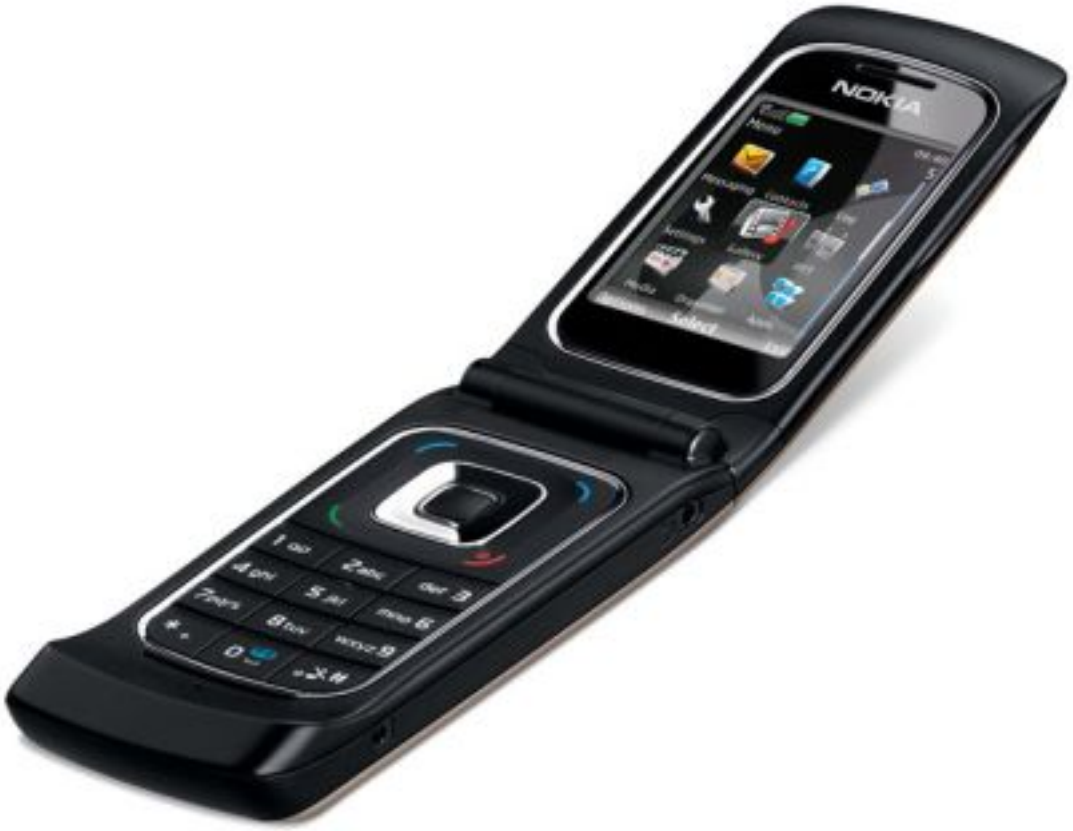
Mobile Phone's Effects on Society



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CONTENTS

INTRODUCTION

A **mobile phone** (also known as a **wireless phone** or **cellular phone**) is a short-range, electronic device used for mobile voice or data communication over a network of specialized base stations known as cell sites. In addition to the standard voice function of a mobile phone, telephone, current mobile phones may support many additional services, and accessories, such as SMS for text messaging, email, packet switching for access to the Internet, gaming, Bluetooth, infrared, camera with video recorder and MMS for sending and receiving photos and video. Most current mobile phones connect to a cellular network of base stations (cell sites), which is in turn interconnected to the public switched telephone network (PSTN) (the exception is satellite phones).

History and the emergence of Mobile Phones:

In 1908, *U.S. Patent 887,357* for a wireless telephone was issued in to *Nathan B. Stubblefield* of *Murray, Kentucky*. He applied this patent to "cave radio" telephones and not directly to cellular telephony as the term is currently understood. Cells for mobile phone base stations were invented in 1947 by *Bell Labs* engineers at *AT&T* and further developed by Bell Labs during the 1960s. Radiophones have a long and varied history going back to *Reginald Fessenden*'s invention and shore-to-ship demonstration of radio telephony, through the *Second World War* with military use of radio telephony links and civil services in the 1950s, while hand-held cellular radio devices have been available since 1973. A patent for the first wireless phone as we know today was issued in *US*_ to George Sweigert of Euclid, Ohio on June 10th, 1969. Due to their low establishment costs and rapid deployment, mobile phone networks have since spread rapidly throughout the world, outstripping the growth of fixed telephony. A premise of the collection of papers that make up this special issue of Development in Practice is that while there is great excitement, innovation, and energy in community and citizen's media, these developments are not well recognized outside the media community; furthermore, the potential of such a movement in media is not well recognized or understood by development practitioners, activists, or scholars - especially because communication is often framed in quite narrow ways. The case of the mobile phone complicates this situation, because it is an area of media in which there has been a great deal of excitement from the community-development sector. Indeed, the case of mobile phones offers excellent prospects to bridge the archetypal gulf between community and citizens' media, on the one hand, and development on the other.

The mobile phone belongs to the world of telecommunications and, as a technology, shares governing features with networks, equipment, and applications, as well as the forms of communication and culture that historically were co-created with

telecommunications. However, the mobile phone has its own characteristics that need to be appreciated. First commercially deployed in the late 1970s, the mobile phone has developed its own social functions and its own 'culture'. This mobile-phone culture builds upon that of the telephone, but also, and increasingly, borrows from other media technologies, creating something different again.

At the most basic level, the diffusion of the mobile phone has outstripped that of the fixed-line telephone. In many developing countries, more people own, have access to, or use mobile phones than fixed-line telephones - there is an idea that via mobile phones, people in developing countries have 'leapfrogged' a traditional stage in telephone or telecommunications diffusion. Not requiring customer-access (local-loop) lines, but rather transmitter towers, the economics of mobile phones is different from that of fixed-line telephones - and customer access can be offered more quickly. With the development of new pricing packages and products such as prepaid cards and payment options, mobile phones are being used by the poor as well as the rich. In their account of mobile phones in Mexico, Judith Mariscal and Eugenio Rivera go so far as to speak of mobile phones as a 'proper service', suggesting that 'mobile telephony has and will continue to provide social benefits, because it is becoming the favored means of communication for less-privileged segments of the population' (Mariscal and Rivera 2007: 51). There is a touch of hyperbole in this claim, as we note later in the paper, but it certainly catches the flavor of what excites many development practitioners and community-media activists regarding mobile phones.

Furthermore, mobile phones have developed a particular relationship with people, their bodies, and their lives. Mobile phones have become a personal, even intimate technology. They certainly were a domestic technology, even more so than 'personal' computers, laptops, or many other household digital or ubiquitous computing devices. A fixed-line telephone was clearly something installed in a household, place of work, or public place, and shared with others, but a mobile phone could be held and owned by an individual - allowing for new relations of sharing and negotiation. Whereas to broadcast a television or radio program required significant, expensive transmitter equipment (although a radio receiver or television set might be relatively inexpensive), a mobile phone could both broadcast and receive messages and images courtesy of the telecommunications network. As a communications device, mobile phones have been associated with significant social transformations; as a media device, mobile phones are now vying with the other old and new media technologies.

Two further things are noteworthy here regarding mobile phones as media: first, across the world, mobile phones are more significant than the Internet in many regards, and mobile phones are the way that many people access the Internet; second, mobile phones are often joined up or connected to other media, to create new forms of connection and cultural expression - as the example of camera-phone-generated content appearing on, for example, You Tube illustrates. Since the mid-1980s, community and citizens' media around the world have been radically and luminously extended with new social, cultural, economic, and technological developments associated with video camcorders, personal computers, computer networking and the Internet, free, libre, and open-source movements, and now creative commons. The mobile phone is taking its place in the imagining of citizen media.

The Importance Of Cell Phones In Modern Society:

"... the mobile clearly enables additional communication that we might not have made before (as does e-mail) - for example, phatic calls where the point is not so much the message but the gesture of getting in touch." (Haddon 2000).

For the contributions to society, it is argued in detail that Mobile phones help to create an informative, connected, culturally innovative, participative, and converging society. Mobile phones have become the primary form of telecommunication in both developed and developing countries. Globally, mobile phone networks play the same role that fixed-line phone networks did in facilitating growth in Europe & North America in the 20th century. The industry has experienced explosive growth in a relatively short time span. The first billion mobile phones took around 20 years to sell worldwide. The second billion were sold in four years.

Hierarchy of mobile phone user needs (based on Flavell 2006)

	User need	Example
The Web is here →	Help	Shopping (including houses, jobs, cars), banking, search tools, mapping, location-based services (eg nearest restaurant)
	Information	News, weather, horoscopes, stock prices
Mobile services are here →	Entertainment	Music, games, social networking, video
	Personalization	Ring tone, wallpaper, physical appearance of device (e.g. cases)
	Communication	Voice, SMS

The third billion were sold in two years. Coverage has expanded and mobile phone subscriptions in developing countries have increased by over 500% since 2000 (Wireless

Intelligence 2007). It is estimated that over 50% of the world's population will own a mobile phone and that 80% of the world's population will live within the range of a cellular network, by the end of 2008. The projections for future performance are similarly impressive to those tracking past performance. By 2010, GSMA projects that 90% of the world will be covered by mobile networks and mobile communication will deliver data, internet and voice services to more than 5 billion people by 2015 – double the number connected today (GSMA, 2007). In 2002, mobile phone subscribers overtook fixed line subscribers to provide communication services in the world. This was due to the relatively low cost of adding new
Subscribers to the cellular network (mobiles are much more scalable than fixed-line phones) and the premium placed on mobility. Content developer Mark Ollila notes that the mobile phone has become the one device that we must have with us constantly, as it has become integrated into our daily lives:

"You don't leave home unless you've got your mobile phone. It's like the set of keys; you leave your home with your wallet, your keys and your mobile phone" (ABC, 2006).

The mobile phone is becoming an increasingly ubiquitous part of everyday life—not only in developed countries where penetration levels suggest there are more handsets than people in some countries, but also around the rest of the globe. Handset manufacturers are now turning their attention away from the saturated European markets to countries such as China, which boasts the largest mobile subscriber base in the world, and increasingly to developing countries, where cellular technology is often leapfrogging the roll-out of stable fixed-line telephone networks. With this ubiquity comes a change in the role of the mobile phone as a social artifact. We already know how it enables simple social communication, but increasingly it plays a number of sophisticated roles in social inter-action and everyday life. It is an enabler of social interactions, hierarchies and communication. It is a fetish object that reinforces a sense of individual identity. It is a transformative technology that changes the way we do business. It is advice that changes how we manage space and time. It is a tool for text-messaging. It is a super-computer in our palm, able to perform more computational tasks than the Apollo rockets. It is simply a voice-machine, its advanced features neglected by the vast majority of its users. It is all these things, and yet more besides. Cell phones have become a necessity for many people throughout the world. The ability to keep in touch with family, business associates, and access to email are only a few of the reasons for the increasing importance of cell phones. Today's technically advanced cell phones are capable of not only receiving and placing phone calls, but storing data, taking pictures, and can even be used as walkie talkies, to name just a few of the available options. Evidently, the cell phone opens a way of perpetuating highly traditional communalistic relationships under modern conditions of high geographic mobility and dispersion.

"... this is for me the essential thing about mobile phones: they enable the type of (virtual) communication and interaction which characterizes premodernity: people who never move far, live in small towns and villages near each other, everybody knows where everybody is etc. But being virtual, this kind of communication is not any more bound to any single locality, as it was in the premodern times." (Roos 2001)

When cell phones were first introduced to the public, they were bulky, expensive, and some even required a base unit that had to be transported along with the phone. Good reception was a major problem and in general, early cell phones could only be used in certain locations were the signal was particularly strong. As cell phone technology advanced, the difficult in using them became less of a problem. Today, cell phone reception has improved greatly due to the use of satellites and wireless services. As cell phones improved and became simple to use, the importance of cell phones increased accordingly.

Cell phones are the perfect way to stay connected with others and provide the user with a sense of security. In the event of emergency, having a cell phone can allow help to reach you quickly and could possibly save lives. However, the importance of cell phones goes way beyond personal safety. Modern cell phones are capable of internet access, sending and receiving photos and files, and some cell phones are equipped with GPS technology, allowing for use in most locations around the world and allowing the cell phone to be found or the user located in the event of loss or emergency.

Cell phone reception has become reliable and of high quality due to advances in wireless technology. Wireless service providers offer excellent packages and promotions for cell phone users. Finding a dependable service provider is no longer an issue for cell phone users. The expansion of the wireless service provider industry gives cell phone users a choice and the increased competition has caused a drop in prices of wireless cell phone service. The importance of cell phones goes way beyond the ability to make or receive phone calls. Cell phone users can instantly send data to the home or office, check for important email, use their cell phone as a PDA or calendar, and store photos which can be easily transferred to a PC or laptop computer.

Cell phone manufacturers have produced a wide range of cell phones, which sell for prices that range from very inexpensive to over one thousand dollars. The available options give users the choice of purchasing a basic cell phone to use simply for making calls, or choosing a complex, technologically advanced cell phone that can perform as many or even more tasks that a home computer. Over the past decade, the increasing importance of cell phones has made them almost a necessity for most people. Even remote and underdeveloped countries have some access to cell phone technology and wireless services.

The importance of cell phones has increased the competition in the wireless service provider industry, making cell phones very affordable and very easy to use. Cell phones have become almost a status symbol in addition to the convenience and security that comes from owning them.

"If you are without a mobile phones it means that no one depends on you for urgent direction, and no one needs to get in touch with you at all times. It means you are not cutting deals, giving orders; in short, not get-ting around all that much." (Bautsch et. al. 2001)

Ever heard of the saying, “The times have changed”? Well it is not only time that has been changing but also technology as well. Technology has been growing at a rapid rate to accommodate the needs and desires of people in obtaining a simpler lifestyle. One of the greatest technologies to hit the 21st century is the cell phone. Majority of the Filipino youth, who use to own a pager are now using cell phones. It is practically impossible for

one not to spot or hear this device go off in the hands of a teenager, be at a church, school, and car and where have you. Cell phones are ubiquitous. It has become a phenomenon and an addiction, to own a cell phone, that adolescents find it to be a necessity in one's life. This type of youth mentality of can lead to positive as well as negative effects on their culture.

Thus mobile phones have both positive and negative impacts on human ambiance. But as a saying goes- good thing highlighted can efface bad ones- lets us look at the Positive and negative effects of mobile in detailed.

Positive Effects of Mobile Phones on Society:

Nowadays phones are not just simple devices we use to call someone – with the rapidly moving pace of technology feeding the hunger of consumer desires for latest gadgets, phones can now be used as cameras, games consoles and mp3 players.The general consensus is that mobile phones are a wonderful invention that allows you to communicate with people anywhere in the world.

Talking:

The upside to the mobile phone is that it allows us to chat to people literally anywhere in the world. Long gone are the days when explorers would go into the jungle and lose touch with life back home. Now with the touch of a button, audacious travellers stuck in the middle of nowhere can call home, find out the latest news and even partake in a msn messenger chat. From a reassurance point of view this is good - letting loved ones know where you are. From a safety aspect, it allows users to make calls to the emergency services or help in times of danger.3G technologies now allow users to see each other through video chat. Sometimes seeing a loved ones face while talking to them from a long distance makes the experience more fulfilling.

SMS Text Messaging:

This text message phenomenon has affected society in many ways firstly it is interesting to point that the text message is simply a quicker version of the telegraph or postcard can it be said that unlike the first generation of telephone users students prefer the written form of communication over the spoken. Or is it more to do with economic factors and the fact that text messages can be sent at any time and can be either regarded or ignored by the receiver. It seems to be the perfect form of communication for young people with little money who are always on the move and sometimes unable to answer their mobile phones.

"Texting has become particularly popular with individuals and in cultures which tend to be reserved with other people: in both Bangkok and Tokyo, teenage boys and girls value texting as a means to communicate without having to voice feelings and thoughts. The demands of brevity can also encourage text massagers and e mailers to be candid, frank,

informal, even cheeky: ice can be broken, intentions declared and invitations offered, all without the risk of embarrassment." (Plant 2000:56).

The cheapest and easiest way to communicate information and news is through SMS text messaging. SMS allows 160 English characters (or less in other languages) to be sent per text message. In most countries text messaging is less expensive (and more reliable) than making a phone call or using voicemail services. Text messages can be sent to large numbers of mobile phones at one time and/or posted on a Website. Almost all mobile phones have text messaging capabilities. SMS is the main news delivery channel for many people in the world--for receiving information on news-breaking events as well as for "live reporting." SMS may become a major tool for creating or reinforcing social integration on a territorial basis: e.g. providing information about or reinforcing solidarity with local or regional institutions. Similarly, large festivals with different simultaneous stage productions can be organized in a more flexible fashion because visitors can be notified very rapidly when new performances are going to start in specific places (Nilsson et. al. 2001)
For highly mobile individuals unacquainted with the environment in which they are currently located, such SMS services are especially useful for finding out where the next Pizzeria, dentist, police station, or flower shop is located. For them, the cell phone is another "urban navigational tool" substituting or complementing street maps, city guides, public information offices etc.) (Townsend 2000).

Photos:

Mobile phones that have cameras can use MMS (multi media messaging services), email, or Bluetooth to send images to other phones. Many popular photo sharing websites allow users to send and publish mobile photos on their sites. Flicker, the popular Yahoo-owned photo and video repository and community, gives every account a mobile email address to send photos to from a mobile device. This feature is used by The People's 311, a citizen-created website that encourages New York City locals to document non-emergency conditions around the city. New Yorkers are asked to take a mobile picture of a public nuisance and send it (along with the location) to a public Flicker account. The information is posted on a map, encouraging the local city government offices to respond. Photos can also be posted from a mobile phone directly to a blog. Blogger, the Google-owned free blogging tool widely used around the world, allows anyone with a blog on the site to send a photo to go@blogger.com and the system will create an instant web blog.Tumblr enables people to share text, photos, quotes, links, music, and videos, from a browser, phone, desktop, or email.

Videos:

Mobile video is still the most expensive and least available mobile citizen media options. Streaming, recording, and sending video requires a higher-end handset with video capture and consumes significant bandwidth. Yet, mobile video can also be one of the most effective ways to share important information and current events not covered by conventional media. Individuals can record and send short videos to popular video sharing sites such as You Tube. Videos can also be posted directly to web blogs. A

number of higher-end phones have built-in video editing tools that may be hard to maneuver on a small phone but that allow for voice-overs, music and other video editing without ever having to access a PC, making video production possible from anywhere. Recently, the Associated Press broke story videos taken by mobile phones about Afghan children killed by US military forces. Similar stories were reported from Kashmir where hundreds of people, touted by the BBC as "Kashmir's mobile phone chroniclers', used their mobile phones to document atrocities during recent demonstrations that were then posted on You Tube. These are not coordinated activities; there is no organization or entity that is moderating this in any way. Citizens the world over have discovered the utility of mobile phones and distribution tools such as You Tube and Blogger to produce their own coverage of news.

Music centres:

Many phones now come with the capability of storing large amounts of music. In the age of MP3s, it is now possible to store hundreds of singles on a phone so the user can listen to their favourite tracks whilst at the gym, on the bus or just relaxing. Gone now are the days were music lovers had to carry around a cd player and a bag full of cds. Now at the touch of a button, they can access their collection and, furthermore, if they do not have a particular song, they can access the web via the phone and download it instantly.

Mobile phones in community development:

There has been much excitement about the possibilities of mobile phones in development broadly, and in community development in particular. While it is outside of the scope of this paper to fully catalogue and evaluate all instances, we have chosen a number of case studies to discuss leading instances of where mobile phones are featuring in community-development practice - and also to suggest the range of uses, and the different implications these can have.

Grameenphone:

The Grameen Bank is a micro-credit facility providing small loans without requiring collateral to those who do not have access to traditional lending institutions - especially the poorest of the poor, village women. Started in Bangladesh in 1976, the Grameen Bank is the brainchild of Muhammad Yunus, and it offers a model widely replicated in both developing and developed countries all over the world. Today, 97 per cent of its borrowers are women, a group considered to be the most vulnerable to poverty. The Grameen Bank has long been of interest to those in the development community, especially economists, but also community-development practitioners, especially regarding gender. Indeed, Grameen certainly has attracted its fair share of proselytizers (not least among its founders), and has often been viewed through rose-tinted glasses by Western eyes. However, especially with the advent of the shift from group to individual-tailored lending represented by Grameen II, it has certainly been central to enshrining microfinance as a central plank of development strategies - though its effectiveness as a way to end, rather than alleviate, poverty is still debated.

Grameenphone is also based on the principles of the Grameen Bank. It is a joint venture enterprise between Telenor, the dominant Norwegian telecommunications company, and Grameen Telecom Corporation, a non-profit sister concern of the Grameen Bank (Grameenphone 2006). Launched in 1997, Grameenphone was initiated by Iqbal Quadir, a Bangladeshi educated in the USA. Quadir had an 'epiphany' when his computer crashed one morning working in venture capital on Wall Street (Sullivan 2007: xviii). He suggested to Yunus that a mobile phone was no different to a cow. It could equally help the very poor escape the poverty cycle. Yunus agreed to lend money to women with a credit history to buy a phone, and so the Village Phone Program was created. In this Program, 'phone ladies' lease phone time to villagers, using the income to pay back their loan in the same way they had sold the milk from their cows to repay loans. The village phone ladies make an average of $750 a year, double the average income in Bangladesh (Sullivan 207: xviii).

As of December 2007, Grameenphone claimed 16.5 million subscribers. According to International Telecommunications Union figures for 2007, Bangladesh had over 34 million mobile-phone subscribers, or 21.66 mobile services per 100 subscribers (ITU 2008b). By way of comparison, in 2007 there were a little over one million fixed-line telephone subscribers in Bangladesh, or 0.75 telephone lines per 100 subscribers (ITU 2008a).

Part of the attraction of Grameenphone is its potential as a model for a bottom-up, technology-empowered approach to development. It does appear that the use of the mobile phone by Grameephone has made a significant contribution to community development (Moni and Uddin 2005; Richardson *et al.* 2000). First and foremost, there is the multiplier effect of the phone ladies' income, which has the potential to ripple throughout their villages, impacting positively on economic and social development. Second, there is a set of associations around technology in particular, and the benefits it confers upon the owner. Third, there are the particular issues regarding gender, accented by the way that mobile phones have been deployed, especially through the Village Phone Program.

In terms of understanding the intersection between mobile phones and community development, the role of local understanding and ownership of needs once again emerges as critical. There is a long-standing problem of technology deployment and design in development, whereby technology is given to, or imposed upon, people without due regard to their needs and cultures. This has long been critiqued, with the general recognition in community development that unless the initiative comes from the community it is unlikely to be sustainable. From the standpoint of science and technological studies, there has come the recognition of the role of users, and social, cultural, and political factors in 'shaping' technology (Haddon *et al.* 2005).

Here it can be observed that the 'success' of Grameenphone does appear to come from its framing and implementation by the local national, regional, and community actors - here following the example of the Grameen Bank itself. The Grameenphone model has been replicated in other countries around the world, including Nigeria, Rwanda, and Uganda (Sullivan 2007: 107). 'Cell phones are no longer a statement of wealth … they are a part of life' (Motlana, quoted in Sullivan 2007: 110).

We have dwelt upon the example of the Grameenphone because it extends the much-discussed principles of the Grameen Bank into the area of mobile phones. It is an early

example of how mobile phones have figured in development, building on a long tradition of community and local telecommunications cooperatives and initiatives (see also Galperin and Bar 2007). Until fairly recently, Grameenphone has not focused so much upon the new information, communications, and media capabilities of mobile phones, as they have developed in the last few years. This is changing: in January 2008, Grameenphone launched the Blackberry, aimed at the Bangladesh business market. There are all sorts of questions, of course, about how these kinds of new mobile Internet and media technologies are made available to a wide range of users, not least poor users, which we will touch upon later.

Mobile phones and market information: agriculture and the market spy :

There is a burgeoning literature on mobile phones and economic development, especially in relation to micro enterprises (businesses with five or fewer employees). The most systematic analysis of this sector has been offered by Jonathon Donner, who in a Rwandan case study found that 'mobiles are allowing microentrepeneurs - particularly those for whom the mobile is the first and only telephone - to develop new business contacts' (Donner 2007: 4).

In other areas of economic development that affect low-income groups, mobile phones are also having an important impact - for instance, in agriculture where the implications of the mobile phone for poor farmers in developing countries can be extraordinary. One important aspect of this is the use of the mobile phone to find information on the market that was previously difficult for small-scale farmers to obtain. Here, the mobile phone can provide producers with information and knowledge on the correct market price, quantities, and availability of a particular product; as well as technical advice. It can enable the producer to have direct communication with the buyer and to avoid the costs associated with intermediaries.

Some notable examples include coffee farmers in Côte d'Ivoire who share mobile phones to check on the hourly fluctuations of coffee and cocoa prices on the international market. Similarly, Indian fisher folk use mobile phones to decide where best to land with their catch. Another interesting scenario is the emergence of the '*shu shu shu*' or 'market spy' in Tanzania. Here farmers are employing the so-called market spies in nearby cities to relay the latest product prices and availabilities to them by mobile phone (IFAD 2007). Such timely information can enable improved market access, improved profits, and ensure awareness of changing market trends and new opportunities.

The market spy is just one element of The First Mile Project in Tanzania, established in 2005 by the International Fund for Agricultural Development (IFAD) with the support of the Swiss Government. This project brings together small-scale farmers, traders, processors, and others in the rural sector to learn about and develop strategies to optimize their relevant local knowledge and experience to better meet their identified needs (IFAD n.d.). While the mobile phone, together with e-mail and the Internet, is an integral tool in this process, success is contingent upon farmers and others working together, trusting, collaborating, and sharing their experiences in order to develop better ways of working and increasing their incomes. Future plans of the First Mile Project include the establishment of an online database of 'locally relevant market intelligence' accessible via short message service (SMS) (IFAD 2007).

Of course, it is important to note here practical issues that play a critical role in how mobile phones work in development. For instance, in their discussion of rural knowledge centres - which include a range of information and communications technologies, including mobile phones - Asaba and colleagues highlight the importance of factors such as access to accurate and timely information, management of the information, and capacity to respond to community enquiries (Asaba *et al.* 2006: 150).

Nonetheless, in community-development terms, the mobile phone has the potential to have a positive impact on poor farmers and their communities, through its use to strengthen their position in the market chain. From the perspective of a rights-based approach to development, the mobile phone is an ideal tool to facilitate active citizen participation in development (HRCA 2001: 29), as the grower gains a degree of agency and control hitherto unattainable. In the terms of Amartya Sen, this might be seen as 'the instrumental effectiveness of freedoms of particular kinds to promote freedoms of other kinds' (Sen 1999: xii). Sen's work is especially apposite here as he argues that without the freedom to participate freely in the economy, other rights lack sufficient foundation.

Health and community:

An important area where mobile phones are involved in social innovation (Mulgan 2006) is health. The mobile phone is now increasingly becoming a vital tool for the effective delivery of healthcare in developing countries. This is most notable in remote areas with little infrastructure.

A good example is Consol Homes Orphan Care, a community-based healthcare model in Malawi, established in 2000, which enables locally-mobilized community members to support children and adults infected with HIV and/or affected by AIDS. The community careers each support hundreds of households with a sick family member, offering help with basic care, cleaning, counseling, nutrition, and referrals to hospitals and clinics. The different communities and centers are linked by a Zone Manager who travels (often by bicycle) to visit homes or centers, or to send a message from a public computer. Until 2007, Consol Homes had just four mobile phones, but no one at village level had one. In some cases, volunteers had to travel 20-30 km by bicycle each way to send a message. In 2007, one of the Consol Home's supporters, the Stephen Lewis Foundation, funded 15 mobile phones for use by the Zone Managers (Stephen Lewis Foundation, personal communication). A journey which might take all day by bicycle or a delayed e-mail response can now be replaced by a brief call or text on a mobile phone: 'sick persons/children have been saved from imminent disaster surely' (Albert Chapomba, Consol Executive Manager, personal communication). The mobile phone enables the healthcare workers to maximize the use of their time in helping those living with HIV, rather than spending large parts of their day on the road. It has also had other benefits, as Chapomba (personal communication) reports: 'the cell phones that have been given to the Zone Managers have acted as special incentives and units of recognition, since they have also raised the status of the recipients in the communities'.

Other healthcare program around the world use the mobile phone as a tool to promote HIV awareness and education: the Heroes Project in India (www.heroesprojectindia.org); the Mexican Zumbido support network enables patients with HIV-related illness to send texts to the network about their daily concerns and challenges; the self-described 'social