

# Stanford SOCIAL INNOVATION REVIEW

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**Social Innovation and Resilience: How One  
Enhances the Other**  
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# Social Innovation and Resilience: How One Enhances the Other

By Frances Westley

In 1972 Bunker Roy and a small group of colleagues set up the Barefoot College in Tilonia, Rajasthan, India. Their vision was an interesting and catalytic one, joining old and new, traditional and radical. Informed by the teachings and philosophy of Mahatma Gandhi—giving the poor and the dispossessed the means to produce their own necessities—the Barefoot College trained the poor to build their own homes, to become teachers in their own schools, and to produce, install, and operate solar panels in their villages. Roy and his colleagues also emphasized empowering women in general and grandmothers in particular. As a result, “professional” expertise was placed in the hands of the poorest of the poor and the weakest of the weak: village women.

In one way, Barefoot College’s innovations were deeply radical—challenging the conventions of village life, professional associations, and traditional culture. In another way they were classic *bricolage*, a term drawn from the junk collectors in France and defined as “making creative and resourceful use of whatever materials are at hand (regardless of their original purpose).” In this case the juxtaposition of elements not normally combined addressed a cluster of intractable problems including the health needs, gender inequalities, energy needs, and educational needs of the developing South.

Barefoot College is clearly a social innovation, and a successful one, that has spread across the developing world: Women from African villages have traveled to India to learn about its ideas and practices, and graduate students from North America are applying the concepts to aboriginal communities in the North.<sup>1</sup>

By juxtaposing the old and the new, the technological and the social, and the po-

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litical and the economic, social innovations build a resilient social-ecological system. With the earth and its ecological systems pushed close to planetary boundaries, we need innovative solutions that take into account the complexity of the problems and then foster solutions that permit our systems to learn, adapt, and occasionally trans-

form without collapsing. More important, we need to build the capacity to find such solutions over and over again.

Part of building resilience in complex systems is strengthening cultures of innovation. These are cultures that value diversity, because as any *bricoleur* knows, the more (and more different) the parts, the greater the possibility of new and radical combinations. But these cultures also need to encourage the kind of communication and engagement that allows disparate elements to meet and mingle, and that allows for experimentation and support rather than blame. Such cultures support social innovation, and social innovation in turn builds resilience.

Resilience theory is becoming more popular as a lens to focus on linked social-ecological systems at all scales, from the individual, to the organization, to the community, to the region, and to the globe. As a theory, it is deeply interdisciplinary, representing the intersection of psychology, ecology, organization theory, community studies, and economics.<sup>2</sup> It is similar to sustainability science in that it is a whole system approach that posits inextricable links between the North and the South and between the economy and the environment. But it differs in that it focuses on the balance between continuity and change, a continuous (or infinite) cycle of release, reorganization, growth, and consolidation that characterizes all resilient living systems.<sup>3</sup>

In the release and reorganization phases, new elements may be combined in new ways.



In the growth and consolidation phases, these new combinations attract resources and capital and deliver returns in energy, biomass, or productivity on which the system depends and thrives. To understand this concept, think about a mature forest, with energy and physical capital stored up in biomass. A forest fire triggers a release of energy and resources. New life forms spring up in the fertile ground, absorbing the nutrients quickly. Some of these forms are species that have lived in that forest before; others are new. Not all can survive, so a pattern of dominance results in some species dying out and others accumulating biomass to grow to a mature forest. Resilience theory suggests that a serious

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loss of system resilience happens only when the system gets trapped at some point in the cycle: System resilience lies in the continuous movement through the cycle, causing the system to adapt or transform in the process.

Now consider this cycle applied to innovation, either technical or social. As Joseph Schumpeter outlined in *Capitalism, Socialism, and Democracy*, entrepreneurs come up with new ideas, using the resources available. Some ideas fail, but others take wing and become new products, programs, processes, or designs that attract resources and become part of the established system. Here too we see a similar pattern: the association of old and new ideas in the idea generation stage; a shakeout of competing ideas and organizations in favor of those able to attract the most resources; a pattern of dominance and consolidation of successful ideas and organizations; and the institutionalization of the innovations so that they become business as usual.

The similarity between the cycle of innovation and the cycle of the release and renewal of resilient ecosystems is striking. But resilience theory suggests that for the broader system (the organization, the community, or the broader society) to be resilient, it is not enough to innovate. Society needs to build the capacity for repetition—over and over again, forever. Moreover, although many innovations allow for adaptation (such as portable homes for the homeless that allow the homeless to live more successfully in extreme temperatures),<sup>4</sup> other innovations, more disruptive and radical, have the potential to transform the system. This was the case of the Barefoot College.

### **What Resilience Brings to Social Innovation**

Resilience theory has many lessons to teach people involved in social innovation. The most important is the need to look at a problem systemically. Western culture has a long history of introducing solutions (particularly technical ones) designed to solve a specific problem, without considering the broader system impacts the solution might have. Consider the race to develop biofuels. The current preoccupation with finding energy sources to replace fossil fuels and petroleum-based products threatens to neglect the multiple system impacts that the production of biofuel has on the environment and society. For example, because biofuels can be grown on poor land (a plus from the

point of view of producers), they are likely to absorb land currently used for subsistence agriculture in the developing world, making food security even more precarious.<sup>5</sup>

Another example of negative unintended consequences on the larger system is the development of ecotourism in the Galapagos Islands. The islands offer unparalleled biodiversity. To maintain this diversity and to stimulate the local Ecuadorian economy, ecotourism companies compete to bring small groups of tourists to the islands. The government controls how many people can disembark on an island, but there is less control over the number of boats that can sail or motor close to an island. As a result, the increasing numbers of boats have caused drastic erosion of the coral reefs. What may seem like a panacea can turn out, when viewed from the point of view of the larger system, to be an illusion.

A historical example of an innovation gone wrong was the residential school system for aboriginal Canadians. Proponents believed that the best way to “help” aboriginal people was to assimilate them by teaching them European culture, language, religion, and economic practices. To accomplish this, the government removed hundreds of children from their homes and put them into residential schools, forbidding them to use their native language. At the time most white Canadians saw the practice as an innovative solution to the problems of First Nations people. But even in the light of the social philosophy of the time, it was an intervention that took no account of the systemic nature of the problem. The intervention deeply undermined the general resilience of aboriginal communities, greatly exacerbating the problems that the initiative tried to resolve. It destroyed communal ties and lineage lines and left a whole generation not only poorly assimilated, but stripped of its cultural identity. It is an extreme example of failing to consider the systemic nature of a social problem when attempting an innovative intervention.

Understanding resilience can also help social innovators balance top-down and bottom-up approaches to crafting solutions. For example, relief agencies were concerned that the trauma of displacement would cause Eritrean women living in refugee camps to suffer post-traumatic stress. But it turned out that as long as the women were able to create coherent accounts or stories and share them with others, their stress was manageable.

Similarly, when efforts were made to provide people with their traditional foods (such as “famine foods”), communities were much more resilient in the face of famine. Because of experiences such as these, international relief organizations are increasingly working closely with local people (by listening and learning) rather than immediately responding with top-down solutions.<sup>6</sup>

Governments strongly influence setting the parameters and creating the opportunities for innovation to occur at local levels. One of the best examples was the Brazilian government’s response to the escalating cases of HIV-AIDS. In 1990 the World Bank found that Brazil was one of the worst hit countries, with almost twice as many people infected as South Africa. The World Bank predicted that both Brazil and South Africa would see astronomical increases by the year 2000. The World Bank recommended that Brazil abandon efforts to treat people with HIV-AIDS and instead focus on prevention. But the Brazilian government ignored the advice and decided to unleash local creativity and innovation. The parameters were that no person—regardless of how poor, insignificant, or illiterate he or she was—would be written off as beyond cure. They lobbied the World Health Organization to reduce the costs of anti-viral drugs and launched an effective communication strategy to make the use of condoms sexy. They then gave enormous discretion to community leaders, including priests and nuns in local parishes, to figure out how to reach every infected person. Health care clinicians worked alongside NGOs to provide the full range of services needed, including testing, education, and delivering and supervising medication.

Despite its high illiteracy rate, Brazil achieved the same compliance rate across all communities as the United States. By 2000 the infection rate had dropped to 1 in 160, a far cry from the 1 in 4 predicted by the World Bank. This is an example of resilience theory at work—looking at the problem and solution systemically, across scales and subsystems, and taking account of the roles that local knowledge and government policy can play in crafting a solution.<sup>7</sup>

### **What Social Innovation Brings to Resilience**

One of the most important attributes that a social innovation approach offers is that it helps people understand the process by

which social systems adapt or are transformed. In particular, the approach shines a light on the various actors (such as social entrepreneurs and system entrepreneurs) who help these processes happen.

A large amount of research on social entrepreneurs has been undertaken. Less research has been done, however, on the system entrepreneurs who are responsible for finding the opportunities to leverage innovative ideas for much greater system impact. The skills of the system entrepreneur are quite different from, but complementary to, those of the social entrepreneur.

The system entrepreneur plays different roles at different points in the innovation cycle, but all of these roles are geared toward finding opportunities to connect an alternative approach to the resources of the dominant system. Opportunities occur most frequently when there has been some release of resources through political turnover, economic crisis, or cultural shift. In the Great Bear Rain Forest in British Columbia (BC), Canada, a political and economic crisis was provoked by the success of aboriginal land claims in the BC courts and the success of Greenpeace International's marketing campaign. This crisis created an opportunity for system entrepreneurs (a coalition of several NGOs) to convene a series of meetings and facilitate a process that allowed stakeholders who had been vehemently opposed to one another (aboriginal groups, logging companies, logging communities, the BC government, and environmental NGOs) to put aside their differences and begin to create solutions.

As these solutions multiplied, the system entrepreneurs moved into a new role: that of broker. They created bundles of financial, social, and technical solutions that offered a real alternative to the status quo. Once workable coalitions of actors and ideas had been forged, system entrepreneurs assumed yet another role—selling these ideas to those able to support the alternative with resources, policies, and media support. When policies were made to formalize new protection policies, financial support packages, and cultural promotion, the system entrepreneurs changed roles yet again by going back to the beginning of the cycle and reframing and challenging the status quo. In the process, the capacity of the social system as a whole to manage such transformations and adaptations had been strengthened. The same process is being used in a modi-

fied form in current negotiations around the boreal forest.<sup>8</sup>

In many instances, this kind of transformation takes many years. It requires a long period of preparation in which an innovative alternative is developed and then scaled up when a window of opportunity opens. In Chile, the window of opportunity for the introduction of community fisheries came with the intersection of an environmental crisis (the crash of the local fishery because of overfishing) and a political crisis (the coup that unseated President Augusto Pinochet's regime). System entrepreneurs had been preparing for such an opportunity for many years by creating experimental sites in a few communities, creating a shadow network of international and national scientists, and maintaining good relationships with politicians and bureaucrats expected to survive Pinochet. Because of that preparation, within a few years of the coup a new fisheries law was passed, enshrining community-based fisheries and environment-based management.<sup>9</sup>

Of course, "managing for emergence" is easier in some cultures than others. Some cultures allow ideas to move freely and quickly, combining with other ideas in the kind of *bricolage* necessary for innovation. Studies of resilience at the community, organizational, and individual levels suggest that these same qualities characterize organizations and communities that are resilient to crisis and collapse. The characteristics that these organizations and communities share are low hierarchy, adequate diversity, an emphasis on learning over blame, room for experimentation, and mutual respect. These are all qualities that support general resilience. If they are attended to, the capacity for social innovation will also increase, creating a virtuous cycle that in turn builds the resilience of the entire society.<sup>10</sup>

### Final Thoughts

People involved in social innovation and people involved in creating a resilient society can learn much from one another. Resilience theory suggests that the processes of adaptation and transformation are dynamic, cyclical, and infinite. Social innovation is not a fixed solution either; it is part of a process that builds social resilience and allows complex systems to change while maintaining the continuity we rely on for our personal, organizational, and community integrity and identity.

To create a resilient society, it is important not to rely solely on the social entrepreneurs who come up with innovative ideas. Neither should one rely solely on government to create innovative opportunities. Instead, we should watch for those moments when crisis, disaster, or strategic vision opens a window for securing resources for the most promising alternatives.

Last, it is important to focus on a new kind of entrepreneur who complements the social entrepreneur: the system entrepreneur. The system entrepreneur identifies the promising alternatives to the dominant approach and then works with networks of others to stimulate and take advantage of opportunities for scaling up those innovations. Working at the level of the whole system, system entrepreneurs develop the alternatives, attract the resources, and work toward the moment when the system tips. ●

### Notes

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