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A breach in the wall

How telephones are affecting rural poverty

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Table of Contents

1. More than money: Bringing in technology.....	3
2. Debates and ideologies.....	4
2.1 Crossing the subsidy and market camps divide	4
2.2 Reaching the market camp on subsidy fuel.....	5
2.3 To literally connect the poor.....	6
3. Ringtones in the countryside.....	8
3.1 Milking the cow: How the Village Phone works	9
3.2 How Nokia changed our lives	10
3.3 A perfect playground for Scandinavian expertise	13
4. A growing cell – or how a concept went roaming in Africa.....	15
5. Literature	18

1. More than money: Bringing in technology

A common assumption many make with regard to the poor is that they lack skills. The reality is that they possess extraordinary survival skills. A poor person must work hard just to stay alive in a country that provides no safety net. Unfortunately, these survival skills are often undercapitalized, with the consequence that the poor do not receive the full fruits of their labor (Yunus 1998). Tackling this problem has been the major purpose of the ever-growing microfinance industry. In the field of development, microfinance – the provision of small-scale financial services – has become an increasingly important means in attempts to reduce poverty, particularly of women. The effectiveness of microfinance programs for poverty alleviation depends, among other things, on whether and how they address the real obstacles faced by the poor (Shekh 2006: 177). Microfinance institutions (MFIs) can assist the poor in many ways; most notably by promoting investment in assets, protecting against income shocks and by improving quality of life (Shekh 2006: 179-180). However, helping the poor goes beyond simply lending money. MFIs with their detailed knowledge at the village level are in a unique position to reach further, either by themselves or in cooperation with others. Nurul Islam Shekh (2006: 201) argues that “there is a need for microfinance institutions to enter into strategic alliances with other development actors working in the same geographical areas and specialized in service provision” to make poverty alleviation more effective. Unfortunately, since this ‘service provision’ in most cases cannot function without subsidies, this issue has been dividing donors and organizations involved in microfinance projects for years, at times causing severe tensions, as there are pros and cons for both self-sustaining and subsidized MFIs. Of particular interest in this matter is the pioneer and innovator of microfinance, Grameen Bank of Bangladesh. Today a profitable and non-subsidized MFI, it has made use of donor’s contributions and subsidies to expand and diversify its services for years before ultimately deciding not to rely on donor’s funds anymore. I will discuss the developments of the microfinance industry, and how Grameen Bank’s fits into the debate, in the next chapter. Grameen Bank’s true motivation to lift Bangladesh’s poor out of their misery has taken very innovative traits. To break up poor people’s isolation, particularly in rural areas, they have been searching for ways to empower and connect them with each other and the outer world in order to create opportunities for economic activity. Going beyond simple capital provision, they have made use of social training as well as of new technologies to reach their goals. One of the most astonishing results has been achieved through the ‘Village Phone’ project, which has given millions of Bangladeshis (who previously did not have this opportunity within reasonable distance) access to telecommunication. As this

example has sparked similar projects in other countries, I will take a closer look at why and how this project emerged and evolved into such a success – and at the precise nature of its impact on poverty issues.

2. Debates and ideologies

2.1 Crossing the subsidy and market camps divide

The remarkable success pioneer MFIs such as Grameen Bank in Bangladesh and BancoSol in Bolivia have had at extending and recovering millions of small loans to poor households and microenterprises has attracted worldwide attention. In fact, 2005 was declared the ‘International Year of Microcredit’, as it is considered to be an important aspect of the UN Millennium Development Goals (see Microcredit 2005). Donors, governments, non-governmental organizations (NGOs), all sorts of activists, and now even some large commercial banks, such as CitiGroup and Deutsche Bank, have all enthusiastically redirected efforts and resources toward new microfinance development projects (Conning 1999: 51-52). However, in recent years, the academic debate in this field seems to have been largely revolving around the issue of sustainability and cost-effectiveness, and whether or not subsidized credit is undermining development (Christen et al. 1995; Rhyne 1998; Conning 1999; Morduch 1999, 2000; Schreiner 2003; Shekh 2006). The ‘market’ or ‘credit only’ approach that has become increasingly dominant (at least officially) at the World Bank and much of the donor community (particularly USAID), is pushing MFIs to aggressively pursue sustainability through raising interest rates and lowering costs. This is seen as being the most effective in rapidly increasing the outreach to an ever-wider clientele (see Conning 1999 for more). As a result of the widespread minimalist ‘credit-only’ approach, social and political awareness raising, literacy training, and skill development have been increasingly downplayed – the very issues advocates of the opposing ‘subsidy’ or ‘credit plus’ approach have been arguing in favor of. They have been contending that a narrow insistence on cost recovery and the elimination of subsidies will only force MFIs to shed the poorest from their portfolios of borrowers because they are precisely the most difficult and costly to attend (Conning 1999: 53). The central debate in microfinance is whether microlenders should be expected to outgrow subsidies and enter the market. The subsidy approach targets very poor clients who are costly to serve and who thus may require ongoing subsidies. The market approach targets less-poor clients who are less costly to serve and who thus may represent a profitable niche. The debate’s two poles can be simplistically characterized in terms of

surplus (worth minus cost), depth (social value of surplus), breadth (number of users), length (time through which loans can be supplied), and scope (types or variety of financial services offered). The subsidy approach assumes that great depth (truly reaching the poorest strata) and great per-user surplus can compensate for narrow breadth, short length, and limited scope. The market approach assumes that wide breadth, long length, and ample scope can compensate for shallow depth and low per-client surplus¹ (Schreiner 2003: 372). How does the Grameen Bank inform this debate? Unlike the stereotypical (and hypothetical) MFI in the subsidy and market camps, Grameen Bank seems to be strong in all aspects.

2.2 Reaching the market camp on subsidy fuel

The spark for microfinance is the story of Grameen Bank of Bangladesh. Founded in 1976, by July 2006, Grameen Bank had 6.5 million borrowers, most of them female (97 percent), very poor, and rural. The loan recovery rate lies at 98 percent. Since inception, Grameen Bank has disbursed the total amount of USD 5.65 billion, of which 5 billion has been repaid. The current monthly disbursement is USD 68 million (Grameen Bank 2006). Unlike many development projects, the Grameen Bank has thrived, relieving some of the misery caused by floods and cyclones, corruption, purdah norms that constrain women, and abysmal poverty (Schreiner 2003: 357). However, Grameen Bank has also been strongly dependent on subsidies throughout most of its existence, as various studies have shown (see Morduch 1999; Schreiner 2003). Interestingly though, even academics sympathizing with the ‘market camp’, or ‘credit only’ approach, have acknowledged that sustainability is not even a necessary condition for achieving leverage² (a key to commercial success). Subsidized Grameen Bank has borrowed on a commercial basis, as do a large number of other MFIs that are yet not fully sustainable. It seems that outside lenders primarily care about credibility, hard budgets, and pledged cash flows, not profits (Conning 1999: 75). Grameen Bank appears to reconcile the subsidy and market approaches because it is (or was, until recently) subsidized yet permanent and because it is (or almost was, until recently) profitable yet serves the very poor. For example, as Schreiner’s (2003) review suggests, Grameen Bank’s borrower surplus is high. Likewise, depth is great, as most borrowers are poor, rural women. Grameen Bank also has great length; even though it has not, at least officially (see Grameen Bank 2006), received any donor funds, or loans, since 1998, it still continues to work successfully. Breadth is great as

¹ This seems to reflect the common disagreement between “finance ministry” and “civil society” tendencies, as Ravi Kanbur has termed it in his excellent article on the nature of such disagreements (Kanbur 2001).

² Financial leverage: reinvest a loan with the hope to earn a greater rate of return than the cost of interest. A MFI may gain leverage if it can borrow money from commercial banks at a lower interest rate than it charges its own borrowers.

well, and Grameen's loans and savings services provide ample scope (and have been even further improved through the Grameen Bank II project; see Grameen Bank 2006). How does Grameen Bank do this? Grameen Bank has been increasingly realizing that efficiency isn't incompatible with its social mission; helping the poor is no excuse for waste. Because it wants both to be efficient and to serve the poor, it works to design and redesign (as in the tremendously successful Grameen Bank II project mentioned above) incentive structures that reward – sometimes in a precarious balance – both these goals. The result is that subsidies it received (before officially ceasing to do so³) did not leak to employee perquisites but instead financed expansion and kept costs to users low. According to Mark Schreiner (2003: 372), Grameen Bank's unusual ability to do this appears to derive from its founder and his recognition that doing good is not easy. But most important, Grameen Bank simply wants to grow. Its employees could have had a quiet life with its subsidies and ten or hundred thousand members. Instead, the bank pushed to reach millions, even though this put more pressure on its employees (Schreiner 2003: 372). It may now have actually outgrown the subsidy camp and entered the market. With a well-functioning MFI with great outreach at hand, attention may now be shifted to new challenges. And indeed, Muhammad Yunus, the founder of Grameen Bank, has been propagating a shift to technology, particularly to information technology, making use (“any project that benefits the poor and is self-sustainable can readily be piggy-backed onto the Grameen system”) of the extensive Grameen branch network (Yunus 1998). The Village Phone project is one example of how this vision materialized in a very successful way.

2.3 To literally connect the poor

A good deal of the world's economic history that is marked by increasing prosperity is also characterized by the emergence of methods and mechanisms that allow human beings to tap more effectively and make use of knowledge embedded within local contexts. Double-entry bookkeeping, insurance and credit bureau ratings, and flexible interest rates are just a few among many examples of how dispersed and otherwise inaccessible knowledge can be summarized in forms that are ready at hand (Chamlee-Wright 2005: 8). However, hundreds of

³ Mark Schreiner (2003) also analyzes less obvious subsidies, e.g., resources from public entities. Grameen Bank has, and is perhaps still using public resources because it sold stocks and bonds to the government of Bangladesh. Likewise, it borrowed from the International Fund for Agricultural Development, and from Norway and Sweden (2003: 366). Officially, Grameen Bank manifests a “No Donor Money, No Loans” strategy: “*GB does not see any need to take any donor money or even take loans from local or external sources in future. GB's growing amount of deposits will be more than enough to run and expand its credit program and repay its existing loans*” (Grameen Bank 2006). The phase-down was in 1995, and the last installment of a donor fund was received in 1998.

millions of people with unmet demand for financial services indicate that there are many barriers that keep the informal sector and the knowledge embedded within it from connecting to national or global markets, or to what Friedrich Hayek has described as the ‘extended order’⁴. In certain countries, where poverty is the norm, the sheer size of the informal relative to the formal sector makes the search for connections beyond the informal sector very difficult (it is in such cases that microfinance can be most effective). According to De Soto (2000, cit. in Chamlee-Wright 2005: 9), the lack of property rights on the informal level, or ‘dead capital’, is also an impediment, e.g. for contract credibility. A further barrier is tight control over telecommunications by governments. Even in the most formal economic environment, ‘word of mouth’ plays an important role in conveying local knowledge across markets. Word of mouth is all the more important in the informal context in which so much of the useful knowledge is embedded within tight-knit social networks. Emily Chamlee-Wright (2005: 9) argues that in regions where cellular technology has been able to take hold, word of mouth can travel and inform others far more widely than it otherwise could. One typical example is how cellular technology enables farmers and other producers distanced from larger markets to connect to the knowledge flows of the extended order, e.g., a city market. For those in search of the best price for supplies and the best markets for their output, the technology often pays for itself, cutting down transportation costs by hours or even days and speeding up response time to fleeting market opportunities. Word of mouth may also help with regard human capital supply and demand: A boy raised in rural town has a better chance leveraging his local social network if his uncle can use a cell phone to tell his business associates in the city about his promising nephew. Close-knit affiliations can be leveraged more effectively if the flow of communication outside the local network is made cheaper and easier. However, government monopolies or excessive regulation makes the telephone communication prohibitively expensive and cumbersome (if not impossible when simply inexistent) for the average entrepreneur, once again severing a powerful link between the informal sector and formal, more developed sector with its multiple economic opportunities (Chamlee-Wright 2005: 9-10).

⁴ *Extended Order* is an economics and sociology concept introduced by Friedrich Hayek. It is a description of what happens when a system embraces specialization and trade. The result is an interconnected web where people can benefit from the actions and knowledge of those they don’t know. This is possible and efficient because proper legal framework replaces trust, which is only practical in small circles of people who know each other socially (see Chamlee-Wright 2005: 7-8).

3. Ringtones in the countryside

As a young boy in rural Bangladesh in 1971, Iqbal Qadir walked ten miles to collect some medicine for a sibling who was sick. But when he arrived at his destination, the medicine man was not there, so he had to walk home empty-handed, having wasted an entire day. Many years later, having moved to the USA and become an investment banker, Qadir was reminded of this episode when the network at his New York office stopped working. Without communications, he realized, people are far less productive, whether in a modern office or a rural village; a simple telephone call could have prevented him from making that unnecessary round trip all those years earlier (The Economist, 11.3.2006). In 1994, after many fruitless attempts, he finally established Gonofone Development Corp., for the sole purpose of organizing what is now Grameen Phone. His project was based on three simple observations: Firstly, connectivity contributes to higher productivity, and increased connectivity could be used to alleviate poverty in rural Bangladesh. Secondly, the digital revolution had been reducing the costs of telecommunications making such facilities within reach of poorer economies even on a large scale⁵. Thirdly, Grameen Bank of Bangladesh had an extraordinary borrower network that could be leveraged to deliver connectivity to rural Bangladesh. Specifically, telephones could be used as income generating businesses for Grameen Bank borrowers (GrameenPhone 1999). GrameenPhone Ltd. launched its services in late 1997. It's initial shareholders were Telenor AS (51%), Norway's largest, state-owned telecommunications provider⁶, Grameen Telecom (35%), a non-profit organization established by Grameen Bank, Marubeni Corp. (9.5%), one of Japan's leading trading companies, and finally the above-mentioned Gonofone Development Corp. (4.5%). Today, only Telenor (62%) and Grameen Telecom (38%) remain as shareholders. The latter's purpose was and still is to administer the Village Phone services to the villagers, to train the

⁵ This addresses one of the persistent myths surrounding telecommunications: that phones cost too much for the poor. Others are that phones follow wealth (the opposite is true; phones can have a tremendous impact on income of its users), or that they serve secondary needs. Misleading assumptions, such as that phones are luxury consumer goods (reflected by Bangladeshi cell phone taxation of USD 19 per phone per year (Cohen 2001: 11)), led policymakers to under-appreciate their role in economic development. It is not a luxury good. It is a means of production – it enables, facilitates, connects, and opens up many new possibilities (GrameenPhone 1999).

⁶ With the saturation of the Scandinavian market in the early 1990s, Telenor started looking for new business opportunities. The capacity for growth lay in internationalization, but Telenor did not have the financial and human capacity to enter markets as big as China or India. It was at that time that Iqbal Qadir and Professor Yunus approached the company. The former Telenor CEO, Tormod Hermansen, was a socially motivated person who liked the idea of using the phone as a “weapon against poverty”, and in their quest for partners, Professor Yunus and his colleagues – who were concerned that a large company might use the Grameen name and network for activities which did not accord with the core mission of the organization – were looking for a relatively small company that could understand and respect Grameen Telecom's social mission. When GrameenPhone was created, Telenor was entirely owned by the Government of Norway, and so the focus of the company was on providing telecommunication services, not solely on the financial return on investment. Telenor and Grameen Telecom were a perfect match (OECD 2004: 19).

operators, supply them with handsets, and to handle all service related issues (Grameen Phone 1999). Objectives (Richardson et al. 2000: 8) were spelled out as follows:

- To provide easy access to telephones when needed all over Bangladesh
- To introduce a new income generating source for villagers
- To bring the potential of the Information Revolution to the doorsteps of villagers
- To introduce telecommunications as a new weapon against poverty

3.1 Milking the cow: How the Village Phone works

“In a typical example [of microfinance projects], a woman borrows enough money to buy a cow, and then repays the loan using the profits that result from selling its milk. The loan is repaid, the woman earns an income from the cow, and her neighbors can buy milk. Mr. Qadir looked at this model and realized that ‘a cell phone could be a cow’” (The Economist, 11.3.2006)

Instead of milk, the woman sells airtime to other people in her neighborhood. The income she generates can then be used to pay back the loan and people in her village can make calls without having to waste time and money on long journeys to urban areas where public phones are more prevalent. Grameen Telecom (GT) uses a specific procedure to select “phone ladies”: On getting information about coverage from GrameenPhone, a GT Unit officer visits the Grameen Bank (GB) branches in the area and prepares a list of villages where network coverage is satisfactory. The GB branch then selects from among its better performing members from these villages to act as the VP operators. Criteria to select these are:

- She must have a very good record of repayment of GB loans
- She should have a good business, preferably a village grocery store⁷, and the spare time to function as the VP operator, eventually switching to a full-time commitment
- She should be literate or at least have children who can read and write
- Her residence should be near the centre of the village

After the initial selection, the respective GT Unit officer verifies signal availability at the VP’s house or shop where she intends to use the phone. A GB Zonal or Area Manager provides the final approval of membership. On final selection being over, GT buys a cellular phone user subscription on the VP’s behalf from GrameenPhone and provides connection to

⁷ Richardson et al. (2000: 32 and 35) suggest that this criterion is not consistent with the goal of women’s empowerment as such stores tend to be operated by men (husbands or other male relatives), and thus phone use by women is reduced. Their survey data clearly confirms that women generally prefer to use phones operated by women. Interestingly, when asked about this particular instance, GT field staff and GB managers did not seem to share the researcher’s understanding that women’s access to the phone would be limited. This might have something to do with the fact that virtually all GT staff and GB managers they met were men.

the member. Additionally, GT supplies the hardware⁸ and training to operate the phone. The price of the phone and the connection fee is paid by Grameen Bank to GT and the member pays these costs back to GB within 2 or 3 years through the existing weekly repayment system for the loan (Richardson et al. 2000: 8-11; Grameen Telecom 2006).

GrameenPhone uses the Global System Mobile (GSM) technology for its network, as it is the most widely used⁹ in the world. In developing countries, the cell phone market is almost exclusively urban. In these countries, it is common to wait a year or more for a landline due to inefficient state monopolies. As a result, cell phones become a substitute for landlines, whereas in industrialized countries, they are a complement (Richardson et al. 2000: 15-16). In the context of Bangladesh, it is important to note that this country is among the poorest in the world. The UNDP Human Development Index lists it as number 139¹⁰, and per capita income per year is currently at USD 376 (UNDP HDR 2005). Bangladesh has also one of the lowest teledensities in the world, there are currently 5 lines per 1000 inhabitants¹¹. The GSM cellular phone market emerged in the second half of the 1990s and according to the latest report, the cellular density is double the landline teledensity (10 cell phones per 1000 inhabitants; UNDP HDR 2005). GrameenPhone, Bangladesh's largest mobile communications provider, currently boasts a number of 8.5 million customers (GrameenPhone 2006).

3.2 How Nokia changed our lives¹²

Since 97 percent (from a total 6.61 million) of GB members are women, VP operators are usually female. As Grameen Bank deals with the poor, it is to be expected that the VP operator will come from a poorer-than-average household in the village¹³. From the phone, average net income of the phone lady, according the latest figures, is around 2500-5000 Taka (USD 50-100) per month. This is quite attractive¹⁴ when compared to other rural occupations. It appears that the operator's income generated through the VP is a supplement to income earned from other sources in most cases, contributing between 30-40 percent of the household

⁸ The basic VP package containing, among other things, a Nokia 5110 phone, costs 12'000 Taka (USD 220; Grameen Telecom 2006).

⁹ Over 75% of mobile networks worldwide, serving 1.6 billion subscribers (GSM 2006).

¹⁰ Niger ranks lowest, 177; and Norway ranks best, 1 (UNDP HDR 2005).

¹¹ Figures date from 2003. To put this in context: in 1999 Bangladesh had around 500'000 landlines (350'000 considered operational; teledensity: 3/1000) and 2/3 of these were in the Dhaka area (Richardson et al. 2000: 16). India has e.g. 42, Norway 713, landlines per 1000 inhabitants (UNDP HDR 2005).

¹² As mentioned earlier, the handset provided by Grameen Telecom is a Nokia 5110.

¹³ In terms of income or land ownership, this appears to be true. However, VP operator families rank very high on social indicators such as literacy, health etc. (Bayes et al. 1999, cit. in Richardson et al. 2000: 21).

¹⁴ In 1999, a VP operator earned 14'400 Taka (USD 300) per year from providing telephone services. This exceeded the average (which is even lower in rural areas) per capita income of USD 286 by 14 US-Dollars (Richardson et al. 2000: 21).

income (Grameen Telecom 2006; Richardson et al. 2000: 21 and 32). Does the VP operator's status change in the household? The VP operator does have some unique advantages. First, the revenue stream from the telephone is substantial. This seems to elevate the woman's position in her own household, particularly with regard to decision-making. Second, even when the phone may be in the man's control during the day, it is often moved to the house at night, where more women phone users tend to congregate. Finally, because it is an in-kind loan, it cannot be used as capital for another, riskier enterprise which might not be in keeping with the Grameen Bank loan agreement. With regard to the potential phone users, Richardson, Ramirez, and Haq (on their field visits) became intrigued by the importance of village members using the VP to stay in contact with village members who had become overseas workers or were working in Dhaka. They concluded that attracting additional income from family members overseas is very important (in the study, the single most important variable in relation to phone use was whether or not a household had a family member working overseas) to Grameen Bank members¹⁵. The VP is a key tool (acting as a 'lubricant') used to ask for remittances and to reduce the risks associated with remittance transfers (Richardson et al. 2000: 23-24). There is some evidence that remittance income can help poor families transcend long-term indebtedness and break free from the hold of moneylenders. This would especially be the case when families have accrued the business experience necessary to make effective investments, a key ingredient among families with Grameen Bank members (2000: 28). While the percentage of VP customers using the phone for business matters (8%) may be disappointing for those interested in direct poverty alleviation, one should recognize the quality of life benefits derived from being able to converse with one's relatives and friends in distant places for a small fraction of the cost of traveling to see them. If a phone call can reduce homesickness, provide a loved one with support, or put a smile on a child's face, then that phone call is clearly improving quality of life in the context of rural poverty (Richardson et al. 2000: 26). Similarly, after broadcasted incidents such as natural disasters, the possibility to call relatives and friends for news has a strong impact on social life, as a 1997 tornado, followed by increased communication traffic to 10 affected rural settlements equipped with village phones, indicated (Grameen Telecom 2006).

Richardson et al. (2000: 24-25) also tried to gather information on who is *not* using the village phone. When survey respondents indicating that they had never used the VP were asked why, 78 percent reported that they had no one to call, which may be an indicator of a

¹⁵ Only Grameen Bank members were surveyed, as they usually belong to the poorer strata in rural Bangladesh. There is some evidence that the GB member's average per capita income is significantly lower (in 1999: ca. USD 198) than the national average (USD 286; Richardson et al. 2000: 22-23).

household in which members experience little migration for labor. This was indeed the case for 83 percent of these non-users. It is also important to note that none of the non-users indicated that phone use was too expensive, suggesting that the cost of the telephone use is not a significant barrier for making or receiving a call.

The VP is a communication tool that provides very real and very substantial financial, travel and productive-time savings for rural villagers. Consumer surplus is a measure of how much a phone user gains by using a telephone rather than an alternative means of communication. In rural Bangladesh, the most common form of alternative communication is personal travel, and the costs associated with it include transportation costs and opportunity costs associated with being absent from normal village labor activities. In Bangladesh, the cost of a trip can be up to 8.44 times the cost of a single call. Consumer surplus for women may be even higher because of the challenges associated with a woman in Bangladesh making a journey to a city without a male escort (Richardson et al. 2000: 29-30). This latter aspect is a very relevant issue in the context of Bangladesh. Rural women, particularly in villages that are distant from the influence of urban centres, are limited by traditional patriarchal society in many ways, including the extent to which they are able to move around and beyond the village without a male escort. This is especially aggravated when their husband is absent, which is rather common due to the large number of Bangladeshi foreign workers. Having a phone in the house may therefore be not only a profitable business opportunity for a woman operator, but also a space that is acceptable for other village women to access. This is confirmed by some findings indicating the gendered nature of universal access to telephones. There is a strong tendency for men to prefer male operators and for women to prefer female operators (Richardson et al. 2000: 31 and 34).

There is evidence of increased social status that Village Phone operators have gained in their villages. For example, the fact that better-off villagers now come to a poorer woman's house to use the phone is significant. The woman's house is a centre of activity, with people waiting to make or receive calls. Moreover, the woman becomes very aware of the private and personal matters of many villagers. These factors, plus the added income, contribute to her increased status in the village (Bayes et al. 1999, cit. in Richardson et al. 2000: 31). The VPs have created a 'phone culture' among women by enabling them to have access to a communications tool that they might otherwise be culturally excluded from using. The VP operators and female users have shown rural societies that women can easily gain the skills

and capacity to run a VP and that women have just as many reasons to use telephones as do men¹⁶ (Richardson et al. 2000: 36).

3.3 A perfect playground for Scandinavian expertise¹⁷

Rural telecommunication tends to focus on several key factors in order to establish and analyze the business case scenario: (1) *Population density* (telecom investments tend to go to high density areas); (2) *per capita income*; (3) *cost per line installed*; (4) *topography* (the flatter the territory, the better); (5) *teledensity* (market saturation, measured by phone lines per 100 inhabitants); (6) *willingness to pay* (indicator of demand), which is linked to (7) *consumer surplus* (potential savings in time/income for phone users). A review of indicators from Bangladesh shows how unique this context is (Richardson et al. 2000: 42):

- 1) Over 1000 people per square kilometer – among the highest in the world¹⁸
- 2) USD 376 per year per capita – among the lowest in the world (UNDP HDR 2005)
- 3) As low as USD 1000 per line – among the lowest in the world for implementation¹⁹
- 4) Flat river delta with recurrent flooding
- 5) 0.5 landlines per 100 people – among the lowest world-wide (UNDP HDR 2005)
- 6) Up to 12 percent of monthly household income (USD 12.25) for a three-minute call²⁰
- 7) Up to 10 percent of monthly household income (USD 10)²¹

Indeed, as GrameenPhone's Norwegian CEO Trond Moe wrote in 1999:

“Bangladesh is a fantastic market for telecommunication services. With one of the highest populations in the world spread over a relatively small geographic area, coupled with a very limited existing supply of telecom services, the conditions should be fabulous for investments in this sector” (GrameenPhone 1999).

¹⁶ This newly gained status appears to further amplify effects rural Bangladeshi women already experience when joining Grameen Bank: According to Hashemi et al. (1996: 646), women are able to gain an identity outside of the family, and they become experienced in interacting with male authority figures (which normally their husbands or male relatives tend to do for them). Additionally, having a connection with someone on a higher hierarchical level is a source of status itself, and increases women's self-confidence. Hierarchy and regimentation are common elements of social life in the public sphere from which Bangladeshi women are usually excluded.

¹⁷ Scandinavian countries have been pioneers of cellular technology; in the case of Bangladesh, their overall presence was striking: Telenor launched, along with Grameen Bank, GrameenPhone Ltd. Ericsson from Sweden supplied equipment; the handsets of the VP program were and still are from the Finnish Nokia company. Additionally, Norwegian and Swedish governmental organizations provided a substantial part of the funding in form of loans to help launching GrameenPhone and the VP program (GrameenPhone 1999; OECD 2004).

¹⁸ According to <http://de.wikipedia.org>. The English version stipulates 985 people/km². In certain cities density is up to four times higher (SDNP 2005).

¹⁹ 1999 figure by Richardson et al. (2000).

²⁰ 1999 figure by Richardson et al. (2000; see page 42 and 49 for more details on the type of phone call).

²¹ 1999 figure by Richardson et al. (2000: 43 and 49).

However, the launching phase of GrameenPhone Ltd. proved to be rather difficult. GrameenPhone's original partner, Telia AB, Telenor's counterpart in Sweden, stepped out when the licensing had to be postponed by the government due to a legal case (OECD 2004: 15). After gaining Telenor as a partner and receiving the license, more obstacles had to be overcome. The main issues were uncooperative behavior by BTTB (Bangladesh Telegraph and Telephone Board, the state monopoly operator) and interconnection problems due to heavy congestion on the poorly developed BTTB landline network – it was simply not sufficiently equipped to absorb the additional traffic caused by the new cell phones²². With unmet goals and a negative result of 642 million Taka (USD 13m) for the year 1998, the cash flow situation became acute when GrameenPhone (GP) was unable to draw from a credit line by international development organizations.²³ One of the main reasons was the non-achievement of a minimum of 35'000 subscriptions. With extra support by way of bridge financing by Telenor, Grameen Telecom, and Marubeni, GP managed somehow in a rather difficult situation (GrameenPhone 1999). It is only between 1999 and 2000 that new subscriptions really picked up, and by the end of 2001, GrameenPhone had left BTTB behind with well above 700'000 subscribers (OECD 2004: 12) Although only a small minority of them are Village Phones, Grameen Telecom argues that GrameenPhone does 'good business' with the phone ladies as they use much more airtime than an urban user. In spite of the 50 percent discount given to Grameen Telecom, GP receives good earnings for two main reasons: first, VP operators account for only 3.5 percent gross of all subscribers of GP but provide 15 percent of GrameenPhone's total revenues; second, Grameen Telecom in co-operation with the Grameen Bank community network takes care of all individual transactions with the operators (OECD 2004: 21). While GrameenPhone's former managing director, Ola Ree, disputes the claim that the Village Phone operators generate above-average revenues for

²² Faced with the lack of interconnections with the state-owned fixed-line telephone network of BTTB, GrameenPhone decided to introduce a service without connections to the main network (mobile-to-mobile), which proved very successful. This had not been tried anywhere else in the world – as former CEO Ola Ree notes, it was "a gamble" (OECD 2004: 22 and 26).

²³ The International Finance Corporation (IFC, a subdivision of the World Bank), the Commonwealth Development Corporation (CDC), and the Asian Development Bank (ADB). Even the loan provided by NORAD, the Norwegian Agency for Development Cooperation, was at stake. A guarantee from Telenor solved this, but in the end GrameenPhone was still not able to draw down the loan due to amendments required in the operating license. However, NORAD recommitted in 1999 after the subscription target of 35'000 customers was met (GrameenPhone 1999). In 2003 and 2004, fresh funds from the IFC, and also from NORFUND, the Norwegian Investment Fund for Developing Countries, were taken, mainly for GrameenPhone's expansion plans to cover all 64 districts of Bangladesh (OECD 2004: 17).

GrameenPhone²⁴, he still highly values the VP program as part of GP's corporate effort to show social responsibility. Village Phone represents a small part of GP's overall business, and GrameenPhone's success hardly hangs on the VP program, but the fact that it provides regular fixed earnings to the company and contributes to the branding of the company is uncontested – and some of GP's major branding efforts go into building an image, drawing attention, creating a lobby in favor of the company and ensuring favorable media coverage. And the VP program has brought GP and its various stakeholders an enormous amount of international visibility and recognition, among other things, visits by President Clinton and Queen Sofia of Spain. The VP program has demonstrated with striking success that “good development is good business”. Furthermore, as detailed in numerous studies, one of the most striking characteristics of the program is its role in empowering rural women in Bangladesh (OECD 2004: 21). GrameenPhone Ltd. is a star by economical standards – in less than 10 years, it emerged from zero to Bangladesh's second largest corporate taxpayer (contributing USD 283 million since its inception until 2003), just after British American Tobacco Bangladesh Ltd. (OECD 2004: 14).

4. A growing cell – or how a concept went roaming in Africa

What does Grameen Bank's cost-effectiveness mean for the worldwide microfinance movement that Grameen inspired? If Grameen, one of the best microlenders, were not cost-effective, then there would be little hope for most of the thousands of other microlenders. But Grameen Bank probably was cost-effective (Schreiner 2003: 371). Unfortunately, this does not mean that other microlenders are cost-effective. Although Grameen Bank's failure would probably condemn them, its current success does not necessarily save them. Nevertheless, microfinance as a whole may be worthwhile, and even if it is not currently worthwhile, it is improving and may in time become worthwhile, as Grameen Bank's apparent shift to complete sustainability indicates. Of course, Grameen Bank's success cannot simply be exported, it is not a blueprint but rather a source of broad lessons which must be adapted to local contexts (2003: 371). Grameen Bank avoided the typical tragedy of development projects; the technical aspects are willing, but the implementing organization is weak. It also avoided the for-profit flaw of ignoring the poor (2003: 372). The story of Grameen Telecom

²⁴ The revenue per unit (RPU) among VP operators at the time the OECD (2004: 21) report was published was USD 100 per month but a large part of this sum consisted of international calls, both incoming and outgoing. Once the international component and interconnection costs are removed, the net RPU of VP operations was approximately US\$ 20 per month which is basically equivalent to the net RPU of regular post-paid subscribers (bearing in mind that regular subscribers' net RPU (USD 16) is lower only because regular subscribers cannot interconnect with the international grid).

suggests that these strong points were also crucial in the implementation of the very innovative Village Phone project. Grameen Bank's strength is demonstrated in the skillful and visionary project design. Since Grameen Bank is a financial institution, not a telecom company, it set up two independent companies: GrameenPhone, intended to be profitable, and the not-for-profit Grameen Telecom (OECD 2004: 19-20). This was certainly relevant in order to attract foreign investors and potential donors, as it elegantly attempted to marry profitable business and social awareness. The vision and 'grameenesque' conceptual crossover reaches even further: When GrameenPhone goes to the stock-market, Grameen Telecom will sell its 38 percent holding to a fund, the Grameen Mutual Fund, from which interested Grameen Bank borrowers will be invited to buy shares – since Yunus' ultimate goal is to give the Village Phone ladies the chance to become not only users but also owners of the company (OECD 2004: 19-20).

The benefits of Grameen Bank's poverty alleviation projects should clearly not be restricted to Bangladesh. Thus, in 1997, Grameen Foundation USA (GFUSA) was established to provide financing, technical assistance, and technology support to the growing numbers of grassroots institutions that are replicating Grameen Bank's success in countries as diverse as Malaysia, India, Uganda, Mexico, and the United States. Based on the success of the Village Phone program in Bangladesh, GFUSA established the Grameen Technology Center. Its purpose is to reduce poverty by leveraging the power of microfinance coupled with information and communication technology. As one of the first projects, the Village Phone concept was replicated in Uganda in a 50-50 partnership between MTN²⁵ and GFUSA – with tremendous success: after its launch in 2003, MTN villagePhone usage proved to be well above a sustainability baseline or break-even point much earlier than predicted (GFUSA 2005; OECD 2004: 24). With this, GFUSA was able to prove that Grameen Telecom was not a unique success limited to Bangladesh as a special case. As a consequence, the Grameen Technology Center published a comprehensive 'Village Phone Replication Manual', which is currently used to set up Village Phone programs in both Rwanda and the Philippines. In all these cases, reliance on local MFIs, as they have deep roots into rural communities, is a crucial element for success (GFUSA 2005: 5). Not many countries boast such widely known MFIs as Grameen Bank; its "stardom" probably helped a great deal to make GrameenPhone happen. GFUSA may now substitute this function in other countries that lack such large catalysts. In Uganda, e.g., instead of a single MFI, seven MFIs, each with 12'000-70'000 members, were chosen as partners (GFUSA 2005: 75).

²⁵ MTN, a South African telecommunications provider, owns Uganda's largest cellular network (see also www.mtn.co.ug (Uganda) or www.mtn.co.za in South Africa).

In the theoretical and other literature making the case for rural telecommunication (probably based on the clearly existing positive correlation between teledensity and per-capita income; see GrameenPhone 1999), an often applied and very vivid example in attempts to explain a telephone's impact is related to trade, i.e. to information about market prices that may be gathered more easily with access to telecommunication, as seen in Chalmer-Wrights (2005) rapid 'word of mouth' transmission argument. However, to my surprise, a far more relevant impact is related to remittances. As Richardson et al. (2003) note, having a family member abroad was the single most important variable in whether or not rural villagers would use Village Phone services. This aspect is highly relevant, considering the scale of remittances and the alleged 'lubricant' function telecommunication devices may have on safer money transfers. In the past decade, money flows from migrant workers to their home countries have increased dramatically; in 2005, it was an estimated USD 230 billion, involving some 175 million migrants. For certain individual recipient countries, remittances can be as high as a third of GDP (BIS 2006: 1), and in rural areas of Bangladesh, remittances can be the single most important source of income (Richardson et al. 2000: 25). In the Philippines, BayanTel offers 'phone shop' services in hundreds of public calling offices nationwide, including facilities for domestic and international money transfer. BayanTel's money transfer services are especially popular with overseas workers and their families. The Grameen Bank and GrameenPhone, and its 'siblings' in other countries, have most of the technical, telecommunication, and financial pieces needed to establish similar electronic money transfer services to the branch office level. It is likely only a matter of time before these services emerge (2000: 29). Grameen Telecom clearly states that further diversification enjoys a high priority, e.g. transforming VPs into 'multi-purpose tele-centers' (Grameen Telecom 2006). With regard to the growing success of cheap Internet telephony (Voice-over-IP), they may have no other choice in order to remain competitive over the long run.

5. Literature

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