

Turning Wine into Clean Water?

An invitation to Explore the Possibilities

ROBBY BUTLER,
with STEVE DOWNEY and NICK NOLL

Church Planting Movements are changing the spiritual landscape among many poor populations. The intention for such movements to be self-funding through bivocational leadership suggests a natural synergy with “Business For Transformation” (B4T).

Could Church Planting Movements be peculiarly suited for synergy with business models for delivering clean water to the poor?

This question became personal for me during four weeks in January with leaders of “some of the biggest harvests in the world today.”¹ Despite faith and prayer, I had “traveler’s tummy” by the third day. My experienced companion combined prayer with local and U.S. remedies to restore me swiftly, then said:

Some young people I brought to India felt their faith was adequate to drink the local water, so I invited a top-notch missionary doctor to talk to them. When she told them she boils every drop of water she drinks, they asked if faith wasn’t enough. She replied, “The first eight missionaries to come here all died of water-borne diseases within six months. I think they had as much faith as I do.”

Still, I wondered, “Aren’t the locals resistant to local bacteria?” No. I soon found one of my hosts suffering as I had. (Since then I have learned that, in some parts of the world, half of all hospital beds are filled with victims of water-borne disease.)²

Yet water contamination is perhaps the most addressable factor in material poverty. And the economic benefits to both the poor and their communities are undeniable:

Sustainable access to improved sanitation, good hygiene habits and decent water unlock the door that bars so many millions of people from climbing out of poverty. It is the poor who suffer most now, so improving their health provides the biggest returns: essentially, the healthier they are, the better they will be able to work. They will grow more, and their nutrition will improve.³



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In recent years these compelling benefits have stirred aggressive charitable efforts to provide clean water—both secular and faith-based. Yet the vast majority of those who still lack clean water are also the poorest people on the planet (see sidebar).

Two recent books⁴ may suggest how *Church Planting Movements* can employ a *business model* to ...

- create employment opportunities that
- serve the poor in particular, and
- improve local access to clean water.

Water, Water Everywhere

The link between poverty and water can be measured in *competition, cost/convenience, purification, and sanitation with education*.⁵

Competition arises where limited water is available for drinking, irrigation and industry. Those in power control water resources, and the poor lose when the supply is reduced.

Cost/convenience reflects the daily effort required to access sufficient water. People can only live near water, but for the poor, the time-cost of obtaining “cleaner” water often interferes with education or profitable employment. The poor frequently...

- fetch water from a distance,
- use sources of questionable quality,
- risk contamination of stored water,
- rely on unethical providers, and
- pay more than those with plumbing.⁶

(Many excellent charity-based well-drilling ministries are whittling away at this access problem.)⁷

Purification is an increasing global challenge—from biological, natural, agricultural, industrial, and pharmaceutical contaminants.⁸ The poor must use the most questionable water, and can become a breeding ground for diseases that threaten everyone in their communities. So helping the poor access clean water benefits their whole community. Historically, purification has only been viable at a community level, through urban treatment filtering of well water. (Wells improve quality *and* access, but must be monitored, maintained, and protected.)

Sanitation with education is another vital factor. The poor most often lack basic understanding regarding contamination, and opportunity to apply that understanding. This is one reason literacy is such a powerful weapon against poverty.⁹

Getting Personal

New, inexpensive filter purification technology makes possible a revolution in clean water access akin to what the cell phone is doing for services and information.¹⁰ Individual house churches or families can now use and care for their own personal filter and share it with others, enabling use of local unimproved sources and serving as a safety net for community treatment.¹¹

When disasters compromise community water treatment,¹² portable filters can continue serving in an evacuation.

Turning Wine into Clean Water?

Steve Downey¹³ and Nick Noll,¹⁴ my collaborators for this article, have identified two filters developed since 2008 (Sawyer® and Berkey®) which exceed EPA standards for water purifiers and appear most useful for missionaries and those they serve.¹⁵ Neither is yet capable of turning wine back into water, but both are ...

- effective for nearly all pathogens,
- low-cost and low-maintenance,
- long-lasting and fully portable,
- and “fail-safe” (plug up rather than allowing pathogens through).

Church Planting Movements

Large-scale efforts to address poverty can be hindered by corruption at high levels and/or spiritual forces which rob the poor of their initiative and creativity. The collective discipling, personal transformation and trust relationships which develop in Church Planting Movements (CPMs) produce the kind of “spiritual capital”¹⁶ necessary to sustain businesses that break the poverty cycle.

CPMs are flourishing among the poor, and the relational discipling of CPMs creates an ideal environment for the propagation of literacy and hygiene education. Even before the advent of CPMs, Frank Laubach is credited with bringing literacy to a hundred million people through his emphasis on *How to Teach One and Win One for Christ; Christ’s Plan for Winning the World* (Zondervan, 1964). How much more will God do in our day as we encourage and

assist CPMs to be active in lifting their members and their communities out of poverty?

The Business of Business

A few years ago Landa Cope’s materials first helped me see the key role business has in providing employment and reducing the cost of goods and services. Charity can help in a crisis, but generally ...

- reduces personal initiative,
- undermines local businesses,
- hinders long-term growth, and
- are unsustainable.

In contrast, business models can ...

- cultivate personal initiative,
- generate income for house church leaders and their coaches, and
- sustainably reduce the local cost of goods.

The time is ripe for business initiatives to reduce the cost of clean water through the sale of new filtering technology. Through microfinance loans individuals could purchase filters on credit to be repaid from ...

- reduced medical expenses,
- productivity gains, and/or
- selling clean water to others at a reduction of their current cost.

Water, Sanitation and Poverty

distilled from the Stockholm International Water Institute

- Poor people living in the slums often pay 5-10 times more per liter of water than wealthy people living in the same city.
- 884 million people (13% of world population, about half of whom live in Asia) rely on drinking water from unimproved sources such as ponds, streams, irrigation canals and unprotected dug wells.
- Almost one-tenth of the global disease burden could be prevented by improving water supply, sanitation, hygiene and management of water resources.

[See MissionFrontiers.org for more facts.]

Sawyer Filters

from Availability to Abundance

- Most filters provide only enough clean water for drinking. But at 8 gal/hr gravity-fed to 3 gal/min under pressure, Sawyer filters produce enough water to bathe and wash clothes as well, thus eliminating contact illnesses and parasites.
- Some church schools with Sawyer filters give students unlimited clean water plus all they want to carry home at night. They then give clean water to the community in the evening, so that the church becomes the daily “watering hole.”
- A MAP, Int. study in Bolivia showed that people using Sawyer filters gain an extra 20-30 days of productive work per year!
- The same study in Ecuador showed improved general health yielding annual reductions of \$30–40 per year in medical expenses. A study in Rwanda by Compassion, Int. gave similar results.
- Another study in Bolivia by Food For the Hungry showed an 85% reduction in dysentery, eliminating all cases from contaminated water.
- A study of 20 schools in Pakistan using Sawyer filters found an increase in attendance from 70% to 92% through improved health.
- Sawyer manufactures its filters in the country of distribution. One Haitian remarked, “Everyone is sending us stuff, but you give us jobs.”

Of the two filters mentioned above, the Sawyer® is best suited for poverty contexts with high levels of water-borne disease. It...

- improves health and productivity,
- is low-cost and lasts for years, and
- filters rapidly enough for on-demand use.

The other filter mentioned above, the Berkey®, removes a much wider range of EPA recognized dissolved contaminants¹⁷ and still costs less than 2¢/gallon for replacement filters. Both companies are owned by Evangelicals, but Sawyer® is more aggressively pursuing sustainable business models for providing the world's poor with clean water.

Retired missionary Lou Haveman is coordinating Sawyer®'s global distribution. To learn more visit Business-Connect.net/water-business.^f

Note: As of this writing, none of the authors of this article have a financial interest in Sawyer® filters. However Nick's business sells 40+ other brands of filters, including Berkey® filters, and will soon be carrying Sawyer® filters as well.

Toward experimenting with business models that reward everyone's involvement, Robby and Nick have worked out a deal for interested missionaries and their friends to share in a group discount on Berkey® filter systems and portable water bottles, plus a commission for referring others. See the paid ad for Berkey® filters on page 13.

- 1 As quoted in my May MF article: *Church Planting Movements from One Indian Perspective*
- 2 <http://wsscc.org/media/vital-statistics>
- 3 http://siwi.org/documents/Resources/Water_Front_Articles/2007/WF4-07_A_Little_Light_Relief.pdf
- 4 *Next Generation Business Strategies for the Base of the Pyramid: New Approaches for Building Mutual Value* by Ted London and Stuart Hart (FT Press, 2010), and *The*

Fortune at the Bottom of the Pyramid: Eradicating Poverty Through Profits by C. K. Prahalad (Pearson Prentice Hall, 2009).

- 5 WaterSanitationHygiene.org
- 6 *The Poor Pay More* <http://hdr.undp.org/en/media/HDR06-complete.pdf> (pp 51–53)
- 7 clean-water-for-laymen.com/clean-water-organizations.html and hydromissions.com/links.htm
- 8 The difference between biological and other contaminants is comparable to the difference between a pipe bomb and a nuclear bomb. Biological contaminants multiply and spread, while other contaminants (such as the Chlorine often used to control pathogens) only affect the one who ingests them.
- 9 From 2002–2005, *Mission India* provided literacy training for 74,000 people with an initial average daily income of 77¢—well below the U.N. poverty standard of \$1/day. Through this one-year, two hour/night training, average income rose by an average of 57%, as reported in *Is Hearing Enough? Literacy and the Great Commandment* (WCL, 2010), pp 76-77.
- 10 “Cell phones increasingly make banking and other key services available to the very poor, along with information to guard them from price-gouging.”—Gary Edmonds, former secretary-general of the World Evangelical Alliance, and president of *Breakthrough Partners*.
- 11 Even in the U.S., centralized treatment can fail. In 1993 403,000 people became ill and 69 died when a Milwaukee treatment plant became infected, costing \$32 million for medical care and \$65 million in lost productivity.
- 12 Hurricanes Katrina and Rita impacted 800 treatment plants, affecting five million people, and placed uncouncted wells under “boil” restriction. <http://mceer.buffalo.edu/publications/Katrina/07-SP02web.pdf>
- 13 A *Lifewater-trained* volunteer with experience in Kenya (with River International and Harvest Keepers) and Latin America (River International). Steve is the author of <http://clean-water-for-laymen.com>
- 14 A second-generation MK with a passion to address water needs through *911Water.com*
- 15 Similar but less suitable filters discovered in our research include reverse osmosis, Katadyn®, and Lifesaver®. Nick and my wife independently researched filtrations options and, like many missionaries, settled on Berkey® filters for our home use.
- 16 See “Spiritual Capital” by Ken Eldred, on p. 11 of this issue.
- 17 Water.EPA.gov/drink/contaminants/upload/mcl-2.pdf