

The Cooperative Model as a Means to Alternative Development: Enabling Rural Peoples to Gain Economic Stability, Act Collectively, and Sustain the Local Ecology through Organic Farming



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Abstract

Economic development and globalization worldwide have proven to benefit only a select privileged segment of the population leaving the majority of the population to bear their burdens. Despite India's excessive economic growth in the last decade with GDP currently at 5.6%, India's HDI is currently at .586, significantly low for a country with such dramatic economic growth (UNDP, 2013; World Bank Global Economic Prospects, 2015). Despite a rising GDP, there has been an increase in unemployment (8.8 % in 2010), poverty, and hunger (Sinha, 2010). Industrial agriculture has led to thousands of farmer suicides in India, estimates ranging from 40,000 to 150,000 between just the years 1997-2000 due to debts that farmers were unable to repay (Assadi, 2012). In response, the cooperative model has risen as an alternative to mainstream development; it puts the power in the hands of the people and practices self-governance and collective decision-making. Given the extreme economic stresses on farmers today, cooperatives stand as one of the only sustainable solutions for empowering farmers (Anandaram and Dubhashi, 1999). In opposition to mainstream development, the non-governmental organization Timbaktu Collective has been working for over two decades with 157 rural villages in Anantapur, Andhra Pradesh taking an active stance against India's concept of development. The aim of this study is to explore how Timbaktu is using the cooperative model through programs such as Timbaktu's Organic Farmer's Cooperatives and the Balala Sangha Program—children's ecological rights clubs. The main research questions is "How is Timbaktu using the cooperative model as an alternative to mainstream development?" In addition, "How is the cooperative model altering decision making processes and affecting how individuals (farmers and youth) think about the community and the environment versus their own self-interest? It was found that the cooperative model is being used as a successful alternative as it has led individuals to act more collectively and take on greater responsibilities. Farmers and youth are learning through experiential methods such as farmer field schools and through hands on activities. The youth are receiving training in becoming educated, empowered leaders and gaining a responsibility for their community as well as their local environment.

Introduction

In light of the fact that mainstream development has led to major inequality and extreme environmental degradation, non-governmental organizations are working with rural villages on alternate forms of sustainable development. While advocates of the benefits of the capitalist economy would argue that a country's economic growth should help alleviate poverty and trickle down to those in need, actually globalization has been shown to frequently do the opposite.

“Globalization process increases poverty and accelerates social polarization even between the rich nations and the poor nations. The ill effects of globalization-neglect of agriculture sector, unemployment, migration, development displacement, loss of small-scale industries, growing urban poverty are some of the indications of poverty. Environmental degradation, deforestation, pollution of air, water and soil erosion is also connected with the process” (Sinha 2010: 36).

On the 1st of May, two headlines in the Hindu clearly portray the paradox and absurdity of globalization and India’s economic growth model: “Growth: the next steps to be taken” and “Worst-ever agrarian crisis in Vidahrba.” In Vidarba, farmer suicides have been rampant with most of Mahashtra’s 601 farmer suicides taking place in this region (The Hindu, 2015). Not one line of the article on growth mentioned agriculture and rural life despite the fact that around 74% of India’s population is living in rural areas and a major portion of those in rural areas are involved in agricultural work (Sinha 2010; Woodlin and Lucas, 2004). Here, the root of the problem becomes evident. In 2000, a case from the World Trade Organization and the United States government drove India to adopt a more laissez-faire import policy “Farm prices and rural incomes are falling dramatically as a result of this imposed import liberalization... Worst of all, agriculture, the last bastion of India’s national economy and the livelihood of the majority of its people, is facing unprecedented threats” (Woodin and Lucas, 2004). A model of development that is based on economic growth fails to take into consideration the majority of a country’s people.

In a study of localized development and empowerment, as opposed to India’s neoliberal mode of development, Tara Natarajan (2005) finds, “This process of

regeneration is focused on creating an ecologically driven local agrarian economy that primarily functions as a provisioning mechanism of livelihood and food security and instrumentally also empowers people through the creation of local self-dependent communities” (Natarajan). Another major difference between counter-development, rather than classic neoliberal economics is the focus on the local and unique qualities of a town or village rather than adhering to a one-sided and monolithic vision of development. This monolithic vision involves a move away from rural and towards urban, a focus on science and math and less on the arts, humanities, agriculture, and local vocational skills, and a one-sized fits all concept of what a development looks like. The 73rd and 74th Amendments to the Constitution were an attempt to distribute more power into the hands of local governances (Shrivastava and Kothari 2012:263). For rural villages and urban areas, local governance bodies were created so that decision making would take place through those who actually know the village, the villagers, and the local issues. Nevertheless, localization is possible with support from the government and NGOs, rather than the decision-making ability being in the hand of those bodies (Shrivastava and Kothari 2012:262). Additionally, the state of Nagaland has already successfully started the process of “communitization (providing for greater collective control) of education, health, and other aspects” (Shrivastava and Kothari 2012:263).

Timbaktu Collective has emerged as a successful alternative to development. The NGO Timbaktu is working with 157 villages on a ground-up type of development, which focuses on empowerment of the most marginalized members of society including dalits, women, children, and disabled peoples. Timbaktu works to enable marginalized communities to create cooperatives and community organizations that work on restoring

natural resources, sustainable agriculture, alternative education, human rights awareness, and overall creating community member led alternatives to development (Timbaktu Collective Annual Report 2013). “A piece of dry and degraded land 23 years ago, Timbaktu is today a green wilderness and an agro forest habitat. Timbaktu has been our learning space where strategies for eco-restoration, organic farming, alternative construction, alternative lifestyles, and alternative education were developed” (Timbaktu Annual Report 2013). Timbaktu stresses “local self governance” as one of the most important aspects of their philosophy (TC Annual Report 2013). Timbaktu strongly believes in the change coming from the people. “The main operational strategy of the Collective is to promote viable, sustainable and democratic cooperatives and community based people’s organizations, through thematic working groups” (Timbaktu Collective Annual Report 2014). This is actively in opposition to mainstream modes of development, which focus on individual pursuits and self-interest. Instead, the emphasis is placed on the community and the cooperative works together to create goals and plans that will benefit all.

Timbaktu Collective is working in the Anantapur district, the second driest region in India making it an extremely difficult climate for successful agricultural production (Kothari 2012). “Years of drought and land mismanagement in the district of Anantapur, Andhra Pradesh has led to wide-spread degeneration of forest and farmland, causing men and women who rely on agricultural work to endure decades of financial hardship and poverty. The quality of the land is not conducive to agricultural work, although it remains the mainstay for the majority of families in the area” (Makasakthi Cooperative Federation 2012:6). “In 2006, Anantapur was one of the thirty-one districts identified by the

Government of India as being prone to agriculture-related suicides” (MSSRF 2009; Timbaktu Organic). The majority of families in the district used to cultivate millets, as they are indigenous to the area and a part of the culture. About fifty years back groundnut was introduced to the area and farmers were enticed to leave millets and switch to groundnut cultivation (Vineeth, Personal Interview). “When successful, this gave the farmer a good return, but if it failed due to drought or pests, the result was economic devastation... the cultivator was locked into a vicious cycle of greater and greater input costs (especially pesticides), growing dependence on government corporate entities, and declining fertility of the soil” (Kothari 2012). “However, before the pressures of mainstream development and monoculture cash crops came in, farmers knew how to care for the land in their region. Timbaktu “hopes to revive the indigenous knowledge, wisdom, art, and tradition of farming, of husbanding the land, of growing healthy food. It promotes agricultural practices that will rejuvenate the soils and make farming feasible” (Timbaktu-Organic.org). Timbaktu Organic has encouraged farmers to return to the grains that are indigenous to the region including “minor millets such as samai, varagu, korra, arika, major millets such as ragi, sorghum, various pulses and paddy” (Timbaktu-Organic.org). Timbaktu Organic has a farmer education program which uses experiential training from one farmer to another to teach sustainable agricultural practices (Timbaktu-Organic.org). Through this manner, local knowledge systems are being revived along with the farmer’s livelihoods and the land.

For the purpose of the study, two of Timbaktu Collective’s programs will be focused on: The Farmers’ Cooperative Model and Mogga- the Children’s Ecological Club Program. The aim of this study is to explore how these cooperative programs

leading to alternative development and changes within the communities. Hence, the initial research question is “How is Timbaktu using the cooperative model as an alternative to mainstream development?” Additionally, “how does the cooperative model alter the decision making process and how individuals think about the community and the environment versus their own self interest?” “How is experiential education taking place through the farmers’ cooperatives and through Balala Sanghas?” And lastly, “How is the cooperative model affecting the youth and their roles as members of a community and safeguarders of their local environment?”

Background: The Cooperative Model

The initial research question was “How is Timbaktu using the cooperative model as a means of alternative development?” To understand this question, the origins of the cooperative model must first be explored. Timbaktu Collective works through creating cooperatives that aid groups of people in collective saving, decision-making, thrift, empowerment, and overall increasing self-sufficiency. Timbaktu’s founders were influenced by the philosophy of Mahatma Gandhi who advocated for swadeshi- self-sufficiency as an alternative to the hegemonic power structure that was in place due to British rule (Radha, personal interview). Gandhi arguably advocated for alternative development that was “designed to build up the nation from the very bottom upward” (Gandhi 1945: 5 qtd. in Ishii, 305). The point of the cooperative model is for the people to come together and through collective power bring about change. This is in contradiction to the capitalist mindset and India’s economic growth model which focus on competition, urbanization, infrastructure, profit generation, and overall the economic

growth of the nation rather than its people. In contrast, “the alternative theories are qualitative and spiritual approaches to development which... enabled “deprived” people to take part in the process of social development in order to restore their “capability” (1989 qtd. in Ishii, 310).

India has more cooperatives than any other nation in the world with 4.5 lakh cooperatives working with 220 million people (Anandaram and Dubhashi: 1999). Cooperatives are created primarily due to financial reasons and are a necessary alternative as farmers in this drought prone region are struggling to get by (Anandaram and Dubhashi 1999; Patibandla and Sastry 2004). “The government of Andhra Pradesh defines the poverty line to be Rs 12,000 per family per years and most of them are below it. The poor have repeatedly voiced several concerns- lack of water for irrigation purposes, credit and market linkages” (Patibandla and Sastry 2004). Anandaram and Dubhashi believe there is “vast scope for cooperative movement to bring about socio economic development in the country” (1999). Collectives are significant in that they disperse responsibility “by sharing risk among a larger number of agents” (Patibandla and Sastry 2004). Various cooperatives that have been successful include Grameen Bank in Bangladesh, Thrift and Credit Cooperatives through the Cooperative Development Foundation in Andhra Pradesh, Amul and sugar cooperatives in Maharashtra (Anandaram and Dubhashi 1999; Patibandla and Sastry). Grameen Bank is a microfinance cooperative with over 2 million members. It was supposed to have no “outside intervention” once the cooperatives were created, but critiques have been made that the power lies in the hands of those at the top (Patibandla and Sastry 2004). Most well-known, Amul has been a major success and is now a “large enterprise with complex and highly efficient horizontal

and vertical organizational structure and linkages competing very effectively in the national market” (Patibandla and Sastry 2004). The cooperative was created in 1946 to help rural dairy farmers combat the issue of the singular middleman, Polson and help farmers regain control over procurement. “As most members were small farmers with liquidity constraints, they made sure that they got frequent and reliable cash payments for supply of milk” (Patibandla and Sastry 2004). Amul is perhaps the greatest success story for cooperatives and shows how a well-run cooperative can turn into a thriving business empowering small-scale farmers (Anandaram and Dubhashi 1999).

Methods

Within this study project, qualitative research methods were used. Overall, 18 interviews took place with 24 people interviewed. Ten interviews came from Timbaktu staff and administration while 14 came from farmers or youth in the villages Kondakinapalli, Puletipalli, and Venkatampalli. Observation was utilized as well at the Farmers’ Crop Planning Meeting in Kondakindapalli, the Balala Sangha meeting in Kondakindapalli, observation of a Balala Sangha Samakya Meeting at Timbaktu, and observation throughout the author’s stay at Timbaktu and homestays in the three villages. Some interviews were conducted in English while others were translated by Radha Kunke, Ramesh Dalavaypalli and Shreenivas Gangula. This research was exploratory, evaluative, and predictive. Interviews lasted from 10 minutes to 45 minutes depending on the nature of the interview and the time available of the interviewee. This study abides by SIT World Learning’s ethical guidelines as well as Kenyon College’s ethical guidelines. This includes the Human Subjects Review, the Local Review Board, and the Institutional

Review Board of SIT. No harm came to any individual within this study, no children under 18 were interviewed, interviewees gave informed consent, and interviewees were made aware of their rights and were free to stop answering questions at any point. Before each interview, the intentions of the student author were made clear and the purpose of the study was explained. Interview questions varied and transformed depending on the individual interviewed and as certain questions were only receiving limited answers, new interview questions were created.

Findings

Timbaktu Organic

The organic farmers' cooperative is different from the typical farming scenario in a variety of manners. Primarily, the farmers are acting as part of a group rather than as competing individuals. The primary difference is both social and economic as in the coop decisions are made via voting and all individuals are equally represented (Murugesan, personal interview). Timbaktu Organic is working in 45 villages with 1,800 families, and with over 9000 acres of farmland (Annual Report 2014). Timbaktu Organic works via a cooperative system with subgroups and further subgroups to spread the responsibility and power of the people. The number of cooperatives varies depending on village, but each cooperative has about 30 members and 2-4 sanghas with 15-20 members. Each sangha has 2 leaders and a field cadre. The field cadre is a representative of Timbaktu, but is also a farmer and a member of the community and is responsible for overseeing 3 villages (Vineeth, personal interview). Each sangha has subgroups called brundas with farmers whose land is adjacent to one another. These farmers meet, visit each other's farms,

check for diseases and collectively plan what natural mixtures to apply (Sankareddy, personal interview). Each village elects a director whom they feel will adequately represent them. The director and all the members contribute an equal amount of money to the cooperative; therefore, there is no power play or economic incentive involved. In a given mandal such as C.K. Palli, (the mandal where this study took place), there are 14 villages and 14 representatives who meet once a month. Dharani Farming and Marketing Mutually Aided Cooperative is the marketing end of the process. Dharani exists as an alternative for farmers so they do not have to go through a middleman trader. (Murugesan, personal interview). “The primary intention of Dharani is to procure, process and market the produce of its farmers members, is possible at premium price, and ensure higher returns for its members” (Timbaktu-Organic.org).

Not all farmers who are part of the cooperative are selling to Dharani per se. However, during the farmer’s meeting Kishtappa, a representative from Timbaktu explained the basics of how Dharani works and the benefits of joining. The major benefit is that Dharani sets fixed prices at the beginning of the season for crops (Vineeth,; Murugesan, personal interviews; Observation, Farmer’s Planning Meeting). This is a major difference from selling to a trader who is guaranteed to cheat the farmers by not properly weighing the crops (Vineeth, personal interview). Also, through selling to Dharani, rather than depending on a fluctuating, unknown market price, the farmers know what price their crop will make if it is a successful yield (Murugesan, personal interview). In this light, it is very economically smart for farmers to join the cooperative. Vineeth, coordinator of Timbaktu Organic, stressed that the incentive to switch to organic or join the farmer’s cooperative is coming from economic incentive rather than

environmental concern (personal interview). One must take into consideration the position of these farmers who are living hand to mouth in the second driest region in the country (Kothari). Their first concern must be their security and well-being before they can begin to tackle greater political, social, and environmental issues.

In this light, Timbaktu is trying to increase awareness among farmers about the benefits of switching to organic. Often, it is hard for farmers to understand that the inputs for groundnut are requiring so much money that despite a greater cash return for groundnut, they are actually losing money (Kishtappa, Farmer's Crop Planning Meeting Observation). Amala, a youth volunteer for PGS, the Participatory Guarantee System that ensures farmers are growing according to organic standards stated that the biggest issue is with farmers not doing the calculations of the price for their inputs versus the cash received at the end of the season (Amala, 2015). Amala feels that once farmers do the calculation, they understand. Now, since farmers have been losing so much by doing chemical farming, she feels the transfer back to organic and indigenous methods will be rapid (Amala, personal interview). In the Farmer's Crop Planning Meeting, Kishtappa asked multiple farmers to go through their inputs for the season, their crop, their yield, and profit. Then, calculations were made and it became evident whether they had actually made a profit over the season. A groundnut farmer, Anand had a yield of 15 bags which came to Rs. 27,750 with an additional Rs. 8000 for the bio waste produced. However, he had spent 48,500 on chemical inputs. It became evident that Anand had a loss over the season in contrast to another man who had planted foxtail millet, had less of a yield, but still came out with a positive profit because he did not spend excessive money on inputs (Observation, Farmer's Planning Meeting). The mindset that Timbaktu Collective is

trying to shift was started when the government and companies pushed groundnut cultivation in Andhra: the greater the input, the greater the yield. Now, what TC is trying to help farmer's internalize is the greater the input, the higher the cost (Observation, Farmer's Planning Meeting).

Economic Security

The initial research question was how is Timbaktu using the cooperative model as an alternative to mainstream development? Initially, the economic effects of the organic farmer cooperatives were the most frequently focused on both by TC administration and the farmers themselves. Social, environmental, and effects on youth were discussed as well but only upon prompting. However, through the research it is clear that farmers are saving money through organic farming by using natural methods to fertilize and keep pests away instead of spending thousands on chemical inputs. Across all 12 interviews in Kondakindapalli, Puletipalli, and Venkatampalli with 18 farmers interviewed, 3 common topics were brought up: the low investment, the lack of a middleman trader, and the soil changes that were leading to better yields. One point was prevalent across all interviews. With chemical farming, the soil had become hard. Now, with organic, it has converted to loose and soft soil. Soil that is smooth and nutrient rich is essential for obtaining a good yield. (B. Narasimhula; B. Akulapa; B. Mahesh; B. Narasimhula; Aadhinarayana, personal interviews). Overall, with the switch to organic farmers are obtaining a higher profit at the end of the season. This is either because their yield is higher than before switching to organic or because they are not spending exorbitant amounts on chemical inputs. Now, they have more of a consistent yield, sometimes perhaps less than with

using chemicals but when calculations are completed it is apparent that overall they are losing less than when they were farming with chemicals pesticides and fertilizers (Observation, Farmer's Crop Planning Meeting). Other farmers first scoff at those who switch to organic but then begin to inquire how they too could join the cooperative and make the shift when they see that other farmers are getting a better yield and spending less (B. Narasimhula; Sangareddy, personal interviews). Also, they see that the organic farmer's products are being bought and that they are doing well so they want to join (B. Narasimhula, personal interview).

Additionally, the cooperative itself is helping farmers so they can get loans. As Kothari notes, the women's cooperatives were the ones that originally realized that most of the expensive loans taken out were for agriculture and chemicals (Kothari). In the organic farming cooperative, all farmers are saving, as they are no longer paying exorbitant amounts on chemical inputs. As A. Venkata Lakshmi explained about the women's cooperative, you save together and then all have enough. If necessary they can take out loans periodically; having that credit and cash in hand makes all the difference. There is liability to the group so loans will get paid back (A. Venkata Lakshmi, personal interview). B. Akulapa and B. Mahesh agreed that the cooperative is good because they can get investments, take out loans and create a marketing platform (April 29, 2015). Additionally, the fact that there are no middlemen or traders is a factor that all members of Dharani are benefitting from (B. Akulapa and B. Mahesh; Sankareddy, personal interviews). Because there is no middleman, proper measurements are being made, there is more market feasibility, and farmers know what price they will be getting for what

crop at the beginning of the season (Sankareddy; Vineeth; Murugesan personal interviews; Farmer's Planning Meeting, Observation).

Community and Knowledge Sharing

This section explores how the cooperative model is altering the decision making process and how individuals think about the community and the environment versus their own self-interest as well as how experiential education is taking place through the cooperative model. Throughout all of its programs, TC puts strong emphasis on democratic methods of decision-making and the power of the people. One individual alone is weak, but with a group he or she becomes strong and gains the confidence to demand their rights (Radha, 2015). Farmers are planning the meetings, keeping track of who attends, keeping track of which crops and how many crops are being cultivated and procured (Sankareddy, personal interview). The cadre will bring the agenda, but then all farmers are involved in discussion together and decisions are made collectively amongst members (Balanayama; Sankareddy, personal interviews). As B. Narasimhula explained, there is a connectedness and togetherness being in the sangha. Each farmer knows what the other is growing. Rather, if you're alone and in trouble, there is no one to help. Now, there is a kind of mutual support (B. Narasimhula, personal interview). As Akulapa stated in accordance, with one person cultivating the land, if there is a disease and you are alone you won't know what to do. Because of the cooperative, farmers are sharing knowledge such as what kashiam or jeevanbrutam or natural pesticide you would apply in a given situation (B. Akulapa, personal interview; Sangareddy, personal interview). This process

of knowledge sharing is a crucial part of being in a cooperative that is not always visible because it is happening in complex and small ways.

The sharing of knowledge is happening at many different levels. Akulapa stated many reasons the cooperative is important including the support of being together as well as the sharing of traditional knowledge that is now taking place (B. Akulapa, personal interview). In Puletipalli as well, Sangareddy explained the process of knowledge sharing. The 4 sangha leaders are learning organic farming methods and sharing this knowledge at the sangha meetings. The cadre conducts multiple farmer field school which is about 7-10 days, farmers attend a training at Timbaktu, and farmers are also exposed to nearby organic farms and NGOs where they can learn right in the field (Sangareddy; Vineeth, personal interview). Additionally, children in the Balala Sangha are learning how to farm organically, how to separate waste and recycle, how to share items such as games, how to take on a leadership role, and overall about their rights and responsibilities to a healthy environment (Prashant, personal interview). Prashant, a sangha leader in Kondakindapalli believes it is important to teach the children because then they are teaching their family and friends (Prashant, personal interview). In this manner, there is a natural dispersion of knowledge taking place through the social fabric in the village.

In the Farmer's Planning Meeting, alternative learning methods were used in conjunction with explanations of rules and lists. As farmers publically went through their losses and gains, it became apparent that growing organic is actually leading to profit rather than farming with chemicals. This occurred in conjunction with Kishtappa explaining why cultivation of millet is better. Then, Kishtappa told a story about two

farmers who were brothers, one who grew groundnut and one who began growing millet organically. The millet farmer was made fun of especially when at two months his crop had not begun growing, but the groundnut was all green. The groundnut farmer encouraged his brother to use chemical inputs. However, his brother stuck to his conviction and a few months later his crop had incredible yields, and he had a much more successful season than his brother. Lastly, the group sang songs about using indigenous methods of growing and taking care of the land (Farmer's Planning Meeting, Observation). Through these alternative methods, knowledge is getting shared in a non-conventional manner. The use of story, song, and the examples of peer farmers is extremely important in this cooperative model where the goal is not to tell farmer's this is what you have to do, but to allow them to see the benefit of making this switch on their own. The overall goal is to reverse the mindset ingrained by big companies and the government that being a groundnut farmer is admirable while being a millet farmer is laughable (Farmer's Planning Meeting, Observation). Through the cooperative, Timbaktu and affiliated farmers and directors are working to change this mindset.

Additionally, the cooperative allows for group liability and added responsibility to take place as well. If one farmer does not attend a meeting, the others in the group will inquire to find out why (Sangareddy, personal interview). Farmers have specific regulations as according to the rules set by Dharani and the farmer's representatives (whom they elect themselves). The farmers collectively decide who will get a loan and for what the loan will be. As Balanayama noted, in the Brunda you agree and sign together and only then can you get a loan (Balanayama, personal interview). If one farmer uses "prohibitive inputs," that sangha will be given one chance but if they are

found to be breaking the organic regulations again they will be thrown out (Murugesan, personal interview). In this light, each farmer has a responsibility towards the sangha and the cooperative so any use of chemicals or failure to follow standards may negatively impact the entire group. This creates a significant group liability. In this manner, it is a system of communal checks and balances.

Environmental

Through the groundnut industries push to move out indigenous methods and trap farmers in a doomed cycle of buying chemicals and fertilizer and accumulating eventual debt, today about 90% of farmers in this district are now growing groundnut. Before the 1960s, 95% of farmers were growing millets, which are indigenous to the area and grow well with little rain (Vineeth, Murougesh, personal interviews). A shift occurred where millet farmers were looked down upon, as millet is a poor man's food (Radha, Farmer's Planning Meeting). Because of rice subsidies and the push for groundnut, millet got pushed out of many farmers' diets. Consequently, many of the children today didn't grow up eating millet and therefore haven't developed a taste for it (Vineeth, personal interview). However, Venkata Lakshmi, the first woman farmer to switch to organic in Kondakindapalli has eaten millets her whole life. She said that kids are not eating them now because the diet has changed, but little by little, slowly by slowly, she believes the children will get into the habit again. Venkatalakshmi keeps $\frac{1}{4}$ of the millets she produces on her family's farm for their own consumption. Overall, she produced 4 quintels (400 kg) this past year and kept 100 kg of millet (Venkata Lakshmi, personal interview).

Timbaktu Collective is sharing the lost knowledge of local organic farming methods with the farmers. Farmers are encouraged to use natural fertilizers such as “jeevanmrutham, panchagavya, and amruthpani made from local available matter including neem, castor, cow urine, and dung” (Timbaktu Organic, Organic Farming Practices, timbaktu-organic.org). Mixed cropping, neem, ploughing, and other natural methods are used to keep away pests (Timbaktu-Organic.org). Balanayama, a farmer from Venkatampalli uses intercropping as an organic farming method for cultivating her korra, soma, green gram, red gram, arika and jogar on 2 acres of land. However, due to lack of rain she has had a very little yield the past seasons and so she has not been able to sell to Dharani (Balanayama, personal interview). Venkata Lakshmi was one of the first to experiment with different natural solutions and mixtures using jayamma, jaggary, and different types of leaves. Her yield has increased and the soil is now healthier since the switch (Venkata Lakshmi, personal interview). In response to the question, “How has the shift to organic affected the environment?” the most common response was that the soil used to be hard and now it is soft and smooth (B. Akulapa; B. Mahesh; B. Mahesh’s father; Aadhinarayana; Narasimhula, personal interviews). With the high chemical inputs, the earth had become hard and lacked bionutrients (B. Akulapa, B. Mahesh, personal interview). Now, jeevanbrutam, neem cake, and cow dung has led to looser soil and an increase in micronutrients (B. Akulapa, B. Mahesh, B. Akulapa, personal interview). Sangareddy explained that Puletipalli has only one farmer’s cooperative with 2 sanghas and 30 members overall. Sangareddy stated that there is not going to be an environmental impact until another cooperative is created and more members can join. He said it has improved the environment, but since there are only 30 members it won’t create a big

change. However, he noted that the soil is changing and therefore other farmers want to join. (Sangareddy, personal interview).

Additionally, farmers were aware of the benefits of growing organic because of the changes witnessed in their health. Gangama explained that the previous generation that practiced organic farming used to live to an old age, and they had healthy bodies and good eyesight. Now, people have to pay more for health problems due to effects of chemical farming (Gangama). However, with the switch back to organic, in 2008 for Kondakindapalli, 2005 for Venkatampalli, and 2009 for Puletipalli, farmers are noticing that body pains have decreased and people are having fewer health issues (Sangareddy; B. Akulapa, B. Mahesh's father; Balanayama, personal interviews). Most families are consuming about $\frac{1}{4}$ of their produce and selling the rest. For example, for millet, B. Mahesh's father sold 4 quintels and the family kept one (B. Mahesh's father). Before, they were eating chemical yield rice, not organic rice, finger millet, pearl millet, ragi ball, and ragi roti (B. Mahesh and B. Akulapa, personal interview). While families self-reported consuming a portion of their produce, Vineeth, the program director and others at Timbaktu noted that often it is cheaper for farmers to be living on rice subsidies than on their own organic produce (Vineeth, personal interview). This is arguable though as most families reported consuming millets from their fields.

The Role of the Youth

The fourth research question addressed the way the cooperative model is affecting how children are seeing their role as a member of a collective and gaining a new sense of connection and responsibility to their local environment. "The Collective believes that

children, along with adults, are major stakeholders of natural resources and need to participate in the conservation of environment and protect their ecological rights” (Timbaktu Collective Annual Report 2014). Through observation and interviews, the effects of a collective model on the youth and its effects on their relationship with their community and environment has been examined.

In this light, Mogga is an initiative run by Timbaktu Collective’s Chiguru group, which works on child rights and alternative education. Mogga means bud and is an initiative working to inform children of their rights in accordance with the United National Convention on the Rights of the Child (TC Annual Report 2013). Mogga works specifically on ecological child rights which are grounded in “right to good life, right to ecological inheritance, and right to information” (Child Rights, Timbaktu Collective, 2015). In 2012, Mogga shifted from just focusing on rights awareness to specifically ecological rights (Ramana). Other topics are still covered such as child marriage, village issues, and leadership building to name a few (Ramana, personal interview). As Ramana and Chiranjeevi, two Balala Sangha coordinators noted, the goals of Mogga are to provide a space with libraries, playing materials, and resources for children that allow them to express themselves in different ways (Ramana, Chiranjeevi, personal interview). By now, 45 children’s groups have been formed, Balala Sanghas or eco clubs with children ages 10 to 18 (Annual Report 2014). The groups meet every week and are student run, but are facilitated by the Mogga team once a month (Annual Report 2014; Prashant, personal interview). Additionally, worked with Timbaktu Organic to create organic vegetable gardens as they participated in an experiential learning field school on organic farming (Annual Report 2013). In 2014, the children continued to learn about

concepts of sustainability and the values of biodiversity through field schools, practicing the “36 model” of organic farming, and meeting with and learning from a variety of organic farmers, conservationists, and environmental activist (Annual Report 2014). The children arranged an Environment Day to celebrate biodiversity and “put up stalls on organic manures, pesticides, forest seeds from Kalpavalli and agricultural seeds including millets” and more (Annual Report 2014). Over 1000 children attended the event from 45 differing villages.

Sid and Molly are Timbaktu employees working in Kapavalli- the eco-restoration program and Timbaktu Organic respectively. They are working on creating a new biodiversity workshop for children called Wolf Walks. They want the workshop to be an out of the classroom experience where the children are able to actually interact with nature and learn via experiential education (Sid, personal interview). The goal of the program is to create a sense of pride and ownership of the wildlife surrounding them. As Sid and Molly made clear, they would be presenting the idea of the Wolf Walks program to the Balala Sangha leaders (the samakhya) at their upcoming meeting and gauge interest level. They explained it would be the children’s decision to create the program or not. However, Sid believed there would be a good response because of how the eco rights campaign went with the children and that they would help develop the program. Molly explained that the kids are extremely “smart, bright, and fuss-free.” No one has promoted wildlife to them but they already have a sense of it. She stressed the importance of the youth having pride in their local natural resources so that they will protect their environment. As Sid notes, the whole point of the cooperative is collective ownership and

responsibility. He said that it was good to see it working because otherwise it is all top down (Sid and Molly, personal interview).

In the Samakya meeting, adults were facilitating group games, songs, and the proposal of the biodiversity camp. During the meeting, Sid and Molly proposed the camp in an interactive and fun manner. Detailed videos were shown of animals in Kalpavalli and then children had to identify what the animal was doing. The children were very involved and excited about the videos and answering the questions. After this, Mary, one of the founder's of Timbaktu, had a talk with the children and asked them what the connection is between these animals, the environment, and themselves? One answer was that the connection is survival- they are both striving to survive and their survival is based off of one another. Another child answered that when the environment is healthy, we are healthy. Then, Mary continued expanding on their rights: the right to be happy, the right to a good life, the right to participate, the right to play, the right to protection, the right to clean air, clean water, and good food. She expressed then that this kind of knowledge will not be taught academically in school; therefore, they must be fully aware that these are their rights and that they should demand them (Balala Sangha Meeting, Observation).

During an interview with Ramuna, Chiranjeevi, and Samadrita (Mogga coordinators), Amala (19), Prashant (18), and B. Mahesh (24) from Kondakindapalli the impact of the collective model on the youth, through both the Farmer's Cooperatives and Mogga's programs were explored. As Samadrita explained, as certain individuals in a village become part of a cooperative (such as women in the women's cooperative or farmer's in the farmer's cooperative), discussions about cooperatives increase. For the

children, this builds confidence and motivation as they see their parents interacting more in a group setting and taking on leadership roles (Samadrita, personal interview). Rights awareness is taking place in a group setting, through play, song and dance. (Ramana, personal interview). Children would rather do things that are hands on as they are action-oriented beings (Samadrita, personal interview). If one just declares *this* is your right, it doesn't work (Ramana, personal interview). Instead, the children may watch a film on problems of plastic waste disposal, and then are shown this issue right in their own village. Many of the kids are already aware of this as they have seen cows die from plastic consumption (Chiranjeevi and Ramana, personal interview). In 2013 through Mogga, the children had a special focus on biodiversity conservation and children made booklets encompassing the "ecological history of their villages" (Annual Report 2013). They are learning through hands on experiences such as growing their own vegetables in small plots, making organic pesticides, and then eating, and selling their own veggies (Prashant, personal interview).

In Kondakindapalli, Amala (19) has been farming with her family since she was young. She is currently studying to become an agricultural engineer and is a PGS volunteer for the organic farming program (Amala, personal interview). PGS stands for Participatory Guarantee System and is the NGO method for certifying the farm produce as organic (Murugesan, personal interview). As a PGS volunteer, Amala looks after the farms in Kondakindapalli through field visits and making sure farmers are filling in their diaries and keeping records. She explained how chemicals suck up the juices and at first farmers got good yields, but then the earth was ruined. She explained how the main problem is that chemical farmers do not see that they are losing money because they only

see the cash they are receiving in hand at the end of the season. However, she thinks that the change in mindset is coming and when people do the calculations they understand. Now, she thinks the transfer back will be quick because farmers are losing via chemical farming (Amala, personal interview). In addition to Amala, B. Mahesh is only 24 years old and has recently been chosen as the new farmer's director. B. Mahesh's father is a farmer who switched to organic in 2009. Before they joined, they were losing money. Once they joined the cooperative, the land became healthy and wealthy and they are earning money (B. Mahesh, personal interview).

Lastly, Prashant, also from Kondakindapalli used to be a Balala Sangha leader and now is a Samakya leader. He is in his second year of junior college studying history, political science, and economics. Every Sunday, he runs the Balala Sangha meeting and one Sunday out of every month Cheeranjeevi facilitates the meeting. In the Balala Sangha or eco club, the children are learning about ecology, different types of pollution, how to make manure, growing vegetables, and segregating waste within their homes. Prashant teaches how it is better for one's physical health to take care of the environment. Less directly, children are learning about leadership, sharing games that the club provides, solving intergroup problems, maintaining meeting notes, learning to listen, and self-conduct. He explains there is liability and responsibility within the group. Prashant feels he has grown as a leader especially through his relations with the children. What has made Prashant happiest is the library and the playing materials that are available for the kids. Prashant feels it is important to teach the kids because they will then teach their family and friends (Prashant, personal interview).

Discussion

Economic Security

Throughout the study, it became evident that farmers, the Dharani manager, the Timbaktu Organic coordinator, and others felt the economic effects of the farmer's cooperatives most strongly, rather than environmental or social. Patibandla and Sastry state major economic problems for farmers: credit, poor quality of seeds and inputs, low yield, middleman issues, and "distress sale of any leftover produce immediately after harvesting when prices are low" (Patibandla and Sastry 2004). Across all interviews, it became clear that people were benefitting economically from the cooperative in 3 main ways: the low investment, the lack of a middleman trader, and the soil changes that were leading to better yields. The fact that chemical farmers in Puletipalli want to join the organic farmer's cooperatives because they see how organic farmers are benefitting economically shows the success of the program. In addition, Kondakindapalli originally began with one farmer's cooperative with 30 members (B. Narasimhula). Now, almost the entire village is converted to organic. This portrays how the economic advantages of being in a cooperative such as loans, the lack of the middleman, and the higher yield are leading to greater farmer interest in joining the organic farmer's cooperatives.

Community, Localization, and Sharing of Knowledge

Socially, farmers are benefitting in a variety of ways from being in a cooperative. The life of a farmer in a drought stricken region is not an easy one. However, having the support of a collective of farmers has had multiple positive benefits for farmers in regard to social support. The concept of localization is now a major aspect of the counter-

development movement (Shrivastava and Kothari 2012; Natarajan 2005) Hart contrasts a “growth-centered vision of development” with “a people-centered vision approach to development,” noting many differences including the view of environmental resources as infinite vs. finite (1997:7). In Kondakindapalli, farmers seemed to appreciate the social aspect of being in the cooperative and sanghas. Multiple farmers expressed that they can depend on one another. Now, because of the cooperative if they have a problem with pests, another farmer will recommend with natural pesticide they should apply. In a study by Rao in 2013 of Timbaktu’s Organic program, it was found that 75.5% of the study group saw an increase in family interactions and it was stated that collective-decision making is taking place in 69.9% of the families (Rao qtd. in Kothari 2014). Additionally, “87.4% of the group feels that there is increased participation of women and youth in discussions/decision making [and] interaction among community members has increased by about 65%” (Rao qtd. in Kothari 2014). The sharing of knowledge is happening at many different levels, from Timbaktu cadre to farmer, from organic farmer to chemical farmer, from anu to anu (brother to brother), from one cooperative farmer to another, from father to son, mother to daughter, and from children to parents and friends as well. This answers both research questions two and three, as farmers are acting differently due to the cooperative model as well as learning from one another through hands on sharing of knowledge. Through the farmer field schools, trainings, visits to organic farms, cooperative, sangha, and brunda meetings, a transfer of knowledge is taking place.

Also, the cooperative has allowed for a dispersal of responsibility among the group. “Perhaps no intervention other than a cooperative can bring long-term sustained benefits to farmers. An individual or marginal farmer cannot do what the cooperative can

do” (Patibandla and Sastry 2004). Additionally, organizations run by the government or by outsiders not willing to give the power to the people have consistently failed to create sustainable change (Patibandla and Sastry 2004). If one farmer does not repay loans or is using chemical inputs, the effects are felt by the entire cooperative. Therefore, each member has an extra sense of responsibility to his or her fellow members. Lastly, the farmers’ cooperatives can only succeed via the strong social fabric existent in the villages, which goes past Timbaktu’s realm of influence. Murugesan emphasized that if one farmer is breaking regulations, they will find out because of the tight social network (Murugesan, personal interview). In this vein, Vineeth told a story of one trader who saw how successful a chili farmer was doing who had recently switched to using only organic methods. He then brought farmers from different villages to see this man’s farm and his method of cultivation. Through word of mouth, the benefits of growing organic is spreading and affecting surrounding villages (Vineeth, personal interview).

Environment

During the study, it became apparent that what *the environment* means to farmers and families in the Anantapur District is going to be very different from what it means to an individual who is educated about the massive environmental problems of today. In the three villages visited, it was apparent that the well-being of the environment can only be understood at a personal, local level. The farmers deal with their reality of environment on a daily basis—working in the field sometimes up to 10 hours in a day. When one’s livelihood is directly related to the environment, toiling with the earth and depending on the infrequent rain, the dominant concern is not for the well-being of the environment in

the broad definition of the world. Despite the harsh conditions of the Anantapur District, Balanayama's story was the only one that seemed hopeless and as if she was not benefitting economically from the cooperative other than during past seasons. However, Vineeth, the Project Manager for Timbaktu Organic pointed out that many people choose to not focus on the negatives, as life would not be bearable then (Vineeth, personal interview). The main environmental aspect farmers focused on was the change in the soil from hard to smooth as they shifted to organic from chemical farming.

Timbaktu is working to raise awareness about why farming organic, preserving the land, and cultivating indigenous crops is important not just financially but for ecological sustainability as well. It seems that certain factors be they education, awareness, or time and financial constraints are limiting the farmers from seeing the larger picture that organic farming plays within the environmental issues of today. Farmers are not working in an activist mode as they are working hard to get by (Vineeth, personal interview). The Balala Sangha program has had major success in helping children internalize their relationship with the local environment. Also, Sangareddy was one farmer who was more aware of the environmental effects. He explained that only 30 people were in Puletipalli's cooperative. He believed that it would only create a substantial change environmentally if more members were allowed to join (Sangareddy, personal interview). As over 9,000 acres of farmland have not been converted to organic, it is evident that the positive environmental effects of the program are substantial. This is especially significant in regard to using the cooperative as an alternative to mainstream development. "The ecological and democratic model of food security is based as far as possible on ecological production and local consumption. Trade liberalization ignores

this truth... it translates into increased hunger and deprivation in the rural areas of the Third World” (Shiva qtd. in Woodin and Lucas 2004). Through the farmers’ cooperatives, farmers are gaining power, nurturing the land, cultivating indigenous crops, and making collective decisions. Lastly, farmers were aware of the changes in their physical health since switching to organic. Here, the words of one child ring true. When the environment is healthy, we are healthy (Observation, Samakhya Meeting). Further research is needed in regard to how much of their organic produce are farmers consuming. Timbaktu administration felt that farmers were not consuming much of their own produce, as it is too expensive and cheaper to buy government subsidized rice (Vineeth, personal interview). However, farmers self-reported eating millet and other organic crops (Venkata Lakshmi, personal interview).

Effects on the Youth

The final two research questions explored how the children are being affected by the collective group model (both the Farmer’s Cooperatives and Mogga) in regards to their view of themselves within a community and their relationship with the environment and how they are learning through experiential education. During the Samakya meeting, the children’s answers to Mary’s question about the connection between wildlife and themselves showed that they have internalized that connection. One child’s answer that when the Earth is healthy, we are healthy shows that the awareness raising of ecological children’s rights has been successful (Balala Sangha Meeting, Observation). As Ramana noted, learning and awareness building is taking place through group interactions such as games, songs, and dance. Merely telling the children, these are your rights does not work.

Instead, they are learning through one another and through doing whether it is through song or creating compost. In Kondakindapalli, the impact of the farmers' cooperative as well as the Balala Sangha can be seen through the interviewed youth. In contrast to the current trends of youth leaving their villages for higher education and for work (Schooling the World), Amala, Prashant, and B. Mahesh were excited and involved in their local communities and environment. Amala was passionate about organic farming and helping farmers do calculations to see the economic benefits and make the switch. B. Mahesh had newly been elected as the representative and was less aware of his role so far, but the fact that the village had elected such a young individual to be the farmer's representative showed that his intentions must have been clearly towards his own community rather than desiring to flee to an urban area.

As for Prashant, he evidently had a very positive experience being a Balala Sangha leader and was proud of the work he was doing with the children and raising awareness about the environment. He as well as Ramana, Chiranjeevi, and Samadrita explained that children are learning through hands on activities rather than through being told what to do. Prashant emphasized how the members of the club share responsibilities, learn from one another, and teach their family as well. Hart speaks of a "local responsibility" that children can only develop when they become physically tied to the land (1997:15). Field schools where children plant their own gardens are directly teaching the children the value of growing local food using traditional and sustainable methods. This poses a clear distinction from learning in a classroom setting about the economic value of growing cash crops such as groundnut. Hart declares that a connection and care for the Earth cannot be fostered merely by one time projects, but rather "we

should feed children's natural desire to contact nature's diversity with free access to an area of limited size over an extended period of time, for it is only by intimately knowing the wonders of nature's complexity in a particular place can one fully appreciate the immense beauty of the planet as a whole" (1997:18). The fact that the children are all recycling and separating waste in their own homes shows how the awareness created within the group is transferring into different settings allowing the knowledge about environmental issues, and the responsibility as well, to be dispersed. Overall, it can be concluded that children in Kondakindapalli are learning through experiential methods through Mogga and garnering a new sense of community and environmental responsibility. In a study by Gruenwald and Smith, this relationship is explained. "Just as the new localism can be understood as diverse acts of resistance against the ravages of globalization and rootlessness, place-based education can be understood as a community-based effort to reconnect the process of education, enculturation, and human development to the well-being of community life" (2014:xvi). Gruenwald and Smith argue that people have become alienated from the land and from one another and through connecting with a place, one helps foster a sense of community and an appreciation for the land (2014). The only issues with the Balala Sangha that came up was primarily a social one in Kondakindapalli over leadership amongst the younger children that was caste-related as well as the fact their gardens hadn't done well because of low rain. Additionally, in Puletipalli children said that their Balala Sangha had fallen apart because no one had attended. In this light, the program could be made stronger and initiatives must be taken to encourage the children to attend the weekly meetings.

Conclusion

Overall, Timbaktu is successfully promoting empowerment of the people through the cooperative model and thereby facilitating an alternative and bottom-up type of development. The majority of coordinators, facilitators, and cadres for Timbaktu's programs are individuals from the communities themselves. Shreenivas is a cadre for Timbaktu and a farmer himself who works with three villages in the C.K. Palli Mandal where he lives with his family. Amala has been farming her whole life, eating millets, and is now a PGS volunteer. As Bablu, the founder of Timbaktu explained, if you are not a part of the community, the community's problems will not be your own and you are likely to eventually leave and be less connected to the issues. For an organization to effect real change, the employees must be a part of the community to be truly invested in the problems of the people (Bablu, personal interview). This study has shown that the cooperative model through the Farmers' Cooperative has increased economic stability, strengthened the community, allowed for experiential education to take place, increased awareness about the local environment, and has had similar affects on the youth as they are learning to become young leaders and aware of their rights through Mogga. "The Collective believes that children, along with adults, are major stakeholders of natural resources and need to participate in the conservation of the environment and protect their ecological rights" (Timbaktu Collective Annual Report, 2014). This concept of local governance and the confidence that one gains from having power in a collective is permeating to the children. The future is in the hands of the youth, and through making children aware of their ecological rights and instilling an early sense of leadership,

Timbaktu is motivating children to mold a new future based on the needs of the local people and local ecology.

A limitation to this study is that interviews and observation only took place at 3 out of the 45 villages that Timbaktu works with. Therefore, generalizations should not be made about the effects of the farmers' cooperatives as it likely varies from community to community. Another limitation is the length of time given for the study project. Further research would be beneficial looking at the interaction of the women's cooperatives with the farmers' cooperatives. In addition, a limitation of this study is that children could not be interviewed as per SIT's ethical regulations. However, further research would be very beneficial involving children's opinions (with informed parental consent) on their role in the collective, within their community, and their relationship with the environment. Lastly, a question that was raised was the percentage of homegrown produce the farmers are consuming versus selling to Dharani. This should be further explored.

In conclusion, Timbaktu stands as a necessary model of alternative development that is people-driven rather than market-driven. At this moment in time, India is in a perilous state, but has an opportunity. As thousands of rural areas are not "developed" according to the Western hegemonic conception of developed, this presents an opportunity for these areas to experiment with alternatives. Timbaktu's cooperative model should not be blindly replicated across India. However, other organizations and peoples can take Timbaktu's successes and apply their own versions within their own communities. As Gandhi famously said, "The true India is to be found not in its few cities, but in its seven hundred thousand villages. If the villages perish, India will perish too." (Gandhi qtd. in Tendulkar, 1960). Gandhi believed the change must come from the

people and that self-sufficient and self-governed villages were the path to an ideal and true India. Today, the widespread use of cooperatives throughout India to bring the people together, provide economic security and a shared responsibility, nurture the land, and empower both adults and the youth to take on the responsibility of their local communities is creating the *right* kind of change, an alternative form of development. The change must come and is coming from the people.

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Appendices

Interview Questions for Farmers

1. What is your name?
2. How many years have you been farming organic?
3. What are your crops?
4. Why did you decide to shift to organic?
5. How has the shift to organic made changes in your life?
6. How do decisions get made during meetings?
7. How did you learn to grow organic?
8. Have farmers in the village gotten closer since the cooperative began? Is there collaboration or competition?
9. How has the shift affected the village overall?
10. Is life better or easier since the shift?
11. How has the farmers' cooperative affected the youth?
12. Do children want to be farmers when they grow up?
13. Why is it important to grow crops that your grandfathers grew versus things that are not indigenous?
14. How do you see the land's health as being connected to your own health?

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