The Base of the Pyramid (BOP)

Reperceiving Business from the Bottom Up

GBN Working Paper by Nicole Boyer

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The Base of the Pyramid (BOP) is being heralded as the biggest potential opportunity in the history of commerce—and, at the same time, a troubling future discontinuity for many incumbent players. Which will it be? The answer, most likely, is both.

This paper provides a brief introduction to the BOP, a snapshot of a growing, shifting, dynamic space. The goal here is to inform and stimulate new ideas, better questions, and strategic conversations about the BOP within the GBN community. To that end, this paper employs GBN's approach of applying pluralistic perspectives, multiple knowledge domains, and longer contextual views to the exploration of an emerging marketspace and its implications for companies today.

The BOP in Brief

> *"We cannot escape the fundamental question: Whom and what is business for? The answer once seemed clear, but no longer. The terms of business have changed."*
> —Charles Handy

> *"Like the tip of an iceberg, the opportunity remains invisible to the corporate world."*
> —C. K. Prahalad and Stuart Hart

The BOP concept champions new thinking and new ways of doing business in the world's poor markets. While this high-level aspiration is not necessarily new, the current concept, also known as B24B (business-to-4-billion), was coined by influential business academics C. K. Prahalad and Stuart Hart a few years ago in a working paper, which then became a series of important and well-cited articles. (See "Essential Reading.")

These authors made the simple yet powerful observation that 4 billion people remain outside of the global market system. The BOP concept frames this stunning fact as both a tremendous need and real opportunity for corporations. The BOP represents a vast, unexploited, multitrillion-dollar marketplace. For companies struggling with maturing markets, floundering business models, and serious questions about who their customers of the future will be, these are important markets to crack. But tapping into these overlooked markets will require companies to reconfigure their business assumptions, models, and practices.

The Unrealized Opportunity at the Bottom

Source: Prahalad and Hart
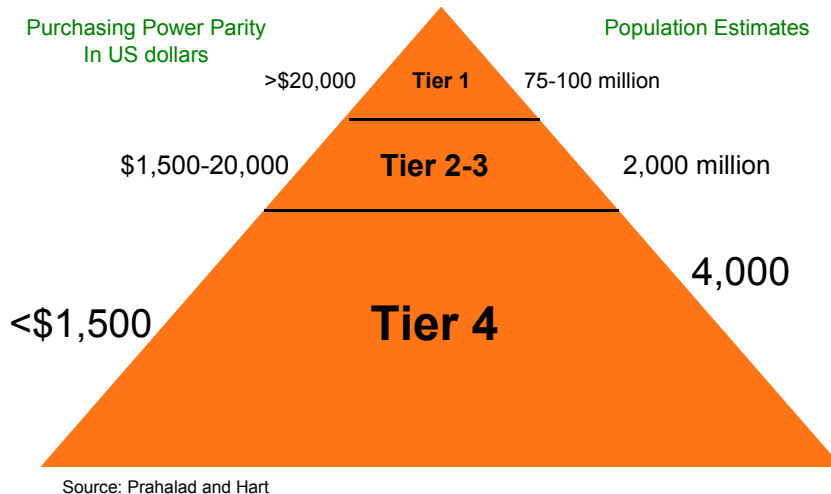
The downsides to ignoring these untapped markets are also enormous. Conditions are dangerously ripe for disruptive technologies and ideas to emerge from the BOP, although it may be hard for large incumbent companies to see or believe this at present.[1] Many things could accelerate this development. One scenario is a wave of sustainability-driven creative destruction, promulgated by a combination of top-down forces (regulation, new norms) and bottom-up forces (public perception, social action, new entrants, technologies) that would force companies to radically rethink their ecological footprint.[2] Indeed, Peter Schwartz's forthcoming book, *Inevitable Surprises*, counts rapid climate change as being a "given" in the next decade.

From a societal perspective, the downsides to not addressing these failures of development are becoming poignantly clear as well. As Joseph Stigliz wrote in his 2002 book, *Globalization and Its Discontents*, "Globalization today is not working for many of the world's poor; it is not working for much of the environment; it is not working for the stability of the global economy." At a fundamental level, something is awry with our current global system. More than ever, then, a positive future for the planet depends on a new paradigm that links business and development and promotes social, economic, and environmental stability around the world. Business, broadly defined, is a dynamic process of value creation; one high-leverage approach is to tap these intrinsic virtues to ensure ecologically sound wealth-creation opportunities at the BOP level.[3]

Corporations, in particular, can play an active part in this through experiments and creative solutions both small and large, and by thinking more broadly about their role in society. It boils down to a question of market design and alignment: As business strategist Michael Porter succinctly put it, "We are learning

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[1] Disruptive technologies are "innovations that allow less skilled, less affluent people to do things previously done by expensive specialists, who often centralized their activities in inconvenient locations." The history of commerce and technology is punctuated with such innovations (e.g., the printing press, personal computers, and telephones).
[2] See Stuart L. Hart and Mark B. Milstein, "Global Sustainability and the Creative Destruction of Industries," *Sloan Management Review* 41 (1999).
[3] See David Wheeler and Kevin McKague, "The Role of Business in Development," 18 November 2002, available at http://www.sustainablelivelihoods.ca/Resources/resources.htm.

that the most effective way to address many of the world's most pressing problems is to mobilize the corporate sector where both companies and society can benefit."[4]

BOP Experiments in the Field

"Furious activity is no substitute for understanding," wrote H. H. Williams. This is what the BOP space feels like at present. Clearly, much work needs to be done to develop better analytical tools, empirical research, and operational models to understand who is doing what, where, how, why, and with whom—and then to evaluate what is working and what is not. This is important because the cost of evaluating the quality of these projects is currently quite high. But it is also complicated—experimentation is happening all over the world, by a wide range of organizations and actors both large and small, often in far-flung and culturally challenging places. Fortunately, the empirical foundation supporting the BOP logic is starting to be built by academic hubs like the BOP Lab at the University of North Carolina. However, we are still a few years away from seeing any results.

Meanwhile, sitting at the crosshairs of both private and public spheres, we are witnessing a Cambrian explosion of activity within the social or citizen sector—a sector now comprising millions of organizations around the world that have emerged to fill certain social needs and value vacuums. David Bornstein, author of the inspiring forthcoming book, *How to Change the World,*[5] likens the birth of this sector to the creation of the commercial sector after the Middle Ages, when the barriers to entrepreneurship fell as the feudal and guild system, which restricted entry, collapsed. It took another 200 years to create the structures, institutions, and norms that support entrepreneurship and business—things we take for granted today like limited liability, joint stock ownership, operating standards, and formal management education. Similarly, the barriers to becoming a social entrepreneur are dropping, as the public sector devolves and deregulates and the private sector's role shifts as well.

We are also just starting to create the support structures for this sector to thrive, with experiments in venture philanthropy and a shifting perception of social entrepreneurship as a viable career path. As increased competition within this sector weeds out the bad ideas from the good, it will become a fertile place to look for future BOP ideas, experiments, organizational models, and trends. The social innovation that happens there is almost certain to have implications and applications for both private and public sectors. Bornstein also sees a convergence between business entrepreneurs and social entrepreneurs; the latter know how to manage a particular client set and distribution network, while the former have production capacity and know-how.

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[4] World Resources Institute, *World Resources 2000-2001*.
[5] Peter Drucker was one of the first to notice this development. See also David Suzuki and Holly Dressel, *Good News for a Change: Hope for a Troubled Planet* (New York: Stoddart Publishing, 2002).

A BOP Typology

The innovators, actors, and leaders that are emerging in the BOP space fall into seven broad categories, spanning the continuum from private to public sectors. Three of these categories—corporate pure-play experiments, catalysts and enablers, and social entrepreneurs—have particular relevance for companies, and are characterized by their faster-moving entrepreneurial style and motivations. Also mentioned briefly are four other categories whose full exploration lies beyond the scope of this paper.

(1) Corporate pure-play experiments. These projects tend to be 100 percent for-profit businesses, or have the near-term intention of being so. They are the star cases in the BOP literature because they best stick within business managers' existing frame of reference.

(2) Catalysts and enablers. This diverse group includes everything from academic institutions and think tanks to foundations and NGOs to niche financial organizations and consultancies. These organizations often perform a brokerage function, act as intermediaries, and are highly networked. As such, they are interested in creating the "middleware" to make BOP ideas work, such as new tools, processes, blueprints, and the hard and soft infrastructure for sustaining further marketspace creation. They tend to be small in size and flexible and opportunistic in nature. In terms of funding models, they run the gamut from for-profit to self-financing/sustaining to nonprofit.

(3) Social entrepreneurs. These are actors who are putting their ideas into action in the field and providing services to clients and customers. Most of these organizations are for-benefit[6] and have had some government funding and outside help, but often no more than any other for-profit startup. Significantly, some use this initial support to migrate to for-profit organizations. Within these categories are three important subcategories: eco-design and digerati entrepreneurs, the ex-big-business group, and grassroots and national champions.

Four additional categories that will not be explored here in greater depth are:

(4) Multilateral institutions and development agencies. Organizations like the World Bank, the UNDP, and USAID are also important enablers of social entrepreneurship and market creation; they fund many programs and activities that improve the business environment for economic activity. What distinguishes this group from the "catalysts and enablers" group is its slower pace and traditional public-sector approaches to development. Among some senior people, there is notable ambivalence and suspicion about BOP projects—some of which could be attributed to a concern that BOP project might replace the work of governments and development programs. But the biggest question for these institutions and agencies is: How do we make these programs work more effectively, legitimately, and in concert with other sectors and developments? With so much activity in this space, duplication and inefficiency are the norm.

(5) Advocates. NGOs, social activists, and citizen and religious groups have historically been the strongest advocates for remedying the ills and injustices of the world's poor. In many ways, this group is the most in touch with BOP issues; its members are intensely cause-oriented and mission-driven and thus have a strong normative agenda. Many in this group see business as part of the problem and not the solution, and so the positioning of business as a positive agent of change is often a difficult sell for these folks (OXFAM and Greenpeace are high-profile examples). Of course, many of these groups are also quite pragmatic, blur into the social entrepreneur category, and play a key role in making the BOP work. Developing processes to include these groups is increasingly critical.

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[6] "For-benefit" has replaced "not-for-profit" as the term of preference because it is more descriptive and avoids definition by negation.

(6) Corporate philanthropy. Corporate philanthropy is another vector for the BOP. As Michael Porter and Mark Kramer argue, this corporate function is often undervalued and underleveraged, but with the right approach it can be essential to a company's competitive advantage. While they don't mention the BOP, their framework clearly applies.[7]

(7) Transnational networks. These networks of nested networks provide global scale and scope to local and regional groups and individuals, mainly through the Web and mobile telephony. Some networks are ad hoc and transient; others are practical and technically focused; still others are designed to support social movements and global causes, as we have seen most powerfully with the anti-globalization coalitions. For example, in Uganda, Woman Information Resource Electronic Services (WIRES) provides technical support for startup companies. The international movement La Via Campesina coordinates peasant organizations of small and middle-class producers, agricultural workers, rural women, and indigenous communities in Asia, Africa, America, and Europe.

Of course, all of these categories overlap in a dynamic web of collaboration and—while it's not said in polite company—increasing *competition* for funding, reputation, and mindshare. So the topography of this web is uneven, with some groups having more power and influence than others. It should also be said that even among collaborations there remains a great deal of creative tension, prejudice, territoriality, and values collision, which makes working on shared issues difficult in practice. "Show me a private-public sector partnership model that works!" is a frequent cry from business managers. A fruitful area of action research, then, is figuring out optimal processes for managing these multi-stakeholder collaborations.[8]

Corporate Pure-Play Experiments

Early corporate efforts to address BOP markets have come from Unilever, Hewlett-Packard, Citibank, Cemex, Royal Dutch/Shell, BP, Johnson & Johnson, and Honeywell—and the list grows longer every month. While it is hard to assess the perceived importance and value of these projects within these companies, Stuart Hart, one of the principal BOP authors, has been surprised to see just how fast this concept is "tipping" and sticking within the corporate world.

Hindustani Lever Limited (HLL)

Two stories about HLL stand out in the literature and serve as good illustrations of BOP initiatives.

A new business design for laundry detergent. In India, an upstart company called Nirma entered the laundry detergent market for low-income Indians. At first, HLL dismissed Nirma as a low-end producer, and continued to focus on upscale markets. But to its astonishment, Nirma began to eat up market share from the bottom-up. After examining Nirma more closely, HLL realized that Nirma was not just another competitor, but one with a superior business system that was better attuned to the local market. By thinking from a demand-side perspective, Nirma reworked its product formulation, manufacturing, distribution, packaging, pricing—ever part of its process—to meet the specific needs of poor Indian consumers. HLL went back to the drawing board and reinvented its business system so that, like Nirma, it could launch a product specifically designed for the BOP market. The result was a vastly improved, more eco-friendly detergent. HLL drastically reduced its water-to-oil ratio, decentralized production, and took advantage of a large labor pool and social networks in rural markets, all of which slashed cost structures

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[7] See Michael Porter and Mark Kramer, "The Competitive Advantage of Corporate Philanthropy," *Harvard Business Review* (December 2002). An interesting case study worth exploring is the Cisco Systems Networking Academy, available at http://cisco.netacad.net/public/academy/.

[8] Start with the UNDP's Global Learning Network (http://www.undp.org/ppp/gln/index.htm) and the Business Partners for Development, which conducted a three-year study on private-public sector partnerships (http://www.bpdweb.org/products.htm).

and thus enabled a lower price for the product. In the end, the margins were lower but unit sales were higher. This product is now an important revenue generator, and has been leveraged into other parts of the world.

Ice cream for the masses. "Shouldn't everyone have access to the delights of ice cream at a price even the poor can afford?" This was the business challenge the HLL team wanted to tackle after tasting the BOP logic in action. Of course, it was no easy task. Ice cream needs to be refrigerated at -18 Celsius, which is difficult to do in rural India, where access to electricity is sporadic and unreliable. But HLL realized that 40 percent of the cost of ice cream comes from refrigeration, not milk and sugar. So the company focused on rethinking the refrigeration platform and—unexpectedly—developed a novel, salt-based heat shield; it also improved its insulation methods. As a result, the price of ice cream dropped to an affordable level. Furthermore, the redesigned refrigeration platform was cheaper to build, highly mobile, required very little energy, and involved hardly any pollutants. The product became a market success, and delivers a better margin than high-end producers. Right now, it is unclear whether this new technology will leapfrog from the BOP marketspace to industrialized markets, thus potentially disrupting existing industry value propositions.[9]

Hewlett-Packard's e-Inclusion

Located within HP Labs,[10] e-Inclusion is the institutional home of Hewlett-Packard's BOP projects and represents a $1 billion investment by HP to help bridge the digital divide and open new markets in rural villages in Brazil, India, and Africa. At the January 2003 BOP Lab meeting, Gary Herman from HP Labs spoke about his experiences in launching some of these projects in India.[11] He was refreshingly candid about what worked and didn't, and very interested in the larger question: How do successful companies try something new? Almost every company faces problems innovating, but the problem compounds with the BOP because, by their nature, BOP projects defy conventional business logic. Here are two examples that Herman presented:

Creating the community computer. How do you bring the power of computing to the developing world? This is more than just a technical challenge, of course, but HP arrived at an interesting solution. With a modified Linux kernel, HP invented a 4-in-1 computer system that delivers the functionality of four individual terminals while using just one computer box. From a developing-world perspective, this is an important innovation; it means far fewer computers would be needed for a school or a village. But from the Western market perspective, this is a very bad innovation because it cannibalizes business. PCs are already a commoditized product competing on unit price, so why would anyone sell four computers for the price of one? While not a disruptive technology in a technical sense, it certainly could be from a business model perspective—a Pandora's Box potentially unleashing all kinds of unintended consequences that HP would not be able to control. The status of this project inside HP is uncertain because of these dilemmas.

Creating a village photography niche business. In its research, HP surfaced a strong latent demand for photographs in India, especially wedding and identity-card photos. To tap this demand, HP developed two companion technologies to support low-cost picture-taking and image development. One was a retail concept called the HP Photoshop Store, where basic image development through HP's printing and PC technology could be bought or licensed by locals in small villages. The second innovation was a high-

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[9] For other case studies, see http://www.unilever.com/environmentsociety/casestudies/.

[10] HP made the strategic decision to locate one of its R&D labs in India, which was seen as a key milestone among BOP observers. Given that over 60 percent of HP's business originates outside of the U.S., this was also perceived as long overdue. For more, see http://www.hp.com/e-inclusion/en/ and http://www.hpl.hp.com/india/.

[11] Wheeler and McKague (2002) discuss a HP Senegalese project as well. Indeed, it should be noted that this paper overemphasizes projects in India, a bias from the source material. By many accounts and reports, much innovation and entrepreneurial energy is being unleashed in Africa in spite of (or because of) the AIDs epidemic.

quality camera, powered through a solar backpack, for mobile street photography. The result was the launch of a mini-cottage industry for aspiring local entrepreneurs who wanted to become village photographers. Financing models, through microlending, helped make this possible. The concept made financial sense to HP because it makes most of its margins selling printing paper and replacement cartridges, not actual hardware; fostering the demand of picture-taking and development was an ideal way to boost supply sales. The ecological impact of these technologies, however, was not mentioned and would be an important question for HP.

Other Examples

- Citibank's Suvidha, a consumer-banking product with a low deposit limit ($25), was an unqualified success when launched in Bangalore, with over 150,000 new accounts opened in the first year. Latent demand for trusted financial services proved to be much stronger than Citibank imagined. Citibank is also experimenting with new IRIS technology and the use of iconic tools to overcome poor people's inability to read and write.

- Ericsson developed a lower-cost cellphone (the MiniGSM) that can operate as a standalone device or as a networked data or voice system for up to 5,000 users in a 35-kilometer radius.

- Voxiva, a startup partnered with Telefonica, is automating business transactions over the phone in Latin America. Peru's Ministry of Health is using Voxiva's service to fill prescriptions and link people with healthcare workers.

Catalysts and Enablers

This category includes four broad clusters: (1) academic networks, leading-edge business schools, and think tanks; (2) foundations and NGOs; (3) niche financial services, brokerage, and consulting companies; and (4) "floating" initiatives and projects.

(1) Academic networks, business schools, and think tanks. As mentioned earlier, the BOP Learning Lab, lead by Stuart Hart, is the main academic hub working on advancing the analytical, conceptual, and educational tools to support BOP initiatives. The two Holy Grails at present are: (1) developing more case studies and success stories so that this meme can spread further and (2) developing workable funding and business models. For instance, the BOP Learning Lab is developing a searchable BOP projects database. It is also involved in a two-year project to develop a research protocol to better understand BOP consumers and markets. The project will involve aggregating existing data about these markets that is scattered across sources (e.g., development agencies, national census data, and reports) and developing new methods of marketing and market research where existing tools prove either inappropriate or ineffective. At present, there is also a push to internationalize the lab and get into the field, which is critical if practitioners are to practice what they preach.

Another interesting academic hub is the Sustainable Livelihoods Program at York University's Schulich School of Business. The Toronto-based school ranks as one of the best in the world for marrying sustainability and business, and the school's intellectual approach draws much from applied complexity thinking. The program's website has some good resources and papers—mostly cowritten by the program's director, David Wheeler—as well as links to some excellent case studies.

While the original MIT Media Lab in Cambridge may be facing funding shortages, the MIT Media Lab Asia, headquartered in Mumbai, India, is just getting started. Its lofty, BOP-esque mission is "to influence profoundly the quality of life of the common man," and the tagline on its website is "innovating for the next 5 billion." The 10-year master plan calls for a total budget of nearly $1 billion, a fifth of which will be provided by the Indian government. One of the MIT Media Lab Asia's first projects is to bring Wi-Fi connectivity to rural villages. It is also working on iconic and voice-activated computing via the Internet.

(2) Foundations and NGOs. Many of the usual suspects in the foundation world are also thinking about the BOP space—Ford, Rockefeller, Soros's Open Society—and assessing how their existing programs tie into these ideas. What level of priority each foundation is giving to these assessments is difficult to determine. A bleak funding climate and an increased accountability for their programs' effectiveness have together created some turbulence within the foundation world.[12]

However, one small organization that has been in this space for over two decades provides a good illustration of the kind of foundation we will see more of in the future. The Ashoka Foundation's mission is to develop the profession of social entrepreneurship around the world. It scours the globe for extraordinary individuals with unprecedented ideas for change in their communities, and enables them through financial assistance to focus fulltime on their ideas in education, youth development, healthcare, the environment, human rights, access to technology, and economic development. To date, the foundation has invested in more than 1,200 fellows in 44 countries. This strategy, which was devised by Ashoka's founder, Bill Dryden, over 20 years ago, is a high-leverage way to accelerate the metabolism of social innovation.[13] It is also very capital efficient, with very little money going a long way. Ashoka's major contribution is a powerful screening and identification process that gives it some predictive confidence in finding people who will become key movers and shakers in their fields.

(3) Niche financial services, brokerage, and consulting companies. The Acumen Fund is a pioneer in social venturing, a field that encourages an entrepreneurial approach to fixing world problems. New Ventures also brokers environmental entrepreneurs with investors. Web-based organizations focused on brokering social entrepreneurship and funders/donors include the Digital Dividend Clearinghouse, funded by the World Resources Institute (WRI), and Development Space.

Access to good information is another key barrier to creating markets. This problem is being addressed by a host of small but highly skillful organizations like Clean Edge, which is helping to "build" the clean-tech marketspace. While its focus has been first-world markets, the company sees much of its future business happening at the BOP level. SustainAbility claims to be the longest running sustainable development consultancy. It focuses on how the sustainable development (SD) agenda fits within business strategy in environmental, social, and economic terms—the "triple bottom line."

GBN has been contributing to new ways of thinking about market creation, sustainability, social change, social networks, and the changing role of corporations—all BOP themes—by pushing and pulling ideas through its membership. A review of GBN Book Club selections, reports, and meetings tells this story best. Two WorldView meetings connected to the BOP are also worth mentioning. The "Customers of the Future" meeting in 1999 had a strong theme of embracing non-customers and experiential/anthropological methods for learning about customer needs, and thinking from a demand-centric perspective. In 2000, "The Clean Revolution: Technologies at the Leading Edge" produced mostly BOP-style opportunities within the clean-tech space, using GBN's business-idea prototyping module.

(4) Floating initiatives and projects. An interesting development—and an experiment in organizational design and future governance—in this area has been the creation of projects that live at the intersection of sectors, groups, and disciplines. Starting with the Rio Summit in 1992 and continuing with the Johannesburg Summit in 2002, we saw the genesis of organizations like the World Business Council for Sustainable Business Development, a forum in which business leaders learn about and work together on sustainability issues. The summit highlighted the growing realization that business was a critical part of

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[12] For more on this topic, see http://www.businessweek.com:/print/magazine/content/02_48/b3810001.htm?mz. Also, GBN's Future of Philanthropy practice has been working hard to impact the direction of this sector: http://www.gbn.com/ServicesPhilanthropyConsultingDisplayServlet.srv.

[13] For a good story about Ashoka and its founder, see David Bornstein, "Changing the World on a Shoestring," *The Atlantic Monthly*, January 1998.

the solution to global problems but encouraged, in the words of Elvis Presley, "a little less conversation and a little more action."

Early signs show that this consortia model may be morphing further to include other "floating" forums, which collectively are becoming the connective tissue linking many stakeholder groups—development agencies, companies, NGOs, etc.—to shared, complex, global problems and issues. These floating projects take on a Hollywood-like model in terms of their complexity, the creative tensions among "actors," how they get funded and operate, and how they disband after a set period of time. For instance, Royal Dutch/Shell is the "executive producer" of a large project focused on AIDS in Africa, in part because of Shell's perceived legitimacy and experience in running such large-scale engagements.

Social Entrepreneurs

This group includes a diverse set of actors: the eco-design and digerati segment, the ex-big-business entrepreneurs, and the grassroots and national champions. The first two segments come from the "rich world," while the third segment usually comprises innovators from BOP markets. The entrepreneurs in this group tend to be small or medium-size enterprises or empowered individuals. They tend to ignore established rules and ways of doing things, and extract ideas across established industries and boundaries.

The eco-design and digerati segment. Another interesting trend has been the convergence of the digerati (or high-tech pioneers), the Green movement, and the world of industrial and product design. Bruce Sterling, a GBN Network member, is the colorful and quirky embodiment of this. He is the leader of the Viridian Movement, which champions a design-led revolution to solve key environmental problems. Its tagline is "creating irresistible demand for a global atmosphere upgrade." Not surprisingly, the confluence of geeks and greens is happening at a time when the clean-technology sector is emerging as a viable and robust one.[14] As John Doerr, a well known venture capitalist from Kleiner Perkins, said recently, "I am interested in making things again: clean water, clean transportation, clean power—those are the big markets of the future."

Since September 11, 2001, however, the tone in this segment has shifted to a curious, emotional mix of "rich world" guilt, heightened doomsayer urgency, and a 1960s-eque hope (albeit tempered and more pragmatic) that it is possible to "do well by doing good." This recently surfaced at the annual TED conference in Monterey, California—a favorite gathering place for the digerati.[15] Instead of get-rich schemes, these dot-com entrepreneurs and Silicon Valley pioneers showcased clean-tech solutions for the developing world. For instance, the high-profile innovator Dean Kamen proffered a new water purification technique for villages. Bill Gross of ideaLab, once a prominent Internet startup incubator, is developing a radically new and very cheap solar technology that looks like a sunflower and is not based on photovoltaic technology. A bike-pedal-powered PC called the Jhai Computer, designed for poor people in Cambodia, was also recently featured; its inventor, Lee Felsenstein, helped to create the Homebrew Computer Club with Apple creators Steve Jobs and Steve Wozniak.[16] In a similar low-tech way, the UK-based Freeplay is developing hand-cranked radios for parts of Africa that lack electricity.

The notable trend here is the novel recombination of high-tech and low-tech solutions. But other entrepreneurs have been at this for a while, long before September 11 shocked people in the U.S. into thinking differently about the BOP. For instance, the treadle water pump, a simple technology resembling

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[14] See http://www.cleanedge.com/reports-trends2003.php.

[15] Katie Hafner, "Dot-Com Saviors, Tilting at the World's Ills," *The New York Times*, 26 March 2003. For more about TED, which recently changed ownership, see www.ted.com.

[16] See http://www.digitaldividend.org/knwldge_bank/knwldge_bank_02_jhai.htm. Also see Kevin Fagan, "Pedal-Powered Email in the Jungle, *The San Francisco Chronicle*, 17 January 2003.

a StairMaster, is one such success story. This pump has pumped hundreds of extra dollars into Bangladesh's GDP per capita because it has enabled farmers to double or even triple the size of the crops they can grow each year. This was previously impossible because of sporadic access to water in the monsoon season. The pump provides access to irrigation water trapped just meters below the river delta flood plain throughout the year. The pump is manufactured locally, has few moving parts, and is affordable—farmers can make a return on their investment after a year. It is also a profitable enterprise, with much competition moving into the field.

The Solar Electric Light Fund (SELF) has also been around for over a decade and is prominently featured in the BOP literature.[17] SELF's mission is to help developing nations build their electricity infrastructure through innovative uses of solar energy. With over 2 billion people on the planet without access to electricity, this is a high-leverage venture—with electrification comes the ability to purify and pump drinking water, refrigerate vaccines, and gain access to information technology. Solar power is a particularly viable option because of the often abundant sunshine in developing countries, and because the PV solar technologies are often the cheapest options. SELF has been using a rolling funding model, which appears to be sustainable and effective.

Bioscience and biotech is another segment looking to bring clean-tech solutions to the BOP, especially in terms of resource restoration—of ecosystems, air quality, water systems, agricultural systems and soils, etc.— which is projected to be big business in the future.[18] To get a hint of this, delve into GBN's BioFutures content stream, where Brian Sager describes the far-reaching implications for business as we start applying nature's technology to our industrial processes and products. For instance, to create the material Kevlar, we expend tremendous amounts of energy bringing great vats of sulfuric acid or other toxic chemicals up to very high temperatures. By contrast, animals and mammals, through enzymatic processes, perform even greater, more elegant transformations at room temperature, and with hardly any impact on the environment. We are not far from mimicking this kind of technology and intelligence.

The ex-big-business segment. In recent years, a vast number of people—from senior VPs to middle managers to newly minted Harvard MBAs—have left mainstream business life to become social entrepreneurs. In contrast to the techies, many of whom were arguably always driven by "thinking different" and changing the world, these folks are rather late-bloomers in terms of finding their cause. Bill Gates, by all reports, is more engrossed in his foundation efforts than ever. The grandfather of the biotech industry and founder of Chiron, Bill Ruters, is also focusing on healthcare issues in the developing world.

Even more interesting, however, is what is happening to middle managers, many of whom are leaving the private sector and taking significant career and financial risks to become social entrepreneurs. Take Craig Cohon, ex-Coca-Cola "golden boy." Cohon exited the company to start Globalegacy, an organization that takes a unique alliance-based approach to sustainable economic solutions for impoverished communities in large cities around the world. Cohon is using his considerable experience in marketing and brand management for a social purpose. Such "defections" from the corporate mainstream are only likely to increase as boomers start to retire and seek other ways to make meaning of their lives. Popular books like David Brook's *Bobos in Paradise* (2000) and the recent Po Bronson book, *What Should I Do With My Life?* (2003) are fuelling these flames.

Clearly, what we are seeing among the technological and business elite is the presence of much deeper sociological and demographic forces, such as post-materialism and the increased perception that something has to be done about the world's ills. This trend is likely to expand beyond middle managers

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[17] "Solar Power Is Reaching Where Wires Can't," *The New York Times*, 9 September 2001.
[18] See Storm Cunningham, *The Restoration Economy: The Greatest New Growth Frontier* (San Francisco: Berrett-Koehler, 2002).

and could have an unexpected impact on the political and value choices that society makes in the next decades.

Grassroots and national entrepreneurs. These startups are perhaps the most interesting, from a human interest perspective, because they remind us that "bottom up" ideas and developments really can come to fruition, despite the odds and systemic barriers against them.[19] The imperative to create a better future for the BOP is strong, but the drive to enhance and preserve human dignity and a sense of place is also a powerful force—one that we often underestimate in our cynical, postmodern world. More practically, corporations have much to learn from grassroots entrepreneurs because they understand a particular client-set, distribution networks, and local conditions at the BOP level.

The most well known story in this bottom-up category is of Yunus Mohammed starting the Grameen Bank in his native country of Bangladesh over 20 years ago. Mohammed had to iterate his idea considerably to incorporate key learnings along the way. For instance, the Grameen Bank started out as a government program, not an NGO. It also started lending to men, not women, before discovering that this was as mistake.[20] Since then, the Grameen family of organizations has grown to include Grameen Shakti (energy), Grameen Telecom, Grameen Shikka (education), Grameen Cyberspace, and Grameen Knitwear.

The most important social innovation, however, within the Grameen group of organizations is the creation of better tools and processes for social entrepreneurship in poor markets. The Grameen group is creating not just new organizations, but new *blueprints*—literally a "how-to" methodology—that can be copied, replicated, and applied to different contexts and ultimately improved upon, like open source software. Today, we see this happening as microcredit schemes go mainstream and scale globally.[21] The most recent Microcredit Summit in November 2002 attracted tens of thousands of organizations, collectively working toward the goal of reaching 100 million of the world's poorest families by 2005.

Numerous grassroots for-profit BOP companies are popping up in the IT sector. One example is TARAnet, a rural Indian startup focused on computer-enabled education services ranging from basic IT training to English courses. Another example is n-Logue, an Indian company that connects franchised village kiosks with centralized nodes to national phone networks and the Internet. Each node, also franchised, reaches 30,000 to 50,000 people; the cost per customer is about $1. This is a shared-use model, the aim of which is to create a business ecosystem. CorDect, also in India, and Celnicos Communications in Latin America follow a similar model.

Arvind Mills, the fifth largest denim manufacturer in the world, developed an affordable, ready-to-make kit for jeans called "Ruf & Tuf." Cemex, the Mexican multinational cement company that made a boring commodity seem interesting, is employing similar techniques, derived from complexity theory, to improve the delivery of cement in rural environments.[22] Cemex is also experimenting with microcredit schemes to create demand, because often one of the first things poor people want to do when they get money is build or improve a home, which usually requires cement.[23] Of course, cement is not exactly environmentally friendly, which is why substitutes are being developed, funded in part by organizations like the Mountain Institute. Early trials of this new manufacturing process are happening in Nepal.

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[19] Again, see David Bornstein's work and Suzuki and Dressel's *Good News for a Change* (2002) for some of these inspiring stories.

[20] See David Bornstein's "The Barefoot Bank with Cheek*" The Atlantic Monthly*, December 1995; *The Price of a Dream: The Story of the Grameen Bank* (1997); and his forthcoming book, *How to Change the World*.

[21] To learn more about microcredit as a tool for development, see http://www.sustainablelivelihoods.ca/Resources.

[22] For more, see http://www.fastcompany.com/magazine/23/petzinger.html.

[23] For more on Cemex's Patrimonio Hoy project, see http://www.changemakers.net/pointofview/forprofit.rtf.

What's Next for the BOP?

Looking ahead, many questions remain about the future of the BOP space. One key set of uncertainties revolves around the current and evolving geopolitical situation and its impact on the BOP. At the same time, the many dilemmas facing business at the BOP level—the challenges of scaling small economies, high transaction costs, distribution challenges, overcoming cultural and organizational barriers—may prove formidable. Questions have also been raised about how well these experiments are *really* working in practice and how the BOP will ultimately connect or clash with the citizen sector.

On the other hand, what could be more certain? Indeed, the robust and elegant aspect of this concept is that it is riding on the back of so many deeper driving forces. Many argue that the BOP is already a given, "locked in" as a model for the future; what we don't know is how many other existing BOP initiatives remain undetected by the Western corporate eye. Can and will BOP ideas emerge from the bottom-up and disrupt existing industry structures and incumbents? More broadly, what is this then signaling in terms of global systemic change and the BOP's role as an artifact of our times?

Switching to a normative viewpoint, if entering BOP markets is a good idea and strategy for companies, what needs to happen to make this a reality? While some projects can be undertaken by individual actors, like corporations, others will need to happen collaboratively and in concert with broader stakeholders. The resulting division of labor may look quite different from past models. We also need to seek out and evaluate the best practices and models to date and connect the people and organizations that are developing them..

The right hybridization of conceptual tools and practical techniques will provide some rich opportunities for action research and learning, which will tell us a great deal about the promises and pitfalls of the BOP concept. In the wake of September 11, the timing may be right to start dealing with the above questions. New horizons of hope are needed, and fresh ideas about development must be tested and tried. In a world "where intangible assets like trust and reputation account for an increasing proportion of the market value of companies,"[24] corporate leaders are now thinking hard about their legacies, the vulnerability of their brands, and the long-term viability of their organizational design and metrics. The GBN community is in an excellent position to catalyze this kind of thinking, and perhaps even to launch a strategy to realize a positive, mutually beneficial scenario where the BOP is a high-leverage source of sustainable innovation and wealth-creation instead of a locus for future social and economic disruption.

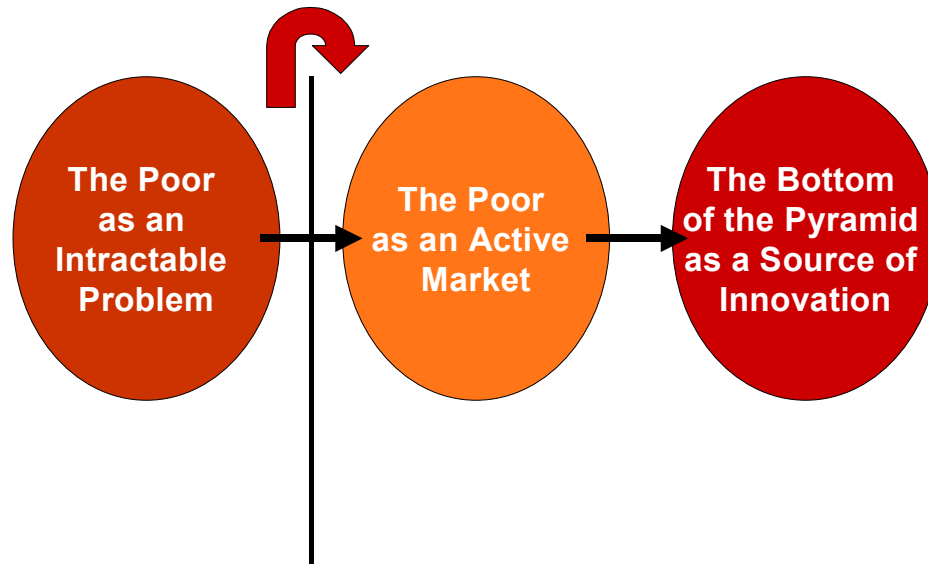# How to Get Started: The Conceptual Framework for BOP Innovation

Corporations can approach the BOP opportunity from a number of directions. Here are three important aspects of the BOP innovation framework developed by C. K. Prahalad and Stuart Hart.

Challenge core beliefs and embedded assumptions about poor people and markets. These assumptions include: what poor people "really" need and desire and how they consume; perceived barriers to market entry such as distribution hurdles and other transaction costs; and deep-seated feelings and fears about non-Western cultures and countries. Education and training will be required to build

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[24] Wheeler and McKague (2002).

skills, competencies, and new "mental maps" of what is and is not possible in these markets. U.S. companies in particular need to check their reflexive "West knows best" attitude and ask themselves what they might stand to learn from other markets and people. This is the kind of "re-perception" championed by scenario-planning pioneers like Pierre Wack, which might explain why the BOP resonates so strongly within the GBN network.

The Needed Shift in Mindset

The Poor as an Intractable Problem → The Poor as an Active Market → The Bottom of the Pyramid as a Source of Innovation

Source: C.K. Prahalad, "India as a Source of Innovations," 30 September 2000

Innovate business designs from the bottom-up. Many current business models in many industries were configured for a different marketspace and time and will not work as well in the BOP context. As a consequence, new business designs need to be created that are better suited to these specific conditions. The challenge of innovating from the bottom-up, however, will be the creation of sustainable and robust new business ideas and technologies that can "cross over" to the developed world. How do you marry quality, low cost, sustainability, and profitability simultaneously? How do companies tap the latent demand for products and services that are badly needed in these markets? In part, perhaps, by beginning the innovation process with the following points in mind:

- *Rethink technology platforms and their supporting business models*. This might include radical innovations, or a mix of high-tech and low-tech solutions. The end result: simpler, better, more accessible, cheaper, and cleaner technologies.

- *Focus on meeting functional needs and services, not just producing more product*. This will require identifying new sources of value through a demand-side lens. It may also require unlearning existing product profiles and developing a beginner's mind to product innovation.

- *Focus on capital efficiency, not just labor productivity*. The latter is less important where labor is cheap and abundant and people need employment. In most BOP cases, there is zero working capital involved, which is an inspiring achievement.

- *Explore shared use/access models that disaggregate access from ownership but widen the consumer base.* [25] The result: increased asset productivity. Think of a community of users instead of a single user in a BOP world.

- *Replace assets with information.* For instance, cellphone services now provide weather, soil, and pricing data to framers in rural markets. They are also procurement vehicles.

- *Shift from a "bigger is better" economies of scale mentality.* Instead, think about marrying world-scale capabilities with more distributed small-scale operations.

- *Focus on different metrics.* Managers are trained to concentrate on margins, but unit volume sales are often more relevant for BOP markets.

- *Tap into diverse knowledge sources across disciplines.* Learning to see old problems in a new light may come from a different perspective or practice.

Invest in a business ecosystem, and enable marketspace creation in collaboration with other groups, institutions, and stakeholders. New business designs are unlikely to succeed without a broader, four-pronged strategy, which includes creating buying power (through increased access to credit and income generation); shaping aspirations (through consumer education and sustainable development choices); tailoring to local solutions (through bottom-innovation and targeted product development); and improving access (through novel approaches to creating distribution systems[26] and enhancing communication links). Of course, if companies and institutions get this right, it will create a virtuous circle of market creation, thus ensuring them customers in the future, which was an unquestioned assumption up until now. But this will require nothing less than a "new mode of international engagement, sharing resources and skills on a global scale."[27] This, in turn, will require a completely new attitude toward risk by all stakeholders.

Seven Ways to Get Your Feet Wet in the BOP Space

With this conceptual framework in hand, here are some more specific ideas, small and large, about how to start thinking, innovating, and catalyzing BOP projects within an organization.

(1) Sponsor a BOP organization. Numerous organizations are at work creating the middleware and social software needed to support a robust BOP marketplace. One cost-effective way to learn about such developments is to sponsor one of these organizations—financially or through other means. At present, at least six GBN members sponsor the BOP Learning Lab at the University of North Carolina at Chapel Hill's Kenan-Flagler Business School. Many other institutions and organizations in the BOP space would no doubt welcome sponsorship, so scan the citizen sector for an organization that best fits with your company and purpose.
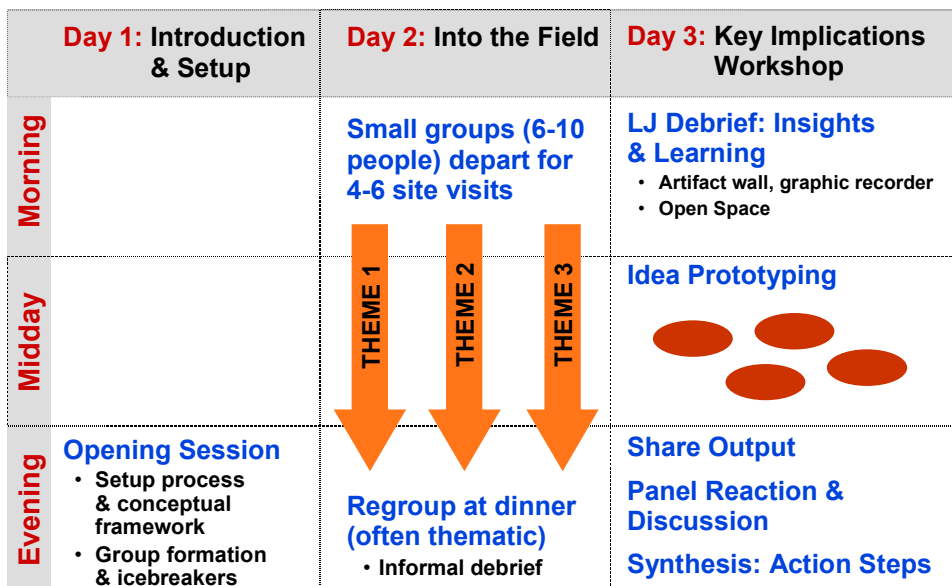
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[25] Jeremy Rifkin's *The Age of Access* (J.P. Tarcher, 2001) makes a compelling case for how we are structuring our economic and social lives increasingly around access and away from industrial-age notions of ownership and property.

[26] These may include leveraging social networks and informal economies as part of a business idea. This is critical because informal economies represent 40 to 60 percent of activity in the developing world. See Hernando de Soto, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (Basic Books, 2000).

[27] Wheeler and McKague (2002).

(2) Get into the field. The only way to truly understand BOP markets is to experience them firsthand, and well-designed experiential learning is the best way to challenge core assumptions and beliefs. The next time you find yourself in a BOP market for business or pleasure, conduct your own Learning Journey with the help of local managers, guides, or friends. Have them take you to the "poor" parts of town, and talk with people about what they really want and need. Observe how people are living and working and experimenting with old and new solutions to their problems. Visit some of the places, organizations, and people mentioned above. Seek out "remarkable people" beyond your company in these markets—intellectuals, writers, artists, NGO leaders, and social entrepreneurs. Ask yourself: What can these people teach me about these markets? What businesses are operating in these markets? If you were to start from scratch, what kind of product or service would you offer?

Typical GBN Learning Journey

	Day 1: Introduction & Setup	Day 2: Into the Field	Day 3: Key Implications Workshop
Morning		**Small groups (6-10 people) depart for 4-6 site visits**	**LJ Debrief: Insights & Learning** • Artifact wall, graphic recorder • Open Space
Midday		THEME 1 THEME 2 THEME 3	**Idea Prototyping**
Evening	**Opening Session** • Setup process & conceptual framework • Group formation & icebreakers	**Regroup at dinner (often thematic)** • Informal debrief	**Share Output** **Panel Reaction & Discussion** **Synthesis: Action Steps**

(3) Prototype BOP business ideas. Recent academic research has shown that poor markets are an important source for global innovation—not just innovation specific to these markets, but sustainable ideas, business models, and technologies that can work across developed and developing world markets.[28] Organize a team to think broadly about future business opportunities in BOP markets. The results might be surprisingly robust. Pick one specific place in the BOP marketspace where your company does not have a presence. Create a photo gallery from magazines, view documentary films, and interview leading experts to get immersed in these environments. Ideally, take your team on a well-designed Learning Journey to a BOP market, then think differently and challenge your core strategic and cultural assumptions about a particular product, service, or business model.

One way to jumpstart the creative process is to use a game format; we did this at the "Clean Revolution" meeting using a customized GBNnovate board game. This game format worked well because it forced people, in a fun and interactive way, to rapidly prototype new business ideas. Embedded in the game's design is a demand-centric bias, so people are forced out of their comfortable supply-side box to develop compelling ideas around critical "fundamentals of human demand" and/or "value vacuums" (needs that

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[28] See Hart and Milstein (1999).

are not being met very well). Push your thinking even harder by imagining two disruptive technologies or business models that could come from the BOP. How could these cross over to first-world markets? How could this be an opportunity for our company to gain early adopter advantage? How could it be a threat? And how would you know either way?[29]

(4) Start a BOP pilot project. If some of the business ideas you uncover are interesting enough to warrant further exploration, start a pilot project or a BOP experiment. If an internal project, the key to success is to start small, remain under the corporate radar, and build success from there. An action-learning approach is also invaluable because in many cases the business idea is moving into uncharted territory. Another approach would be to outsource the early experimentation stage by partnering with another BOP innovator in the citizen sector. Still another would be to join a "community of practice" organized around the BOP or a similar theme—a particularly valuable approach given that this is a fast-moving area with few codified resources and a real need for shared learning.

(5) Recruit aspiring social entrepreneurs. One way to win the "war on talent" in the future is to hire aspiring social entrepreneurs. These people are getting easier to identify in the mainstream educational system; many of the best schools now have programs in social entrepreneurship and environmental industrial design. The next time you are recruiting, think about hiring someone with this kind of profile to join your company. Even better, hire someone *from* the BOP markets—someone who has lived and breathed these environments.

(6) Enhance your "long view." Learning from the past is another way to innovate for the future. Our economic and social history is filled with stories of the creation of new markets. Biographies of past business pioneers reveal that they almost always took a broad, expansive view of the role of business. To regain this perspective, read more about past pioneers such as the British East India Trading Company, the Hudson Bay Company in Canada, the Singer Sewing Company, and Ford Motor Company, or look back to the events that created our current economic order, like the Bretton Woods Agreement. We forget that metrics like GDP and GNP were invented in the not-so-distant past, and new ones better suited for our times are likely to be conceived in the not-so-distant future.

(7) Induce a tipping point. The BOP's success also depends on collaborative learning, validation, and the legitimization by core elites in the private and public sectors. To really create a tipping point, find some funding—perhaps through the Global Compact or the WBCSBD—to conduct a cross-industry or cross-association Learning Journey, which could help to distribute the BOP idea across influential social networks. A mixed CEO/public-sector leader Learning Journey to select markets would do much to bring these high-level issues to the ground, bridge worldviews, engage people's humanity (which is what happened to Bill Gates in Africa), and mitigate some of the criticism these events receive for being too insular, isolated, and out of touch with reality.

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[29] For more on the value of rapid prototyping, see Michael Schrage, *Serious Play: How the Best Companies Stimulate Innovation* (Cambridge: Harvard Business School Press, 2000). For more on disruptive technologies, see Clayton Christensen, *The Innovator's Dilemma* (Cambridge: Harvard Business School Press, 1997). Both are GBN Book Club selections.

Additional Readings

Essential Reading

Start with the seminal papers on the BOP:

- C. K. Prahalad and Stuart Hart's "The Fortune at the Bottom of the Pyramid" (*Strategy + Business*, Issue 26, Q1 2000), which is the most accessible and comprehensive treatment (http://www.strategy-business.com/media/pdf/02106.pdf).

- C. K. Prahalad and Allen Hammond's "Serving the World's Poor, Profitably" (*Harvard Business Review*, September 2002) covers similar ground. Skip this if pressed for time.

- Clayton Christensen and Stuart Hart's "The Great Leap: Driving Innovation from the Base of the Pyramid" (*MIT Sloan Management Review*, October 2002) explores the connection between BOP initiatives and disruptive technologies.

- Clayton Christensen, Stuart Hart, and Tom Craig's "The Great Disruption" (*Foreign Affairs*, March/April 2001) continues this theme on a larger scale. Although the authors try to do too much, there are some interesting insights into how Japan nurtured disruptive technologies as an engine for economic growth and value creation—a technique that China is trying to emulate with biotechnology and other areas.

For more on how the BOP can integrate sustainable business designs and strategies see:

- Stuart Hart's "Beyond Greening: Strategies for a Sustainable World" (*Harvard Business Review*, Jan/Feb 1996).

- David Wheeler and Kevin McKague's "The Role of Business in Development" (downloadable at http://www.sustainablelivelihoods.ca/Resources/resources.htm) and Charles Holliday's *Walking the Talk: The Business Case for Sustainable Development* (2002).

- SustainAbility's "Developing Value: The Business Case for Sustainability in Emerging Markets" (downloadable at http://www.sustainability.com/developing-value/contents.asp). This is the first large-scale study of sustainability in emerging markets.

- Storm Cunningham's *The Restoration Economy: The Greatest New Growth Frontier* (2002) is worth a look. It is a wonderful example of how some of the world's worst problems are being pragmatically framed as opportunities.

For a good review of the trends shaping the global business environment see:

- World Resources Institute, UNEP, and WBSCSD's Tomorrow's Markets Report, 2002 (downloadable at http://www.wri.org/business/tomorrows_markets.html).

- C. K. Prahalad and Kenneth Lieberthal's "The End of Corporate Imperialism" (*Harvard Business Review*, July-August 1998) is an early precursor of the BOP concept, and explains why these new business practices are necessary within the new context of the role of global corporations.

- Charles Handy's "What Is Business For?" (*Harvard Business Review,* December 2002) and Jeffrey Garten's "Globalism Without Tears: A New Social Compact for CEOs" (*Strategy + Business*, Q4 2002) are powerful examples of the current strategic conversation about the future of global capitalism in its current form; both authors suggest it may be reaching an inflection point.

Other Readings

One irony of the BOP literature, which espouses unconventional thinking, is that it is being published in very conventional business periodicals—it is very much a "business class" approach to a "prism" problem, noted one Royal Dutch/Shell executive. The following readings incorporate more "outside in" perspectives.

Macro-analyses of global systemic change:

- For two must-reads, see J. F. Rischard's "High Noon: 20 Global Problems, 20 Years to Solve Them" (*Future Survey*, World Future Society, 2002) and Jerome Binde's "Keys to the 21st Century" *(Future Survey,* UNESCO, 2001).

- For a critique of the current global economic and political system, see Joseph Stiglitz's *Globalization and its Discontents* (2002). Benjamin Friedman's review of this book, in *The New York Review of Books*, is also worth reading, and is downloadable at http://www.nybooks.com/articles/15630.

- For an excellent model for systemic change, though a bit abstract, see Lance H. Gunderson and C. S. Holling's *Panarchy: Understanding Transformations in Systems of Human and Nature* (Island Press, 2001).

The theme of design is becoming pervasive, a product of increasing complexity and a need for better trans-disciplinary and systems thinking tools:

- For a timely reminder that markets are social constructions, not laws of nature, see John McMillian's *Reinventing the Bazaar: A Natural History of Markets* (2002).

- For an argument about why key problems for making sustainable products and services lay in their design, see William McDonough and Michael Braunggart's *Cradle to Cradle: Remaking the Way We Make Things* (2002).

- For more on how people are using nature's designs and technology as an inspiration for innovation, see GBN's interview with Janine Benyus, "Biomimicry, Not Biotechnology" (http://www.gbn.com/ArticleDisplayServlet.srv?aid=145).

Social entrepreneurship:

- For more on how people all over the world are working hard to change the cultural assumptions about what humans need and want, see David Suzuki and Holly Dressel's *Good News for a Change: Hope for a Troubled Planet* (2002).

- For an excellent study of how social change happens at an individual level, see David Bornstein's *How to Change the World* (forthcoming).

- A number of academic centers are focusing on this topic as well. See the Center of Social Innovation at the Stanford Business School at http://www.gsb.stanford.edu/csi/SEDefinition.html.

Development:

- For unprecedented research into the experiences and perspectives of the very poor in over 60 countries, see The World Bank's *Voices of the Poor* (2002), downloadable at http://www.worldbank.org/poverty/voices/reports.htm.

- For an empirical case for why property rights and high institutional barriers to entrepreneurship are the chief obstacles preventing poor people from producing capital, see Hernando de Soto's *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else* (2000).

- For two development classics, see Robert Chambers's *Whose Reality Counts? Putting First Last* (1997) and Amartya Sen's *Development as Freedom* (1999).

The role of social networks:

- For more on the impact of the Web, wireless, and mobile telephony on social networks, see Clay Shirky's website (www.shirky.com) and Howard Rheingold's *Smart Mobs: The Next Social Revolution* (2002). Both are GBN network members.

- For an excellent social-science approach to network analysis, see Barry Wellman's website (http://www.chass.utoronto.ca/~wellman/main.html) and Francis Fukuyama's *Trust: The Social Virtues and the Creation of Prosperity* (1995). The latter explains how dynamic, well-functioning social networks engender social capital, which in turn leads to greater economic capital.

- For more on how immigrants from India and China who work in high-tech centers like Silicon Valley circulate their knowledge capital back to their native countries, see AnnaLee Saxenian's *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (1996).

- For a popularized yet more scientific perspective on the emerging "laws" driving social networks, see Duncan Watts's *Six Degrees: The Science of a Connected Age* (2003) and Albert-Laszlo Barabasi's *Linked: The New Science of Networks* (2002).

A valid critique of BOP thinking is that it still cruises at 30,000 feet. The value innovation literature, developed by Chan Kim and Renee Mauborgne at INSEAD, adds some concreteness to the BOP innovation process. See the following *Harvard Business Review* articles:

- "Knowing a Winning Business Idea When You See One" (Sept-Oct 2000).

- "Creating New Market Spaces"(Jan-Feb 1999).

- "Value Innovation: The Strategic Logic of High Growth" (Jan-Feb 1997).

GBN's own "business idea" tool can also be used to identify new opportunity spaces. See Kees van der Heijden's *The Sixth Sense: Accelerating Organizational Learning with Scenarios* (2002) and Richard Normann's *Reframing Business* (2001). The latter is somewhat abstract, but one of the best treatments around for thinking about new sources of value creation.

Your comments and ideas are welcome and encouraged. Please address them to Nicole Boyer at nicole_boyer@gbn.com.