Hopeful mood and new connections 2010 Payir Site visit report

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There are plenty of pictures of Payir at:
http://picasaweb.google.com/payirindia/PayirInitiatedLivelihoodProjects#
http://www.facebook.com/pages/Payir/154906473619?v=photos
http://picasaweb.google.com/payirindia
http://picasaweb.google.com/indiasudar/PAYIRORGTENURVILLAGE#

My actual site visit to Payir happened towards the end of July, 2010. I was there for a day and brought my usual packages of vegetables, fruit and biscuits along for the Payir volunteers, employees and children. Mr. Senthil Kumar from Trichy kindly drove me and my 10 year old and 7 year old there and back.

A couple of weeks earlier, I had received my first in-person, first-hand news of Payir (since my 2009 site visit) from Palani, an Asha UFlorida volunteer and Payir co-steward, whom I visited for a short time at his new office in IIT Chennai, on a Saturday, around mid July, 2010.

We swung by his office incidentally after visiting (in nearby Adyar) the aging parents of close IIT batchmates (I did my B.Tech there). I had along my kids aged 10 and 7; they could sense my nostalgic mood as our autorickshaw putted through IIT campus, but they were understandably restless to see the neighboring snake park.

Palani is currently engaged in setting up his group there, as a faculty member. I was interested to hear his changed perspective, now that he is living and working in India. Naturally I wanted to know whether his interaction with Payir had strengthened. As an answer to my question, he showed me pictures of a yarn extracting machine that Payir had tried out via connections with the garment industry at Tirupur. The machine extracts yarn from discarded factory knits, hoping to tap a market for the resulting Yarn waste. The machine is now lying idle at Payir partly due to poor performance, and Palani was involved in improving this machine. In the context he mentioned grants given by central and state governments to faculty members and their teams to work on rural technology initiatives. He also mentioned the difficulty of finding time for this, while fulfilling his teaching and research duties as a faculty member. In addition, he mentioned that finding student assistants willing to work on such projects was also difficult. All familiar themes: no one to work on relatively low tech design and manufacturing solutions that require originality, ingenuity and engineering training, because the customer base does
not have paying power. C.K. Prahlad may suggest "fortune at the bottom of the pyramid" as a solution. But I prefer to ruminate about DIY open manufacturing http://p2pfoundation.net/Product\_Hacking directly by the villagers. See http://p2pfoundation.net in general.

I don't think I need to point out the local entrepreneurship and training opportunities this indicates, both for older children and adults. This might also lead you to think about microfinance (ignore the new large commercial players like SKS/Akula/Khosla and the flap in Andhra Pradesh). The best scenario appears to be reasonably regulated, small, local MR bank and cooperative. Demanding transparency of regulation, as well as public accountability and oversight of the regulatory authorities is a different, very timeconsuming topic which we will not get into now.

Other visitors at Payir

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Several other visitors and visiting volunteers were present at Payir when I visited, echoing the broadly upbeat mood that I encountered there. More on this hopeful mood later. I would have liked to stay longer, but had other commitments back at my parents' home.

Mr. Senthil Kumar (henceforth, Trichy Senthil) who drove us to Thenur knew of Payir Senthil and had been meaning to visit Payir for some time. A few words about Trichy Senthil. He was an NRI working in the IT industry until recently. He traveled back and forth for some time, initially to care for his ailing father. He then decided that he was financially independent enough to return for good, be of service to the community and yet support himself and his young family in a modest lifestyle. He seemed to be an apt person with whom to be visiting Payir, especially since Payir had now launched payirinnovations.com, their profit-making arm. He showed a keen interest in my site visit activities overall. He also drove us to HUT (human uplift trust) in Perambalur, as another Asha (NYCNJ) site visit to their Vidyashram a residential school for children who have lost at least one parent to AIDS. Subsequently, he has persuaded his brother-in-law, a psychiatrist to make periodic visits to the HUT Vidyashram to help the counselors there monitor and assess at-risk children, as well as provide free consultation to them if visits to his clinic prove necessary. This would fulfill the recommendation of my late brother Shreeram, also a psychiatrist who set up the methodology for assessing the HUT Vidyashram children when he visited them in July 2009.
Four students from Tufts university were visiting, part of Tufts' BUILD project in India. See  
http://buildindia.tumblr.com/  
for their blog after their visit and  
http://www.tuftsgloballeadership.org/programs/build/build-india  
for their proposal prior to visiting South India. While I was there, they were essentially collecting data for a narrative based socio-economic survey by talking to various groups of people at Thenur, Thottiyapatti and neighboring villages. I accompanied them as they visited and talked to a group of elderly people at the NREGA project who were supposedly desilting a huge reservoir that is bone dry and baking in the sun.

Two Engineering student volunteers from Bangalore, part of the iVolunteer India Fellow Youth program were there. Atleast one of them, Aparna, had been there for more than a month, helping out with various tasks. She blogs about her visit at:  

Education
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Asha Uflorida's primary interest in Payir concerns the Gurukul, Afterschool/E-learning and Govt school intervention programs.

Gurukul
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I spent some time with the 8-10 Gurukul kids who are all at the preschool or very early elementary level, and 2 teachers (names?). They have a general montessori/ABL (SarvaShikshya Abhyan's activity based learning) material there. The teachers have begun keeping scrupulous records of the kids' work as part of the evaluation, an important requirement of the ABL system, and here they actually adhere to it. The teachers are by and large of a progressive mindset, which is rare in the rote-learning, "marks" and drill driven culture there. It is a hard job for them to convince anyone to sympathize with a progressive approach to education, especially very early childhood education. Given this situation, they are doing a good job. It is promising that many of the parents have agreed to keep the kids at the Gurukul school. The kids are generally enthusiastic about their activities, especially those that engage them physically in some way: active games, recitation, singing. Drawing and coloring are fun too.
Reading, Writing and Arithmetic are, as everywhere, the hard part. I think the teachers do a reasonably good job at reading and writing. My only suggestion would be to broaden the reading material to include a much wider variety of picture books. And strengthen vocabulary and reading skills using word-finders, scrabble, simple crosswords and other such activities that would be very inexpensive both in terms of money and teacher training time. In fact, I have seen Tamil books that already have a number of such exercises. Just more are needed.

Teaching math to very young children needs a highly enlightened approach honed by a lot of experience, and it is hard to find in any country. This scarcity can be compensated, at least at the early childhood level, by interesting mathematical activities especially all kinds of manipulatives, materials like sand, pebbles and measuring cups, puzzles and simple games. Unfortunately, some of the manipulatives and other material donated by one of the friends of Payir for teaching math to young children has not been fully put to use yet. The main teacher coordinator (name? who is also in charge of the older kids after school and Payir's other education programs) mentioned with enthusiasm about some visitor who had taught the teachers Vedic math style algorithms and interesting ways to do arithmetic. But these methods haven't been used yet on the Gurukul kids.

Suggestion: for all of the 3 R's, simple team games (both boardgames and running around, relay games, treasure hunts with clues etc.) that require the teams to read letters or read and understand words or do arithmetic. A few Sesame Street style videos, interspersed with teacher interaction, would help too. In addition, there is plenty of free, online material on the 3R's that engage a child (past the age of 5) to work independently unsupervised. When used with care, and in a pointed fashion, this material can be used, not for teaching concepts, but rather for practice exercises. These things can easily be added to the current budget, towards quality improvement. The important thing would be to tag each activity with specific learning goals (say in the ABL system) which that activity contributes to. They may even be able to use some of these activities as part of the evaluation process.

Afterschool and E-learning

The afterschool kids are older and a lot livelier, from 5th to 8th grade. They play for a while, and then go inside to do their homework together, under teacher supervision.

The big mood enhancer this time was the distance learning initiative, where some friends of Payir who live in the US and elsewhere volunteer to give online, realtime, somewhat interactive lectures to the children.
Senthil feels that (i) there are lots more people outside who are competent at the material to be taught (ii) just the exposure to outside teachers boosts the kids’ morale. I agree, and this can certainly have a positive effect on their learning. However, competence at the material to be taught is only a necessary, not a sufficient nor an adequate condition for effective teaching at the school level. This latter is a scarce resource, particularly so over an online, not fully interactive medium. The best way to leverage the few good teaching volunteers that Senthil has available for distance teaching is to (a) combine their sessions with teaching in situ and use it to catalyze local teaching. I.e, use both the teaching sessions as well as the expertise of these distance teachers to train the local teachers to teach more effectively - not only does the kids' morale improve with such access, but also the morale of the local teachers! (b) use the opportunity to pull together an extensive collection of free online material (both static, video, and interactive) into organized lesson modules for each subject, translated into Tamil or English accented Tamil; this should be achievable by local talent, with some guidance of volunteers from afar.

I had sent to Senthil a lot of online material for mathematics and physics and geometry prepared by my uncle Dr. Vasudevan (mentioned in a previous site visit report in connection with alternative energy). He has more material available in physical form that can easily be converted to online form. In addition, there is Khan math and other such free material.

In fact the ALM or Active Learning Method (SSA's continuation of the ABL method past the 4th grade) textbooks are very nice, can potentially be read independently by the child, and provide excellent skeletons for the lesson modules that can then be fleshed out by free online material mentioned above.

This is an extensive project, but my feeling is that Asha-wide would definitely like to see it DONE, thoroughly, with a well-thought out plan. Such an experiment at Payir would be well-positioned to be funded as a large scale, innovative project using Asha general funds: Payir's experience (properly chronicled and relayed by personnel who have gone through the experience) as well as the material developed, would have a high potential of being transferred to other Asha partners. Perhaps the E-vidya organization would share their compilation of material and Payir could flesh it out or modify it to suit their purposes. Senthil has been complaining about poor internet connection. A solution to this would be crucial for taking advantage of the long-distance teacher volunteers. If it is a question of funding, it could potentially be included into the abovementioned proposal.

Government school intervention

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Another mood lifter: an enthusiastic local physics teacher (name?) was introduced to me by the main teacher coordinator (name?). He proudly showed me the graded exam papers of older kids at the local high school. Some of them were doing very well. Of course "well" is defined based on the usual marks, but still.... Besides the regular afterschool and associated e-learning, Payir had held a "summer camp" funded by Vijay Cements, where they were taught Math and Physics among other things. As part of this summer camp, volunteers from Greece (? , it says this in my notes, but I am not sure if it was a typo) also taught the kids as part of another distance learning initiative. In addition, Senthil mentioned another visitor who came and taught Physics and the kids loved it.

Meeting such enthusiastic local teachers is the reason why I feel that there is plenty of local talent that can be tapped, motivated and used to hugely supplement any distance learning initiative.

On an older topic, it now seems as though ABL has been adopted mostly in the 3 local schools, there is no longer any bad blood with Payir for pushing ABL etc. This is very encouraging, although the standards are considered to be highly varied: one of the schools is still considered to be in very poor shape.

Health, Water, Livelihood and all the other stuff

The health worker Mythili's presence and sunny disposition have improved the mood significantly since my 2009 visit. I read in Payir's blog about another homeopathic doctor Preethi now working at Payir; she was not there when I visited. I met Dr. Hemamalini in Trichy, who has been helping Payir patients that Senthil sends to Trichy, as well as her husband Dr. Govindaraj who had asked his assistants to help Senthil with his telemedicine initiative. But he said that the technology had not begun working yet.

Another mood lifter was that they managed to bore at the right angle to find water and are now able to pump from Payir's impressively deep well dug into solid rock by one of Senthil's recent ancestors. Senthil's farm has fairly sensible drip irrigation and water efficiency, so his pump will not be the cause of the water table sinking further.

An unaccounted-for cost is the subsidised electricity available for agricultural purposes in Tamilnadu. Alternative energy (specifically from biomass and possibly solar) towards environment friendliness and energy independence had been another topic of interest in my site visit report of 2009, but not much had been done in this regard.

In this context, the following solar and wood stove initiatives are definitely worth looking into. A thorough and patient exploration and networking with the people and agencies listed in these websites will provide you leads, both for finding local expert consultation on installing
a solar kitchen and waterheating and for finding funding for perhaps prototype purchase, self-fabrication and installation.

See also the P2P foundation websites given above. Again, I don't think I need to point out the local entrepreneurship and training opportunities this indicates, both for older children and adults. Again as pointed out before, this might also lead you to think about microfinance (ignore the new large commercial players and the flap in AP). The best scenario appears to be (according to a lucidly written book by Elizabeth Rhyne about the coming of age of microfinance in Bolivia), is reasonably regulated, small, local MR banks and cooperatives that break even or grow modestly, but aren't really commercial for-profit ventures. To repeat, transparency of regulation, as well as public accountability and oversight of the regulatory authorities is a different, very timeconsuming topic which we will not get into now.

(1) You can find SK-14 and Scheffler solar cooker (parabolic reflectors, for community kitchens such as yours) international suppliers (as you browse through the Indian ones you will find many in Tamilnadu)
http://www.solarcooking.org/directory.asp
Some images of solar cookers can be found here

(2) The auroville renewable energy consultation
http://www.auroville.com/aurore/
and about their solar kitchen
http://www.auroville.org/society/solarkitchen.html
http://www.auroville.org/society/solark_sunnydays.htm

(3) A gujarati NGO that manufactures scheffler and SK-14 solar cookers
Lots of pictures and data, nice pamphlet
Data for water boiling (how long it takes during various times of the day -- you will see that my estimate of 1 hour at noon was accurate).

(4) From the above P2P website, allegedly 90% efficiency biomass stoves (Magh-3G)
http://www.goodstove.com/
using a variety of self-produced compacted biomass (compacter designs are also available on the site).
(5) All kinds of alternative energy solutions:
http://www.selco-india.com/

It hasn't rained much in Thenur, and last year's visiting geologist/hydrologist Mr. Sivagnanam took on an academic job in Chennai that caused him to abandon Payir. Last year's discussion with him (see my 2009 Payir site visit report), looking at maps of chola era watershed structures in the area had caused a lot of enthusiasm about watershed and microclimate management via foresting and other forgotten traditional techniques and use of cheap GIS and home weather technologies for monitoring towards both long-term ecological stewardship and precision agriculture. I had hunted up substantial reference material and case study experiences on these subjects, contacted a local university of Florida researcher Jane Southworth at the land use and ecological conservation institute (LUECI) and convince Asha Uflorida volunteer Sharan to write a proposal to a university of Florida initiative. This could have gathered steam provided an Indian academic (and students) could complete the team. Unfortunately, Mr. Sivagnanam dropped the ball for whatever reason. However, I was surprised to hear Senthil was stil gung ho on the topic and willing to even `go 10 km to the foothills if we have to" to tap the chola era watershed system that is now silted, blocked, deforested and despoilt. A Ted video about water harvesting in Rajasthan has now been posted on the Payir blog.
I would like to see this realized at Thenur. Since Payir folks will be visiting Timbaktu
http://www.timbaktu.org
where watershed revival and management was reportedly successfully done, hopefully they will learn from it.

The NREGA efforts at desilting a huge reservoir there are just basically a handout to the locals. Many of them are malnourished, so a handout is not a bad idea. However, no work is done. Senthil calls it the worst of corruption since it is a corruption of work. I agree. It is a joke for them since the reservoir bed is bone dry and has turned into thorn scrubland, it hasn't rained in years, so it is not at all clear to them why they are desilting it. It is not clear to me either since it is not accompanied by any comprehensive watershed development plan. No one asked them what work they would think would be useful infrastructure for the village. It is not clear if most of the NREGA money reaches the villagers who show up there everyday past mid-morning, hang around in the shade (only
reasonable thing anyone can do under such punishing sun), eat lunch and head back home well before sunset. Or if a lot of the cash leaks out in the pipeline.

During the extremely interesting conversation with the villagers directly at the NREGA site, initiated by the Tufts student team (I removed an account of it from this sitevisit report in the interest of brevity :) ), a rights-conscious and suspicious young man who kept attendance records kept asking us why we were asking questions and what was the benefit in it for us. He was almost certainly part of the NREGA funds pipeline, although probably pretty low down, close to the faucet.

The BPO set up is doing well. More PC's, at least a few running linux and opensource, thank goodness. Cheerful crew, new folks being trained. There is an air of confidence. Internet connection patchy, but I guess in this case, it is not as crucial as telemedicine or distance learning. Although my chatty kids broke the ice rapidly, I did not have a chance to chat with the employees about exactly what they do, but business must be growing. There is a "Friends of Payir" chapter in Bangalore and many of them in the IT industry, so a profit making arm of Payir http://www.payirinnovations.com has been started with the BPO as the hub of the wheel, but encompassing diverse possibilities such as organic coconut products etc. Although my kids played as usual with the cows and calves, the coconut trees looked fine, and we saw a shed where the compost was kept, there were no signs of any other agricultural activity, and we did not have time to talk about it.