poor person receives a one-page report showing in a heat map format the ways her family is extremely poor (red), poor (yellow), or not poor (green). Thus, she can see at a glance which of her family's poverty-related problems are most severe; those less severe, which she can work to overcome; and in which respects her family is not poor.

A general stoplight is also produced for the village bank as a whole (typically a group of 20 microfinance clients), which enables the group to see which members already have overcome certain problems and can provide role models for other village bank members, and which problems the group has in common. We have found that in Paraguay, where village banking clients are almost always neighbors and already know the financial situation of each member of the village banking group, privacy about each family's red, yellow, or green poverty indicators is not an issue. On the contrary, except for issues like domestic violence, everybody is well aware of their neighbors' situations.

Meanwhile, Fundación Paraguaya's village bank advisors and agricultural high school teachers learn how to use the integral approach to analyze the underlying causes of clients' and students' poverty-related problems, and how to motivate clients and students and lead them to adopt behaviors conducive to overcoming poverty.

Fundación Paraguaya's interventions are designed to empower its microfinance clients and students to overcome poverty in all its dimensions, as it affects them personally. As a first step, Fundación Paraguaya provides all its village bank clients with a standard package of services that offers solutions to several poverty-related problems. These include access to credit, required savings, membership in a solidarity group, and the various benefits of belonging to Fundación Paraguaya's Client Club. Club benefits include group health and burial insurance, store discounts, and recreational opportunities.

The village bank advisor also works with each client to develop a specialized package of services to address her family's particular poverty-related problems. Typically, the first task is to help the client develop a business plan to raise per-capita family income above the national poverty line. Thus, the package of personalized services might include a microloan to another adult member of the household; microloans to expand business premises or to finance the process of legalizing a business or establishing titles for land and other assets; and the opportunity to become a microfranchise by selling reading glasses, over-the-counter pharmaceutical products, basic foodstuffs, or other products that Fundación Paraguaya is working to turn into client microfranchise opportunities.

Fundación Paraguaya also empowers village banks and their communities to develop their own solutions to the poverty-related problems that members have in common. For example, Fundación Paraguaya provides microloans to nonprofit rural community water boards. It also connects client producers, such as low-income women producing agricultural goods, with client buyers, such as small grocery stores. It helps village bank clients organize themselves to take advantage of economies of scale by buying inputs, producing goods, and marketing their products as a group. It also encourages the most successful village bank members to share their business and personal skills with other members; for example, the literate members of one village bank are teaching other members of the group to read and write.

Fundación Paraguaya also seeks alliances with other institutions that can help its low-income clients address poverty-related problems that are beyond the scope of its own activities and expertise. To date these include Vittana (microcredit for education), Aflatoun (youth savings groups), Vision Spring (microfranchising of reading glasses), and Fundación Visión (trains Fundación Paraguaya's village bank advisors to screen for vision problems and refer clients to the appropriate eye-care institutions, including those that provide affordable cataract surgery).

Last but not least, Fundación Paraguaya encourages its clients to use their village banking structure to strengthen their organizational and participatory skills and to lobby municipal governments to provide needed services. This is a key factor, as it not only allows the poor to fight for their rights, it also helps government to better understand and quantify demand for specific goods and services. Usually, road and bridge construction, schools, post offices, police stations, and health posts or clinics are things that neither businesses nor nonprofits can provide. Given the scarcity of resources, the poor have to understand that the squeaky wheel gets the grease!

In 2011, Fundación Paraguaya's Poverty Stoplight program enabled 6,400 families (an estimated 32,000 people) to bring their family income above the national poverty line. A second intervention using the Poverty Stoplight in 2012 brought an additional 6,000 families above the national poverty line by year's end while enabling 600 of the previous year's 6,400 families to transform *all* the indicators in their family stoplights from red or yellow to green, indicating that they had overcome poverty in all its dimensions. In 2013, Fundación Paraguaya is helping another group of 6,000 families to rise above the national poverty line while working to ensure that previous "poverty graduates" remain above the poverty line. If an estimated 92,000 people have been lifted out of poverty by their own efforts, how much more can be accomplished if society as a whole makes a concerted effort?

Meanwhile, our staff has developed a curriculum and lesson plans so that teachers and students at our self-sufficient agricultural school can understand and address the 50 poverty indicators at each student's home. Needless to say, this has given our school a whole new role. It not only trains students to obtain employment (or self-employment) after graduation, it also trains them to understand the multidimensionality of the poverty affecting their families and to develop, together with their parents and siblings, strategies to generate income to put them above the poverty line and to close other gaps in their housing, health, and infrastructure conditions.

PUBLIC-PRIVATE ACTION PLAN TO ELIMINATE EXTREME POVERTY IN PARAGUAY

In June 2012, the Paraguayan congress impeached President Fernando Lugo after a peasant-led land invasion left 16 farmers and policemen dead. Social unrest had once again knocked on Paraguay's door, thereby signaling the existence of serious social problems.

Federico Franco, the new president of Paraguay, asked me to join his new cabinet as chief of staff. Among my responsibilities were the coordination of the "social cabinet" and the supervision of social spending in key welfare programs. The new president and I quickly became aware that, rhetoric aside, ending extreme poverty was not part of the budgeted government agenda. Social programs were designed to make a dent in the problem, and most (if not all) programs were old-fashioned in their approach, simply throwing money at the problems and later quatifying number of personnel, resources, technical assistance, training programs, and activities in each program, and altogether disregarding results. Impact evaluation was almost nonexistent.

In December 2012, after a few months of taking stock, the Paraguayan government, frustrated by the apparent inelasticity of poverty with respect to economic growth and to its increasing portfolio of welfare programs, decided to zero in on extreme poverty. It assembled 30 government agencies that could play a role in addressing the problem and called on the business community, universities, nonprofits, and social activist organizations to form a public-private partnership to address this intractable problem.

A month earlier, in order to curb the misuse of ever-increasing public funds allocated for social welfare programs, the new government had established the National Anti-Corruption Agency, the Executive Branch Code of Ethics, and the Unified Registry of Welfare Recipients. Aware of the limitations of the traditional governmental approach, we posed new questions: Who are the extreme poor? Where do they live? How poor are they and in what "dimensions" of poverty are they poor? How do we establish a baseline and how do we get the poor themselves involved in solving their problems? What types of poverty need to be dealt with? Does addressing insufficient income solve other problems affecting poor families? Do "trickle-down" economics apply to the poor in Paraguay? Once they have enough income, will they access health, education, water, and housing on their own initiative?

The Paraguayan National Census did not answer these questions, and the government had never before posed the questions. "What do you mean you want the names and addresses of people living in extreme poverty?" conservative bureaucrats would say. "That's preposterous!"

That December, the government officially launched its Public-Private Partnership Action Plan to Eliminate Extreme Poverty by 2018. It incorporated the Poverty Stoplight methodology as government policy, and used the poverty-mapping tool to identify the 400 rural villages, 1,000 urban slums, and 116 indigenous villages where it thought the country's 1.2 million extreme poor were living. The Paraguayan government also determined that it had to officially earmark $2.4 billion in the budget over five years to ensure that 30 different agencies could deliver goods and services to more than 200,000 extremely poor families. Finally, the Poverty Stoplight provided a methodology that enabled 1,516 businesses to sponsor one extremely poor village or settlement in their communities, and thereby become the designated social activist interacting with the government on behalf of its adopted community, using the Poverty Stoplight methodology.

The Public-Private Partnership Action Plan is innovative in that it is concrete, stating who, what, when, where, why, and how the elimination of extreme poverty will take place. It is not a government plan per se but a joint public-private effort that incorporates businesses, universities, and civil society, in addition to the government and the poor families themselves. It is a plan to permanently *eliminate* poverty—not reduce it, have a war on it, or fight it. It focuses on extreme poverty, a specific subset of poverty.

Martin Burt

"ALL HAPPY FAMILIES ARE ALIKE": LESSONS LEARNED AND POLICY IMPLICATIONS

Russian writer Leo Tolstoy began *Anna Karenina* with the following sentence: "All happy families are alike; every unhappy family is unhappy in its own way." By seeing the results of our Poverty Stoplight, we have come to understand that every poor family is poor in its own way and therefore needs an individualized strategy to eliminate its poverty.

We also have learned that social entrepreneurial organizations like Fundación Paraguaya can be more efficient and effective than governments in developing social innovations. It's not that public-sector innovation is not possible, but experimentation is easier in the private sector, budgets are more flexible, perspectives are more open, and time constraints are different. In government, one is allowed to do only what the law permits, while in the private sector one is free to do anything that the law does not forbid.

Fundación Paraguaya was not only able to see problems as opportunities, we also saw what no one else was seeing at the time: how to apply what worked in microfinance to education, and then to apply lessons learned in our self-sufficient schools for the poor in our village banks. Of course, we were never working alone. We always were accompanied by others both inside and outside the field of development and many people helped us reach our goals. We will need many such partners around the world in order to take our solutions to scale and reach the millions of people who really need new tools to permanently overcome poverty.

With the Poverty Stoplight, Fundación Paraguaya was able to test new hypotheses, take stock of lessons learned, and propose a new way of looking at poverty that combines various traditional approaches in an innovative way, including (1) the multidimensionality of poverty, (2) a human rights approach, (3) an integral and holistic focus, (4) a focus on the poor person's family, (5) emphasis on the wealth and potential inherent in human beings, (6) shared responsibility and self-reliance, (7) public-private partnerships, (8) education and training for social and economic inclusion, (9) a territorial focus and geo-referencing, (10) baseline data, (11) results and impact evaluation, and (12) transparency and rationality.

By focusing on a locally validated concept of what it is to be "not poor" across 50 indicators and defining, consequently, what it means to be poor and extremely poor, the Poverty Stoplight "granulates" a complex system such as poverty, making it possible for the social worker or the microfinance loan officer to understand the nature and seriousness of the different ways poverty affects poor families. It is now possible for every poor family to have an individually tailored plan to help them "graduate" out of poverty . Furthermore, since most poor families are not poor in all respects, it is possible to leverage the areas where the poor are successful to promote change in weak areas. Thus, the Poverty Stoplight provides hope by allowing the poor person to visualize her future flush toilet when she assesses her pit latrine.

The Poverty Stoplight approach also reduces the concept of poverty to an income gap relative to the indicator for the poverty line. If a family of four in a slum of Asunción must earn $420 per month in order not to be poor ($3.50 per person per day, or $14 a day for the whole family) and the family only earns $300 a month, their poverty is thus an income gap of only $120 per month. "Positive deviants" living in the slums are proof that a family can be motivated and trained in just a few months to earn an additional $120 a month. And because our experience has shown that there is a lot of "low-hanging fruit"—that is, many families in Paraguay are almost "not poor" in many indicators—we have realized that a poor family can quickly get on a path out of poverty.

Finally, the Poverty Stoplight strategy is scalable and replicable because it costs little to implement and can be adapted to any country. Nigerians, Brazilians, Palestinians, and Indians have their own definition of what it is to be not poor across different poverty dimensions and indicators. If in Paraguay having at least one water faucet in the house amounts to being not poor with respect to water, in Nigeria there must be an equivalent. Why? Because people in every country know perfectly well what it means to be not poor, to be poor, and to be really poor in every aspect of life because they see all these conditions in their own communities.

In conclusion, for poor families themselves, for social workers or microfinance loan officers, for social entrepreneurial organizations, for businesses, and for governments at all levels, the Poverty Stoplight can be a powerful tool for eliminating poverty because it simplifies, disaggregates, helps visualize, and proposes a way out of poverty. Unlike other tools and methodologies that search for proxies to promote change, the Poverty Stoplight embraces the extreme diversity and singularity of poor families. It enables change agents to visualize the opportunities by looking at red, yellow, or green dots on a Google map; technology and software producers to see how they can adapt what works in some industries to serve the millions struggling to overcome poverty; governments and businesses to use the Poverty Stoplight to understand how to eliminate poverty in their communities; and, finally, it enables poor families to raise their consciousness by seeing where they are starting from and the territory they must cross to arrive at a better reality.

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APPENDIX: THE FIFTY INDICATORS

Income and Employment
Income/earnings above the poverty line
Stable employment or business activity
Credit
Savings
More than one source of income
Documentation: personal Identification

Health and Environment
Potable water
Health care center close to home
Nutritious diet (no malnutrition or obesity)
Personal hygiene and sexual health
Ophthalmologist and dentist access
Vaccination
Garbage disposal
Unpolluted environment (no deforestation or degraded soil)
Insurance (health and burial)

Housing and Infrastructure
Housing with secure roofs, doors, and windows
Sanitary latrines and sewers
Electricity
Refrigerator and home appliances
Separate bedrooms
Elevated stove and ventilated kitchen
Tables, chairs, cutlery, and basic comforts
Access to roads in all weather conditions
Regular means of transportation
Police station and physical security
Telephone or cell phone
Sufficient and appropriate clothing

Education and Culture
Spanish literacy
Children educated though ninth grade
Knowledge and skills to generate income
Ability to plan and budget
Communication and social capital
School supplies and books
Access to information (radio or TV)
Entertainment and leisure

Values cultural traditions and heritage (such as traditional music)
Respects other cultures
Human rights awareness (for children, disabled people, women, and the elderly)

Organization and Participation

Is part of a self-help group or another group/organization that helps her become a more self-actualized person
Has policy advocacy capabilities and can influence the public sector
Has ability to solve problems and conflicts
Is registered to vote and votes in elections

Interiority and Motivation

Self-awareness and self-esteem
Awareness of needs (personal goals)
Moral values and consciousness and
Awareness of the emotional-affective spectrum
Aesthetic self-expression; appreciation of art and beauty
Psychosexual awareness
Entrepreneurial spirit
Autonomy and ability to make decisions

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1. Salomón, J. (2013, August 25). *Exportaciones de Paraguay expresadas en raciones de alimentación para consumo humano*. Ministerio de Industria y Comercio.
2. For more than two decades, Paraguayan business and social leaders Guillermo Peroni, Esteban Burt, Antonio Espinoza, Daniel Elicetche, Alvaro Caballero, Raul Gauto, Pascual Rubiani, Yan Speranza, Amado Adorno, Margarita Kelly, Fernando Peroni, Marta Lane, Roberto Urbieta, Enrique Lando, Jose Antonio Bergues, Ruben Fadlala, Marcos Goldemberg, Astrid Gustafson, and Guido Britez have been our most active directors and members.
3. Boston: Shambhala Publications, 1996
4. Wilber, p. 104
5. New York: McGraw Hill, 2008.
6. Positive deviance is defined as "intentional behaviors that depart from the norms of a referent group in honorable ways.", as defined by G. Spreitzer and S. Sonenshein from the University of Michigan Business School (*American Behavioral Scientist*, Vol. 47 No. 6, February 2004 828-847), p. 828, retreived from http://webuser.bus.umich.edu/spreitze/ABS_SpreitzerSonenshein.pdf on 10 july, 2013.