Mobile Networks and
Socio-Economic Change in Cambodia

An Ethnography of Marketing and Consumption

By

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Declaration

Except where otherwise indicated, this thesis is the result of original work carried out by the author.

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Abstract

This thesis ethnographically explores socio-economic change in Cambodia through the prism of the consumption and marketing of mobile networks. Just as Cambodia was embarking on a new era of political and economic change it etched its name in the history books as the first country where mobile network connections surpassed fixed line phones. Since then, mobile network infrastructure has emerged as a symbol of change and progress. When this research began the country was experiencing network subscription growth of nearly fifty percent per annum. Cambodia was thus an excellent location to explore the relationship between network connectivity and socio-economic change.

By ethnographically exploring how Cambodians engage with mobile networks this thesis contributes to a new but rich collection of ethnographies on mobile communication from around the world. However, it also differs from these user-centred ethnographies by closely examining the marketing of mobile networks. In the new economy, responsibility for the provision of infrastructure has shifted to the private sector and mobile network providers have been promoted as symbols of how corporations can work in the interest of the world’s poor. Therefore, this thesis turns the ethnographic gaze onto these corporations in Cambodia and explores the inner workings of corporate marketing in order to examine the relationship between corporations and the Cambodian population.

To examine the relationship between mobile networks and socio-economic change in Cambodia two questions are asked. The first question concerns how consumers transform mobile networks into infrastructures of social and economic life and the second focuses on how marketers
imagine and define the market for mobile networks. The first question leads to an ethnography of how mobile networks are incorporated into everyday life and how Cambodians pursue a range of socio-cultural and livelihood projects through them. The second question leads to an ethnographic exploration of how the consumers of mobile networks are imagined and constructed through consumer research and marketing practice.

The answer to the first question demonstrates how Cambodians have transformed mobile networks into infrastructures for configuring their own social and economic networks, and reimagining what they can do and where they can go. Mobile networks have become infrastructures of mobility through which Cambodians transverse geographical terrain to engage in courtship, manage kinship and social relations, and participate in markets at a distance. Through mobile networks Cambodians bridge urban-rural divides and alleviate the difficulties of social and economic remoteness. In contrast, the answer to the second question reveals how corporate market definitions are structured by class subjectivities and classificatory schemes that reinforce social divisions, particularly between rural and urban Cambodians, and accentuate social and economic exclusions. However, this thesis also demonstrates that markets are social and cultural creations as much as they are political and economic creations. As such, markets and consumer value can be redefined in more inclusionary forms that are supportive of everyday Cambodian aspirations.
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I am also indebted to the many Cambodian informants and friends I met before and during conducting research. I couldn't have achieved this thesis without their generosity in opening their lives to me, introducing people that I could interview, guiding me around the countryside, helping me improve my Khmer and critiquing my questions. I view them as my research partners and without their support and inspiration this thesis would not be what it is.
Author’s Note

There is no standardized system for writing the Khmer language using Roman script, which leads to differences in how Khmer is transliterated. Therefore, I minimise the use of transliterations.

In reference to markets and social class categories, I follow transliterations used by Annuksa Derks (2008). In other cases, I use accessible transliterations from David Smyth and Tran Kien’s Practical Cambodian Dictionary. Transliterations appear in italics, except in the case of places and names. In regard to place and area names, I use the most common available spelling.

Pseudonyms are used to refer to informants to protect their identity. Only for public figures do I refer to their actual names. I also use a pseudonym to refer to the consumer research firm that I conducted ethnographic research within. The companies that market mobile networks are prominent figures in this research. There are a variety of terms to refer to them that are in common use such as mobile carrier, mobile operator and mobile service provider. I use the term mobile network provider as it best encapsulates their business and their position in the economy.

Concerning references to currency, I mainly refer to US dollars since mobile phones and tariff rates are priced in US dollars instead of the local currency of riel.
Introduction: Networks of Change

In 1993 elections were held in Cambodia for the first time since the tumultuous years of the 1970s. It was also the year the country etched its name into the history books as the first country where mobile phone subscription rates surpassed fixed line phones (ITU 2002; UNDP Cambodia 2009). It’s a peculiar record that reflected the country’s poor state of telecommunications infrastructure when it was embarking on new era of social, economic and political change. After the tragic years under the Khmer Rouge and its relative isolation under Vietnamese occupation, Cambodia was finally reconnecting with the world. Refugees were returning and international aid was pouring in. The United Nations Transitional Authority for Cambodia (UNTAC) had already arrived and elections were held under its supervision (Chandler 2008). The telecommunications record was symbolic of these rapid changes and the new connections that were being formed with the outside world and internally, but it also symbolized the long road of development and modernization that was still in front of the country.

This thesis fast-forwards 16 years and ethnographically explores social and economic change as mobile network infrastructures and connectivity spread beyond the elite and the urban middle class to the broader population. When I commenced this study in 2009 telecommunications infrastructure had made significant strides forward, but there had been only modest development in fixed line infrastructure. Connections had only reached an estimated 43,000, which was a mere 0.28 per 100 inhabitants, the lowest in Southeast Asia (UNDP Cambodia 2009: 48). This rate paled in comparison to the growth in mobile network connections. By 2009 there were an estimated 3.7 million mobile connections, which was approximately 26% of the
population (UNDP Cambodia 2009: 47). This number would change dramatically with rapid
growth in mobile network coverage and mobile phone ownership the country was experiencing.
Growth rates were estimated at nearly 50% per year (Marong & Power 2008: 12). By 2012 SIM
card subscription numbers exceeded the population size (Weiland 2012). Given these facts, it
dawned on me as I began research that I could observe Cambodians that had just recently
become or were about to become mobile phone users for the first time.

During my initial visits to Cambodia in the years prior to commencing research I was
overwhelmed by the sense that mobile phones and networks were central to how Cambodians
were experiencing change. Mobile phone stores were ubiquitous, and the billboards and
umbrellas of mobile network providers coloured the streets of Phnom Penh and provincial towns.
The national roads linking the major centres were lined with mobile network towers.
Conversations with Cambodians were littered with news and rumours about the latest mobile
network operator or device to arrive in the country. Embodied in these conversations was an
optimism and excitement about the future.

What I observed and sensed about mobile phones was not unique. Over the past two decades
mobile phones have captivated the imagination of people around the world as a symbol of
progress. The Economist has been particularly enthusiastic about the mobile phone and used
numerous superlatives to describe it, including “magical” and “mother of invention” (Economist
2005b; 2009d). Advocates of Amartya Sen’s capability approach to development have described
mobile phones as constituting “the basis for one of the greatest expansions of human capabilities
in known history” (Smith, Spence & Rashid 2011). Jeffrey Sachs referred to the mobile phone as
"the single most transformative tool of development" (Economist 2009c). I was intrigued by
these characterizations and as I began research I asked how the proliferation of mobile phones and the spread of network coverage could be transforming Cambodia.

In a world dominated by economics, change and progress is typically measured in indices of economic growth and equality. On the economic growth front, Cambodia appeared to be excelling. Since the early 1990s annual growth rates have mostly exceeded 5% and in some years reached double digits (Hill & Menon 2013: 5). Between 1998 and 2007 the economy’s GDP doubled and it is possible that no other post-conflict country has grown so rapidly (Hill & Menon 2013:6). Yet, in 2009 development remained a pressing concern and this remained the case in 2015. According to an official poverty line of US$1.25 per day, the poverty rate was 22.9% in 2009 (Asia Development Bank 2014: x). However, at a poverty line of US$2.00 per day, the poverty rate would have been 40.7% of the population in 2009 (2014: xi). Further to this, when other indicators of development are used, Cambodia appears to be even worse off. According to the Asia Development Bank (2014: xii), a much higher proportion of Cambodians are multidimensionally poor than they are income poor. They are disadvantaged in terms of factors such as access to drinking water, education and health care. Inequality has also persisted in Cambodia as development has been concentrated in urban pockets while poverty has continued to be pervasive in the rural and remote areas (Asia Development Bank 2014: 7). It is therefore difficult to overlook development, poverty alleviation and issues of inequality when contemplating research about Cambodia.

Infrastructure & Network Ethics

Questions around poverty alleviation and inequality never left me through the course of research and writing this thesis, but to frame change in economic reductionist terms would turn the light
away from how change is imagined and enacted by Cambodians, which as an anthropologist of social change is my prime interest. Social actors endowed with agency tend to be missing economic accounts of change, but they have also been largely missing in narratives of social change and development concerning ICTs (information communication technologies) in the global South. Slater (2013) illuminates how narratives of change depict "Southern beneficiaries" as “‘tool users’, people who are not expected to change in any fundamental way but simply to use ICTs instrumentally, as tools that might ‘empower’ them to more effectively be what they already are and have always been” (Slater 2013: 102). Mobile phones are conveyed as functional tools and the consumers of them are users who do not change the mobile phone and neither do they significantly change themselves through using mobile phones. The Southern user of mobile phones merely gains a less precarious and marginalized place in local and global economic relations through using mobile phones and other communication tools (Slater 2013: 120).

Slater argues that this narrative falls on one side of a global division in network ethics. According to Slater (2013: 116), network ethics have shape and form in concepts such as cyber culture, network society and the new economy. They constitute normative versions of how people, through engagement and transaction with privileged objects such as mobile phones and cellular networks, "imagine and specify new forms of agency and sociality in terms of the available possibilities of connecting and associating that they perceive or experience" (Slater 2013: 9). Network ethics are “mediations on the value of connection from the standpoint of subjectivity and social relations” (Slater 2013:116). Through mediations with new communication technology that intensify and expand human connectivity, people transform who they are and what they imagine they can be. As such, network ethics are versions of how communication technologies are seen to "act as a kind of material culture of development through which people imagine, articulate and enact futures" (Slater 2013: 9). Network ethics, Slater (2013: 117) argues, stem
from Western narratives of development that rests on “the conviction that humankind will progress by virtue of the proliferation of connections”. However, Slater points to a global asymmetry in ethics. While Northern subjects are seen as being transformed through the material culture of communication technologies and enhanced connectivity, Southern subjects are consigned to “a quite separate ethical world” (Slater 2013: 119). For the marginalized, poor and rural of the global south, information communication technologies are "generally understood not as material culture of transformation but rather as narrowly instrumental tools for unaltered ends by unaltered agents" (2013: 9).

Beginning with the title, “Mobile Networks and Socio-Economic Change”, I seek to address this asymmetry of ethics in the Cambodian context by using the term “mobile networks” instead of “mobile phones” or “cell phone”, which are pervasive in titles of accounts of the impact of mobile phones and ethnographies of mobile communication. It is a subtle shift in terminology that brings attention to how Cambodians experience networks and how they might be transformed by engagement with the networks they access through mobile phones. It also follows the evolution in the field this study belongs which increasingly uses the term “mobile media” to describe itself (Horst 2013). Mobile media indicates a shift from studying mobile phones as communication devices to "a broader suit of activities and potential analyses" (Horst 2013: 147). Mobile media takes attention away from mobile phones as technical tools or devices and opens analysis to the various forms of communication and connecting that is possible through mobile phones.

Like its media studies namesake, mobile media studies can and should draw the owners and producers of new media into the analysis. Horst (2013: 151) calls on mobile media research to...
take into account the supporting infrastructure by exploring not just the formal political, legal
and economic processes that lead to infrastructure development, but also the "informal ways in
which consumers and providers of services and platforms come to subvert, resist and reconfigure
mobile media infrastructures." I adopt a more specific angle that focuses on mobile network
infrastructures, which brings attention to the actual mobile networks built and maintained by
multinational corporations in Cambodia. It also lends itself to considering how Cambodians
engage with digital networks to maintain, configure and reconfigure their own social and
economic networks, which can both subvert and reconfigure the infrastructures built and
marketed by mobile network providers.

Studying networks and infrastructures are, in a practical sense, indistinguishable endeavours.
Larkin (2013: 328) defines infrastructures as "built networks that facilitate the flow of goods,
people, or ideas and allow for their exchange over space." Infrastructures are transport networks,
which facilitate the movement of people and goods. They are financial infrastructure networks
that facilitate the movement, transfer and storage of money. Energy infrastructures generate,
store and distribute power through built networks. Markets are also network infrastructures that
facilitate the trade in goods and services. Likewise, media infrastructures are platforms and
networks for the flow of information and ideas. Different kinds of infrastructure networks
intersect and merge. For instance, mobile networks, which are a subset of media infrastructures,
cannot exist independently of energy infrastructures. They depend on market infrastructures to
facilitate their construction, maintenance and provision. They can also play a critical role in other
forms of infrastructures such as market, financial, transportation and health infrastructure
networks. Thus, how mobile networks are interwoven with other networks to transform and
reconfigure them is a poignant concern of this thesis.
However, there has been a tendency in anthropology to see infrastructure as physical constructions and to study the impact of infrastructure such as a new road rather than consider the social, political and economic apparatus that constructs a new road (Larkin 2013). This thesis adopts a ‘systems thinking’ approach to examining mobile network infrastructures that goes beyond studying the impact of the physical mobile network to examining how they are constructed. Drawing on science and technology studies, I consider how the process of constructing and marketing mobile networks is loaded with particular political rationalities and network ethics. I explore how the social actors, who plan, construct and market mobile networks, insert into them their own versions of what is a mobile network, who will use them and how them will have value to Cambodians. As such, mobile networks are forms of material culture that express particular ways of acting and thinking.

By examining mobile network infrastructures as forms of material culture, I intentionally destabilise what is encompassed in the term mobile networks. For anthropologists, infrastructure has increasingly become an unstable unit of analysis. Infrastructures can be physical constructions of connecting roads, wires, transmission towers and satellite dishes, but they can also be managerial, organizational, and social structures composed of systems and practices of communicating, socializing and interacting that produce webs of political, economic and social connectivity (Larkin 2013: 338). The multiple meaning of infrastructure was reflected by middle class Cambodians in Phnom Penh I mixed with when I began this study. They would refer to networks as the corporate run mobile networks they used as well as the social networks they actively cultivated and drew on to navigate their social and economic lives. These networks were difficult to distinguish. Through engaging with mobile networks they were constructing and maintaining the infrastructure networks of their own social and economic life. However, the
middle class urban Cambodians, who highlighted for me the duality in network meaning, rarely extended their own treatment of networks to the broader population, especially to the class of rural Cambodians. Rural Cambodians were not seen as people that construct or engage in networks of social or economic form. What Slater referred to as an international division of ethics is played out among local social actors in a form that reflects and reinforces class relations. However, the division in ethics is open to subversion and challenge as mobile networks are redefined and reconfigured by the marketers of mobile networks and the consumers who use them to construct and transform their own network infrastructures.

First Question: Mobile Networks & the Consumer

Defining mobile networks, what they mean and are to different people in Cambodia is a constant theme running through this thesis. I deal with this theme directly in two principle questions. The first question deals with the meaning of mobile networks to everyday Cambodians. I am interested in both how mobile networks are transformed by Cambodians and how Cambodians are themselves transformed through engagement with mobile networks and the social and economic networks they configure through them. I ask:

How have mobile networks been turned into the infrastructures of social and economic life in Cambodia and how do these infrastructures support and transform the socio-cultural and livelihood projects of everyday Cambodians?

This question clearly has two parts and both take inspiration from Slater's (2013) network ethics argument and Horst and Miller's (2006) ethnography of mobile communication in Jamaica. Horst and Miller ask what has the cell phone “become in the light of its use by Jamaicans” (2006: 5). In the first part of my question I am asking a very similar question about what mobile networks become through being used by Cambodians. I am asking, how have mobile networks been
transformed from being alienable objects to inalienable objects and from being telecommunications engineering constructions to being infrastructures for Cambodians to navigate their social and economic lives. In this question, there is an acknowledgement that everyday Cambodians are active agents in creating network infrastructures. A mobile network only becomes a communication infrastructure when it is used to connect with other people. Without human connections and people using it to sustain and build connections it does not constitute a communication network. Therefore, mobile networks are never really infrastructure without the people that use them to make human connections for social, cultural and economic purposes.

The second part of the question is entwined with the first. Horst and Miller (2006: 5) again provide guidance by asking what have Jamaicans “become in the light of their use of the cell phone.” In the context of this study it can be reworded as "what do Cambodians become as they access and navigate mobile networks?" On one level, I am asking what kinds of connections are Cambodians making through mobile networks and how do these connections help them achieve the things they always wanted to achieve. On another level, I am asking how, through the infrastructure of mobile networks, Cambodians could be reimagining themselves and what they seek to be and achieve through mobile network connections. I refer to those things Cambodians seek to achieve and the process of achieving them as "projects". According to Ortner (2006: 145), life is "socially organized" around projects, which are culturally constituted and "infuse life with meaning and purpose". I am therefore interested in how mobile networks have become infrastructure to support these projects, but also how through social and economic networks Cambodians could be reimagining and reconfiguring the projects they pursue.
The New Economy and Network Infrastructure

In the new economy that has emerged in Cambodia access to mobile networks and being able to turn them into infrastructure of social and economic life is premised on Cambodians asserting themselves as consumers who transact with the corporations that build and manage mobile networks in Cambodians. There is an intended marriage between consumers and corporations, which forms the basis of the neoliberal model of market-led development. It’s a model that has been encouraged by the political elite in Cambodia. The long standing Minister of Post and Telecommunications, So Khun, was an active proponent of the mobile networks sector and the role of the private sector in it. The country, he proclaimed, wants "more foreign firms because we want better service, cheaper and higher quality" (Reuters 2009). He explained, "Our people, they love to talk over the phone for business communication. They will talk on their phones until their batteries go dead"(Reuters 2009). Foreign investment and the entry of foreign firms was a rent seeking bonanza for the Cambodian government and So Khun was possibly the chief beneficiary. Still, So Khun's approach appealed to advocates of neoliberal market-led development doctrine and reflected the new role of large local and foreign firms in the economy.

A vocal proponent of the market-led development doctrine has been The Economist. In a series of articles about mobile phones and economic growth, it argued that governments need to step out of the way to let the market work its magic. It claims that promoting the spread of mobile phones and networks "requires no aid payments or charity handouts: handset-makers, acting in their own interest, are ready to produce low-cost phones for what they now regard as a promising new market. Mobile operators across the developing world would love to sign up millions of new customers" (The Economist 2005b). By and large this is what So Khun did. He stepped out of the way and let a highly competitive market emerge. Despite the competition,
new entrants continued to clamour to enter the rapidly growing market that had few operating conditions.

Under the model supported by So Khun and the Cambodian state, it was left to private sector actors to meet the needs of the population and drive development. It is a model that is given weight by the bottom of the pyramid (BOP) approach to business and development, which positions multinational corporations as lead actors in development and addressing the needs of the global poor (Prahalad & Hammond 2002; Prahalad & Hart 2002). Much like The Economist, advocates of the BOP approach argue that multinationals should simply see the poor in developing countries as a market opportunity rather than as economic victims in need of development aid. However, few industries have been able to achieve a sustainably profitable relationship with the global poor outside of what Benson and Kirsch (2010) calls “harm industries” such as tobacco and soda companies. The telecommunications sector of mobile phones and network providers appear to be an exception. As a result, it has emerged as a poster-child of the market-led development model and has been sold as "reconciliation between neoliberal capitalism and the interests of the poorest people in the world" (Mazzarella 2010: 785).

Despite the status of the telecommunications companies in neoliberal discourses of development their relationship with and the global poor has received scant attention among anthropologists with some exceptions (Horst & Miller 2005,2006; Horst 2014; Jeffery & Doron 2013). Furthermore, there has been little scholarly work that "focuses on the power dynamics that shape the mobile media and telecommunications landscape” (Horst 2013: 148). This hole in research about mobile phones and networks concerned me as I began research. I considered the ability of big business to deploy governmentality like technologies to guide, lead, nudge or
manipulate the Cambodian populace in the interest of their own projects of capital accumulation (Rose 1999). I assumed that the corporations building, maintaining and marketing mobile networks had in-depth knowledge of Cambodian consumers and could take advantage of this knowledge in an imbalanced relationship of power. However, in the field observing the challenges faced by mobile network providers I realized that this concern was misplaced. This is not to say that there was not an imbalance in power or that mobile network providers did not seek to steer that population to meet their own profit orientated goals, but the providers were challenged by fundamental questions about what the market is and what it could become. How corporate actors respond to the challenge of understanding markets in the present and future, I will argue, is much more telling about the relationship between corporations and populations, and the dynamics of power that shape networks and social transformation.

How are markets understood or perceived is a question that rarely enters social analysis of change and development. Proponents of free-markets on one side and advocates of regulation on the other side both see markets as a given. Markets are treated as “self-evident, permanent, and incontestable” (Slater & Tonkiss 2013: 3-4). The prime difference is in how markets are judged to contribute to equality and progress. The treatment of markets as fixed and stable, Slater (2002: 59) argues, is based on a separation in modern Western thought between economic and socio-cultural categories of analysis. The market is treated as belonging to the economic domain devoid of socio-cultural and political elements that could destabilize its shape. This separation, however, does not take into account, how actual market actors construct versions of the market. Slater (2002: 59) argues that when markets and market relations are seen “from the standpoint of specific social actors, we find that economic and cultural categories are logically
and practically interdependent. Seeing markets as fluid constructs built by social actors through the active merging of economic and cultural categories raises questions for this research.

The profit seeking projects of mobile network providers are underpinned by what the market for mobile networks is perceived to be and can be. How corporate actors merge economic and cultural categories to form an understanding and vision of the market determines how they engage with consumers and pursue capital growth. Deciding on who is an eligible consumer with sufficient consumption capacity requires subjective judgement that draws on cultural as well as economic knowledge. Moreover, who is classed as belonging to the market for mobile networks hinges on versions of network ethics that associate different categories of people with forms of agency and sociality. Consequently, different versions of the market are produced through different ways the Cambodian population is classified, and how agency and sociality are associated with networks and with different kinds of Cambodians.

**Second Question: Mobile Networks & Marketers**

The second principle question of this thesis endeavours to understand the complexities of the relationship between private sector actors and the population in the new economy, and how social and economic change is shaped by this relationship. Underpinning the relationship between mobile network providers and Cambodians consumers is how marketers of mobile networks make sense of the market. Therefore, I ask simply:

*How is the market for mobile networks imagined and defined by the marketers of mobile networks?*

This question directly addresses the network ethics of network infrastructure providers and how they associate networks with different groups within the population. It is also a direct response
to my experience in the field. I arrived in Cambodia to do research with the image that mobile phones were becoming increasingly affordable and most Cambodians would soon have access to mobile networks. However, as I associated with people in the industry that were making micro and macro decisions about the marketing of mobile networks, I realized that my view was not common. They were excluding large sections of the population from the market based on perceptions of income and the value mobile networks had to different kinds of Cambodians. Therefore, I began to ask questions about how they were seeing the market and why it was starkly different to my own vision. As I did this, I began to realize that the answers were strongly linked to broader questions of power and social change.

In this question I broadly refer to market decision makers as marketers. They range from investors, CEOs, network planners, advertisers and market researchers. They work inside mobile network providers and affiliated supporting agencies. Through formal and informal processes they imagine and construct versions of the market and insert these versions into the physical and marketing infrastructures of mobile networks.

I use ‘how’ as opposed to ‘what’ or ‘why’ in this question to give focus to the process through which markets are perceived and constructed. Asking ‘how’ facilitates seeing marketing as culture and helps unravel the cultural games and identity politics that underpin the marketers understanding of what mobile networks are and can be for Cambodians. Since neoliberal doctrine gives the discipline of marketing a preeminent role in development and social change, seeing marketing as culture is an important step towards fully critiquing neoliberalism and capitalism in emerging economies (Kotler & Lee 2009; Applbaum 2011). It also facilitates a broader picture of how markets are formed. Marketers are not merely subject to how they see
consumers. They can become occupied by the behaviour of their fellow marketers and competitors. In *Capitalism: An Ethnographic Approach*, Daniel Miller (1997) describes how industry trends and attention to competitor’s behaviour steers the vision of marketers away from actual consumers and their interests. As a result, Miller argues, corporate marketers construct versions of markets that are alien to actual consumer interests leading to failures in addressing the needs of populations they are portrayed as serving.

**Answering the Principle Questions**

The two principle questions of this thesis are framed in order to illuminate consumers and marketers as social agents who come together in a matrix of power and intersecting projects within the new economy of heightened connectivity and corporate capitalism. These questions led me in two divergent and yet intersecting research directions. One direction was an ethnographic exploration of how everyday Cambodians were reconfiguring and reimagining who they are and what they can be through the consumption of mobile networks. The second direction was an ethnographic exploration of marketing and how knowledge and definitions of the market for mobile networks are constructed by the very actors that are responsible for delivering them to Cambodians. The first question took me out into the fields and the everyday lives of Cambodians in urban and rural areas. The second question took me into a corporate world where the consumers are imagined, defined and constructed by marketing personnel. Through answering the first question I highlight the agency of Cambodians to turn mobile networks into material cultures of transformation by using them to configure and reconfigure their social and economic networks. By answering the second question I illustrate how corporate marketing processes insert into the infrastructures of mobile networks subjective versions of who Cambodians are and who they could be through mobile networks. Marketing subjectivities, I
argue, generate constraints on agency and sociality that reinforce social divides. However, I further argue that markets as social constructs can also be inclusive and supportive of Cambodian aspirations for expanded social and economic connectivity.

My answers to the first two principal questions both corroborate ethnographies in other countries and challenge their analysis and recommendations. Much of the research conducted about mobile communication in other developing countries is comparable with how Cambodians engage with mobile networks. In particular, mobile networks are given new specifically Cambodian meaning. They are incorporated into the metaphysical sphere of dreams and spirits and become mediums of courtship and expressing kin and social connection. Mobile networks are accessed to navigate and expand a range of social and kin-based social relationships, transforming the sociality of Cambodians. Networks of human connectivity are reshaped through mobile networks, producing new forms of opportunity, protection, governance and obligation from a far. Mobile networks are a medium of mobility: to move without moving, allowing for the maintenance and management of relationships at a distance. In particular, the mobility afforded through mobile networks brings markets closer and makes them more accessible to rural and remote Cambodians. As a result, economic and market networks are being reconfigured by Cambodians through mobile networks. While access to mobile networks are seen as a source of efficiency in basic livelihood pursuits, they are also mediums to reimagine and reconfigure social and economics networks, form bridges to and from remote areas, and participate in markets from a distance. Broadly speaking, Cambodians are accessing mobile networks to overcome and subvert rural-urban divides that can constrain the rural populace. Through mobile networks Cambodians see a world of expanded opportunity, but they are also presented with new expectations, obligations, constraints and complexities.
Social and economic configurations are transformed by Cambodians through mobile networks to such an extent that those who cannot access networks due to economic limitations, geographical remoteness or a lack of cultural capital such as literacy are significantly disadvantaged in the new economy. Research on the roll-out of telecommunications infrastructure in developing countries demonstrates that it correlates with growing social and economic inequalities (Forestier, Grace & Kenny 2002; Overå 2006; Carmody 2012; Blumenstock & Eagle 2012). I reach a similar conclusion in this research, but by examining the relationship between marketers and consumers I illustrate how failures to meet the needs of a populace in an equitable manner are not necessarily results of ‘the market’. I argue that inequities in access to mobile networks are at least partially the result of how the market is socially defined. Class based subjectivities manifest in the process of imagining and defining the market, leading to the insertion of class divisions in the planning and roll-out of infrastructure, distribution networks and an array of marketing activities that shape the provision of mobile networks.

This ethnography draws attention to how the methods marketers of mobile networks use to define and construct markets can conflict with how mobile networks are constructed as social and economic infrastructure by everyday Cambodians. Corporate methods of consumer research and market analysis atomize consumers by cutting them off from the social relationships they pursue and cultivate through mobile networks. Moreover, consumer research and marketing processes are infused with class subjectivities and schemes of classification that alienate and marginalize sections of the populace. Consequently, I argue that the process of market definition can function as a mechanism for constructing and reinforcing class structures, which mitigates some of the benefits Cambodians extract from mobile networks.
This thesis is, however, not an anti-market or anti-marketing argument. My aim in it is to highlight how markets are social constructions as much as they are political and economic creations. By seeing market definitions as social constructions it is possible to see alternative market formations that are inclusive and more closely aligned with the aspirations of everyday Cambodians. I give weight to this argument by drawing on evidence of Viettel's mobile network operations in Cambodia. The proliferation of access to mobile networks, I argue, is strongly related to how Viettel defined the market. Moreover, how Viettel defined the market is heavily determined by how they understand the value of social connectivity in Cambodia and how Cambodians could reconfigure their world through mobile networks. In short, Viettel situated rural Cambodians in a significantly different sphere of network ethics to their counterparts, which allowed it to gain a powerful position in the new Cambodian economy.

Viettel also poses a challenge to my analysis as it is owned by the Vietnamese military and has close ties to the Cambodian People’s Party. In response, I argue that states can play a role in giving room to enterprises to define markets in more inclusive forms. To create more efficient and inclusive markets of mobile networks, the answer is not governments simply stepping out of the way and neither is it a case of just regulating the market. Viettel’s success in Cambodia and in numerous other countries, suggests that state backing of corporations can play an important role in enabling companies to define and construct more inclusive markets.

A more significant point I emphasize in this ethnography is that for corporations to work in the interest of populations in an inclusive fashion, there requires a transformation in marketing and how marketers categorize populations and define markets. For providers of network infrastructures there is need for reflexive scrutiny of how they associate networks and their value
with different kinds of people. There is further need to address the politics of class that is embedded in marketing practices and the disciplining power that marketing has over its practitioners. I propose that ethnographies of marketing can play a role in this transformation by documenting how marketing is a social process that shapes the development of networks and the provision of goods and services.

**Finding Questions in the Literature**

I began this research with broad questions about the relationship between information communication technologies and social change in Cambodia. Through navigating a wide range of literature I eventually arrived at more specific questions. In this journey there was element of critical reflexivity that steered me through the literature. In this section I will outline this journey, the different questions I pondered, and the various discourses I navigated.

**Mobile Phones: The Tools of Market-Led Development**

As I launched this project I initially encountered the discourse of ICT4D (Information Communication Technology for Development). It is a discourse that has been shaped and developed by government agencies, academic and corporate research, and media agencies. It became an industry in itself as interest in the power of mobile phones and communication technologies grew at the beginning of the millennium. The International Telecom Union (ITU), an arm of the UN, has been at the forefront of the discourse. In 2003 at the World Summit on the Information Society in Geneva, it shared its vision of the information society. In its declaration of principles it states that information communication technologies (ICT) “can be a powerful instrument, increasing productivity, generating economic growth, job creation, and employability and improving the quality of life for all” (International Telecom Union 2003a: 2). It further states
its commitment to empower “the poor, particularly those living in remote, rural and marginalized areas to access information, and to use ICTs as tools to support their efforts to lift themselves out of poverty” (2003a: 2). In these claims the ITU bundles multiple communication technologies together, but the earlier stage of the discourse was dominated by the empowering aspects of the internet and the use of PCs (Schech 2002). This involved academic attention being directed at the digital divide and various capacities to use and take advantage of the internet and PCs (Selwyn 2004; Warshaauer 2004).

Attention then shifted from PCs and the internet to the spread of mobile phones. This shift was highlighted by The Economist (2005c) when it claimed that “the mobile phone, not the personal computer” has the most potential to bridge the digital divide between rich and poor. Compared with the “rich world”, The Economist argues, mobile phones are “even more useful in the developing world”. It describes the mobile phone as a "magical device" that can “boost entrepreneurship and economic activity, provide an alternative to bad roads and unreliable postal service, widen farmers’ access to markets and allow swift and secure transfers of money” (Economist 2005c). In these depictions of economic change the focus is on tools or devices. The PC and then the mobile phone is endowed with their own agency to unleash entrepreneurship and magically overcome many of the obstacles for economic participation faced by people in rural areas of developing countries.

The shift from focusing on PCs to mobile phones as tools of development can be explained in surging rates of mobile phone ownership around the world compared with internet usage and PC ownership (International Telecom Union 2013). This pattern is reflected in Cambodia where PC ownership has remained a feature of the minority. In 2009 only 3% of households had a PC.
compared with 44% owning a mobile phone. By 2013 the number of households with a PC had risen dramatically, but only to 6%. In the same period, the number of households with a mobile phone rose to 77% (National Institute of Statistics 2010, 2014). Statistics on internet usage reflect a similar story. According to data from the International Telecommunications Union there were only 0.3 internet users per 100 people in Cambodia in 2005. By 2009 there were still only 0.5 internet users per 100 people, but by 2014 the number had risen to 9 internet users per 100. However, when mobile internet users are included the number is much higher. A report on social media usage accounts for 2.4 million active social media users in Cambodia, which represents 16% of the population (Baliga 2015). GSMA Intelligence (2015) puts the rate of mobile broadband usage at 20% of the population in 2015 and rising at a rate of 26% per annum. Despite these impressive jumps in internet usage, the main game changer has been the rise in mobile phone ownership, especially before and during the period that this research was conducted.

The emergent focus on mobiles phones as a development tool differs from the longer standing research field on mobile phone usage in the developed world. This field of research has been concerned with a shift from the use of fixed line phones to mobile phones (Katz & Arkhus 2002; Ling 2004). It has questioned changing social dynamics related to being able to communicate on the go. Additionally, it has focused on the individualizing features of mobile phones, as users no longer needed to share a fixed household phone. As a result, mobile phones are associated with the increasing atomisation of society (Castells, Fernández-Ardèvol, Qiu & Sey 2007). However, the developing world, especially the subcontinent and Africa, have presented researchers with a quite different context. The spread of mobile phones has occurred among populations with very low rates of fixed line phone penetration. Countries with historically poor infrastructure such as Cambodia have effectively leapfrogged fixed line phones thanks to the spread of mobile phones.
and network coverage. These countries have also demonstrated new models of usage, particularly concerning the communal use of mobile phones, which could bring wider and more rapid access to telecommunications. These new patterns of usage coupled with rapid growth in mobile phone ownership have produced excitement about the possibility of rapid social and economic change delivered through these magical tools of development.

In response to this excitement and range of anecdotal evidence, there has been an effort to verify whether there is a relationship with mobile phone ownership and economic development. Large telecommunications companies have been eager to support this kind of research and have helped publicise their results. These studies unsurprisingly corroborate the benefits of mobile phone ownership. A major study conducted with the support of Vodafone demonstrates that "a developing country which had an average of 10 or more mobile phones per 100 population between 1996 and 2003 would have enjoyed per capita GDP growth that was 0.59 percent higher than an otherwise identical country" (Waverman, Meschi & Fuss 2005: 11). The Norwegian telecommunications giant, Telenor, sponsored similar research in the countries in which it operates (Deloitte 2008). It documents that a 10% increase in penetration leads to a 1.2% increase in long-term growth rates (Deloitte 2008: 10). The Telenor funded study gives particular attention to improvements in productivity. It claims that GDP growth due to productivity improvements was 0.8% in Thailand and 2.1% in Bangladesh (Deloitte 2009: 7). These economic versions of change portray mobile phones as tools of development. The more there are of them the more economic growth can be achieved.

As tools of development, mobile phones are principally seen to endow users with greater efficiency in economic transactions. Abraham’s (2007: 15) study of fishermen and their trading
relationships in Kerala, India, documents how trade became "more efficient by the introduction of mobile phones and subsequent free flows of information." Through mobile communication a range of efficiencies emerged between fisherman, boat owners and agents. Fishermen spent less time idling at sea, and traders or boat owners would go to the docks or landing points only when they received notification from fishing vessels. Negotiations could also occur at a distance. Efficiencies due to mobile phone use are also evident in ethnographic studies of trade in Rwanda (Overá 2006), and Nigeria (Jagun, Heeks & Whalley 2008). Overá’s study of traders in Rwanda demonstrates that rural-based traders were able to make considerable cost savings through mobile communication as it enabled them to organize their activities more efficiently.

Based on this literature, I began to view mobile phones as tools of efficiency and I stirred towards asking how mobile phones were improving efficiencies in rural trade in Cambodia. However, I also questioned the basis of asking such a question and the link between information and poverty alleviation. Critiques of the ICT for development discourse suggest that perhaps I was caught up in the discourse without scrutinizing it and recognizing the political and economic doctrine that shapes it. Mobile phones, I realized, are not the first communication devices that have been portrayed as tools of development.

Schech (2002) argues that historically there is a relationship between different communication technologies and the prevailing political and economic doctrine of the time. In the 1950s and 1960s the spread of affordable battery powered transistor radios led it to be considered as one of the “sharpest tools” in the developer’s kit (Rogers 1969: 99). Sounding very much like The Economist of the current era, Jamison and McAnany (1978: 9) described it as “man’s most potent communication innovation since the development of writing.” The attention given to the
transistor radio, according to Schech (2002), reflects the dominant development model of the time, which was state led, top-down and centralized. This model contrasts with the neoliberal development orthodoxy that emerged in the 1980s. Under it “a multitude of private firms and individuals came to replace the state as the key development agent” (Schech 2002: 16). Hence, the private sector became a new and leading stakeholder in development. This is reflected in the International Telecom Union’s (2003b: 1)"Plan of Action", which states, "The private sector is not only a market player but also plays a role in a wider sustainable development context."

According to Schech (2002: 16), the internet is symbolic of “the new development orthodoxy of market-led, decentralized development, presenting itself as the technology of our age.” Schech was premature in making this assertion as the mobile phone and not the internet emerged as the dominant technology associated with development. However, the link that Schech highlights applies equally to mobile phones (Mazzarella 2010; Carmody 2012). Mobile phones and network access are mainly provided through the market by private sector actors, in particular large corporations. They are associated with the poverty stricken using them to lift themselves up, rather than pulling on the hand of the state or donor agencies. Furthermore, mobile phones fit neatly into the neoliberal prioritization of “information flows” and other factors that are deemed to make markets “perform better” (Lapasvistas 2005: 38).

Advocates of market-led development link mobile phone usage in developing countries with micro-finance or present them as comparable cases of how the market can work in the interest of the poor. Muhammad Yunus, who is known as the father of micro-finance, has been an avid proponent of mobile phones as a development tool (Yunus & Weber 2007). Such is his support for mobile phones that he formed Grameen Telecom, which joined forces with Telenor of
Norway to launch Bangladesh’s first privately run mobile network operator under the name GrameenPhone (Sullivan 2007). Grameen Telecom leveraged Grameen Bank’s network of credit officers to handle marketing and sales in rural Bangladesh. This was coupled with the insertion of Yunus’ version of grassroots development, which was a scheme to establish village phones throughout the country. This scheme involved women taking out loans to purchase phones, SIM cards, calling credit and other peripheries in order to sell calls and call related services to villagers, which widened access to telecommunications in the village. The Grameen Technology Centre (Grameen Foundation 2005) developed a manual to facilitate its introduction in other countries. The Economist (2009c) used examples of the model in Uganda as evidence of the power of mobile phones and the private sector to support grassroots development. In Cambodia a duplication of the model was developed under the guidance of GTZ, the German aid agency, and the UNDP (Marong & Power 2008). The resulting company was called the Cambodian Village Phone Company. In the lead up to conducting this research, I briefly volunteered at the company. I had been inspired by the book *Can You Hear Me Now?*, which describes the formation of GrameenPhone and the development of the village phone scheme (Sullivan 2007). On reflection, it seems inescapable that this research has been shaped by my own captivation with the mobile phone as a development tool and its place within a development model that positions private sector actors as leadings agents of development. I attempt to grapple with my own subjectivities through critical reflexivity and by questioning the very doctrine that steered me in the direction of this research.

**Anthropology of Mobile Communication**

With the ICT4D (information communication for development) discourse as my background I began this study with a focus on mobile phones and their functionality. This led to an interest in
the social, cultural and technological capital that could be necessary to use and make the most of mobile phones (Selwyn 2014). As a result, I questioned how a lack of Khmer language phones was impacting on the functionality of phones and how varying levels of literacy in Cambodia was shaping how Cambodia’s use mobile phones. While these questions remained with me during research, the anthropological studies of mobile communication indicated that I should be looking beyond mobile phone devices to the actual relationships and social connections formed and maintained through mobile phones and networks.

Anthropologists have taken a strong interest in ethnographically exploring mobile communication in developing countries over the past decade (Horst & Miller 2005, 2006; Skuse & Cousins 2007, 2008; Doron & Jeffery 2013; Archambault 2011, 2012). Grounded in material culture studies, anthropologists have given ethnographic focus to how mobile phones are domesticated or localized as cultural objects. In these ethnographies attention is given to exploring how development is understood and experienced from the perspective of local social actors who use mobile phones and develop connections through mobile networks. At the forefront of this collection are ethnographies funded by the United Kingdom’s Department of International Development (Miller et al. 2005). Included in this selection is Horst and Miller’s (2005, 2006) ethnography of mobile communication in Jamaica, which highlights how mobile phones are used to realize pre-existing aspirations, namely the local practice of “link-up”. There is also Skuse and Cousins’ (2007) research in South Africa, which illustrates how mobile communication is a medium for the “management of distance” within dispersed kinship and social relationships. Slater and Kwami’s (2005) contribution to this collection also illustrates how Ghanaians navigate and manage social and kinship obligations at a distance. Central to these ethnographies are not mobile phones but the social and kinship connections that are configured
and reconfigured through mobile networks. In these ethnographies there is attention to what people try to achieve and realize in their everyday lives through the connections they make on mobile networks. This leads me to question the kinds of relationships Cambodians are configuring through mobile networks and how these relationships could be part of, or in the service of some kind of goal or aspiration.

Giving attention to the connections that Cambodians make and what they try to achieve generates an optimistic picture of social agents working on advancing themselves. However, ethnographies of mobile communication also demonstrate how mobile networks, as new forms of material culture, present new challenges and obstacles for individuals and groups, which I do not whitewash. Extended and intensified networks of communication can relieve certain pressures but they can also create new burdens and constraints (Horst 2006; Burrell 2010). Through mobile networks Cambodians experience new forms of social independence and opportunities for mobility, but mobile networks also represent infrastructures of social surveillance and control (Martinez, Aguado & Tortajada 2012; Tacchi, Kitner & Crawford 2012). Additionally, mobile networks and new forms of mobility associated with them can stand in stark contrast to ever present forms of immobility. Mobile network connections can act as a torch that illuminates one’s sense of immobility as much as they might be a source of mobility (Archambault 2012). Moreover, new forms of material culture can transform the social structure. There can be those that benefit and find new opportunities through mobile networks and others who realize their social position to be undermined by new forms of social and economic infrastructure.
**Practice Theory: Projects and Power**

Ortner (2006)'s practice theory is useful in grappling with these complexities. Central to it is the concept of “agency of projects”, which concerns a social actor’s intentionality and capacity in imagining, crafting and pursuing projects. Projects are culturally constituted and relate to how we live our lives, how we form our identity, and associate with others. I insert this concept of projects into my first principle question and ask how Cambodians transform mobile networks into infrastructures that support their projects. Fundamentally, I am asking how mobile networks are turned into mediums through which Cambodians realize agency in relation to social, cultural and livelihood projects they have, and how they might be reimagining projects through mobile networks.

Agency is however rarely distributed equally in the social structure. Projects are pursued in the context of a "matrix of local inequalities and power differentials" (Ortner 2006: 144). Within this matrix, actors are endowed with varying degrees of "agency of power", which Ortner depicts as intention and capacity to subordinate or resist others. It is interlinked with agency of projects since "it is normally in the service of the pursuit of some project" and is rarely an end in itself (Ortner 2006: 147). As social actors pursue projects through subordinating and resisting the power of others they play forms of cultural games. The "anthropology of agency", Ortner argues, is about understanding what these cultural games are, their ideological underpinnings, and "how the play of the game reproduces or transforms those underpinnings" (Ortner 2006: 152).

The cultural games and their rules are not stable. They can be transformed by "the entry of an externality that cannot be digested" (Ortner 2006: 149). According to Ortner (2006: 149), "Externalities may prove indigestible precisely because they empower some of the normally
subordinated subjects, and open up the possibilities of rebellions, great and small”. Ortner provides the example of how the technology of literacy acquired by young Magar people in Nepal altered the conditions of marital courtship. The Magar youth engaged in love letter writing, subverting and undermining the power of parents to oversee and control their courtship and match-making process. Sharp (1952) famously depicted how missionaries disrupted the gender relations among Yir Yont aboriginal people in Australia by distributing iron axes to woman. This undermined the power of men, who controlled the production and trade of stone axes, and led to the demise of rituals of trade and sharing. These are examples of how new forms of technology disrupted the social structure. Love letters and iron axes became material cultures of transformation, producing new forms of subordination and empowerment. This leads me to question how mobile networks might be forms of infrastructure that are disrupting the social structure by empowering otherwise subordinated actors.

Disruptive externalities in the form of new technologies do not just arrive and neither is their provision detached from human agency. However, a user-centred approach, which I lean towards in the first question, has the danger of overlooking the socio-political dynamics that shape how technologies arrive and how infrastructures are built and maintained, how relations of power are transformed through their provision. When literacy was introduced to Magar society and iron axes to Yir Yont society the power dynamic did not only change between parents and their offspring and between men and woman respectively. In each case there was a third actor: the providers of the technology. The Magar youth developed a new relationship with the creators and providers of education infrastructure. In Yir Yont society the provision of iron axes transformed the relationship between missionaries and Yir Yont men and woman. In each case, the providers of technology brought to the relationship their own projects and forms of agency.
Therefore, I began to ask questions about the actors responsible for the provision of mobile networks in Cambodia, what are their projects and what kinds of relationships were they forming with the Cambodian population.

**Khmer Studies: Social and Economic Change**

The ICT4D discourse, ethnographies of mobile communication and Ortner's practice theory form my point of departure for exploring Khmer studies, which is a combination of anthropological, historical, economic and political science contributions to the study of Cambodia. I turn to Khmer studies to explore the kinds of projects Cambodians may have reason to value, how society could be changing, the micro and macro power dynamics that could be structuring the distribution of agency and the potential of Cambodians to craft and pursue projects.

Within Khmer studies there is attention given to forms of grassroots economic development, the experience of poverty and the on-going difficulties of life in rural Cambodia (Fitzgerald & Sovannarith 2007; Ballard et al. 2007). These studies highlight the importance of mobility through physical migration for overcoming the struggles of everyday life and alleviating poverty. Derks (2008) argues that mobility is also a medium to explore and cultivate alternate identities and relationships. As a result, I question how mobile networks could be infrastructures of mobility in Cambodia and how Cambodians could be pursuing projects of mobility through them. In an anthropological sense I am interested in what mobility means to Cambodians and how they experience and imagine mobility.

A dominant theme running through Khmer studies is concerned with how social, economic, and political structures have remerged and developed following the traumatic experiences of the
1970s and the Vietnamese occupation of the 1980s. There is particular attention to how Buddhism has re-emerged and its role in community (Ledgerwood 1998, 2011; Keyes 2001). Other studies give attention to the trust and reciprocity in contemporary communities (Zucker 2011; Sedra 2011). This body of literature leads me to consider how mobile networks have become infrastructures of community orientated projects, but I am struck by an apparent contradiction between community and livelihood orientated studies in Cambodia. Community is associated with stable settlements and non-market interactions, while livelihoods and poverty alleviation are related to mobility in the form of migration and access to markets. Therefore, through the prism of how Cambodians connect with each other through mobile networks, I question the relationship between community and mobility, and whether new forms of mobility could be under-cutting community structures and traditional forms of authority.

By focusing on how Cambodians pursue projects through mobile networks I veer towards a user-centred approach that amplifies the empowering aspects of mobile networks as material culture. Yet, the strong political science dimension of Khmer studies gives attention to the disempowering social, economic and political structures that exist in contemporary Cambodia. Political scientists give particular attention to patron-client relations and the strength of the political apparatus under the Cambodian People’s Party (Hughes 2003, 2006; 2009; Cock 2010). Hughes (2009) argues that Cambodian People’s Party controlling and constraining political apparatus of patronage, intimidation and even violence is ever present in the lives of rural Cambodians. This suggests that a focus on the agency of the Cambodian consumer and the empowering aspects of mobile networks could be misplaced and give a skewed picture of Cambodian society that does not give justice to structural constraints placed on individuals. Consequently, I question whether
the agency of individuals can be depicted without taking into account the social structures through which Cambodians craft and pursue projects.

My first reaction to questions of structure was to consider the political apparatus and how the power of the political elite in Cambodia has been strengthened through the development of the telecommunications sector. I thus consider whether the political economy of the telecommunications industry contributes to the coffers of the Cambodian political elite and provided the state with enhanced surveillance capacity. A simple answer to this question is "yes". Cock (2010: 257) argues that the "bulk of the benefits" derived from the liberalization and privatization of the economy have been “channelled into the hands of the elite" (Cock 2010: 257). Evidence from my own research indicates that the telecommunications industry should be included in this assessment. It is also fair to assume that the digital surveillance capacity of the armed forces and the ruling elite has been strengthened through the growth of the telecommunications sector. I do not take this line of inquiry significantly further as I realize that a focus on the mechanisms of corruption and the technical aspects of digital surveillance would project this research in a very different direction.

This line of questioning does however lead me to consider the changing dynamics of power in Cambodia due to the liberalization of the economy. An argument presented by Hughes and Un (2011) is that liberalization in Cambodia has disembedded the market from society by raising market exchange to an end in itself. They describe this process as "neoliberal marketization", which they indicate has brought new opportunities but has also had the effect of “destroying older coping strategies, and reducing both the incentive and the basis of collective action", which they suggest is, arguably, further marginalizing the poorest (Hughes & Un 2011: 25). Comaroff
and Comaroff (2000: 306) provide an additional reason for why neoliberalism marginalizes the poor. Under neoliberalism, selfhood, identity and citizenship are increasingly measured by capacities to consume and participate in the marketplace. Therefore, the poor are limited by their economic means to assert their citizenship and make claims on resources.

In Cambodia the liberalization of the economy correlated with increased inequality. According to the World Bank (2007: iii), living standards measured by consumption rose by 32% between the years 1994 and 2004, but the increase was unequal across the population. The living standards of the richest fifth of the population rose five times faster than the poorest fifth of the population. This disparity was also evident between rural and urban areas with the latter growing significantly faster. Within rural areas living standards also differ based on the remoteness and the distance from all-weather roads. The World Bank (2007: vi) explains how geography has played a role in growing inequalities:

As growth and public services improved first around urban centres and in accessible densely-populated lowland areas, households in these areas enjoyed better access to factor and product markets and pulled further ahead of those in remote areas, resulting in widening difference.

However, the World Bank also adds that inequalities ceased growing as better infrastructure was developed in rural areas and rural residents became better able to access goods and services. This demonstrates that access to goods and services can represent a key structural impediment that drives inequalities. Thus, it is imperative to question how the mobile networks market could be a manifestation of urban-rural and rich-poor divides and how it could be mitigating or accentuating socio-economic inequalities.
Research conducted in other territories illustrate how the roll-out of telecommunications infrastructure correlates with growing inequalities due to a concentration of access in areas of higher income (Forestier & Grace et al 2002). Overå argues “that unequal access to tele-services, especially mobile communication in Ghana marginalizes the remote and the poor relative to the rich” (Overå 2008: 45). A study across multiple African countries indicates that phones are disproportionately owned and used by privileged sections of society (Blumenstock & Eagle 2012). So, rather than being a technology that addresses digital divides, mobile phones and networks have, in a variety of cases, exacerbated them. When I began this study in 2009 it was evident that the market for mobile phones and network access in Cambodia was highly unequal. Phone ownership was concentrated in urban areas. While 93% of Phnom Penh households had a mobile phone, only 35% of rural households had one (National Institute of Statistics 2012).

Even market-based schemes dedicated to addressing inequality can reinforce them at a local level. There is evidence that indicates that the Grameen Telecom's village phone scheme and a similar project in South Africa have produced new forms of inequality (Aminuzzaman, Baldersheim & Jamil 2003; Skuse & Cousins 2007). My experience at the Cambodian Village Phone Company illustrated this to me before I began research. The vast majority of the so-called village phone operators were concentrated in urban areas. Therefore, the central criticism of the neoliberal model of market led development - that it doesn't address underlining structural inequalities - seems to ring true in regard to the provision of mobile network access (Grieg, Hulme & Turner 2007).
Anthropology, Capital and Corporations

I pondered from what angle I could analyse the relationship between mobile networks and structural inequalities. The response of anthropologists who have identified inequities in mobile network access has been to recommend government intervention and regulation to shape more equitable markets. Overå (2006: 1313) encourages the government of Ghana to develop policies that make it a favourable place to invest and reduce call charges. Horst and Miller are more forthright in their push for government intervention in the market. They claim that “the market can only serve the welfare of the population if driven to do so by government” (Horst & Miller 2006: 177). One reason for this orientation is that the anthropologist’s audience tends to be government agencies that seek policy recommendations. A more complex reason concerns the positioning of the state as the primary constructor and shaper of markets while corporations are treated as mere vectors of capital. According to Comaroff and Comaroff (2000: 318) capital is an “uncontrollable” force that moves with “its own velocity, to sites of optimum advantage”. This depiction follows a narrative that capital has its own intelligence and agency (Hefner 1998: 3). It’s a narrative that deprives corporations and their personnel of agency to make socially and culturally informed decisions.

This may explain why few anthropologists have ethnographically explored corporations and their behaviour despite being the dominant institutions of our time (Welker, Partridge & Hardin 2011). It may also explain why “the work of marketing has received relatively scant attention from social scientists” compared with the “meticulous academic and professional scrutiny” given to consumption (Zwick & Cayla 2011: 5). This is despite marketing being “as deeply political, social, and cultural as it is economic” (Zwick & Cayla 2011: 7). Gregory (2009) gives historical perspective to the neglect of producers, corporations and marketers. He argues that anthropology,
particularly economic anthropology, has historically given attention to the producers and suppliers within the economy, but as neoliberalism took hold so did the “agency paradigm” and there was a shift away from production to a focus on consumption. Economic anthropology as a sub-discipline “all but disappeared under the general banner of consumption and agency” (Gregory 2009: 290). Indeed, my own attention to the agency of consumers reflects this disciplinary shift.

This imbalance dawned on me as I began field research. Consequently, I turned my attention to corporations and discovered a renewed anthropological interest in them. A supplement of *Current Anthropology* (Welker et al. 2011) expresses a surging anthropological interest in corporations, their behaviour and how they interact with, and shape the social and cultural world. The supplement advocates an anthropology of "corporate forms" as opposed to an anthropology of "the corporation". This distinction is important as it allows the diversity of corporations to be explored. Welker et al. (2011: S7) point out that for many anthropologists "it feels right to be critical of corporations", but "an exclusive focus on the negative aspects of these institutions undermines our ability to understand and even challenge corporate life writ large." They argue that a fuller account of "corporate capitalism" should include the "ambivalent and positive ways in which corporations make and enable, as well as curtail and destroy, life" (2011: S7).

It is in this spirit that I ask questions concerning how corporations imagine and define markets and whether this process inhibits or supports how Cambodians turn mobile networks into infrastructures of social and economic life. However, I did not begin field research in this spirit. I was concerned about the governmental power of corporations. The school of governmentality defines acts of government as “all endeavours to shape, guide, direct the conduct of others,
whether these be the crew of a ship, the members of a household, the employees of a boss, the children of a family or the inhabitants of a territory” (Rose 1999: 3). Marketing can easily be framed as a governmental technology that turns population segments into consumer subjects that can be nudged and guided in the interest of corporate capital. Corporations are depicted as having an insatiable thirst to make populations “knowable and calculable” as consumer subjects (Rose 1999: 254). Corporations operating in developing countries, according to advocates of the governmentality school of thought, produce consumers just as states produce citizens. Dolan and Roll (2013) describe how corporations use governmental technologies “to produce the poor as knowable market subjects – consumers and entrepreneurs who become the objects of marketing and distribution experts” (Dolan & Roll 2013). Seeing corporations as governing agents in these terms made sense as I entered the field and discovered multiple firms with armies of personnel conducting research on Cambodian consumers.

The volume of research being conducted about consumers raised questions for me about the power relationship between corporations and the population. Studies that address this relationship have been absent in Cambodia. The field of Khmer studies has given weight to the relationship between the state and big business, and between the state and civil society. But the neoliberal development model has positioned corporations as agents with the power to shape the development trajectory of Cambodia and elsewhere. This led me to consider that neoliberalism and market-orientated development could be reshaping power configurations in Cambodia and that corporations were central actors in this process. This line of thinking inspired me to turn my ethnographic gaze onto mobile network providers and how they make the population knowable and calculable as consumers through governmental technologies. However, the eventual question I ask regarding how the market is defined and how corporations see
consumers is more a reaction to what I discovered in the field than a product of my concern for
the governmental power of corporations.

This thesis came together only when I ceased with a governmentality line of inquiry, and set forth
on analysing my field research data from the vantage point of the corporate subjects of my
research. This led me to examine the process of how they answer fundamental marketing
questions about the market and the value of their products. I realized that framing corporate
marketing as a technology of governmentality has several problems. It directs attention to how
marketing is controlling and manipulative, without addressing the fundamental questions
marketers must ask and how they can falter in the process of answering those questions.
Ethnographies of corporate business, advertising agencies and consumer research firms shed
light on how internal actors are themselves subject to the governmental power of their own
business culture and disciplines, which complicates any endeavour to identify and understand
consumers, let alone govern them (Miller 1997; Moeran 2006; Sunderland & Denny 2011).

Ethnographic Approach

My methodological approach to answering the questions that the literature raises is two pronged,
reflecting two related but quite different questions. In both cases my approach are
ethnographies, which are conducted, for the most part, simultaneously. For the first question
concerning how mobile networks are forms of social and economic infrastructure, I draw on a
range of ethnographies on communication to guide my research from the outset (Horst & Miller
2005, 2006; Skuse & Cousins 2007). In contrast, the second question had a weaker
methodological foundation. I came to it through an on-going interaction between theory, my
own ethnographic research and ethnographies of marketing from other parts of the world (Miller
In one respect, I actively tried to find clearer questions that responded to both the literature and my experience doing ethnographic research. In another respect, questions evolved in reaction to accidental or coincidental experiences and revelations. Just like stories of marketing strategies that can be found in business school textbooks, my experience conducting an ethnography of marketing was not as systematic and well planned as I could portray it to be.

I began with concerns about an imbalance within the literature that is user-centred and swayed towards the agency of consumers. I wanted to address the power of corporations to make the population knowable and calculable and hence more susceptible to their nudging and manipulation. So, when a research director at a consumer research firm invited me to observe a series of focus groups they were conducting for a mobile network provider, I jumped at the opportunity. The research project was large in scale. It included multiple focus group discussions in Phnom Penh and so-called semi-urban and rural locations. These focus group discussions were followed by a major qualitative survey in multiple locations through the country.

What I discovered in that initial experience of observing consumer research directed and shaped all the research that came after it. It provided an element of surprise that stimulated a research process of discovery as opposed to corroboration and confirmation. I had anticipated seeing a powerful engine of knowledge production. In many respects this was the case. The consumer research agency produced an immense volume of information on consumers, but the picture of consumers was rigid and lacked depth. It imposed classificatory models that seemed out of place in Cambodia. More importantly, from inside the consumer research firm I could see what was portrayed as a self-evident market of mobile phone consumers, was actually a social construction.
It was produced through an interaction between the researchers’ and marketing personnel’s own categories of perception and marketing methods of classifying populations as consumers. It was evident to me that inequalities in product and service provision were being encouraged through the process of conducting consumer research. As a result, I shifted my ethnographic gaze onto the consumer research process itself.

The version of the consumer market painted by consumer research differed greatly from the ethnographic accounts of mobile communication in other parts of the world. It was also vastly different to my own initial experience of ethnographically researching mobile network consumption. It thus became apparent to me that very different versions of consumers could be constructed. So, through my own ethnography and the ethnographies of mobile communication in other parts of the world, I gained critical perspective on corporate versions of consumers and markets. It also became apparent that the methodological path of conducting dual ethnographies of consumption and marketing generated a perspective on differences between ethnographic accounts of consumers based on sociology and anthropology, and accounts generated through consumer research based on the discipline of marketing. As a result, this research became an exploration of different methods of constructing knowledge about consumers and alternate lenses for seeing markets.

*Ethnography of Consumption*

Ethnographic research into how Cambodians engage with and transform mobile networks was conducted over approximately one year from August 2010 to August 2011. It was supplemented with further ethnographic research conducted periodically during 2012. Conducting research over an extended period provided many benefits. It allowed me to observe changes over time
and, perhaps more importantly, it gave me the space to change as well. Time gave me the opportunity to modify and develop the questions that I asked instead of the research being determined by a list of pre-manufactured questions that could be quite misplaced within the Cambodian social and cultural context. I make a point in this thesis of describing how my questions and my methods of ethnography evolve in the field. There is thus a reflexive and autobiographical element in this thesis, which is important in regard to identifying and expressing my own subjectivities. It is also a point of contrast to the positivistic approach of marketing research, which claims to be objective and is evidently quite inflexible in the questions it asks and gives value to.

This was multi-sited ethnography that crossed rural-urban divides. Research was conducted for the most part in Phnom Penh City and Battambang Province. I chose Battambang for several reasons. Firstly, I considered that it was sufficiently removed from the bubble of life in Phnom Penh and its city-centric versions of Cambodia. Secondly, it has a number of characteristics that suggested to me that it would make for a dynamic setting to explore mobility in contemporary Cambodia. It has urban, rural and remote geographical spaces. Although it performs well on a variety of economic indicators, it also has significant diversity in its socio-economic make-up. Additionally, it has high rates of inward and outward domestic migration as well as cross border migration to Thailand.

In Battambang Province I conducted research in Battambang City, in the districts that surround Battambang City, and in the district of Rotanak Mondul, which is located between Battambang City and the Province of Pailin and the border with Thailand. In Rotanak Mondul district I conducted research in the villages of Badak Tboang and Kandal Steung on the northern and
southern fringes of the district, as well as in Sdau, which is at the centre of the district and has the main market in the area. Research in Battambang was supplemented with visits to provinces of Takeo and Kandal near Phnom Penh, and Banteay Meanchey, which neighbours Battambang and has a border with Thailand. I also conducted research about consumption when I joined consumer research teams on trips to the provinces of Kampong Cham and Kampong Thom. The multi-sited character of this ethnography reflects the multi-sited lives and relationships of the Cambodians that informed and shaped this research.

At research sites I conducted interviews and engaged in discussions with village residents, village chiefs, market vendors, traders, and farmers. In particular, I engaged the people and places that were ignored or devalued by consumer research. Participant observation was a strong feature of research. This entailed participating in the life of my informants such as taking part in festivals and joining them in their workplaces and in their homes. It also involved spending considerable time in and around markets.

In many respects I entered the lives of my key informants just as they entered mine. I interacted with them in Phnom Penh and Battambang City as well as in their villages of origin. I attended funerals of their family members and went to weddings with them. I travelled with them by bus and often on the back of their motorbikes. Consequently, I view my key informants as much more than mere research subjects. They supported my research through bringing me into their lives, introducing people that I could interview, guiding me around the countryside, helping me improve my Khmer and critiquing the questions I asked.
Ethnography of Marketing

I use the pseudonym PPMR (Phnom Penh Market Research) to refer to the firm in which I conducted ethnographic research. PPMR was one of several firms that performed consumer research in Cambodia. At the time of field research, staff circulated between these firms giving some continuity and consistency to how they operated. My initial experience with the firm indicated that it could provide a fruitful source of data, not so much on the Cambodian consumer, but on how knowledge of them and the market was being constructed. I sought greater involvement at the firm and was accepted on the premise that my own research and data collection was limited to observing and analysing research processes rather than using specific data generated by the firm’s research.

My eventual involvement with the firm stretched over two years. I joined them periodically to observe and participate in projects. In total I was involved in research for three different mobile network providers. This involvement ranged from observing focus groups, analysing questionnaires, examining the research participant recruitment processes, travelling with the research team to sites for rural research, and assessing research reports produced for the client. The firm also called on me to edit reports and support the presentation of them to clients. Contributions I could make to questionnaire design and data analysis were also encouraged. The director of the firm, as well as his employees, regularly consented to interviews with me. They also provided me with a range of internal documents for analysis. Additionally, from within the firm I observed research conducted for other industries such as for banks and fast-moving consumer goods. This was surprisingly beneficial as it contextualized research for mobile network providers that could be mistakenly labelled as unique and specific to its own industry.
My research into the marketing of mobile phones and services, and how the market was being defined, was not restricted to what I found inside PPMR. I also interviewed executives and personnel within mobile network providers and in the advertising industry. I further analysed the marketing strategies of mobile network providers as they were manifested in coverage areas, products, distribution networks, and advertising campaigns. In rural areas I interviewed local staff to gain a picture of how their company understood and approached rural markets. I also critiqued marketing texts and reports produced by marketing and investment consultancies to draw a deeper and multi-dimensional picture of why the market was being interpreted and constructed as it was.

**Thesis Outline**

This thesis is centrally concerned with how markets are socially constructed by marketers and consumer researchers, but I do not exclude the role of the state in constructing and shaping the market. Corporations exist and operate under state regulation and market parameters are set by the state. Even in Cambodia, which has a weak regulatory environment, the state has played an instrumental role in setting the conditions for corporate actors to imagine and define the market. Therefore, in chapter two I provide context to the proceeding chapters by exploring the role of the state in setting conditions for the growth of the market and the development of infrastructure over the past two decades. I historically contextualize the market within the changing global and local political and economic environment. The birth of the telecommunications industry in Cambodia corresponded with broader changes that swept through Cambodia in the late 1980s and early 1990s. Additionally, I stress the importance of recognizing that this wave of change began well beyond the Cambodian border. Likewise, I emphasize the necessity to acknowledge that the Cambodian market for networks exists within a
much broader regional and global market. The growth of the global market for mobile phones and networks has its own political roots that intersect with local Cambodian politics to shape the evolving market and the development of infrastructure. I outline these inter-linkages to trace the development of the market over two decades. This political economic analysis provides critical context for answering the core questions of this thesis in the subsequent chapters.

In chapter three I present the first part of my ethnography of how consumers engage with mobile networks to turn them into infrastructures of mobility that support an array of socio-cultural projects. Through mobile networks Cambodians create bridges, which allow them to traverse the physical terrain between social connections without actually moving. However, mobility has additional meanings to Cambodians. Mobility is an aspect of Cambodian cosmologies that includes moving ghosts and spirits, and movement in dreams and between one life and the next. Within these cosmologies mobile networks are transformed into bridges between different dimensions. I further illustrate how mobile networks have become forms of courtship infrastructure for pursuing sex, love and marriage. Through the mobility they gain from mobile networks young Cambodians form connections with potential sexual partners and marriage spouses in distant locations. This leads me to argue that the geography of kinship is being transformed through mobile networks. However, I also highlight that Cambodians mobile networks are infrastructure for mitigating the spatial distance within existing kinship relationships. I further describe how mobile networks are used by Cambodians to cultivate social identities and switch between them. From choosing SIM cards and phone numbers to using multiple SIM cards, consumption is a mechanism to express social identities and experience mobility.
In chapter four I ethnographically depict how mobile networks are infrastructures of market life in rural Cambodia. I describe how mobile networks are turned into bridges for traversing rivers and muddy roads in order to bring markets closer to rural Cambodians. In particular, I describe how Cambodians find work, remit money to family and pay for goods, arrange taxi services, coordinate the transportation goods, find suppliers and buyers, and negotiate and check prices through mobile networks. I further illustrate how aspects of mobile network infrastructure such as phone numbers are turned into forms of personal identification, which makes courier services and the remittance of money possible within informal networks. I demonstrate the use of calling credit as a currency in transactions at a distance.

I argue that Cambodians are expanding the parameters of their markets and accelerating the speed of market interactions by incorporating mobile networks into the infrastructure of the market. However, I do not suggest that this intensification and expansion in market connections and the enhanced mobility of money should be equated with the marketization of social relations or the deterioration of community. To the contrary, I suggest that the market, or *psar* in Khmer, is a representation of a network community in Cambodia and through mobile networks, Cambodians participate in *psar* communities and transform their shape. Market relations cultivated and maintained through mobile networks hinge on social bonds as much as, and possibly more than, face to face interactions. Through building new market-based relations and connections, Cambodians are merging urban and rural divides and altering the shape of the markets in which they pursue their livelihoods and experience community.

While chapters three and four illustrate how mobile networks are infrastructures for mitigating and subverting social and economic divides, in chapter five I document how structural constraints...
persist and are accentuated in contemporary Cambodia through the marketing of mobile networks. In particular, I illustrate how a social structure that constrains the rural population is reproduced through the process of constructing knowledge about consumers and defining the market of mobile networks. From inside PPMR, a consumer research firm, I ethnographically explore the production of market definitions and how mobile network providers see and make sense of the Cambodian population. I demonstrate that the market for mobile networks is neither all-encompassing, or self-evident. The addressable market is carved out from the broader population through a combination of economic, social and cultural processes. I describe ethnographically how particular versions of the market are produced and legitimized through consumer research. I illustrate how the consumer is imagined through methods of inclusion and exclusion, which are much less to do with economic calculation and much more to do with class based narratives about the social “other”.

In chapter six I extend the ethnography of marketing to how mobile network value is defined and communicated. I ask how mobile network providers understand the value of their network to the Cambodian consumer. Through ethnography of consumer research and marketing practice I identify forms of value that are quite alien to the livelihood, social and cultural projects that Cambodians pursue through mobile networks. To the marketers and consumer researchers that I describe, consumer value is primarily perception and is represented by positions in the mind. It can be calculated through a range of indicators that relate to product utility and brand perception. This version of consumer value isolates consumers by cutting them off from a myriad of social relations. I argue that by focusing on the mind of the atomized individual, marketers are blinded from the value that their goods and services have between people. Mobile networks are infrastructures for social and economic life precisely because they are mediums of human
connection. I further argue that through marketing, urban middle class versions of value are projected on the physical and social landscape. In these versions of value are class structures that undermine the bridges Cambodians are forming across urban-rural divides through mobile networks.

A key element of my argument is that marketing has a disciplining effect on marketers and consumer researchers that leads them to see markets and value in narrow, structured and rigid forms. For the marketer there is a sense of no alternative. In chapter seven I demonstrate that there is potential for marketing alternatives by exploring how Viettel, the Vietnamese telecommunications company, defined the Cambodian market and understood consumer value. I attribute Viettel rapid success to their definition of an inclusive and far-reaching market. Moreover, Viettel’s vision of the market has formed the foundation for the rapid changes in the telecommunications market and the rapid expansion of mobile network access in Cambodia.

In conclusion I argue that mobile networks are infrastructures through which the future is imagined and acted upon. From the pursuit of marriage partners to creating new market enterprises mobile networks have become mediums for imagining new possibilities. Mobile networks can therefore be understood as symbols of progress and more expansive futures. In contrast, the discipline of marketing and consumer research that I describe in this thesis is constricted in its capacity to imagine and create more progressive and inclusive futures. The corporate marketers I observed prioritized the present and often the past and therefore have dubious claims on being agents of development. Unlike them, Viettel expressed a vision of the future in their marketing strategy, which is quite different from the past. Through its marketing, it bridged rural and urban divides and addressed social inequities. It demonstrates that in fact
corporations can be agents of social and economic transformation. In the conclusion, I further argue that ethnography should be seen as a medium for comprehending how social agents, from everyday people to corporations, imagine and make the future. Ethnography can highlight the agency of social actors to create a more inclusive, sustainable and humanistic future. It can also challenge the divisive, exclusionary and freedom depriving aspects of the marketing discipline and corporate practice.
The development of mobile network infrastructure began in 1992 when two telecommunications companies from Thailand entered Cambodia (Po 2010). Their entry and the subsequent growth of the market for mobile networks was the product of multiple intersecting factors. In this chapter I give attention to the political factors that contributed to the birth and growth of mobile network infrastructures. I describe how local, regional and global events have intersected to shape the market. Through this I provide political and historical context to the chapters that follow.

This thesis is principally concerned with how the consumption and marketing of mobile networks transforms the social and economic fabric of Cambodia. With an anthropological perspective I give priority to the social and cultural aspects of these processes and how they intersect to shape the infrastructures of social and economic life. This perspective inevitably de-prioritizes a political scientist’s version of market and infrastructure development, which would focus on the political forces that shape the development of infrastructure or how the political landscape is transformed by mobile networks. Both perspectives are valid and interrelated. It is difficult to talk about social and cultural processes that contribute to the development of the market without considering political events and actors that have shaped the market and how infrastructure is developed. This is particularly poignant with regards to how the market of mobile networks was born and conditions were set for its growth.

I begin by outlining the local and global forces of liberalization that have facilitated the emergence and growth of mobile networks. I describe the regulatory environment and political
economy of cellular frequency spectrum licenses. I then provide an account of the various network providers that have made up the market, the changing market composition and the process of consolidation that has occurred in the market. I use this chapter to introduce the major political and corporate players and give an overview of the mobile networks tariffs offered to consumers. I further describe the supporting infrastructure that the state has had a hand in shaping. In conclusion, I examine the role of external states in the Cambodian telecommunications market. Based on this account, I argue that what is largely a free and highly competitive market for mobile networks is very much a political construction of local and global actors.

The Birth of Cambodian Mobile Networks

A pivotal event that led to the birth of mobile networks in Cambodia was the collapse of the Soviet Union. This entailed an end to Soviet support for the Vietnamese intervention in Cambodia, which eventuated in the withdrawal of the Vietnamese military forces and the beginning of a peace process. This culminated in the signing of the 1991 Paris Peace Accord and national elections in 1993 under the supervision of UNTAC (the United National Transitional Authority). The ruling party, which was the KPRP (Kampuchean People’s Revolutionary Party) and renamed as the Cambodian People’s Party (CPP), began a process of political change as funds from the Soviet Union dried up (Gottesman 2004; Chandler 2008).

The ruling elite’s approach to change was strategic. On one hand, they recognized the importance of a multi-party system and an open economy to attract external support. On the other hand, they identified privatization of state owned resources as an opportunity to cultivate a patronage network to protect its power in the ensuing years within a multi-party system.
In 1989 Hun Sen proclaimed to a visiting Vietnamese delegation the need to sell state assets if there is a political solution to the on-going conflict in Cambodia. He explained, “If we leave them with the state, we will face problems with the three parties (of Sihanouk, Son Sann, and the Khmer Rouge) who will come and spend money that belongs to our factories” (Gottesman 2004: 318). This was the beginning of a strategic approach to the privatization of state resources that has oiled the political apparatus ever since (Hughes 2003, 2009). It is therefore of no small coincidence that the first of the major steps in the privatization of the telecommunications industry occurred in 1992 prior to multi-party elections.

What was a tactful move by the ruling elite was encouraged and supported by a global political movement to liberalize economies. Telecommunication markets have been at the forefront of this movement. During the 1960s and 1970s the World Bank mainly funded infrastructure projects, but under neoliberal policy it focused on encouraging privatization of telecommunications markets. A study found that 167 countries worldwide reformed their telecommunications sectors based on World Bank loan conditions (Salavar 2007: 9). This reflects the bank’s move from supporting state-led development to encouraging private sector-led development and prioritizing market efficiencies in order to stimulate growth. Based on this shift state owned telecommunications companies that were previously considered to be “natural monopolies” due to the logic of economies of scale were reframed as enterprises that would operate more efficiently as private entities in a competitive market place (Salavar 2007:9).

In the 1980s the global drive to liberalize telecommunications markets went through Cambodia’s neighbouring countries, particularly Thailand, Malaysia and the Philippines (Niyonsilpa 2000; Salvador 2007). These reforms corresponded with a growing relationship between the state and
private firms (Niyonsilpa 2000; Salvador 2007; Phongpaichit & Baker 2004, 2009). Due to these reforms successful local telecommunications companies emerged that were eager to invest beyond their own borders. Indeed, part of the push to bring peace to the region and settle political disputes was driven by an interest in creating new markets for regional and international companies. Chatichai, the prime-minister of Thailand from 1988 to 1991 made a call to "turn battle fields into markets" (Phongpaichit & Baker 2004: 211).

Two Thai telecommunications companies responded by establishing operations in Cambodia in 1992 (Po 2010). Therefore, it is evident that the market was born from two processes of liberalization. The first was the liberalization of the Cambodian market as a tactical move by the CPP to have its arm extended into the private sector and respond to liberalization pressures from the international community. The second was liberalization that occurred outside Cambodian borders, which fed the growth of regional companies ready to invest in the newly opened economy.

The first of the two companies to enter Cambodia was Samart Telecommunications. Samart began operations offering a wireless service using NMT900 cellular phone system (Smart Corp 2014). The second was Camshin, a company owned by Thakshin Shinawatra, who was at the time an up and coming player in the telecommunications industry in Thailand (Niyomsilpa 2000; Phongpaichit & Baker 2009). Thaksin’s Camshin began by offering a wireless local loop (WLL) service that enabled the rapid installation of phone services (Munthit 1993). Both Samart and Camshin began their life in Cambodia as joint ventures with the Ministry of Post and Telecommunications and enjoyed rapid growth during the UNTAC period from 1992 to 1993. As a consequence of this growth and the near absence of fixed line telephones, Cambodia quickly
gained the status as the first country to have more wireless phone subscribers than fixed line subscribers (ITU 2002; UNDP Cambodia 2009).

The Ministry of Post and Telecommunications took advantage of this growth by profiting from the sales of their stakes in these companies. In 1996 the ministry relinquished its stake in Samart’s Cambodian company and extended the company’s license by 25 years (Munthit 1996 Jun 28). In 1997 the government sold its stake in Camshin and extended its licence from 15 years to 35 years (Mfone 2011; Clayton & Maghfur 2009). In the following year it granted the company a GSM 1800 spectrum license (Clayton & Maghfur 2009). Camshin was subsequently rebranded as Mfone, which I will henceforth call it. Samart was later sold to a Malaysian telecommunications company that is now called Axiata and was rebranded as Hello, which is the name I use to refer to it (Clayton & Mayhfur 2009).

In 1997 the market for mobile networks was shaken up by a third player, Kith Meng. He was a young tycoon who spent his childhood in Australia and returned to the land of his birth in the early nineties to support his elder brother’s new family enterprise. Their business began modestly providing office furniture to the UN Transitional Authority. When his elder brother died mysteriously in 1994 he took over the company (Crispin 2007). By that time the company had become the exclusive distributor of Canon copiers and formed a joint venture with Motorola. Then in 1997 it formed a partnership with Millicom International SA, one of Sweden’s largest telecommunications corporations to offer cellular services under a license issued by the Ministry of Post and Telecommunications. It operated as Mobitel and was later branded as Cellcard. I refer to the company as Mobitel, and only refer to it as Cellcard when I specifically refer to its network brand.
Mobitel grew to dominate the market through applying Millicom’s pre-paid subscription and mass distribution strategy. It held the market leadership until 2011 when Viettel replaced it at the top. In 2010 when Millicom was undergoing a strategic withdrawal from Asian markets it sold its stake in Mobitel to Kith Meng’s company, The Royal Group, which by then had grown into a major conglomerate with interests in hotels, banks, fast-food chains, and TV (Crispin 2007; Gluckman 2008). Mobitel served as a cash cow for the Royal Group and allowed Kith Meng to cement his place as a leading business tycoon in the country (Crispin 2007; Gluckman 2008). He is well known for close ties to the Cambodian political elite, especially through his position as a personal advisor to Prime-Minister Hun Sen (Crispin 2007). He has received the noble title of Oknhna, which by convention is bestowed by His Majesty the King for contributions to national reconstruction that exceed US$100,000, but can also be gained directly from Prime-Minister Hun Sen (Ear 2011: 72-73).

**Mobile Networks Market: The Early Years**

Up and till 2007 the market consisted of Hello, Mfone and Mobitel. It is a period that is characterized by weak regulation, a lack of arbitration in industry disputes, and corruption (Stephen 1999 May 14; Calvert & Kimsong 2000 Aug 10; Sarooeun & Kyne 2001 Apr 13; Ure 2008). There was a wide-spread practice of cross-network call blocking, which was partly a response to squabbles over the payment of cross-network connection fees (Stephen 1999 May 14). However, this practice had strategic benefit to Mobitel, the largest of the operators, since interconnection problems incentivize users to choose the network with the most subscribers. The state’s reluctance to intervene can be attributed to its close relationship with Mobitel. This was evident in the Minister of Post and Telecommunications’ own admission that he received regular
payments from Mobitel for his private work as an advisor to the company (Calvert & Kimson 2000 Aug 10; Kimson & Chon 2001 Mar 7).

If rent seeking through corruption was a feature of the early period of the market it pales in comparison to what seems to have followed as the global telecommunications took off and investors and corporations sought opportunities in emerging markets such as Cambodia. Around 2007 there was an explosion in the issuing of cellular spectrum (mobile network) licenses in Cambodia and by 2009 there were nine licenced providers with active mobile networks (Po 2010). This explosion in licenses can be put down to two possible reasons. The first is the potential Cambodia represented as a growing market for international investors and multinational mobile network providers. How market entrants saw and valued the Cambodian market is a question I explore in chapters five and six. The second reason is license issuing presented a major rent-seeking opportunity (Salavar 2007). This may explain why the Minister of Post and Telecommunications’ called for more networks providers to enter the market in 2009 despite the already saturated state of the market.

The issuing of mobile spectrum licenses has been described as a “murky process” (Clayton & Maghfur 2009). Marc Einstein, a senior industry analyst at the research firm Frost & Sullivan suggests that “it’s very easy to buy a license in Cambodia” and describe issuing licenses as "a cash cow for the government” (Dorn & Plokhii 2012 Mar 15). While many countries have opted for the sale of licenses though public auctions, licence negotiations have been a closed-door affair in Cambodia and the revenue from the sales of spectrum licenses remains off the public record. Moreover, governments have typically applied conditions to the issuing of licenses such as
geographical or population coverage stipulations, but no such conditions have been attached to licenses issued in Cambodia.

The behind-closed-door character of license issuing reflects a broader pattern in the relationship between the state and the private sector in Cambodia, which has its advantages for corporations investing in the country. Ear (2011: 75) explains, “Cambodia offers investor-friendly tax holidays that substitute a formal system of taxation for an informal one.” In this informal system private sector actors and companies make contributions in the form of donations to the CPP and CPP affiliated organizations such as the Red Cross in lieu of formal taxes on businesses (Ear 2011: 75). Mobile network providers have willingly joined and been attracted by this system. It has allowed companies to enter the market with minimal up-front investments as long as they follow the rules of the informal system.

**The Rise of a Competitive Market**

The informal and non-transparent sale of spectrum licenses has led to the emergence of what insiders describe as one the most competitive markets for mobile services in the world (Sothea 2009; Beco 2010). The emergence of a more competitive market began in 2007 when Applipone and their Starcell branded network arrived in the market. It was owned by a Kazakhstan company called Vsor (Marong & Power 2008; Po 2010). While they tentatively built network infrastructure they proved successful at penetrating the youth market by offering competitive unlimited on-network call packages on a daily basis.

The next company to enter the market and build mobile network infrastructure was Camdcomm, which runs the network branded as QB Cube (Marong & Power 2008; Po 2010). It is backed by a
Middle Eastern investor and in its early days was run by Norwegian executives who had worked at Telenor, the Norwegian telecommunications giant. They too sought to shake up the market by offering unlimited on-network calling packages on a monthly basis. From its beginning in early 2008 it operated a pure 3G network, which requires that its subscribers have 3G phones. This market strategy reflected a particular vision of the market for mobile networks and what it would become. However, it’s a strategy that failed to translate to market share of any significance. The Norwegian executives did not last in their positions and subsequently there have been several new management teams that have tried unsuccessfully to transform the position of the network in the market.

GT-Tell, a mobile network rumoured to be owned by an investor from Uzbekistan, demonstrated another vision of the Cambodian market for mobile networks (Clayton & Maghfur 2009, Po 2010). GT-Tell entered the market in 2008 with a network branded as Excell. It uses CDMA technology and requires users to purchase compatible phones (Clayton & Maghfur 2009, Po 2010). Although the company continued to exist it was a technology that has failed to take off and compete with GSM technology that became the preferred technology of network providers and consumers in Cambodia and around the world.

While the brands of Excell and QB Cube prodded the market, the real shake up of the market can be attributed to the three network providers that followed them. One of these was Vimplecom from Russia, which includes Russia and ex-Soviet states at its core markets. Vimplecom took a ninety percent stake in the local company, Sotelco, which held a spectrum license. The remaining ten percent was held by the local business tycoon, Huot Vanthan (Clayton & Maghfur 2009, Po 2010). Vimplecom engaged in an aggressive marketing campaign using its international brand,
Beeline. It was part of a broader campaign to establish the Beeline brand in the region, including Vietnam and Laos. Beeline entered the market with perhaps the deepest pockets, and the most aggressive pricing strategy, but its approach also failed to translate to market share. It was handicapped by a conflict with Mobitel that engaged in call blocking. Mobitel’s sister company, CTV, the country’s leading TV channel also refused to broadcast its advertisements. In the face of losses across Cambodia, Vietnam and Laos that were reported at US$527 million, Vimplecom took the strategic decision to withdraw from the region in 2013 and sold their majority stake to their local partner, which continued to operate the Beeline branded network (Dorn & Plokii 2012 Mar 15).

It was a lesser known mobile network with Russian backers using the brand of Smart Mobile that experienced much more success. Smart Mobile is the brand of Latelz, a locally registered company that was owned by Timeturns, a company registered in Cyprus with unknown Russian owners. Timeturns has made investments in emerging telecommunications markets including Burundi, the DRC, Sierra Leone, Uganda, Tanzania, and Nepal (Timeturns Holdings Limited 2010, Cellular News 2009). While Vimplecom stumbled, Smart Mobile took giant strides thanks to the strategic management of its executives. They achieved rapid growth for the company through heavy expenditure on mass media advertising, consistent messages that targeted the youth population and strategic acquisitions and mergers.

Smart Mobile’s impact on the market, although significant, could not compare with Viettel, which represents the most significant player in the development of mobile network infrastructure. Despite being owned by Vietnam’s Ministry of Defence, it is also the most important shaper and developer of the market for mobile network services. It initially developed its business model in
Vietnam before applying it in Cambodia and beyond. Its local brand is Metfone, but I refer to the company using the name of its mother company, Viettel, since it best speaks to the company’s regional roots.

Viettel obtained a license in 2006 and quietly went about building a nationwide network before launching its service in 2009 (Po 2010). Consequently, upon its launch it already had a network that reached deep into the countryside. In contrast, other network providers launched with minor coverage in Phnom Penh and slowly built their networks to other urban areas and then outwards to rural and remote areas.

**Rapid Growth and Changing Market Composition**

The arrival of mobile networks providers and the competition they instigated corresponded with and contributed to a rapid rise in SIM card subscribers and users of mobile phones. The Ministry of Post and Telecommunications (Moa 2011) accounted for only 1,400,314 mobile phone subscriptions in 2007. This number soon changed to 4,242,000 by 2009 and then reached 7,533,039 in 2010. Rapid growth continued and by 2012 the number of SIM card subscriptions reached 14,960,000 which exceeded the total population that then stood at 14.7 million (Weinland 2012 Jan 21). By early 2014 there were 20.2 million mobile phone subscriptions (Sokhean 2014 Mar 27). According to more recent statistics, SIM card subscriptions had reached 154% of the population in 2015 (GSMA Intelligence 2015). Evidently, some Cambodians have more than one mobile phone or have multiple SIM card subscriptions.

Mobile service subscription numbers can be misleading due to over-reporting from mobile network providers and consumers using multiple SIM cards. However, strong growth is also
evident in mobile phone ownership rates, albeit the rate is less than the rise in mobile network subscriptions. According to the annually conducted Cambodian Socio-Economic Survey, in 2009 only fifty-three percent of households had a mobile phone (National Institute of Statistics 2012, 2014). However, there were dramatic differences between rural and urban ownership rates. Ninety-six percent of Phnom Penh households had a mobile phone compared with only forty-six percent of rural households. By 2013 the total number of households with a mobile phone had risen to seventy-seven percent. The largest change was in rural areas where the rate rose from forty-six to seventy-two percent. These statistics, however, do not reflect individual ownership. One household could have multiple phones and others could have just one. Additionally, what these statistics do not show is that households that once had only one mobile phone may have increased their number of phones. What is also noteworthy in these statistics is in 2009 the majority of rural households did not have any phone, and despite the rapid rise in mobile phone ownership still twenty-three percent of households nation-wide did not have any phone in 2013 (National Institute of Statistics 2012). Given the argument I present in this thesis, a near quarter of the population without a phone in their household should be seen as a pressing concern and studied in relation to other indicators of poverty and deprivation.

Explaining why the number of households without a phone has decreased and why networks subscription has grown rapidly is a theme that runs through this thesis, but there are simple changes in the price of mobile phone devices that deserve attention. As I began research in 2009 Nokia dominated the market with their reliable and sturdy devices. In 2009 the lowest price of a new Nokia was US$28 and the lowest price of Nokia with a Khmer operating system was $35. However, when Viettel launched their network in the same year they introduced phones manufactured by ZTE and Huawei under the Metfone brand with a Khmer language operating
system that were considerably cheaper. The first was a US$17 mobile handset with a SIM card and some calling credit included. They also introduced a low priced wireless desktop phone at only US$10, which also included a SIM card and calling credit. Viettel acknowledged there was population of Cambodians who would subscribe and use mobile networks if the price of mobile devices came down. Their prediction proved to be accurate and a new market of first-time phone owners emerged thanks to Viettel’s cheap handsets and desktop phones. Viettel’s success led their competitors to follow. Eventually, mobile network providers Hello, Smart Mobile, Cellcard, Mfone and Beeline introduced low cost handsets and wireless fixed phones in order to reach out to a new market of consumers.

During this period of rapid growth in subscribers and mobile phone owners the market share among mobile network providers changed rapidly. There were winners and losers. Using what were slightly outdated statistics Clayton & Mayhfur (2009) reported in 2009 that Mobitel commanded fifty-five percent of the market. Mfone and Hello followed with eighteen and fifteen percent respectively. However, soon the market looked dramatically different. According to Ministry of Post and Telecommunications (Po 2010) Mobitel’s share had shrunk to thirty-four percent, while Mfone and Hello’s share shrunk to nine and six percent respectively. Starcell had gained seven percent of the market. Smart Mobile had gained five percent and Beeline reached four percent. The big winner was Viettel, who within less than two years of operation had achieved thirty-two percent of the market.

Soon the market would again look very different. By 2014 nine active mobile service providers had shrunk to just three main players with a few on the fringe of the market. Mobitel lost its top position in 2012 to Viettel and by 2013 it dropped behind Smart Mobile in terms of market share.
Much of Smart Mobile’s growth was a consequence of strategic acquisitions and mergers. In 2010 it acquired Starcell (Beco 2011). Then in late 2012 Smart Mobile was acquired by Axiata, the owner of Hello, in a US$155 million dollar deal (Kunmakara 2012 Dec 13). Given that Smart Mobile had out-performed Hello in the preceding years the two companies were united under the Smart Mobile brand. Mfone, which began operations in 1992, ceased to exist in 2013. It declared bankruptcy and Mobitel acquired its remaining subscribers (Kunmakara & Renzenbrink 2013 Jan 14). This was a major fall from grace for one of the most prominent participants in the Cambodian telecommunications market over the preceding 20 years. Beeline followed suit in 2015 after six years of struggling to make an impact. In 2015 the local owner sold the operation to Viettel (Meyn & Sothear 2015 Mar 20). By this point Viettel had already become the market leader, but by acquiring Beeline its market share grew to over fifty percent (PRNewswire 2015).

Regulation and the Pricing of Services

The market competition that led to these rapid changes was the product of the state’s eagerness to issue licenses and its lax approach to regulation. The state consistently resisted regulation until the end of 2009 when market competition erupted into a public spat between Beeline and Mobitel. It began with an attempt by Beeline to disrupt the market with aggressive tariff rates that competitors alleged were below their actual operating cost. Mobitel retaliated to Beeline’s strategy by blocking calls to their network from Beeline subscribers. Beeline then reacted with legal action. Hun Sen soon stepped in demanding an end to the dispute (Sovan & Green 2009 Oct 28). The eventual solution was a joint ministerial edict, which was issued by the Ministry of Commerce and the Ministry of Post and Telecommunications. The Minister of Post and Telecommunications stated, “We offered free-market principles, but operators kept having
conflicts with one another, so the government needs to have a hand in it” (Sothoeuth & Green 2009 Dec 8).

The edict ultimately favoured Mobitel by limiting Beeline’s ability to offer market beating tariff rates. It stipulated that operators cannot charge less than US$0.045 per minute for calls within networks and not less than 5.95 cents per minute for calls to different networks (Green & Sothoeuth 2009 Dec 22). By the end of 2009 most operators had adjusted their official tariff rates to be line with the edict. Mobitel’s rate was $0.05 per minute for calls within their network and $0.10 per minute for across network calls. Viettel set their tariff for their premium Metforever SIM cards at $0.072 per minute for calls with within network and $0.10 for across network calls. For their economical MetEco SIM cards tariff rates they set the $0.06 per minute for calls within their network and $0.09 for calls to other networks. Hello set their rate at US$0.072 for all calls in their network and across networks (Green & Sothoeuth 2009 Dec 22).

In reaction to the edict mobile network providers adopted creative promotional campaigns to circumvent the law (Burke 2011 Jul 22). Rather than discounting their tariff rates they offered bonuses to users when they topped up their credit balance. For example, Viettel regularly offered 100% bonus when users added credit to their accounts. Viettel also provided generous credit on new SIM cards. The regular price was US$2-3 per SIM card, but each could contain up to US$6 in calling credit. This led some consumers to buy SIM cards repeatedly to gain free credit instead of topping up an existing SIM card account. Other network providers offered unlimited calling packages on a daily or monthly basis for calls within the network. These offerings contravened the edict, but were nevertheless tolerated since the edict’s main objective was to halt Beeline’s aggressive campaign.
These promotions came to an abrupt end in 2013 when the Telecommunications Regulator of Cambodia (TRC) was established by the Ministry of Post and Telecommunications (Reuy & Renzenbrink 2013 May 01). The new authority is responsible for enforcing industry regulation. But by the time of its establishment the market had mostly stabilized with three main market players and competition from new entrants had mostly dissipated. The first step the regulator took was to strictly enforce the 2009 edict (Reuy & Rezenbrink 2013 May 01). This briefly put an end to the generous promotions that had characterized the market over the preceding years. However, the enforcement didn't last and operators soon returned to offering a range of promotional packages that put their tariff rates well below their official rates that complied with the edict.

Promotional tariff rates were driven by competition, which was the result of the generous issuing of operating licenses. They were further permitted by the lax enforcement of regulation. The promotional offerings encouraged users to make calls only within networks to avoid cross network calling that was subject to significantly higher tariff rates. This was a factor that drove high churn rates as subscribers would switch between networks as they or their calling circle chased the cheapest promotion. Therefore, the state has arguably shaped consumer behaviour, although not intentionally, through the conditions it has set for network providers.

The state's role in shaping the market is further evident in regulations pertaining to issuing phone numbers. Each network provider is granted two or three prefixes under which it can issue numbers to consumers. These numbers are however not portable to other networks, leading to a situation where consumers are reluctant to change networks providers if they have been using a number for an extended period. The inability to port numbers between networks has protected
Mobitel, which was the strongest of the incumbent network providers. It has further shaped consumer behaviour and encouraged the use of multiple SIM cards, which I explore in the next chapter.

The State and Supporting infrastructure

The development of mobile network infrastructure and the market of competing network providers have additionally been impacted by a lack of supporting infrastructure. There are two key infrastructure ingredients that support mobile network development: fibre optic networks and electricity. Both have been sorely missed in Cambodia.

As mobile network providers have been unable to tap into an existing backbone of fibre optic networks, typically developed by state owned or backed companies. As a result, they have tended to opt for developing entire networks from scratch (UNDP Cambodia 2009). This has typically involved the development of interconnecting transmission towers. For instance, to connect one urban centre with another a string of towers are built and connected by microwave transmission dishes that relay signals back to the main switch. The trend was to establish them along the national roads in order to connect urban centres such as Phnom Penh, Battambang and Siem Reap. One exception was Mfone which used its sister company’s Thaicom satellite to relay signals in remote locations. Another exception was Viettel which opted to develop its own fibre optic network. By 2010 Viettel had built a network of 16,000 km of fibre optic around the country, which allowed it to reach every commune in the country (Brennan & Weinland 2011 Aug 24). This has positioned Viettel well to provide broadband mobile and fixed line internet services in rural Cambodia. Following Viettel, a private company called CFOCN built a below ground
network of fibre optics leasing network bandwidth to ISP and mobile service providers so they can more effectively reach around the country (Brennan & Weinland 2011 Aug 24).

Antennas, microwave and satellite dishes all contribute to the energy consumption of a radio base station. Therefore, the second and perhaps more critical ingredient in the construction of mobile networks is electricity, which unlike the mobile services market, has been an underinvested sector. Despite improvements, the majority of population still live in areas off the electricity grid (Poch & Tuy 2012). As a consequence, in much of rural Cambodia where Cambodians can access mobile networks coverage there is no electricity grid to support it. In a reversal of development experienced in the Global North, fibre optic cables have reached rural villages well before any sign of electricity lines arriving.

The slow pace of developing the electricity grid in Cambodia has had a two-fold effect on mobile network infrastructure. Firstly, it creates an obstacle for charging mobile phones in rural and remote areas. This obstacle is typically overcome by charging mobile phones using car batteries that are charged by diesel generators. Car battery charging enterprises can be found in most villages. Villagers drop off their batteries or they are picked up by the business operator and returned when the charge is complete. Secondly, the lack of an electricity grid drives up the cost of running radio base stations in remote regions as they tend be run on diesel generators. In some cases diesel generators are supplemented by electricity from solar panels in a hybrid system. The additional costs of running mobile networks in areas disconnected from the electricity grids has made companies more reluctant to extend their mobile networks to more remote areas of the country.
The Rise of China

Examination of the development of mobile network infrastructure in Cambodia and globally cannot exclude the rise of China, particular Huawei, the giant of the Chinese telecommunications equipment and engineering sector. At the consumer level, Huawei as well as its Chinese rival ZTE have brought more affordable phones to Cambodia, enabling growth in phone ownership at a time when the economy was stumbling. However, more significant is Huawei’s contribution to shaking up the global telecommunications engineering and equipment market. In 2012 it took over Ericsson as the world's largest telecoms-equipment maker (Economist 2012). The competition brought by Huawei and ZTE has allowed network providers to build networks at lower costs and reach out to a large consumer base. However, the positive contribution Huawei has made the sector, especially in regard to increasing access to telecommunications in the Global South, does not abate the negative light the company is seen in within Western media and political circles. The links the company has with the Chinese state and particularly the People's Liberation Army has raised eyebrows as Huawei has extended its tentacles around the world.

According to The Economist (2012), "Some people suppose that the Chinese government is helping Huawei win overseas contracts so that spies can exploit its networks to snoop on ever more of the world's electronic traffic."

This concern has some substance globally and in Cambodia. The founder of Huawei formerly served in the PLA’s engineering corps and Chinese state owned banks have generously backed Huawei’s expansion. By 2009 the Development Bank of China had a credit line of US$30 billion in support of Huawei business around the world (Bloomberg 2011 April 25). Such lines of credit supports interest free or low interest loans to telecommunications companies that agree to use Huawei’s technology. Thus, analysts suggest that the US$200 million agreement Mobitel signed...
with Huawei to acquire technology to up-grade and expand its network, should not be seen independently of a US$591 million loan that the Bank of China granted to The Royal Group, the owner of Mobitel, to refinance its debt (Mullins 2010 Nov 4, 2010 Nov 11).

**China vs Vietnam?**

Mobitel’s loan and Viettel's rapid rise has sparked concerns that once again China and Vietnam were fighting for influence in Cambodia and the telecommunications industry was a new front. Viettel's growth in Cambodia had already raised serious questions among a public concerned that a foreign military, especially their former colonizer, was running the countries' main telecommunications network. Concerns have been particularly directed at the potential of Vietnam to eavesdrop on Cambodia.

Telecommunications surveillance has historical precedence in Cambodia. The government has been known to imprison or discredit political opponents based on phone conversations that were secretly recorded (Post Staff 2007 Jun 15). The head of the NGO Forum on Cambodia, Sam Ath, claimed in an interview I conducted, "NGOs leaders and the leaders of the opposition know their conversations are being listened to." In another interview, Virak Ou of the Cambodian Centre of Human Rights pointed to Hun Sen’s public proclamations that he is listening to his political enemies.

The rise of Viettel indicates it may not just be Hun Sen who is listening but also his backers in Vietnam. This raises the long standing issue of Cambodian sovereignty. Hun Sen’s and The Cambodian People’s Party’s detractors view Viettel as part of a new wave of Vietnamization in Cambodia. A Cambodian academic expressed concern to me that the Vietnamese government
would be able to listen to the Cambodian government. Another Cambodian explained to me that Viettel is just interested in acquiring the "database of Cambodia". Sam Ath of the NGO Forum on Cambodia expressed similar sentiment, "That is why the Vietnamese invest in Metfone... mainly to investigate". The Director of Licadho, a leading human rights organization, explained her displeasure at Viettel's market presence, “We tell everyone not to use Metfone. It’s owned by the Vietnamese military, you know.” These concerns have some validity. Viettel has surveillance capacity on its own network. It also has very close ties to Hun Sen and the Ministry of Defence. Hun Sen’s daughter Hun Mana has six percent shareholding in the company alongside the wife of the Minister of Defence who is also a minor shareholder (Global Witness 2016). Moreover, Hun Sen publically encouraged all Cambodian military personnel to use Viettel for security reasons (Global Witness 2016). This close economic relationship between the ruling and the Vietnamese military makes a mockery of the country’s sovereignty. It is unquestionable that Viettel’s status in Cambodia enhances the surveillance capacity of the Vietnamese military. According to Thayer (2012) Vietnamese military has also gained economic power through Viettel. Its operations in Vietnam and others markets such as Cambodia have become its prize profit asset.

The issue of Cambodian sovereignty has been further brought into question by the loan granted to Mobitel. Sam Ath of the NGO Forum in Cambodia put it simply by claiming that "China owns Mobitel" due to The Royal Group’s loan deal. The loan and the rise of Viettel led the mobile services market to be framed as "China vs Vietnam" (Mullins 2010 Nov 11). This is a historically convenient characterization given the internal and often violent conflicts supported by China and Vietnam that have plagued Cambodia’s recent history. It also reflects the very real grievances regarding other Chinese and Vietnamese companies, which have been the leading recipients of
land and natural resource concessions leading to countless evictions and tremendous loss of access to natural resources (Global Witness 2009; Titthara 2014 Feb 25).

Seeing the market in terms of ‘China vs. Vietnam’ reflects a Cambodia centric view that overlooks some important factors. Huawei and Viettel regularly do business together. Some of the cheap handsets that Viettel disrupted the market with were made by Huawei. In fact, there are increasingly few mobile network providers globally that do not do business with Huawei or ZTE of China. Furthermore, the loan that was granted to Cambodia was a drop in the ocean in Huawei’s world-wide expansion backed by cheap loans from Chinese banks. The same applies to Viettel. Their venture in Cambodia is merely one part of a global growth strategy that stretches well beyond Vietnam’s sphere of political influence. By 2015 Viettel had invested in 10 markets including Haiti, Mozambique, Peru, and Cameroon, and has plans to launch its service soon in Burundi and Tanzania (PRnewswire 2015 Apr 09). Spying on the Cambodian government and population appears to be a flimsy motive in the context of their broader global push.

What should be further acknowledged is that states have historically supported the expansion of their own telecommunications companies domestically and internationally, even in an age of free-market political doctrine. While loans from Chinese banks in support of Huawei’s global expansion receive significant scrutiny the state-run Swedish Export Credit Corp., has also been an active provider of loans at subsidized rates to telecommunications companies that contract with Ericsson (Bloomberg 2012 Apr 25). However, they have increasingly failed to match Chinese banks. Viettel is also not the only state-backed telecommunications service provider to make waves internationally. Telenor is a company that has made strong in-roads into emerging telecommunications markets such as Thailand, Bangladesh, India and Pakistan. Little scrutiny is
given to the Norwegian government’s stake in the company as it has expanded internationally.

Ooredoo, which is majority-owned by the Quatari state, is another example of state backed telecommunications companies expanding globally. Both Ooredoo and Telenor beat Viettel in bids to gain a spectrum license to operate in Myanmar, the last of the undeveloped telecommunications market in Southeast Asia (Wong & Mahtani 2013 Jun 27). As a result, Viettel's further expansion in Southeast Asia was put on hold by two companies backed by oil rich states.

**Conclusion**

In this chapter I have described the birth and growth of mobile networks infrastructure in Cambodia through exploring the role of market liberalization and by examining the relationship between the state and the private sector. I described how the liberalization of the telecommunications sector has been part of a broader program of liberalisation in Cambodia. Consistent with other sectors in Cambodia, liberalization of the telecommunications sector has generated new rent-seeking opportunities through licensing and regulatory regimes. Liberalization of the market, driven by neoliberal economic doctrine has not removed the state, but has reformulated the relationship between the state and the private sector while strengthening the position of the ruling elite.

Liberalization, while serving the interest of the ruling elite in Cambodia, has played an instrumental role in the development of mobile network infrastructure. Outside Cambodian borders the liberalization of telecommunications markets has produced private sector companies looking to expand in emerging markets. These companies have been welcomed by the Cambodian state, but on arrival they have encountered a fiercely competitive market generated
by the state's eagerness to issue new licences and its lax approach to enforcing regulations. Free
market conditions have been accentuated further by the state’s refusal to attach conditions to
the licenses they issue. Hence, the state has effectively left the private sector companies to
define the domestic consumer market on their own terms and build mobile network
infrastructures without state interference. I therefore argue that the consumer market for
mobile networks is shaped principally by the private sector and mobile network infrastructures
are primarily free-market constructions. Yet, the private sector has been subject to competition
and a regulatory environment shaped by the political elite's relationship with big business. These
political and economic inter-linkages are important context for the following chapters that focus
on the social and cultural aspects of the consumption and marketing of mobile networks.
Chapter 3: Infrastructures of Mobility

It was a typical hot April day in Battambang province when the Khmer New Year began. I sat under Ponleak’s family house, which is nestled behind some trees along the national road linking Battambang with Bantey Menchey. Ponleak is a young Khmer man that I came to know in Phnom Penh. I joined him and his family for the first day of Khmer New Year festivities. We sat around a TV and watched the national broadcast of a ceremony to welcome a new angel that would protect the country during the coming year. I was familiar with the angel positioned at the centre of the ruling Cambodia’s People’s Party insignia, but I learnt then that there were seven angels endowed with the responsibility to protect the country. They are the oldest seven daughters of the King of Heaven and each of them represents a different day of the week. Depending on the day of the week the New Year begins determines which angel takes on the role of protecting the country in the year to come. The day was Thursday, which was represented by Keriny Tevy, an angel who likes to eat beans and sesame seeds. This was good news and she was welcomed by Ponleak’s family. They looked forward with optimism to a better year to come. Like other people I encountered around Khmer New Year, Ponleak’s family were happy that the previous year had past. It was a year protected by Reaksa Tevy. Unlike her amicable bean and sesame seed eating sister, she was known to drink blood.

The year Reaksa Tevy protected Cambodia, from April 2010 to April 2011, was widely considered to be a tragic year. The central event in that year was the November 22 Diamond Island stampede in Phnom Penh during the annual Water Festival. It resulted in the death of 353 people (Nimol 2010 Dec 5; Dorn & Peter 2012 Nov 23). The vast majority were young Cambodians, especially women. Immobile on the bridge most of them suffocated or were trampled to death.
Chapter 3: Infrastructures of Mobility

Photos of the bridge taken the following morning showed a bridge laden with the shoes, flip flops and sandals of the dead who were no longer moving forward and growing in the physical world.

Bridges in their physical form are components of transport network infrastructures that facilitate the movement of people and goods between connecting land masses. They are infrastructures of mobility, but on the tragic night of November 22 the Diamond Island Bridge was overwhelmed by the sheer number of young Cambodians seeking to move. Clogged by human congestion, the bridge became an infrastructure of immobility, leading to the deaths of hundreds of young Cambodians. Infrastructures, I realized, can sustain life, but when they fail or are overwhelmed, they can end lives. However, while conducting ethnographic research I mostly observed how infrastructures were supporting life. In Battambang, I witnessed first-hand on several occasions how mobile networks supported health and emergency services. A call to a taxi or ambulance service can improve the chances of survival after a traffic accident or when someone stands on a landmine. Survival was dependent on physical movement and the capacity to connect with others. Horst and Miller (2006: 173) argue that communication is a basic human need and “must therefore be understood as ends and not just means” (Horst & Miller 2006: 173) This ethnography gives support to this perspective, but also contends that mobility should also be recognized as an end in itself. The Diamond Island stampede tragically expressed how immobility can stand for death and despair, while mobility is a source of life and hope (Pine 2014).

Ponleak and I both traversed the bridge at different times in days before the stampede. We were both deeply affected by the event and in this chapter I explore how we experienced and reacted to the tragedy differently. Through documenting these personal stories I shed light on the relationships between agency, the connections that are made and imagined through mobile
networks. I describe how Cambodians draw on and construct connections with the metaphysical to grapple with death and imagine futures for themselves and the dead.

While the beginning of this chapter focuses on the tragedy of November 22, the remainder explores how young Cambodians are constructing their own bridges and infrastructures of mobility through the consumption and use of mobile networks. The bridges Cambodians build are mostly between people, but they are also bridges that are dreamt and imagined. As they build and maintain bridges Cambodians reconfigure their social and metaphysical world and reimagine what is possible. The bridges Cambodians create allow them to traverse between and across metaphysical, virtual, physical and imagined spaces. Through this process Cambodians turn mobile networks into infrastructures of social and cultural life.

Through exploring how Cambodians were engaging with mobile networks to build and maintain bridges, I generate an optimistic picture of people expanding their possibilities to move and connect. In conversations with rural Cambodians I was regularly told how *jee-weut* (life) had become more *s'roo-ul* (easier) and less *bpi-bark* (difficult) after mobile network coverage reached their village and mobile phones became affordable. What exactly did Cambodians think was easier with a phone in their hand and access to a mobile network is a question which helped me reveal the kinds of social and cultural projects young Cambodians were trying to fulfil. Through mobile networks young Cambodians were forming connections and building bridges across geographical and social divides in order to make their projects more achievable. In turn, mobile networks were transformed into infrastructures for imagining who they are and the projects they can pursue.
I give particular attention in this chapter to projects of courting a partner for love, sex and marriage. I describe how Cambodians engage with and navigate mobile networks as they explore and experience romance, love and sex. Projects of love and sex are integrally connected to imagining the future, including the persons one imagines being with and the emotional and physical senses that are attached to the future. As Cambodians turn mobile networks into infrastructures to support their courting projects they also transform what they imagine as a possible relationship. Through mobile networks young Cambodians expand their connections, but with new connections come new forms of surveillance, control and obligation that need to be navigated and managed. The popular culture is coloured with music and stories of relationships disrupted by the new connections being made through mobile networks and new media such as Facebook. The bridges that Cambodians form through mobile networks vary between youthful friendship, relations of love and sex, and kin-based connections. Just as Cambodians experience variation in their connections they can also vary their identities. To manage identities, switch between them, and to express bonds of friendship and love, acts of consumption play an important function. The multitude of networks, SIM cards, and phone numbers generated by corporate competition and the regulatory environment are absorbed into social and cultural infrastructure as mediums to configure networks, navigate a range of social obligations, express one's identities and experience mobility.

In this chapter I seek to flesh out what mobility means to young Cambodians and how mobility is experienced and transformed as Cambodians engage with mobile networks. I acknowledge that mobility can be physical movement such as traversing a bridge, but it can also be imagined and can include the movement of imagery and information (Sheller & Urry 2006). I also acknowledge that all forms of human connection should be seen to involve some form of mobility. Urry (2007:
46) argues that “all social relationships should be seen as involving diverse ‘connections’ that are more or less ‘at a distance’, more or less fast, more or less intense and more or less involving physical movement”. Therefore, I question how distance and movement within relationships are imagined and configured through mobile networks.

Cambodians use the term *ksae* to refer to a social connection. Literally it means string or rope and is also used to refer to electrical and telecommunications wiring. According to Derks (2008: 63), a *ksae* or a connection can facilitate physical migration and open new opportunities. I suggest that a *ksae* can also be connections Cambodians make through mobile networks and they can embody the social infrastructures they construct to traverse physical, social and imagined terrain. *Ksae* also carries the meaning of a patron, or a patronage network and can be considered a source of power and protection (Derks 2008). The more *ksae* somebody has the more capacity they have to achieve certain things and resist or subordinate others. *Ksae* can thus serve as a metaphor for agency of projects and agency of power in a Cambodian context. Using this metaphor I ask how the connections Cambodians make and imagine through mobile networks contribute to a sense of empowerment, particularly the sense they can achieve certain goals or make an impact on others. I draw on this relationship between *ksae* (connections) and empowerment to consider how Ponleak and I experienced and reacted to the tragedy of the Diamond Island Stampede. I continue by describing my own personal experience of the tragedy and then contrast it against Ponleak’s experience and the connection he made with a victim of the stampede.
Disconnection and an Unsent Message

I had been looking forward to the annual Water Festival, which represented the largest event in Phnom Penh during the year. It is a three-day event that pivots around a boat racing competition on the Tonle Sap River and attracts teams from around the country and abroad. The foreshore of the river attracts millions of Cambodians. Subsequently, the festival became a major commercial event that corporations use to market themselves to the population. In order to accommodate commercial interests, festival organizers demarcate public space along and near the foreshore as commercial spaces where marketing firms can run activation and promotional events.

Intrigued by how they were using this event to reach out to the rural population, I visited the area in front of the Naga Casino and then crossed a narrow two lane bridge that connects it with the Diamond Island. Both sites had been demarcated for commercial activities. The bridge had been converted to a pedestrian-only bridge to cater for visitors to Diamond Island, which was the site of a make-shift fun park and concerts in the evening sponsored by Smart Mobile and a local TV station. By the time I made my way back across the bridge to the commercial area in front of the Naga Casino in the late afternoon the crowds were beginning to swell. On the bridge I found myself jammed between families with young children at my feet. I pondered what would happen if the crowd behind me surged and I developed a strong sense that a stampede was possible, especially as the crowds grew later that night and during the next day. As I came off the bridge I realized that the human congestion was the result of food and drink vendors blocking the bridge’s off-ramp. Deeply concerned, I insisted that the worst offender move her sugar cane vending cart to the side. I tried to tell others to move, but they would only point to other offenders. I thought perhaps that I could find someone to intervene, but the closest security
officer I could find was busy keeping people off the casino’s property. The police I found were occupied accepting bribes from motor bike and car drivers entering pedestrian only areas.

At the time I typed an SMS message explaining the problem at the bridge and the potential of a stampede. At first I thought I would send it to someone that might know high ranking officers that could take action, but then I questioned my naivety. I asked myself, “Who would pay any attention to me?” Instead of taking any further action, I went off to find somewhere to enjoy a drink while viewing the end of the day’s boat racing. During the night I found myself in a bar that I frequented and relayed my concern about the possibility of stampede to the English manager. He reassured me that Cambodians are much more patient than ‘us’ and can cope with crowds. In the morning following the final night of the festival I woke to news of what happened. I turned on the TV to see images of the aftermath of the stampede. I then opened the draft folder of the messaging application on my Nokia smart phone to see my unsent message.

In the days and week after the stampede Cambodians I tried to come to terms with the tragedy. The girl in the laundry shop I regularly used looked at me with tears in her eyes and told me how young and beautiful the girls were that died on the bridge. I thought to myself how they must have been just like her. At a local restaurant one of the waitresses I knew came to me after much silence to ask me why she was not one of the victims on the bridge that night. The stampede made Cambodians, especially people in Phnom Penh and the young people reflect on their own mortality and the fact it could have been them on the bridge that tragic night.

I too struggled to come to terms with what had happened and was haunted by questions about my role in the tragedy. I had predicted a stampede in the very location that it occurred but did
not in any way halt what transpired. Some of the literature that formed the basis of my research focuses on mobile phones as a technology that supports the mobilization of people by rapidly circulating messages. A centrepiece of the literature is the EDSA 2 protests to oust President Estrada from power in the Philippines (Pertierra et al. 2002; Castells 2009). Following the acquittal of Estrada in a corruption case, a single text message was sent out as a call for people to gather at the EDSA shrine to protest. The SMS went viral and tens of thousands of people were mobilized in protest. In my case a text message remained in the draft message folder on my phone. Following the successful EDSA protest, Smart Communications of the Philippines took advantage of the incident to promote the power of their technology. The company printed an advertisement containing a picture of protestors who gathered at the EDSA shrine. They were framed within an image of a mobile phone screen and below the image of people contained the caption, “Message sent” (Pertierra et al. 2002). However, before me was an unsent message.

Following the stampede a blame game ensued in the media and within political circles. The organizers, the owners of the island, the police, the Phnom Penh municipal government, and nation’s leadership all came under scrutiny (Sokha & Cheang 2010 Nov 29; Sokheng & O'Toole 2010 Dec 1). The public were also blamed for not using an alternative bridge. The day before the tragedy occurred I accused vendors of drinks and food for causing congestion. After the tragedy some Cambodians I met conveyed to me their own sense of danger on the crowded bridge. In the end, nobody was made accountable for the tragedy, but in reality it was a multitude of actors who were responsible for a failure to communicate the dangers on the bridge.

The irony of the tragedy is there was no shortage of video footage of the incident taken by bystanders on mobile phones that were later uploaded to YouTube and distributed as VCDs.
Moreover, word of the stampede spread quickly by mobile phone. This led to more people converging on the area near the bridge to see what was happening, which only served to worsen the situation and efforts to rescue many of the victims.

Studies of mobile phone use, by and large, present narratives of empowered actors making phone calls and connecting with others for survival, social, economic and political purposes. Following the EDSA 2 protests there has been countless accounts of new communication platforms such as Whatsapp, YouTube, Twitter and Facebook being used to communicate and mobilize people for political, economic and social purposes. However, little attention is given to unsent messages and failures to communicate. Focus is skewed to messages that are sent and received rather than those that are never sent. Yet, the tragedy of the Diamond Island stampede demonstrates how failures to communicate can have disastrous consequences.

I anguished over the unsent message on my phone and my failure to communicate in the weeks and months after the stampede. I shared my experience with friends and family who consoled me with the unanimous point that I could not have altered what transpired. They used an agency paradigm and conveyed that I was not significantly empowered to have shaped the event. However, as a means to reconcile what happened it left me with lingering questions that do not escape me. Why did I feel disempowered? Why didn't I try to circulate a message about the danger that I sensed on the bridge? I struggle with these questions. The only answer I seem to find is that I felt isolated and disconnected from a network through which my message could effectively flow and be heard. I didn't see myself as a person empowered by my connections with others. But even this does not seem to lift my sense of responsibility. In the age of social media, a heightened sense of connectivity increasingly disposes people to share and circulate messages and
imagery. On reflection, I realize I was indeed connected to people who could have circulated my observation and prediction of stampede. But at the time, I didn't sense my own connectivity and acknowledge its power.

**Empowerment & Metaphysical Connection**

I cannot help thinking that Ponleak, the young Cambodian man that I shared the following Khmer New Year with, also had trouble reconciling what happened. He had a very different story related to the stampede that he shared with his friends. When I heard about his story from his university classmate in Phnom Penh I asked to be introduced. I was intrigued by what it could tell me about how mobile networks intersect with the metaphysical. Like me, he had been on the bridge in the days prior to the stampede, but his subsequent experience is a dramatic contrast to my own. While I tried to rationalize what happened, Ponleak conversed with a ghost from the bridge. This is Ponleak’s story as he recounted it to me:

> The first night [of the Water Festival] I went to the Diamond Island Bridge. My friend’s younger brother wanted to walk on the bridge. He said it was beautiful and very colourful with all the lights. It was very crowded. Then, you know, there was the stampede. One month later I got a phone call about two in the morning. I tried to talk with the caller, but there was just noise. It wasn’t normal noise. It was like a crowded place ... many men and women. The next day about 3.00pm I tried calling the person back. I was angry that someone called me so late. A man answered with a strange voice.
>
> "Who are you?" I asked.
>
> "I am dead," he said.
>
> "Where are you calling from?" I asked.
Then he said, “Now I am calling from Diamond Bridge. It’s very hot. I have no shoes and clothes. I saw you on the bridge, you look like a good person. After I died I always think of you.”

“What do you need?” I asked.

He said, “I need your life. I need your life.” But I couldn’t go with him, so he said to me, “If you cannot leave with me, I need you to buy for me some clothes and shoes”. I told him I wanted to help so he explained, “If you give them to a monk I cannot get them, so please give to a friend, who is then same age, and you are close to.”

The next day Ponleak went to the old market to buy a shirt, trousers, and a pair of shoes. He gave it to a friend, who wore it while burning incense and praying for the Diamond Island victims. He would call back one more time to check on the person. This time the victim was in a good mood, and told Ponleak that he was ready to move on to the next life. Before finishing the conversation the caller told Ponleak not to call the number again since it might prevent him from transitioning to his next life. Ponleak did, however, call Smart Mobile to check if the number existed. It didn’t, which reassured him that he did indeed engage a ghost.

Ponleak didn’t hesitate to share the story with his friends. Some of them believed him and others thought he had been hoaxed. I also relayed the story to other Khmers. Some questioned it and others told me stories about other people they knew who communicated over the phone with ghosts from the stampede. Stories of people communicating with ghosts in the days and weeks after a death are prevalent across Asia. Barendret and Pertier (2008) detail a variety of examples of how mobile phones have been incorporated into communication with the
supernatural. They suggest that new technologies such as mobile phones “serve either as uncanny electronic agents or as gateways to another dimension” (2008: 383). Based on their analysis, mobile phones co-exist with and support old beliefs. However, rather than focusing on the mobile phone as a gateway to another dimension, it may be more productive to think of mobile phones as a mere device for accessing mobile networks, which are both digital communication networks and networks of people. Mobile networks, I argue, are not stable. They are subject to transformation by active agents as they navigate and reconfigure their social, economic and metaphysical networks. Networks can be configured to intersect with other networks. For example, social and kinship networks often intersect with or take the form of commercial networks. For Ponleak a mobile network connection was reimagined as a connection to a metaphysical network, which is consistent with how Cambodians merge their metaphysical, physical and social lives and imagine connected networks.

When I joined Ponleak’s family for Khmer New Year to welcome a new angel, Ponleak discussed the story with me for a second time. At that time, he expressed the happiness he gained by helping the ghost. It contrasted with the anguish I still felt from the lingering questions I had. In a way that I could not achieve, Ponleak impacted on the event by giving new life to the victim through being an empowered actor connected to a metaphysical realm. While I tried to rationalize my inaction and why I felt isolated and disconnected from people that could have made a difference, Ponleak imaged a connection with a victim and gave mobility and life to him. For Ponleak, the mobile network connection with a metaphysical dimension was a source of empowerment, which I could not experience or feel.
This was not a form of empowerment that nicely follows the development narrative of a modernizing people. Neither does it present a neat picture of how mobility is experienced through mobile networks. Within his story, mobility was experienced as Ponleck traversed between the physical and metaphysical through a mobile network connection. Ponleck also imagined the mobility of the victim being freed from bridge and transitioned to his next life. Transport and telecommunications infrastructures are conceptually easy to understand as networks that facilitate the movement of people and ideas, but it’s possible to also view Khmer Buddhism as infrastructure that connects physical and metaphysical spaces and facilitates movement between lives.

Metaphysical mobility is further illustrated by Ponleck in the questions he had about the incident and the regrets he had. He questioned why the ghost had contacted him and not his own relatives. The caller gave him a partial answer when he told Ponleck that they shared the same birthday. He further pondered how a ghost could enter his room via a mobile phone and he speculated that the shrine in this room had been disturbed, which allowed the ghost to enter. Ponleck also asked the caller why he was trapped on the bridge and had not moved on to his next life. The called stated that he had a debt of US$500, to which Ponleck explained that sufficient compensation had been arranged for the victims’ families.

According to Khmer Buddhism, a violent death such as experienced by the victims of the stampede can inhibit a smooth passage to the next life (Holt 2012). Debt can also trap a person as a ghost, holding one back from transitioning to the next life. Chariya, a friend and informant, explained that when her mother died her first priority was to gather funds to pay off her outstanding debts to ensure that she could transition to her next life. A report on the
microfinance industry prepared by Leopard Capital, a venture capital firm, suggests that the Buddhist belief that “non-repayment of loans may result in punishment in the next life” is contributing to the low rate of non-performing loans making it a suitable industry to invest in (Magenheim 2009).

Debt was a burden that Ponleak shared with the victim of the stampede that he conversed with, and I suspect it was debt that left him with a regret that he shared with me during Khmer New Year. He questioned whether he should have taken the chance to ask the ghost about numbers in the up-coming Thai lottery. Participation in lotteries from Thailand and Vietnam is common place in Battambang. It is facilitated by local bookmakers, who also take bets on the likelihood of rainfall. Betting on lottery numbers and rainfall require two distinct sets of skills and resources. The latter requires the metrological skills and contacts around the region that can relay messages about the movement of clouds. In contrast, lottery numbers are predicted by interpreting dreams. When I visited a local bookmaker to place a bet on the day’s lottery in Vietnam, he asked me how I chose my numbers, and whether I picked the numbers based on my dreams.

Interpreting dreams is a favoured past-time and they can reveal much about one’s current and future life. Dreams reveal the state of love ones and family who are separated geographically and can reveal what will happen in the future. Through dreams Cambodians can form a connection with the metaphysical world where spatial and time constraints are lifted. They can thus give insight into the spatially distant and into the future, including lottery numbers in distant locations such as Vietnam and Thailand. To Ponleak, future lottery numbers and knowledge of the future exist in a metaphysical dimension where ghosts, spirits and dreams are connected. Ghosts and spirits can move spatially and between the past, present and future. Therefore, Ponleak
considered that he could have accessed knowledge of lottery numbers via his unique bridge to a metaphysical network that was established through a mobile phone connection.

Interpreting dreams and interacting with the supernatural are seen as potential sources of wealth and prosperity, which Ponleak was lacking. At the time Ponleak interacted with a ghost he was under considerable financial stress, which may have contributed to his experience after the stampede. When I last met him he had just passed the exams that permitted him to work in South Korea and he was waiting to hear from the recruitment company about when he would leave Cambodia. On that occasion he introduced me to a woman that he had recently met. She represented a potential future for him in Cambodia, and thus he was torn over the prospect of leaving her so he could work in South Korea. To his own frustration, he was at the mercy of his father who insisted that he go to South Korea to address a family debt. It was a debt that may have trapped him as a ghost if he was on the bridge that fatal night. His future was being shaped by his role as the son of an indebted farmer in Battambang and the need to project life forward for his family and himself. The projects that Ponleak pursued bridged his present and future lives, and merged physical and metaphysical dimensions.

**Love Connections**

Like Ponleak, most young Cambodians I met were engaged or had succeeded in projects of finding a partner or partners for sex, love and marriage. Through these projects they were turning mobile networks into infrastructures of courtship. Talking about mobile phones and networks with young people in Cambodia, inevitably led to talking about 'hooking up': meeting someone for a sexual and or romantic relationship. In my meetings, interviews and interactions
with young Cambodians, stories abounded about romantic connections made through mobile networks.

Pisey’s story of how she met Chea was one of the more striking stories I encountered and, like Ponleak’s connection with a ghost, it illuminates how mobile network connections can be made in a diversity of ways. When I met Pisey and Chea they rented a house that hung over the Sangkae River next to the Ek Phnom brahak (fermented fish) market. It was both a living space and a makeshift classroom that Chea used to teach classes to local children to supplement his income teaching at a local university. Pisey also used it to take care of their child and do contract sewing for traders shipping clothes to Thailand.

Pisey was originally from Kampong Cham and at the time she met Chea she was working at a footwear factory on the outskirts of Phnom Penh. She claimed that at the time she had no interest in men and meeting someone to marry, but one night she dreamt she was drowning in a river only to be pulled out by a man, who on the river bank wrote his phone number on her hand. When she woke the number was still vivid in her memory and she wrote it down. She discussed the dream with her friends and family and pondered what she should do with the number. Two days later she called it and Chea answered. She continued to call him and slowly a relationship evolved.

Chea lived in Battambang and had been seeing another woman who he had proposed to marry but her family insisted he wait another year, which didn't sit well with Chea. Based on the advice of a fortune teller, he was determined to marry in that year and thus entertained Pisey’s calls and her story of how she discovered his number in a dream. Their phone-based relationship lasted
six months before they decided to meet. Chea and his parents travelled to Phnom Penh to meet her and her family. Together they made plans to marry two weeks later in Phnom Penh.

According to Pisey, word had spread among her co-workers of the mysterious way she learnt of Chea’s number so many of them turned up at the wedding to get a glimpse of the man whose number she discovered in a dream. Upon getting married, Pisey moved to Battambang to join Chea. Pisey’s connection with Chea was formed in a dream world, and relationship through a mobile network and eventual marriage. Like Ponleak’s story, I retold it to other Khmers and most agreed it was a wonderful and believable tale of Khmer romance in the age of mobile phones and network connectivity.

Other stories of courting through mobile networks, like Dara and Srey Mao’s, were much more mundane. They also lived on the outskirts of Battambang in a house that hung over the banks of the Sangkhae River. Their first encounter, however, was far less mysterious than Pisey’s connection to Chea. Srey Mao was the sister of Rith, a community worker who accompanied me on many research trips around Battambang. When I visited Rith’s house, Dara had just joined his family after marrying Srey Mao. About nine months earlier when Dara was still a monk at a temple in Battambang he received a call from Srey Mao. He referred to the call as “j’ra-lom layk dtoo-ra-sup”, which literally means confused number call, but is best translated as a “wrong number call”. After apologising for mistakenly calling the wrong number, Srey Mao took the opportunity to ask him for details about himself. Srey Mao liked what she heard and kept calling. They maintained a relationship by phone for a further nine months until Dara took off his orange robe to become a layman. They met and two months later married. When I probed him on the nature of the first call he insisted it was a wrong number call. In the background Srey Mao giggled and said she was “layng dtoo-ra-sup” (playing on the phone).
Intentionally calling “wrong numbers” while playing on the phone is strongly associated with being young and single. The practice is also linked with particular mobile networks providers who have supported playing on the phone through the promotional packages they offer. Dara and Srey Mao were at the time both using Star Cell, a mobile network that later merged with Smart Mobile. Star Cell offered a service that allowed users to make unlimited calls on their network for ten cents per day. Srey Mao took advantage of this by calling random numbers on the network and giving the impression to the receiver that she called the wrong number only to try to start up a conversation. For 10 cents per day she could make unlimited wrong number calls to any number with a Star Cell prefix. Thus, Starcell, like other network providers that offer similar packages, became popular for young people seeking to connect with others on the network across the country. In contrast, there were other network providers who were more associated with a stable life. When Srey Mao and Dara eventually married they ceased to use Star Cell and opted to share a single mobile phone with a SIM card of a network provider more associated with a stable life of less interference from people trying to make connections with them. It reflected their new relationship and a new phase in their life. In this respect, mobile networks can symbolise different life phases and shifting social identities.

When Ponleak’s discussed with me the pressure to go to South Korea, he told me that his father regularly told him not to be a gong-gaip k’nong on-doang (frog in the well). It was a message that his father told him when he first left home to work in Siem Reap and again as he was applying for work in South Korea. In a begrudging tone, he explained that his father did not give the same message to his two sisters, who remained at home with little education and could barely read. Ponleak ultimately took a grand physical step, but the stories of courtship through mobile networks indicate that young Cambodians were turning mobile network connections into a ksoap
(rope) for climbing out of the well and to explore the world above. Indeed, Ponleak’s sisters could also reach out from the well with a mobile phone in their hands, a network connection and a little calling credit.

In an interview I had with a young woman in Battambang it was made clear to me that climbing out of the ‘well’ to meet a partner is a central project among many young Cambodians. I asked if there was a useful public list of numbers that she could access as I was interested in how people in Battambang access phone numbers of businesses, government agencies or NGOs, but she immediately grabbed a gossip magazine and showed me one of the back pages that listed the phone numbers of people looking for sex, friendship and marriage. She emphasized that the page was mee-un bpra-yaoch (useful) for young Cambodians.

The gossip style and technology magazines that fill the newsstands around markets in Phnom Penh and major towns contain at least one page dedicated to free personal advertisements, where readers can list their phone number, name and what they are seeking. According to an informant at the Angkor Thom magazine, a popular weekly gossip magazine, her office received 80 to 90 requests per day and had a waiting list of more than two months. An example of a personal ad to find a marriage partner is “I am called Da, 27 years old, looking for someone to marry Tel: xxx”. Personal ads expressing interest in friendship follow a similar pattern such as, “I am Sokha, 17 years old, looking for good friends Tel: xxx”. Cambodians also use these personal pages to find transgender, gay and lesbian sexual partners. An example of these ads is “I am Leakena, 24 years old, I want to make friends with the third sex.” Another is “I am Phala, 18 years old, looking for males that love the same sex.”
Popular TV music video programs provide an additional medium for viewers to connect with people by allowing them to send SMS messages to the program, which are then shown at the bottom of the screen while videos play. The broadcasters of these shows demonstrate little control over the SMS content and who are allowed to post messages. It was common to find messages posted by young teenagers, proclaiming their age and gender while inviting contact from strangers. This surely deserves the attention of organisations concerned with the welfare of children. However, the rise of various communication technologies makes it increasingly difficult for control to be asserted over how people connect in the virtual and then physical world. As Cambodians experience greater mobility there is the potential they can increasingly subvert authorities. Derks (2008: 188) argues that the hunting grounds for potential spouses have been extended from pagoda festivals to the factory floor, urban housing compounds and public parks. In these spaces parental supervision and authority are subverted. My ethnography indicates that in the digital age Cambodians are creating new spaces of subversion across mobile networks, in gossip magazines, and on Facebook.

**Evidence and Expressions of Connection**

As mobile networks have been turned into infrastructures of courtship, they have also become associated with disrupting existing relationships. In this regard, Cambodia is not in any way unique. Burrell (2010) describes how in Uganda mobile phone use generates jealousy and suspicions as concern rise about the connections a partner has through their mobile phone. In Mozambique, Archambault (2011) depicts break-up being blamed on mobile phones and in Jamaica, Horst and Miller (2006) highlight how mobile phones reveal evidence of infidelity and can be sources of domestic arguments.
In Cambodia, the disruptive power of connections formed through mobile networks and other communication platforms have become a common narrative within the popular culture of music and karaoke videos, which came to regularly feature mobile phones and networks and Facebook in stories of love, romance and sex. One popular song describes how the singer’s call tune expresses his love to a woman he has lost. Other songs convey jealousy that the use of phones and Facebook can breed. A popular song was Facebook Disturbs Love. It had predecessors including Email Disturbs Love and The Phone Disturbs Love, which demonstrate a technological progression while a consistent theme of love, jealousy and rejection remains. Facebook Disturbs Love contains the lyrics “when I see you send messages to him on Facebook you are excited more than when you are with me” and “you told me you can’t stop because when you are bored only Facebook can help”. There is an amusing element in these lyrics probably because they resonate across cultures where new connections made and maintained through digital networks are disrupting existing relationships.

The mobile phone has become “a repository of personal information” (Ling 2011: 172) and thus provides an account of the user’s personal life that can be pried into by a partner or a family member. The fact that call logs, contact lists and messages provide a detailed picture of the user’s personal life has caught the interest of anthropologists who, as a matter of ethnographic inquiry, like to pry into people’s lives. Miller and Horst (2005, 2006) conducted analysis of their informant’s phone contact lists to establish an ethnographic account of the relationships maintained over the phone. I also sought to illuminate the social connections Cambodians have by looking into their phones. However, while some phones, especially those of the urban young and educated, provided a vivid picture of a highly connected social world, for the most part, the phones of everyday Cambodian lacked significant detail. A reason for this is that a low proportion
of phones could run Khmer script, which inhibited the use of contact lists and text messaging applications among Cambodians with limited English literacy. Many phone users I observed saved their numbers using a roman letter, such as ‘a’, ‘b’ or ‘aa’, to help trigger their memory. Others kept numbers in notebooks or on scrap paper. Many others wrote numbers on the walls and beams of their home.

The myriad of ways Cambodians kept numbers posed a data collection and analytical challenge as I tried to draw a picture of the social connections Cambodians were creating and maintaining through mobile networks. I tried to address this obstacle by creating an elaborate questionnaire that probed interview respondents about phone numbers they knew in different areas and who would they call in different situations. This was a futile approach as phone numbers and knowledge of them were often embodied in kin and community relations. It was not possible to identify someone’s network by the numbers kept in phone contact lists, notebooks, on walls or in people’s memories since phone numbers and knowledge of them often flowed through families and around communities. A response I received from a villager in Kandal Steung typified the mobile and fluid character of phone numbers. A bit bemused by my questions she replied, “I don’t know that number but probably my neighbour does, and if she doesn’t know the number the amputee living across the path will know ... he knows lots of numbers.”

Mobile phones as well as numbers were actively circulated around communities and as they were shared they become expressions of communal bonds. This contrasts with Burrell's study of mobile phone use in Uganda. Burrell (2010: 243-244) argues that a willingness to share mobile phones is tempered by the personal information contained within the phone and sense the information was vulnerable to prying eyes. But among my informants in rural Cambodia mobile
phones contained such little information that this sense of vulnerability was limited. Moreover, due to limitations on storing contact numbers, numbers were displayed in the open and often in very public places such across the outer wooden boards of houses. Thus, while mobile phones and numbers have communal attributes they also lack the personal and private qualities that facilitate private connections away from the prying eyes of kin, spouses and neighbours.

The slow pace of introducing Khmer language phones inhibited the emergence of a text messaging culture. As a response, ‘tech savvy’ local designers and mobile network providers stepped in to make picture messages that contain Khmer script and can be sent and read on any mobile phone. These messages were directed at young people to use as a medium to express feelings in the intimate relations they cultivate. Gossip magazines also provided advice on how to construct love messages in English. The mobile service provider Hello ran a contest to find the most romantic English text messages.

An additional and very common mechanism for communicating messages and sentiment between people is the practice of making missed calls. In other parts of the world the practice is called beeping, bipping, flashing, and buzzing (Donner 2007, Armachault 2012, Deumert 2014). It involves disconnecting or hanging up before the receiver can answer the call. The purpose is to communicate without incurring any cost. A missed call can indicate a range of messages depending on the context. The meanings of missed calls in Cambodia are consistent with Donner's study of this practice in other parts of the world. According to Donner (2007: 6-7), there are "pre-negotiated instrumental beeps" or missed calls, which can indicate someone is ready to be picked up or has arrived at a destination. There are "relational beeps" which are alternative ways to communicate "hello" or that you are thinking of the person. These kinds of beeps and
missed calls can easily be confused with "call back beeps", which serve as a request to the receiver to call back and incur the monetary cost of communication. Archambault (2012: 406) described how in Mozambique *bips* (missed calls) are usually sent by women "to lovers and suitors on a regular basis in the hope of being called back and often with the intention of placing requests for specific things." Men usually respond to *bips* from women, but when a man is financially constrained *bips* highlight their fragile status in mobile-based social networks and their limited mobility.

Narith, a motorbike taxi driver who helped me move around Battambang, was a man that drifted in and out of mobile networks. On several visits to Battambang I would find him without his phone as he had pawned it for some much needed cash. After giving him some business for a couple of days he would be able to get it back and return to the world of mobile network connectivity. Indeed, this was important to Narith. Not only did his livelihood prospects improve with a mobile phone and some phone credit, so did his love life. Narith had a love interest called Kunthea and their relationship had been cultivated from the beginning through a mobile network connection. Their relationship, according to Narith, took a positive turn when they sat an exam together at a local college, and during it she sent him SMS messages with the answers. For Narith this gesture indicated her interest in him and from that point he decided to give a certain degree of commitment to her. He stopped visiting local brothels, but still flirted with female strangers he met from wrong number calls, and sometimes called numbers that had been shared with him by his fellow motorbike taxi friends. According to Zucker’s (2011: 99) ethnographic account of village life in Cambodia, the establishment of trust involves studying “each other and the outsiders for clues and hints of another’s character and intentions.” The infrastructures of mobile networks in
their varied form are providing abundant new ways for Cambodians to appraise the intention and judge their character of others.

**The Consumption of SIM Cards and Numbers**

The infrastructure of mobile networks includes SIM cards and phone numbers, which have also been incorporated into the infrastructure of social life in Cambodia. Whereas missed call and wrong number calling practices or the sharing of exam answers through text messages utilize the actual mobile networks, SIM cards and phone numbers are given meaning as expressions of social bonds and sentiment through their actual consumption. This is evident in Narith’s attempt to court and establish a relationship with Kunthea. After Narith turned his focus to Kunthea he decided to purchase a new SIM card that would reflect his intentions and desired relationship. The network provider he chose was Mobitel, which was the same network that Kunthea and most of his family members used. A popular alternative was Viettel (Metfone), but he held strong anti-Vietnamese sentiment and associated Viettel with the Vietnamese and the Cambodian People’s Party. Narith, at the time, was a temple boy at a pagoda, which was a hotbed for anti-government and anti-Vietnamese sentiment. Having settled on Mobitel he searched available numbers at phone shops in Battambang to find a number that most resembled Kunthea’s number. Eventually he found one that contained the same Mobitel prefix and similar final numbers.

Miller (1998) makes a convincing case that through shopping we express our bonds with other people. “Through the medium of selecting goods” the social relationships that people care about are imagined and developed (1998: 14). Acts of shopping are expressions of who we are and how we relate to people. The choice and consumption of SIM cards and phones numbers are for many
Cambodians expressions of who they want to connect with and the people that are important in their lives. Narith chose a SIM card and a number that both expressed his relationship with family members and his political orientation. It also expressed his sentiment towards Kunthea and his hope of establishing an on-going relationship with her.

Choosing numbers and SIM cards during the period in which research was conducted was a prolific past-time among many young Cambodians I encountered. SIM card and number vendors dominated markets and streets. Mobile network providers and SIM card distribution firms formed make-shift stalls on street corners, at markets and in various other public places. They were usually under small canopies or umbrellas and were often accompanied with music to attract young people. These distributors provided extensive lists of numbers for customers to browse through in search of a favourable number. Numbers would be judged on their similarity to numbers of family members or lovers. Some considered how easy the number is to remember, while others examined if the number could bring good fortune. Most SIM cards and numbers went for a nominal fee, while SIM Cards with numbers that represent good luck or prestige were sold at rates of 50, 100, 500 dollars and sometimes more.

Narith maintained just one SIM card and one number. It was intended to symbolize his stability and commitment to Kunthea, but Cambodians were also choosing to purchase and keep multiple SIM cards. Chariya, an informant in Phnom Penh, described people who have multiple SIM cards with the expression, SIM j’rarn jeut j’rarn (many SIM cards, many hearts). Multi-SIM card usage symbolizes the multiplicity of relationships phone users have and maintain since different SIM cards are typically used for different sets of contacts. For instance, one SIM card may be for a group of friends or a lover, while another could be for calling family members, especially parents.
Therefore, a SIM card not only stands for a mobile network provider but also a social or kinship network. In one way, the more SIM cards and numbers a Cambodian uses the more social networks they are seen to belong to. It another way, multiple SIM cards suggests a person is investing in multiple social networks or people. The multiple SIM card user can be seen as highly sociable with many ksaë (connections), but they can also be seen to be hedging their bets and not fully committed to any given relationship or network.

The practice of keeping multiple SIM cards is complicated. It can entail owning two or more phones or switching SIM cards in and out of a phone depending on who you are contacting. Sophea, who ran a successful small business in Phnom Penh, maintained one SIM card number for every network provider and hence carried nine phones around in her handbag until she bought a Chinese phone that could hold four SIM cards at once. This worked out well until she lost it. I was therefore surprised when she complained to me about the merger of Star Cell and Smart Mobile. Consumer choice, according to her, was being reduced by the merger. By consumer choice, I think she was referring to her ability to choose between and distinguish her different sets of social connections, which were truly abundant. She claimed to have more than 1000 phone contacts and over 30,000 Facebook friends over six different accounts. The idea that power and status comes from connections was understood by Sophea in a quite quantitative sense.

Multi-SIM card usage is a mechanism for creating bridges that allow Cambodians to traverse between identities, social relations and localities. A young person can at once be a member of a peer group, a student, a factory worker, a brother or sister, a daughter or son, and possibly a mother or father. Through switching SIM cards or phones a Cambodian can take on an identity
associated with different set of social relations. This demonstrates an extension of a pre-existing pattern of how identities are navigated and articulated. Mills’ (1999) ethnography of Thai female factory workers describes the flexibility of their social identities. In the urban context woman express particular urban and modern identities, but on returning to their village they express another identity more associated with being a daughter and member of rural family and village community. Derks’ (2008: 197) ethnography of migrant woman in Phnom Penh depicts how the mobility for young migrant women “involves the possibility or necessity of switching codes for each situation.” Switching SIM cards, I suggest, has been incorporated into code-switching. Swapping a SIM card to connect with family is part of taking on an identity associated with the caller’s family such as being son or daughter, and by switching to a SIM card of a peer group one adopts the identity associated with a friendship group.

Before mobile phones and networks, switching codes necessitated physical travel, but through the infrastructure of mobile networks, including handsets and SIM cards, movement between locations and identities is possible without physical movement. In one respect, this is liberating as it eases the pressure to physically travel to fulfil the attributes of an identity one seeks to live up to. In another respect, the ease of switching creates a burden as new expectations and perpetual obligation may emerge. Martinez et al. (2012: 512) describe how mobile phone communication can be a means to independence through subverting authority, but mobile communication and the perpetual possibility of contact can increase obligation and control from a far. SIM card switching addresses this by being a mechanism to manage authority and obligations. Through inserting or taking out a SIM card, a phone user can connect and disconnect oneself from the obligations and control of a given social or kinship network.
The emergence of practices such as "wrong number" calling and multi-SIM card usage has a strong regulatory and economic dimension beyond the social dimension that I am highlighting here. Wrong number calling is fostered by promotional packages that are driven by intense competition brought about through the state's liberal provision of operating licenses. Multi-SIM card usage is partly the result of regulation that protects pre-existing network providers by inhibiting the transfer of numbers between network providers. This can mean that the consumers of mobile network opt to add numbers and SIM cards rather than change numbers. Therefore, through shaping how network providers package their products and services regulation has also set conditions for consumers to engage with networks and transform their meaning.

Yet consumer behaviour and network engagement, which appears to be the product of regulation, from an anthropological perspective has its own social and symbolic meaning. Cambodians have turned the purchase and use of SIM cards and phones numbers into social symbols in their exploration of sex, love, romance and friendship, and in their management of different social identities. Miller (2001: 290) characterizes this as consumption work, which he defines as a process “which translates the object from an alienable to an inalienable condition; that is, from being a symbol of estrangement and price value to being an artefact invested with particular inseparable connotations." The consumption work of Cambodian consumers has infused SIM cards, phones and networks with meanings that are far removed from their engineering and regulatory foundation.
Conclusion

Horst and Miller (2005, 2006) argue that in the hands of Jamaicans the mobile phone takes on specifically Jamaican meanings. I have argued in this chapter that in the hands of Cambodians, the mobile phone is turned into a device that is specifically Cambodian and mobile networks are transformed into infrastructures with specific Cambodian meaning and purpose. They have become infrastructures of specifically Cambodian forms of mobility. In Ponleak's case, mobile networks were turned into a bridge or ksaе (connection) to another dimension where he could give new life to a victim of the Diamond Island stampede. Mobile networks have been incorporated into the way connections are dreamt and imagined. In particular, I have documented in this chapter how mobile networks have been transformed into infrastructures of courting and finding a spouse or sexual partner in Cambodia. Through mobile networks Cambodians have been able to form bridges or ksaе (connections) to traverse the physical landscape and make connections with potential partners around the country. These connections allow young Cambodians to subvert parental authority, but new connections can also challenge the relationships young people try to develop and maintain.

The transformation of mobile networks into infrastructures of mobility is allowing Cambodians to traverse urban and rural divides and move between social and kinship identities. The bridges being created by Cambodians through mobile networks poses a challenge to how markets and communities are understood in Cambodia, which I will explore in the next chapter. Cambodian mobilities also represent a challenge to state and corporate modes of constructing knowledge about populations. Rigid methods of social classification struggle with the fluidity of mobile actors. People that straddle both urban and rural worlds tend to be recorded as merely rural residents based on census surveys that focus on village registration (Rigg 1997: 197). But in the
age of greater mobility, urban and rural categories become merged as Cambodians cross divides and switch between urban and rural identities. In chapter five and six I address how the mobilities experienced by Cambodians through mobile networks are also problematic to corporate modes of seeing the Cambodian population and determining the market for mobile networks.
Chapter 4: Networks & Market Infrastructure

Kandal Stueng is a village in Rotanak Mondul District that sits between Battambang City and the province of Pailin and the border Thailand. The village is split by the Sangkhae River that flows through it towards Battambang City and onwards to the Tonle Sap Basin. The northern side of the village is connected by dirt roads to the main market in Sdau Commune and the national road that runs through the district, which provides a route to Battambang City and other parts of the country. The southern side of the village is dependent on a narrow suspension bridge that connects it with the northern side and beyond. The bridge, which was built with the support of the Jesuit Service, opened up the southern side to settlement and farming and now represents the centre of the village. The livelihoods of villagers on the southern side are dependent on being able to traverse the bridge and move goods across it. Although narrow and un-useable by cars or large tractors it is symbolic of the mobility that has given life to the southern side. The bridge also represents the limits of mobility that the villagers face. When I asked a middle aged woman about development in the village she expressed a need for a wider bridge that could be traversed by larger vehicles, such as cars and tractors. She imagined larger vehicles traversing the bridge to move her family’s produce more easily. A future she imagined and hoped for was framed in terms of mobility and her family’s ability to access and participate in markets.

The suspension bridge was the only physical bridge the village had, but there were many other bridges between people and places that were built, maintained and extended through mobile networks. Evidence of these bridges was littered throughout the village as phone numbers inscribed on the walls of houses and on the pillars and beams that support them. I first took notice of these bridges when I passed a wooden house with a thatched roof on the far southern
extremity of the village. I noticed a mobile number written across the face of the house and stopped to ask whose number it was. The family that was gathered in front of the house quickly answered, “bong-b’oun”, which means siblings or relatives, but is also used to refer to people who someone has a close social connection to. When further questioned they explained that the number belonged to a family that had lived in the village but had recently moved to Siem Reap. The number inscribed on the wall of the house was symbolic of the on-going presence of the family in their lives. The number also represented a world far beyond the river that limited their physical mobility.

The woman that imagined a future with a wider bridge also kept numbers. She and her husband had inscribed numbers onto the beams under their house where the family gathered, ate and spent most of their free time. I asked them to guide me through these numbers. At first they pointed to numbers of bong-b’oun that lived outside the village. I then started pointing to other numbers that were unmarked. The couple squabbled over whose they were, but finally agreed and outlined a list of produce traders as well as seed and fertilizer suppliers. They were entirely unmarked since their literacy was limited to numbers, but their semi-literate status did not hold them back from thinking about the future and how they could better participate in the market. The family had young children as well as an older son, and had saved wood for over 10 years to build a new house. The market and mobility was fundamental to how they were constructing their future and mobile networks had become part of the infrastructure for experiencing mobility and participating in the market.

Their neighbour was less involved in trade, but he too was constructing a future in the village. He was a retired policeman from Banteay Menchey Province and had settled in the village with his
wife who had inherited some land there. I interviewed him under his house where he proudly displayed his polished boots. On the wall hung a black board that he was using to teach his daughter basic math equations. Like his new neighbours he gladly guided me through the numbers that he had written onto the beams under his house. He began with his sister that lived in Banan district and the number of one of his police buddies back in Banteay Meanchey. Unlike his neighbours he also kept the number of the local police and the village headman in case he ran into any trouble. Finally, he glowed with pride as he introduced me to the number of an old friend, who had become a bodyguard for Chea Sim (then head of the Cambodia’s People Party). These numbers helped form his identity in the village and were signal of the connections he had well beyond the village. He explained to me that mobile phones and networks were particularly important in Kandal Steung because it was a village that is “bpee p’saa ch’ngai” (far from the market). Remoteness was gauged in terms of distance from markets and he framed mobile phones and networks as infrastructure that reduces distance and act as a bridge over rivers and muddy roads.

During interviews with villagers there was a consistent message that mobile phones and networks help them connect with distant family and relatives. A common statement provided by respondents was, "the phone makes it easier to connect with family." Enhanced mobility with kinship relations is, I suggest, the primary value that Cambodians associate with mobile phones and networks. In the 1970s, war and revolution split-up families, but more recently the search for land and work has continued to create distance with kinship relations. Mobile networks ameliorate the physical separation created through war and economic pressures. My ethnography thus draws a parallel with ethnographic studies from other parts of the world that
highlight how mobile phones and networks are used to mitigate and manage distance within
kinship relations (Skuse & Cousins 2007; Slater & Kwami 2005).

This research indicates strongly that mobile networks have been turned into infrastructures of
kinship and social connection, but in this chapter I focus on how mobile networks have been
turned into infrastructure of market and economic life. I illustrate how mobile networks have
become a fundamental infrastructure of the new economy and central to how Cambodians
pursue livelihood and market orientated projects. As is the case within kinship and social
relations, mobile networks have been turned into bridges for overcoming physical barriers and
reducing distance within market connections. And, in similar fashion to how young Cambodians
are building new bridges and configuring new social and kinship connections across the country,
Cambodians are configuring new market and economic networks through the infrastructure of
mobile networks.

Since mobile networks are bringing markets close to Cambodians there is an indication that they
could be playing a role in alleviating poverty. The relationship between poverty and the distance
to markets is well documented in studies of development in rural areas of Southeast Asia (Rigg
1997). More specifically in Cambodia, greater connectivity to all-weather roads and ease of
access to markets has been evaluated as a strong indicator of relative prosperity (World Bank
2007). Communities that are more mobile and less physically constrained are more prosperous
(Fitzgerald & Sovannarith 2007). Therefore, I ask in this chapter how mobile networks could be
driving rural development and alleviating poverty by lifting some of the challenges associated
with remoteness.
While the previous chapter was concerned largely with social and kinship orientated projects pursued through mobile networks this chapter focuses on livelihood and market-based projects. However, I argue that these projects are in many respects indistinguishable. By examining how they are entwined I challenge the narrative that marketization and monetization of society threatens community-based relations. Through mobile networks money and markets are indeed becoming more mobile and fluid. Yet, market and monetary transactions that are made possible through mobile networks hinge on the existence or cultivation of trust and bonds of solidarity. Rather than community being threatened, I argue that communities are being reconfigured through increased mobility and more fluid markets (Walker 2009, 2012).

**Mobile Networks as Market Infrastructure**

Mobile networks have become a ubiquitous feature of the infrastructure of market life in Cambodia. They have become so entwined in market relations that for many of my informants it was difficult to imagine a time when mobile phones and networks did not exist. One *brahok* (fermented fish) trader claimed that she would die without her mobile phone. Indeed, very little occurs without the supporting infrastructure of mobile networks. In this section I will outline the diverse ways mobile networks have been transformed into the infrastructure of market life through which livelihood and market projects are pursued.

**Finding Work & Labour Market Power Relations**

The mobile networks have become an important part of the infrastructure for selling and recruiting labour in rural Cambodia. Fitzgerald and Sovannarith (2007) demonstrate that selling labour and work migration is the major or primary source of many rural household incomes. Thus,
the process of finding work is significant in the lives of rural Cambodians and this research indicates that mobile networks have been used to transform this process in recent years.

The maize harvesting season in Rottanak Mondul district provides job opportunities for picking, processing and packing maize. A large open field in front of the main temple in Sdau was used by several maize traders. After a process of stripping the corn kernels by machine, the maize is dried in the field before being packed into bags and loaded onto trucks for shipping to buyers in Thailand, Phnom Penh and Vietnam. On one occasion I visited a section of the field that was bustling with a group of young people who were packing corn in the hessian bags and loading them onto a waiting truck. They were mostly from the neighbouring Banan district, but others were from further afield. I asked them how they found the work and connected with the female trader that had hired them. They all responded in unison, "dtaam dtoo-ra-sup" (by telephone).

Battambang like other provinces in the North West has a high rate of work migration to Thailand. One of the families in Kandal Steung village had a young male member who had paid US$150 to a recruiter to find work in Thailand. Upon receiving a call from the recruiter he would leave the village and head to the border. Unfortunately, at that time three months had passed and a call had not come, but they considered it was better than waiting at the border.

Philimore is a recruitment company that at the time of field research was sending young Cambodian workers to Thailand and Malaysia. It advertised phone numbers of their local representatives on local radio stations. I met one of these representatives for Battambang and Bantey Menchey in his modest house on the road connecting Battambang with Pailin. He explained that once he received a call from a prospective worker he would travel to their village
to introduce work opportunities to them and their family. He complained about the recent bad press that recruitment companies gained. He insisted that the reports of Cambodian maids being abused in Malaysia were rare cases. However, the abuse of maids at the hands of their employers is well documented.

In relationships between employers and employees, access to social and kinship networks through mobile networks figure strongly in power struggles. With a mobile phone and a connection to a mobile network a migrant can mitigate some of the dangers of being isolated from supporting kinship and community relations. In reported cases of abuse of Cambodian maids it has been the maid’s parents or other family members that enlisted the support of local human rights organisations after receiving calls from their daughter or sister reporting abuse at the hands of their employers in Malaysia (Nimol 2012 Jan 18; Kunthear & Boyle 2011 Mar 30).

Migrant worker recruitment agencies are aware of how the social and kinship networks are a source of worker empowerment. Killias (2010: 901) describes how domestic worker recruitment agencies in Malaysia deliberately isolate migrants in week-long training sessions upon arrival by stripping them of the contacts details of the friends and kinship ties in Malaysia. This hampers the migrant’s ability to draw on transnational social and kinship ties and use them as mediums for labour organization. There is evidence of a similar approach to disempowering migrant workers in Cambodia. At a migrant worker training centre in Phnom Penh, which was run by a recruitment firm subject to considerable bad press, there were conflicting claims about phone use. A trainee claimed that mobile phone use was prohibited, while an official at the company claimed that trainees could leave the facility at any time if they called their parents to pick them up (Somphose et al 2011 Oct 20).
Non-government organisations that support the safety of migrant workers are known to run emergency call services, which migrants can call if they experience abuse and danger (Ling & Donner 2009). I think it is questionable the degree to which these services are known and used by migrants. Evidence from cases in Cambodia indicate that capacity to connect with relatives though mobile networks might be more important in strategies migrant workers, such as maids, deploy to navigate risk and dangers in the workplace.

Within the domestic factory setting it is highly probable there is a similar power dynamic over access to social and kinship connections though mobile networks. Law and Peng’s (2008) research among migrant workers in China demonstrates that mobile networks are infrastructure for migrant workers to maintain close contact with family members while also building new social networks among colleagues that have moved to new factories in search of better conditions. This expansion of social networks facilitates the flow of job information, which expands the choices available to workers and enable them to move more easily from one factory to another. Consequently, they increase their bargaining power. The proprietors of factories, in contrast, complain that their ability to keep salaries low without losing staff was limited by the free flow of information made possible through mobile networks. The information flowing through social networks empowers workers to identify and imagine new opportunities. However, Law and Peng also point out that the speedy and expansive flow of information through social networks makes it easier for factory proprietors to recruit new staff. Derks reiterates this point within the Cambodian context in her ethnography of migrant workers in Phnom Penh. She argues that “flexibility and mobility” serves “the interests of factory managers, brothel owners, and local authorities by assuring cheap, controlled and easily disposable labour and services” (Derks 2008: 140-141). However, Derks (2008: 141) also stresses that “flexibility and mobility” are utilized by
woman in their “strategies for dealing with exploitative conditions and new opportunities in the
city.” Therefore, mobile networks can be seen as infrastructures of “flexibility and mobility” for
both employers and employees. This helps explain why Wallis (2013: 174) argues that the social
connections cultivated through mobile networks help labour migrants in China experience lateral
movement between workplaces, but tend not to support greater income generation.

**Transporting Goods**

Markets of labour and goods are dependent on transportation infrastructure that includes roads,
trucks, boats, rivers and ports. As in most parts of the world, economic life in Cambodia could not
function without transportation infrastructure. In recent years there has been tremendous
improvement in the quality of roads that connect people and markets in rural Cambodia, which
are unquestionably improving the capacity of rural Cambodians to trade and participate in
markets. Alongside the spread of roads, especially sealed all-weather roads, rural transportation
infrastructure has been significantly improved through the growth of mobile network
infrastructure, which has been turned into a core element in the coordination of transportation.

I became acutely aware of the role of phones and mobile networks when I made my way to a far
outcrop on a large flood plain connected to the Mekong River in Kandal Province near Phnom
Penh. There was a small makeshift stall selling drinks and snacks to fisherman and traders that
landed on the outcrop. I sat there with the owner of the stall and her son and watched a fish
trader that had been out collecting fish from the many fishermen working on the floodplain that
day. When he pulled his boat onto the outcrop another man simultaneously arrived by motorbike
with a large basket on the back. They then went about weighing the fish. Money changed hands
and they both went on their way. It was a form of efficiency that could have only been achieved
by coordination through a mobile network. This example mirrors the study of fisherman in Kerala, India, in which fishing boats made contact with traders working at different ports to negotiate prices and deliver their catch (Abrahams 2007).

Markets are dependent on mobility and particularly the mobility of goods. The narrowness of a bridge in Kandal Steung limited what and how much could be traded and who would come to the village to trade. Mobile networks do not overcome these barriers, but they do enable transportation to be coordinated at a distance with specialist transporters such as trucking and bus companies, boat owners, and private taxi, tuktuk and motorbike taxi drivers.

Taxi services provide a critical service for market traders in Rotanak Mondul as well as the rest of the country. Above the standard service of moving people, they provide a courier service between provincial and district centres, and their surrounding communes and villages. Drivers tend to specialize in specific routes such as between Battambang City and Sdau market or to particular remote villages. Seats are sold on an individual basis with six people in the back, two in the front passenger seat and an additional person sharing the seat with the driver. For high volume routes such as between Phnom Penh and the nearby provinces of Kandal, Takeo and Prey Veng, Toyota Camrys are replaced by small vans with a greater load capacity. Taxi drivers that specialize in particular routes take on an important role within their communities as movers of people, goods and money.

At the Sdau market in Rotanak Mondul district I interviewed a vegetable vendor, who was pregnant and could no longer travel to the main market in Battambang. Instead, she made orders over the phone with traders in Battambang she already knew and coordinated with taxi drivers to
pick up the goods to deliver them to her in Sdau. In Battambang she knew four or five wholesale vendors and more than five taxi drivers who could pick up goods for her. If there was an issue with the quality of the goods or their volume she would negotiate a discount that would be settled at a later date with a taxi driver being the cash transfer facilitator.

The wholesale market in Battambang, like most provincial towns, operates from about midnight to daybreak. Travel at this time is considered dangerous, especially for female market vendors, therefore taxi services, phones and mobile networks alleviate some of these dangers and allow female vendors to participate in regional market activities. It was apparent that market life in rural areas depended heavily on taxi drivers, reliable Toyota Camry sedans and networks of roads and mobile connections.

Bus companies also perform a function of transporting small quantities of goods between major markets. To overcome the lack of an effective official system of identifying people, bus companies use the novel idea of identifying the recipients of goods by their phone number. On numerous bus journeys around Cambodia I shared the space with parcels and bags of produce. The goods would be labelled not with an address or the name of a recipient but with a phone number of the intended recipient. Upon arrival, the bus company would call the recipient to inform them that their goods had arrived. The recipient would then visit the drop off point and identity themselves by making a phone call to demonstrate that their phone number is the same as the number marked on the goods. Samples of goods for trade are moved in the same manner.
Transmitting Money

When trade is conducted at a distance there is a need for some form of infrastructure for remitting and receiving payments. Despite the rapid growth of the banking sector in Cambodia the majority of Cambodians are still without a bank account and are classed as “unbanked”. There has been attention given to mobile banking services in the developed world as a solution for addressing the financial remittance and saving needs of unbanked populations. Safaricom’s M-Pesa service in Kenya is presented as evidence of how corporate mobile banking services can support the financial service needs of the poor (Donner 2009, Buku & Meredith 2012). In Cambodia, the ANZ Bank of Australia established a mobile banking service called WING that runs across several mobile networks. WING has received attention from researchers interested in the impact of mobile banking services on improving markets in Cambodia (Vong, Fang & Insu 2012). However, these researchers and the donors and investors in the corporate mobile banking services sector have neglected to recognize or give attention to how Cambodians have acted independently of them to construct an effective informal infrastructure for transmitting money that utilizes mobile and other telecommunication networks.

In Cambodian infrastructures for transmitting money includes local taxi services that run between villages and major markets play an important role. When the maize crop was ready for harvest on Narith’s family plot of land in the Badak Tboang village on the northern side of Rotanak Mondul District, Narith’s brother arranged money for their father to pay labourers to assist with the harvest. Narith had the responsibility to send the money to their father using a local taxi service. The taxi operator was well known in the village and it would be a simple case of his father visiting the taxi driver’s house to collect the money, but on this occasion the process was complicated since his father had once again sold his phone at the local market. So, Narith
waited several days until he received a call from his father who used a local vendor of phone calls. Narith then confirmed that he would send the money by taxi and specified the time he could collect it from the driver. Delivering an envelope of cash between the Battambang and his village incurs a small fee of around 5,000 riel (approximately US$1.25). The people who I discussed this service with saw little risk in it since the taxi driver was a person whom they and their family members had experienced numerous journeys together with.

For long distance transfers of money such as between Battambang City and Phnom Penh, or other major towns, money transfer agents provide a service at shops called money exchange or money sending shops. In Battambang they are concentrated around the Psar Nat market and in Phnom Penh they are located around the Psar Olympic market. Money transfer agents are typically ethnic Chinese who provide currency exchange services while also acting as gold and silver merchants. They belong to extensive networks of money exchange and transfer agents scattered around the country. Their standard charge is a modest fee of US$1.00 for transfers of up to US$1000. Each agent is identified by a two digit number such as 55, 99, or 73 and can be known for varying degrees of service and the freshness of the notes they supply.

The process is simple and allows anyone with a mobile phone or access to one to be a recipient of funds without any official identification. The sender issues cash to the agent and provides the name and phone number of the recipient. A written or printed receipt of the transaction is then provided. The sender then calls the recipient to notify them of which shop and at which market they can pick up the money. Like the bus courier system, the recipient identifies themself by making or receiving a phone call.
International money transfer services are also performed by agents who belong to informal money transfer networks. Battambang, like other provinces in the North West such as Banteay Meanchey and Siem Reap, have a high rate of work migration to Thailand, which creates demand for cross border remittance services. Providers of such services are usually located around a main market in the provincial centre and can be identified by their VOIP phone services. These shops are fitted with small booths with a computer loaded with Skype or a similar service. While visiting Bangkok I tested the service by transferring money to Narith. I initially sent him an SMS requesting that he call me via the VOIP service. Once he was in the shop he called me and let me know the Thai bank account of the shop owner. I then dropped by an ATM of the shop owner’s bank. Upon depositing money I sent an SMS to Narith with details of the amount deposited and the transaction time. He then showed these details to the shop keeper who checked it against her Thai bank account using the bank’s online banking service. She correlated the amount and transaction time with her bank details and then handed over the amount to Narith with 30 baht deducted for the service. From the time I deposited the money the process took a matter of minutes. Narith commented that the fee was considerably less than what he paid as a migrant worker in Bangkok. He recalled that a transfer agent would come to his lodging or workplace to pick up remittance money and the fee was upward of 100 baht per 1000 baht transferred. For transferring money between Thailand and the USA there are similar services offered, which charge US$30 for every US$1000 dollars transferred. This is comparable with standard international electronic bank transfer rates.

An additional method of transferring money involves pre-paid mobile phone credit, which has become a currency in itself that can be transferred around the country. An example of this practice comes from Chea, a university teacher in Battambang. After some of his more
prosperous students left Battambang to study in Phnom Penh they would occasionally call on him to help them with assignments. This usually involved doing the entire assignment and emailing it to them upon completion. For this service they would transfer him phone credit in the form of numbers of pre-paid scratch cards, which he could either load onto his own phone or take to a local phone shop where he could exchange them for cash minus approximately 10%.

**Mobile Phone Enterprises**

Converting phone credit to cash and vice versa is just one of the services that are performed by phone shops and small stores, which are important elements of the infrastructures of local market and economic life. Sokhem, despite his modest means, ran one of these stores. He acted as an informal banker who exchanges phone credit for cash and provided a number of other mobile network related services. Sokhem came from the slums around the old Battambang Train Station and when he married a woman from the area his mother let him take over her small shop situated a few metres from a railway crossing. The shop was made of corrugated iron sheets and he slept in the back of it with his wife and young baby. Upon taking over the shop he quickly added a range of other services to the standard assortment of gasoline, drinks, snacks, and cigarettes. These services included a mobile phone repair service, mobile credit sales and exchange service, as well as a mobile phone pawning service. During an evening I spent with Sokhem one customer from the area came by to take back his mini-SD card that he had pawned. He had to pay 10,000 riel (US$2.50), which was the amount he borrowed, plus 1300 riel for the week he pawned it. This was according to Sokhem the standard rule for phone pawn shops like his. He explained that rarely would anyone pawn something for more than 20,000 riel (approx. US$5.00) since it could be too difficult to pay back and they would risk losing their phone or phone accessory.
Sokhem had a keen eye for business and the needs of his community. He recognized that one of those needs was entertainment and performed the service of loading music videos onto mobile phones. I refer to this service as a video music kiosk. It is a common service operated by mostly men, who set up a computer at markets or by the side of the road and load music videos onto the phones. For people in his community these phones were often cheap Chinese model phones with music and video playing functions. In his shop he had a basic PC on which he stored an extensive selection of music videos from Cambodia and Thailand. He also kept a printed catalogue for his customers to peruse. To facilitate the process of searching and up-loading music to mobile phones and mini-SD cards he purchased a locally developed Khmer language computer program that allowed him to input music video titles, singer names and their production company in Khmer and then conduct searches in Khmer. He praised the program for how it made his music video kiosk business easy to run.

In the top right corner of the program I noticed the name, Vithu, and a mobile number. On returning to Phnom Penh I called Vithu and we met to discuss his business and the development of this software. While Vithu was studying computer programming at a university in Phnom Penh a friend of his that ran a small music video loading service asked him to develop a program in Khmer language to make it easier to organize music video files and transfer them to mobile phones. He obliged and quickly word spread to other music video kiosk operators. He subsequently developed improved versions. By the time I met him he had developed the fourth version of his program and proudly claimed that there wasn’t a province in Cambodia without someone running a small business using his software. Demand for the software was initially strongest in Phnom Penh and surrounding provinces, but eventually demand emerged in some of the more remote provinces such as Oddar Meanchey, Prey Vihear, and Kratie.
Information about the software flowed by word of mouth from one kiosk operator to another. The software was copied between each operator and code was required to unlock the program after it had been copied, which Vithu sent to the user upon being paid. For the standard version he charged US$15 and for the latest version he charged US$25. He also developed an incentive scheme for existing customers to introduce his program to other operators. As part of the program package, he offered training to customers on how to use the software, which he provided at his residence in Phnom Penh or over the phone. Vithu accepted payment for the software by a variety of means such as WING and money transfer agents at the Olympic market, but mostly his customers preferred to make payment by sending him a text message containing codes of Cellcard calling credit, which he then transferred to cash at a local phone shop.

Advertising Phone Numbers

I was able to find Vithu because he published his mobile network phone number. The circulation of his phone numbers was critical to the expansion of his business. The publishing of phone numbers and their circulation has come to play an important role in the expansion and operation of small businesses. Rotanak Mondul is without any public water supply and privately run water trucks supply water to villages throughout the district. These water trucks were plastered with the phone numbers of the driver so local residents could arrange water to be delivered to their residence or business. Other businesses such as operators of rice and maize threshing machines marked their machines with their phone numbers. Even collectors of recyclables on the streets of Battambang City paint their carts with their phone numbers. These small business operators who promote their phone numbers are quite similar to the young people who publish their numbers in the personal pages of gossip magazines. They are seeking to connect and expand their own network in order to enhance their livelihood opportunities.
Price Checking

Through mobile networks Cambodians are able to perform price checking, which is critical activity in market life. An elderly family friend of Chea used his children’s phones to call his relatives in Moung Russei District at harvest time to check what prices they were being offered for their rice in order to compare them with the local rice miller in Ek Phnom. The married couple in Kandal Steung village who squabbled over the numbers on the beams under their house called traders in Sdau and Banan before settling on a buyer. One of their neighbours no longer had a phone after their eldest daughter dropped it in a pot of soup, but they also kept numbers of traders on the beams under their house and borrowed their neighbours phone to call them to check and compare prices.

Mobile Networks and a Brahok Market

Many of the elements of market infrastructures supported by mobile networks were evident at the Ek Phnom Brahok (fermented fish paste) market. It is one of the main features of the Ek Phnom District, which is near Battambang City along the Sangkhae River. I visited the market on several occasions to talk to the traders that lived and worked there. The traders were also active in fermenting and drying fish. Most of the traders lived in a row of wooden shop houses behind the fish processing area and conducted business in an open area at the front of each house. Many of the traders maintained a chalk board on which they wrote essential information related to their business, especially the phone numbers of suppliers and customers. Life at the brahok market had become largely dependent on mobile networks to connect with suppliers and customers, coordinating product shipment, and making price inquiries. One female trader expanded her business by travelling around the markets in the Northeast and distributing her phone number to potential customers, claimed that “these days I would die without a phone”.

Chapter 4: Networks & Market Infrastructure

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Her trading network was glued together through mobile networks. Without a phone she would be disconnected from the network that supported her livelihood.

The head of the market was a polite and welcoming elderly man of Chinese descent. He had begun processing and trading *brahok* in the 1980s and could recall significant changes that had occurred in the area. He recalled how he regularly travelled the Sangkae River to meet *brahok* and fish traders on the Tonle Sap Lake, but since the development of mobile network infrastructure, particularly the extension of coverage to the lake he no longer needed to travel. He arranges shipments of goods at a distance over the phone and used the Exchange Shop 73 in Battambang City to remit money to suppliers in other parts of the country. Over time he had developed a network of suppliers and buyers around the country and across the border in Thailand, but seldom needed to meet them face to face anymore. He could arrange transport and negotiate orders all over the phone through mobile networks.

Mobile network were being used to make rural market life more efficient and these efficiencies were evident at the *brahok* market. Mobile network infrastructure is valued and embraced precisely because it has been transformed by Cambodians into the infrastructure for remote areas to reach out to markets and participate in them more effectively. With a mobile phone in hand and a network connection, Cambodians can transmit and receive market information, remit money over distance and coordinate the transportation of goods. Mobile network infrastructure, when extended to rural and remote areas, can address to an extent the spatial component of poverty that holds back development (Rigg 1997: 209). In this regard, mobile network infrastructure should be seen like roads, health care and education as foundational infrastructures of development. Equally, an absence of telecommunications infrastructure should...
be understood as undermining equitable participation in markets and as a driver of unequal
development.

**Infrastructures of Trust and Solidarity**

Above I have described how mobile network infrastructure has been turned into market
infrastructures of livelihood and economic projects. With a mobile phone in hand and network
access Cambodians are accelerating the speed and intensity of market interactions and
expanding the shape of markets they participate in. Thus, on the face of it mobile networks are
strengthening the institutions of money and markets in society. These are institutions that are
associated with detachment and alienation in capitalist societies (Hart 2005). Furthermore,
mobile networks are being used by Cambodia to support market participation at a distance and
reduce the need for face-to-face interaction. The strengthening of money and markets and the
lessening of face to face contact could be an indication of the atomization of society and a
reduction in social bonds such as trust and solidarity. However, this ethnography indicates that
market relations that involve physical distance hinge on trust. Consequently, the trade conducted
at distance should be seen to represent the existence of trust.

Trust has been an important element of trade in Cambodia. According to Derks’ (2008: 132),
ethnography of market life buying on credit was common place and was referred to as *tin-cue*,
which literally means “buying on trust”. Respondents within my ethnography also referred to
giving credit or giving trust. A rice trader bluntly explained to me, "If we cannot trust each other, I
cannot risk giving credit." The rice vendor stressed explicitly that trust and credit is
indistinguishable. What she was less explicit about is that trust is embedded in the long distance
transactions that she conducted with her suppliers and customers through mobile networks.
Trust and the giving of credit are indispensable to market relations in Cambodia when distance is involved. Invariably some element of credit and trust is at play in trade that is coordinated at a distance since distance creates time delays between ordering and delivery of goods and between the payment of goods and its delivery. Within the informal sector the need for trust is compounded by an absence of legal guarantees such as a bank issued “letter of credit”.

Furthermore, trust is an essential element of informal money transfer operations, be they conducted by Chinese money transfer agents or taxi drivers delivering envelopes of cash. Trust is necessary within relationships between vendors and transporters of goods. It is required when a buyer and seller agree to trade over the phone since they must have confidence that each party will deliver on their promise.

The role of trust in trading relations that are maintained and managed through mobile networks has gained attention in other territories. Molony’s (2007) study of mobile phone usage by micro and small enterprises in Tanzania demonstrated that while mobile phone usage is being used to facilitate trade there remained a trust deficit that could only be addressed through face to face contact. In contrast, Overå illustrates that in Ghana while mobile phones were being “used to strengthen existing trader networks, they can also be useful in initiating new relations with customers” (2006: 1309). As Overå observed in Ghana, I found that Cambodians were enthusiastic to develop new connections and trust through mobile networks and face-to-face contact was not a pre-requisite for establishing trust.

Zucker (2011: 95) describes that trust in Cambodia means “having confidence in someone or something”. Confidence is developed through monitoring the behaviour of others to gauge their
“predictability, reliability, honesty and transparency” (2011:100). However, she also indicates a willingness among the adventurous to take a “leap of faith” based on a face-to-face encounter. In the previous chapter, I illustrated leaps of faith being taken over the phone in pursuit of love and sex and it was also evident that they were being taken over the phone to achieve livelihood objectives. *Brahok* (fermented fish paste) and rice traders that I interviewed claimed to have developed trading relations with suppliers and buyers who they had never met face-to-face. The publishing of numbers on bags of rice, or in the corner of the screen of a computer program can be the source of new connections just as the sharing of numbers within a community of people.

When Cambodians take the initiative to develop a market relationship based on these connections they are choosing to take a leap of faith. There is always some risk involved, but there is evidently an enthusiasm to explore new market possibilities just as young people demonstrate an eagerness to use mobile networks to establish new connections as they pursue sexual and courting projects.

Market relations configured and maintained through mobile networks depend on degrees of trust and confidence existing between connected parties. Through using mobile networks to build and maintain market connections Cambodians turn the networks into infrastructures for expressing social bonds, solidarity and affinity. This transformative process occurs at the level of motorbike taxi drivers accepting delayed payment for rides they give to clients or at the level of a wholesale trader who accepts delayed payments from buyers. When transactions are negotiated, transport arranged, and money remitted through mobile networks, layers of trust and social connection are developed, expressed and confirmed.
The buying and selling of pre-paid phone credit provides regular occasions for trust and social bonds to be expressed and cultivated. Credit vendors maintain special accounts with mobile network providers from which they can digitally transfer credit without issuing scratch cards. They only need to know the phone number of the credit purchaser. Narith vividly displayed his bond with one street side phone credit vendor by calling out “two dollars” as we drove past. He had confidence that she would load credit to his phone and she had confidence that he would pay later. Pre-paid credit buyers would drop by local vendors such as Sokhem’s shop to deliver money and write down their number in case the vendor didn’t already know it. The buyer would then leave and the vendor would add credit later when time was available. These transactions are small expressions of confidence in one another that cement bonds between people.

SIM card and network selection is an additional medium to express and cultivate bonds of trust. When Chariya explained the expression “many SIM cards many hearts” she also told me a comparable expression, “many SIM cards many customers”. At first she suggested that it referred to popular sex workers and their need to keep multiple SIM cards for special sponsors, but then she explained the expression in the context of her brother who was a distribution sales agent for Unilever at a major market in the Steung Meanchey district of Phnom Penh. He considered it necessary to maintain SIM cards of the same mobile networks as his clients. This entailed keeping five different SIM cards. Sophea, who I mentioned in the previous chapter, kept nine SIM cards to cover all her personal and business contacts. The elderly head of the brahok market also stressed the need to use the same networks as his customers. “I will lose my customers if I don’t use the same network as them,” he explained. While economic utility plays a role in the choice of SIM cards, I suggest, the strong emphasis on using the same SIM is related to the importance of
establishing trust within trading and market relations. Usage of the same network expresses familiarity, affinity, and possible solidarity, which contributes to the formation of bonds of trust.

The personalized character of Cambodian market relations supported by mobile networks is consistent with the culture of market life that pre-dates the spread of mobile network connectivity. Derks’ ethnography of market vendors in Phnom Penh (2008: 135) highlights how an emphasis is placed on developing personalized relations between buyers and sellers. Loyalty is an important attribute that market interlockers look for in each other. Derks also illustrates that trust is a feature of the relationship between market vendors. Trust and solidarity is expressed in the physical marketplace by the common practice of overseeing the stalls of neighbours while they are absent or attending to an errand. At a more complex level trust is at play in tontine schemes, which are informal rotating credit schemes popular among market vendors. A tontine scheme involves a group of members contributing money to a fund on a weekly or monthly basis. Members take out loans from the fund according to the order of bids members make on the interest rates they are willing to pay. These schemes rely heavily on trust in the group leader who is entrusted with the money and on trust in the borrower. Tontine schemes and other informal practices are evidence of trust in market place relations, but this does not mean that markets are devoid of competition. By the same token, it doesn’t mean that monetary transactions strip human relations of trust, solidarity, and general principles of community.

This ethnography demonstrates that money and distance within market relations can symbolically represent the existence of social bonds of trust, solidarity and affinity. It further demonstrates that while mobile networks are infrastructures that support the extension of distance in market relations there is no indication that they are detracting from their personal
character of market relations or reducing the role of trust. Quite the contrary, market
colorations configured and maintained through mobile networks are underpinned by the
personalization of market relations and the cultivation of trust. Moreover, it is mobile networks
as infrastructures of social connection which makes expanded market connectivity possible.

Network Infrastructure & Community

By examining how mobile networks have become the infrastructures for market life and the
pursuit livelihood projects I present an optimistic version of society and community in Cambodia.
Through the prism of mobile network connections I identify a propensity to trust and reach out
to build new connections in both social and market domains. This contrasts with a prominent
view of community in contemporary Cambodia. Ledgerwood (2011: 122) highlights that
contemporary observers of Cambodia have been “more inclined to focus on conflict and distrust”.
Moreover, scholarship on Cambodia has sought to understand how communities have re-
emerged and become settled after decades of social upheaval and dramatic population shifts.
Population mobility has thus been positioned in opposition to community. Migration during a
time of war and revolution forced on the population, but as peace has dawned on Cambodia
there continues to be migration driven by economic pressures. Thus, I question where my
analysis fits into various versions of social and economic change in Cambodia and to construct a
framework for understanding the relationship between mobile networks and social change.

Versions of social change in Cambodia generated from research about how individuals, families
and communities develop livelihoods and navigate poverty in contemporary Cambodia, tend to
illuminate the central importance of mobility. In the form of work migration, mobility is a
medium for supporting households and communities (Fitzgerald & Sovannarith 2007; Derks
2008). Poverty is related to remoteness from main roads and markets while improvements in community livelihoods and prosperity are linked with proximity to transportation routes and the ability of household members to sell their labour by migrating to Phnom Penh or to Thailand (Fitzgerald & Sovannarith 2007). Ledgerwood (2011) also notes that the material quality of life in the village of Sway, the site of May Ebihara’s ethnography in the 1960s, improved through cash income supplied by residents going to work in Phnom Penh or through remittances from relatives living abroad. These studies indicate that mobility in the form of work migration and the resulting remittances play a central role in improving the quality of life in rural areas. Even the reconstruction of temples has been supported by migrant workers and refugees remitting money (Ledgerwood 1998; Keyes 2011). Ledgerwood (1998: 140) argues that by reconstructing temples Cambodians are “building the hearts of their communities and at the same time gaining Buddhist merit for this life and the next.” Yet this process has been dependent on community members moving to generate wealth in locations far-removed from the physical temple. These portrayals of change indicate that while mobile networks are enhancing mobility, they are not necessarily a threat to local communities and could be enhancing the capacity of Cambodians to participate in and support their communities from a distance.

A more pessimistic version of social change focuses on how Cambodia has undergone a process of "neo-liberal marketization" (Hughes & Un 2011: 25). Through this process the market has been disembedded from society and market exchange has been raised to an end in itself, which has destroyed older coping strategies and marginalized the poorest. This picture is reinforced in Ovensen, Trankell and Öjendal’s (1996) report, “Every Household is an Island”. It describes how the “liberalization of the economy and the consequent monetization of most social relations beyond the nuclear family” have led to further deterioration of community relations (Ovensen et
al. 1996: 67). However, other scholars are less negative. Sedra (2011) argues that traditional community forms of mutual assistance and reciprocity have re-emerged and continue to play a role in rural society in the aftermath of war and revolution. Yet, Sedra (2011: 161) suggests that involvement in “the cash economy” could be decreasing “the scope of mutual help”. This raises the question whether the proliferation of mobile network connections, which are accelerating market participation and the mobility of money, could be threatening traditional community structures, older coping strategies and causing the deterioration of community relations. My research does not support this perspective. The role of money and markets in the new economy is rising, but this rise is being supported by infrastructures of mobility such as roads and mobile networks that are expanding distance within market relations. As such, these relations increasingly depend on the existence and cultivation of trust. Therefore, what is more likely to be occurring is not the deterioration of community, but the reconfiguration of the networks of social and market connection through which community is experienced.

To more fully comprehend community and change in Cambodia’s new economy of greater connectivity I suggest there is a need for a re-examination of the place of money, markets and networks in Cambodian history. The pessimistic version of change in relation to markets and mobility in Cambodia is rooted in a historical picture of money and markets existing on the periphery of Cambodian society. In the newly independent Cambodia of the 1950s and 60s Sihanouk painted a picture of contented Cambodian peasants in lush rice paddies who were able to pick fruits from trees at will (Derks 2008: 30). It was a picture of changelessness that Chandler’s (2008) account of Cambodian history challenges. However, Chandler also projects the view of a subsistent rural population. In reference to 17th century Cambodia, Chandler (2008: 121) writes, "Cambodia had a subsistence economy; most of its people spent most of their time
growing rice, with men and woman working side by side." When there was a need to engage in trade, Cambodians relied on barter. According to Chandler, only the elites and the Chinese-dominated trading class had a need for money. Based on this version of history, Cambodia is undergoing a period of economic and social change that involves the rise of markets and monetary relations among the rural population. This narrative of subsistence is, I suggest, both questionable and unhelpful in terms of assessing change in contemporary Cambodia.

While Chandler reinforces the subsistence narrative he also provides significant evidence that indicates subsistence may be a weak historical characterization of rural communities in Cambodia. By drawing on the memoir of Zhou Daguan, Chinese envoy to Angkor at the end of the 13th century, Chandler (2008: 87) indicates that markets were a prominent feature of life in the Angkor period. Chandler (2008: 120) further describes ethnic and spatial divisions that give additional weight to the prevalence of trade and markets within rural Cambodia. The ethnic Khmer were primarily concerned with rice farming, monastic life and official duties. The ethnic Chinese handled marketing and trade activities as well as market gardening. The Muslim minority were mostly concerned with cattle trading, weaving and commercial fishing. He also makes a distinction between different kinds of villages by distinguishing rice farming villages and plantation villages. These divisions between ethnic groups and farming villages are still visible today in Cambodia. They indicate that communities have long been dependent on trade, which suggests that subsistence is a misleading label to characterize rural economies historically and in the present.

Bowie (1992) illustrates that “subsistence” has been a pervasive myth used to characterize peasant life in Southeast Asia. As a revisionist historian of the economy Bowie demonstrates that
the portrayal of rural economies as mostly subsistent, with markets existing on the periphery is a misrepresentation. The textile weavers of the 19th century Northern Thailand, who were at the centre of her study were not, she argues, part of a subsistence economy as commonly portrayed. They operated within a complex and far reaching production and trading network. In Cambodia a similar re-examination of markets and trading networks within Cambodian history would be productive since narratives of the past inform how contemporary society and processes of change are understood and interpreted. The subsistence version of Cambodian history characterizes Cambodian society as disconnected from trading networks. Accordingly, greater social and market connectivity would be novel. In contrast, a revisionist version of history may indicate that Cambodians have always been part of market and social networks that extend beyond the narrow confines of a village and the greater connectivity that comes from roads and telecommunications is just expanding and intensifying the experience of market and networks in Cambodian society rather than fundamentally changing society.

I look to Derks’ (2008) ethnography of migrant workers for a version of Cambodian society that puts market and networks at the centre of social life. With a focus on female market and street traders in Phnom Penh, Derks describes how livelihoods are experienced through markets and the network of connections that woman have and cultivate. According to Derks, markets do not necessarily stand in opposition to community but are part and parcel of social life. She draws on Alexander’s (1998) description of the “pasar system” in Java to illuminate the centrality of markets in Cambodia. The “pasar system”, which Derks calls the “psar system” in the Cambodian context, is a system of material exchanges that takes place at a multitude of sites including the physical psar (market place) and a vast number of stores around the main market. The psar
system is a network of people and places connected by social, kinship and economic links and supported by transport, financial and now telecommunications infrastructures.

Skinner’s (1964) historical ethnography of marketing structures in pre-modern China provides a framework for considering the shape and characteristics of the "psar system" as a network and how it is changing as mobile networks have been turned into supporting infrastructure. Skinner encountered some 50 years ago a dearth of ethnography on markets. He observed that the market is a neglected subject of anthropological studies of peasant and agrarian societies. According to Skinner (1964:32), anthropological accounts “distort the reality of rural social structure” by focusing on the village as a unit of analysis. Through a fascinating account of rural marketing structures he argues that “the effective social field of the peasant ... is delimited not by the narrow horizons of his village but rather by the boundaries of his standard marketing area” (1964:32). He defines this area as a spatial region within which goods and services are traded. It contains a physical market at the centre, but includes the villages and village members that associate with and visit the market on a regular basis. The standard market is linked with intermediary and higher markets. Through these linkages standard market participants are linked to the broader society. He argues that rural peasants experienced a sense of belonging to their given marketing area and thus refers to it as the standard marketing community. Peasants would come to the physical market area for entertainment and to socialize as well as to trade. In market spaces peasants would establish social alliances and share community knowledge. According to Skinner (1964: 35), spending an hour in a local teahouse "enlarged a man's circle of acquaintances and deepened his social knowledge of the other parts of the community." In pre-modern China, the market and market networks were fundamental supporting infrastructure of social and economic life.
Standard marketing communities, which can be referred to as *psar* communities in the Cambodian context, are observable throughout rural Cambodia. At the centre of Rotanak Mondul District is the main Sdau *psar*. It constitutes the centre of social life for the entire district.

Although Kandal Steung on the southern extremity of Rotanak Mondul has a general store selling cooking ingredients, fertilizer, seeds, and phone credit, villagers had a strong association with the market in Sdau. On the northern side of the district in Badak Tboang village residents had more in the way of local stores but the Sdau market still figured prominently in their economic and social lives. The Sdau market is also linked to what Skinner refers to as intermediary and major markets in Battambang town, Phnom Penh and in Poipet on the Thai border. Further, the Sdau market is a place where visitors could interact with residents of other villages and expand their social and economic network. By attending a local coffee house, or gathering at a local restaurant to watch and bet on televised boxing matches local men could learn about recent events in the community and gain crucial knowledge about commodity prices and market opportunities. This pattern of social and economic organisation is repeated around the country.

In this chapter I have provided ethnographic description of how mobile networks have been turned into the infrastructures of market life. The *psar* is rural and remote residents, such as people in remote locations such as Kandal Steung and Badak Tboang village in district of Rotanak Mondul, has been intensified. But market closeness is not the only result of increased connectivity. Through mobile connections and other forms of infrastructure, particularly roads, Cambodians are presented with new opportunities to reconfigure their market and social networks, and change the form and shape of what constitutes their standard marketing or *psar* community. Skinner (1964: 39) argued, "To the extent that the standard marketing community
contained the peasant’s life, it shaped the way he lives it.” Skinner’s statement can be rephrased as, “To the extent, the peasant’s life was contained within the marketing network and peasant’s life was shaped by the network”. This statement can be applied in the Cambodian context. As Cambodians have turned mobile networks into infrastructure of market life they are reconfiguring their own market networks and as a result reshaping their lives.

Conclusion

I have documented above how mobile networks have been turned into bridges over rivers and muddy roads that bring markets closer to rural Cambodians. They have become forms of infrastructure that mitigate the burden of distance and support Cambodians in their pursuit of livelihood and market-orientated projects. In particular, I have demonstrated how mobile networks are used to accelerate the speed of market interactions and to reconfigure the shape of Cambodian market and economic networks.

I have highlighted that mobile networks support mobility in the labour market and can be mediums for addressing workplace abuse. Moreover, I have described how Cambodians have turned mobile networks into infrastructures of trade and rural market life. Through mobile networks Cambodians conduct negotiations, check prices, and coordinate the transportation of goods at a distance. In addition, phone numbers and pre-paid phone credit are used in a variety of innovative ways to remit money at a distance. Through these practices Cambodians turn mobile networks into the infrastructures that bridge urban-rural divides while pursuing livelihood and market-orientated projects.
These projects, I argue, are not pursued in a separate realm to the social. Livelihood and market-orientated projects supported by mobile networks have a strong social dimension. Trust and social bonds of solidarity are crucial ingredients in market interactions that involve mobility and distance. Importantly, commerce conducted at a distance through mobile networks is a mechanism to express trust as much as it relies on trust. Additionally, the consumption and choice of mobile network provider is a medium for traders and market actors to express bonds between each other. The proliferation of mobile phones and network access has further provided a variety of opportunities for local enterprises. Thus, I stress that mobile networks are not merely infrastructures of market life but also community life. As such, Cambodians are not only reconfiguring their market and economic networks through mobile networks but also their communities.

In this chapter and the previous chapter I have followed a user-centred approach that emphasizes how Cambodians turn mobile networks into infrastructures for their social and economic lives, but I do not address certain fundamental structural constraints. Wallis's (2013: 175) ethnography of mobile phone use in China indicates that mobile phones merely provide "temporal" and "fleeting" forms of empowerment and do not little to address more "deeply embedded structural impediments". One of the most explicit structural divisions that must be grappled with is actual access to mobile networks. During research I came across many Cambodians who could not afford to keep a mobile phone or afford the costs of a mobile network connection. According to the National Socio-Economic Survey, twenty-three percent of households still did not have a phone of any sort in 2013 (National Institute of Statistics 2014). Despite the rapid growth Cambodia has experienced in mobile phone ownership, this statistic is alarming. Given that mobile networks have become part of the infrastructure of social and
economic life in Cambodia, disconnection from mobile networks should be seen as indication of severe disadvantage and marginalization in Cambodia's new economy.

The main critique of market-based models of development is that they do not address social and economic inequalities that are embedded in the social structure. A strong feature of social structure in Cambodia is the division between rural and urban areas and between farmers and city people (Derks 2008). This chapter has indicated that mobile networks are infrastructures that can mitigate this divide to some extent. However, by exploring how mobile network providers imagine and define the market for their network in the next chapter, I illustrate how the social structure with its urban-rural divide is reproduced and inserted into the development of mobile networks and the infrastructures of marketing mobile networks to the Cambodian populace. In other words, while rural Cambodians have embraced mobile networks as infrastructures of mobility to bridge urban and rural divides in social and market-oriented projects, the providers of mobile networks can obstruct these bridges through how they imagine and construct the market for mobile networks.
Chapter 5: Defining Network Consumers

Not long after arriving in Cambodia to conduct field research I was invited by a consumer research firm to observe a series of focus group discussions involving “semi-urban” and “rural” mobile network consumers in Kampong Cham province. The research was commissioned by a struggling network provider that was fast losing market share in the face of new competition. Part of the research was a series of focus groups in Phnom Penh and Kampong Cham that covered "urban", "semi-urban" and "rural" mobile network consumers. After observing the focus group discussions of “urban” consumers at the firm’s offices in Phnom Penh, joining the research team in Kampong Cham appeared to be a wonderful opportunity to gain early insights into how mobile phones and networks were being integrated into the lives of consumers outside of Phnom Penh. However, during this research trip I realized that categorizing consumers of mobile networks as urban, semi-urban or rural is a complex task. These categories are not self-evident and defining them is a social and political process that merges cultural and economic knowledge.

The general manager of the firm, Vanna, unintentionally highlighted for me the politics of defining mobile network consumers. He picked me up in his Camry and drove me to Kampong Cham to meet his team, who had already arrived to conduct preparations. During the drive Vanna commented on the beauty of the countryside and his desire to experience its tranquility and peace. From the road it was easy to conjure up a romantic image of rural life. The rice fields were lush and green. Khmer style wooden houses and coconut trees scattered among the rice fields contributed to this romantic image of a Cambodian rural world juxtaposed against the hustle and bustle of the city. However, when it came to talking about rural people Vanna’s tone took a turn. During the car trip and over lunch with his team it became apparent that Vanna saw
himself in quite different terms to the rural people I thought we came to conduct research about. Over lunch with the team, he stressed the difference in education and the way people deal with disputes. “Look at the way Hun Sen handles political disputes! He always finds a diplomatic solution, but rural people, they only know how to use violence.” he explained. Hun Sen’s diplomatic skills epitomized the educated urban class, which Vanna set against an unruly rural population. According to Vanna there are two distinct kinds of people: the neak srae (rice people) and the neak krong (city people). It is this social division that has long divided the country and erupted into class war during the 1970s (Vickery 1984). This division was reproduced in the research conducted in Kampong Cham, leading me to ask how class politics was shaping definitions of mobile network consumers and consequently determining the development and marketing of mobile networks in Cambodia.

Dramatic social and economic divisions within the Cambodian population suggest diversity in the make-up of Cambodian consumers. However, personnel working within market research firms described to me the homogenous character of Cambodian consumers of mobile networks. Indeed, the focus groups that Vanna coordinated among so-called urban, semi-urban and rural consumers expressed homogeneity. As I observed the focus groups between different geographical areas I was struck by a lack of variation in the participants. They ran businesses in the town, and worked in government offices or NGOs. The younger participants had just graduated from high school. They were mostly about to start attending university in Phnom Penh and proclaimed their plans to land a government job or work at a private company in the future. They arrived on their motorbikes and spoke vividly about the latest mobile phone and notebook computers they owned. The insights and opinions they gave on their usage behaviour and
perceptions of brands differed little between locations. In this picture of consumers, a country divided by class and economic disparities was absent.

It quickly became apparent to me that socio-economic divisions had been hidden in the selection of the research participants. Much to my surprise, farmers, factory workers and labourers were excluded from participation. Perceptions of them having insufficient incomes and consumption capacities cast them as flawed consumers and thus ineligible to participate in the research. Income and other classifiers were used to zoom in on what the firm and their client had pre-judged to be worthy consumers. By narrowing the range of potential participants a picture of homogenous consumers was allowed to emerge.

The exclusionary methods of consumer definition ran against the premise of my own research. I came to Cambodia to explore how mobile phones and networks were transforming the country and possibly contributing to development. The premise of my approach was the existence of a self-evident and universal market. I had assumed that the market for mobile networks users stretched across social, economic and geographical divides given a need for all people to communicate and connect with others at a distance. The ever decreasing cost of mobile phones and network access along with phone sharing practices were making universal access to mobile networks increasingly possible. Moreover, statistically the market was growing at a dramatic rate, which suggested to me that the country would soon be flooded with mobile phones and consumers of mobile networks. However, it was evident that the vision I had of a universal market for mobile networks was not shared by those constructing knowledge about the market and defining its shape. The CEO of the network provider, Smart Mobile, made this explicitly clear when he claimed, “Unlike in more developed countries the addressable market here is far below
the population” (Beco 2011: 45). How then did executives such as the Smart Mobile CEO carve out the market from the broader population?

This question directly relates to how mobile network infrastructure is developed in Cambodia and how mobile networks are marketed in Cambodia. The roll-out of telecommunications infrastructure has been correlated with the reinforcement of inequalities in developing countries (Forestier et al 2002; Perrons 2004; Blumenstock & Eagle 2012; Overà 2006). Yet, corporate processes that produce infrastructure that reinforce inequalities have been unexamined. It is presumed that infrastructure development and distribution systems are determined by corporations rationally pursuing profits. The insight of Science and Technology Studies (STS) is that infrastructures are loaded with particular political rationalities and versions of the world (Larkin 2013). I suggest that this insight applies also to the infrastructure built and marketed by private sector actors. Through ethnographic research I expose the planning and marketing of mobile network infrastructure as social and cultural processes as much as they are engineering and economic endeavours.

I assert in this chapter that private sector generated infrastructures are the product of marketing strategies which are underpinned by how markets are imagined and defined. According to Slater (2002: 67), forming a marketing strategy involves the “simultaneous definition of both markets and products.” To define a market, marketers need to ask who and where are the consumers of their product or service and what needs are met by their consumption? To answer these questions marketing executives draw on “extensive cultural knowledge” that they merge with economic models (Slater 2002: 63). Based on the resulting market definitions, calculated decisions can be made that determine the provision of goods and services. In respect to mobile
network infrastructure, market definitions determine how they are developed and marketed. Consequently, they determine the extent infrastructure accentuates or limits inequalities.

In this chapter I explore how the market for mobile networks is imagined and defined through processes that merge cultural and economic knowledge. I take an ethnographic position inside the consumer research firm I joined when I visited Kampong Cham to observe focus group discussions. I call the firm PPMR (Phnom Penh Market Research), and from inside the firm I explore the process of producing market definitions and constructing the Cambodian consumer of mobile networks. From this perspective, I will demonstrate that the market for mobile networks is not self-evident, but is imagined and constructed by marketing executives, consultants and consumer research firms. I will illustrate how they draw on a myriad of cultural knowledge, class narratives, network ethics, economic and marketing theory to form definitions of the market and zoom in on the consumer. I describe the classifiers and markers they use to make pre-defined markets visible while simultaneously rendering large swaths of the population invisible. I argue that these market definitions condition how consumers can access and experience mobile networks. The social and economic connections that Cambodians cultivate and maintain through mobile networks hinge on how mobile networks providers define the market for their networks. Therefore, I argue that exploring the process of defining the market for mobile networks is pivotal to building an understanding of the equitable development of infrastructure and the role of corporate actors in shaping the future of Cambodia.

**Seeing Cambodia in the Global Market**

This chapter is principally concerned with how markets within Cambodia are defined and how segments of the populace are included and excluded. This process, however, does not occur in
isolation to the segmentation of countries conducted at a global level. Corporate executives and consultants representing international telecommunications and investment firms must first bring Cambodia as a market territory into focus, which involves using a range of classifiers that indicate potential for capital growth. These classifiers are then reapplied domestically to zoom in on the market within the population.

Comaroff and Comaroff (2000) provide a counter view. They describe capital as moving throughout the globe with its own velocity to sites of optimum return. Within this perspective, the agency of social actors with culturally and politically constituted modes of seeing the world is absent. Yet, national markets are made and defined at a global level based on marketing strategies formulated by executives and consultants. Based on these formulations, decisions are made about when and where to invest. There is an intention to be efficient and rational in these formulations, but they are nevertheless formulations made by humans who require forms of cultural knowledge to make sense of the world. The result can be efficiencies in investment that lead to strong growth, but they can also lead to failures and significant financial losses. Following Daniel Miller (1997), this thesis illustrates ethnographically how modes of capitalism can fail to both meet consumer needs and produce capital growth.

The mode of capitalism that serves as a medium for the provision of mobile networks in Cambodia is global. At its centre are corporate executives who must form abstractions to make visible and legible Cambodia as a market. Access to a “public statistical habitat” makes this possible (Rose 1999: 230). According to the Harvard Business Review, executives give particular attention to composite indices that include GDP, per capita income growth and population demographics when contemplating investment in emerging markets (Khanna, Palepu & Sinha
These indices form a global statistical habitat that make the global market legible to corporate executives, consultants, and investors. How they interpret these statistics and zoom in on particular territories depends on a variety of intersecting factors including the availability of statistics, the application of economic and marketing theory and how they interpret their own products and services in relation to identifiable consumers.

The statistics and indices that made Cambodia visible to investors in mobile networks included its fast growing economy and its low rate of mobile phone ownership. The international business consultancy Accenture (2010) urged international mobile network providers to recognize that markets in industrialized countries are already saturated and the opportunity for capital growth is best found in emerging consumer markets that are experiencing rapid economic growth and rapid adoption of mobile technology. Following this logic telecommunications companies have sought growth in low penetration markets with high economic growth. On both these counts Cambodia was classed as a market where expansion and capital growth was possible.

Cambodia's youthful and urbanizing population also brought it into the vision of multinational corporations and investors. Leopard Capital, which specializes in emerging and frontier markets such as Cambodia, draws strongly on an array of statistical data to encourage investment. In a brief to potential investors it cites Cambodia’s rapid economic growth, high rates of urbanization, an underpenetrated and growing consumer domestic market, and an exceptionally youthful population as evidence that investors can expect rising domestic demand. In particular, they note that 61% of the Cambodian population is under the age of 25 and that the median age is 21 (Leopard Capital 2010). This broad characterisation of Cambodia was reflected by one executive at a mobile network provider, who noted how the fast economic growth and the young
population were his company’s prime reasons for investing in Cambodia. These classifiers which bring Cambodia into focus on a global level are then reproduced at a local level as mobile network providers seek to carve out a market from within the population.

**Reproducing a Focus on the Youth**

Among mobile network providers, demographic statistics that bring Cambodia into focus on a global level have generated an overwhelming orientation towards the youth in local marketing strategies (Beco 2011). A vision of the youth as target consumers has been evident in a variety of marketing campaigns from sponsoring youth orientated concerts and celebrities to the provision of free SIM cards for students. The prioritization of the youth was particularly evident in the consumer research conducted for mobile service providers by PPMR.

The selection of research participants vividly demonstrated that the Cambodian youth were deemed to be part of the addressable market. For one research project the age limit of focus group discussion participants was set at just 28 years and for quantitative questionnaires the limit was raised to 35 years. Another company was slightly more generous in terms of who they allowed to have their voice heard as consumers. It put its age limit at 35 years for focus group discussions and 59 years for quantitative research. These limits on participation expressed how research was merely an opportunity to understand the market between pre-determined parameters.

Labels placed on the youth and particular age groups also express how consumer categories are pre-fabricated. For one set of focus groups, participants were divided into three categories. The first group was aged between 15 and 19 years. They were labelled as “students”. The second
group was aged 20 to 24 years and were called “young professionals /job seekers”. The final category was made up of 25 to 35 year olds who were labelled as “Established (full family, stable occupation)”. These labels reflected what the research designers believed to be desirable research participants and thus served as a guide to the recruiters of focus group participants. In a post fieldwork role analysing consumer research conducted in Thailand it became evident that these labels were standardized labels used by consumer research agencies and marketing personnel across borders.

Seeing the Market through Socio-Economic Lenses

While demographic statistics bring the youth into focus, economic statistics serve to classify the population based on consumption capacities. In *Distinction* (1984: 310), Bourdieu described “a social world which judges people by their capacity to consume, their 'standard for living', their lifestyle, as much as their capacity for production” (1984: 310). What Bourdieu saw as indicative of French society was a strong attribute of how mobile network providers and their related personnel defined the market in Cambodia. This was made explicit when a marketing executive at Smart Mobile asked the rhetorical question to me during an interview, “in reality who can afford to pay 5 dollars per month?” This was his expected average revenue per user (ARPU). He questioned whether much of the population could afford this, especially in rural areas, where he noted, “There is potential, but demand has to be supported by income.” According to his perception much of the rural population was just too poor to be considered addressable as consumers, let alone be prioritized within consumer segmentation models. However, he appeared to see no contradiction in seeing the youth as the addressable market.
While age exists as a rather straightforward classifier given its clear numerical quality, calculating and identifying consumers based on their capacity to consume is fraught with complications, despite the numerical calculability of income in a monetary economy. Consumption capacity is readily associated with income, but the idea of linking income to the capacity of someone to be mobile network consumer led me to ask several questions. How do mobile network providers calculate who can afford to pay an amount such as 5 dollars per month? Do they conduct research on the consumption propensity in relation to income? What formula do they use to calculate the necessary income required for paying 5 dollars per month? And, how do they use economic and census data to distinguish eligible consumers from the ineligible?

I thought I would uncover answers to these questions while inside PPMR, but the process for calculating consumption capacities was much less sophisticated and much more subjective than I anticipated. I had thought that there were always numbers behind the calculations and the judgements that corporations and their agents make. However, it became apparent that numbers mask the cultural knowledge and subjective judgments that actually shape how markets are defined.

The PPMR Director, Kosal, displayed the importance of cultural knowledge in reading people’s capacity to consume when I joined him and his team to observe focus group discussions in Kampong Thom. The research project had been divided between urban and rural consumers and the Kampong Thom research represented the rural component. As per usual, the research was conducted in the district centre connected by a national road. At the end of one focus group discussion, one of the participants didn’t have any transportation for returning home so Kosal volunteered to drive the participant home in his SUV and I joined them. The young woman gave
directions to her house, which was west from the national road. Around 5 minutes after leaving
the national road, Kosal started to question out loud why his team had ended up recruiting
participants far from the district centre. Within another 5 minutes we arrived at the woman’s
house and dropped her off. We then sat in the car for a moment while Kosal assessed the quality
of the houses and a couple of shops in the vicinity. "This village is doing quite well. Look at the
houses. There are plenty of goods in that shop. It’s much more prosperous than I expected," he
shared with me. Kosal concluded that it wasn’t a mistake to recruit participants from there after
all. He made this judgement by drawing on his cultural knowledge to read signs of economic
prosperity that denoted to him sufficient consumption capacity.

The lead researcher at the firm, Sven, who had a background working in consumer research in
Europe and briefly for another firm in Cambodia, was conscious of the difficulties of using income
to gauge consumer consumption capacity. All the research surveys require participants to declare
their personal or household monthly income by ticking a box in the screening questionnaire. If
their income was below a set amount, they would be excluded from further questioning. Sven,
however, considered that income was problematic as an indicator since there is a tendency to
underreport it. Therefore, he inserted into the questionnaire an elaborate socio-economic
assessment that he had used at another firm.

This socio-economic assessment took into account a variety of factors from occupation to the
materials used to construct the respondents’ house. Points were then allotted based on the
responses. For example, if the household head was a business owner or white collar worker the
respondent would be allocated 5 points, but if the household head was a housewife they would
be allocated only 2 points. If the head of the household had only a primary education they
received 2 points, but if the head of the household had a post-graduate or doctorate degree 8 points would be allotted. Questions were also asked about household “facilities” and “possessions”. If the household had a bicycle or tricycle 1 point was awarded and if the household had a maid or domestic helper 3 points were awarded. The status of maids or domestic helpers appears even bleaker when considering that 4 points were allotted if the household had a washing machine. A satellite dish and a brand new car received an impressive 7 points and if their house was made of cement and bricks 6 points were awarded. However, if the house was made of bamboo and rattan only 1 point was allotted. Likewise, 5 points were awarded if the house roof was made of terracotta tiles and only 1 point was awarded if the roof was made of coconut leaves, grass, bamboo, and or rubber canvass.

This numerical system of constructing and evaluating socio-economic categories of consumers takes on an objective form when the final results are turned into charts presented in PowerPoint presentations. These neat numerical pictures hide the cultural knowledge that enables their production. They also hide the class-based subjective knowledge that links a variety of material indicators with socio-economic status. The hidden use of cultural knowledge in constructing such models exposes the dubious claims such studies make of being objective.

Judging people and defining the market based on consumption capacity has its own questionable claims on relevance. In chapter two I highlighted that the market grew rapidly during a period of economic downturn when incomes dropped, which suggests that income is a poor indicator of the shape of the market. A six-country study conducted across Bangladesh, Pakistan, India, Sri Lanka, Philippines and Thailand demonstrated that demand for mobile networks services exists to some extent across all income levels (Agüero, Silva & Kang 2011). Mobile services have
emerged as a necessity that fulfils basic communication needs, and thus demand is to some extent inelastic. This results in lower income groups paying a higher proportion of their income on mobile phones and network access. The question that should therefore be asked is how do low-income groups, such as rural Cambodians, accept and manage these costs. In chapter three and four I documented how rural and particularly remote Cambodians have turned mobile networks into infrastructures that to support variety of social, cultural and economic projects. To rural and remote Cambodians, mobile network infrastructures bring markets closer and mitigate urban-rural divides. Thus, from a purely economic standpoint, it is arguable that mobile networks are relatively more valuable to rural Cambodians than to their urban counterparts. This thesis also indicates that it is very difficult to measure the value that Cambodians derive from mobile network infrastructures, especially the value of the social and kinship relations that are cultivated and maintained through these infrastructures.

However, the use of income and a variety of symbols of class status to demarcate the market and zoom in on eligible consumers persists in Cambodia. According to Bourdieu (1984: 310-311) the world that judges people based on their capacity to consume “finds ardent spokesmen in the new bourgeoisie that are the vendors of symbolic goods and services, the directors and executives of firms in tourism and journalism, publishing and the cinema, fashion and advertising, decoration and property development.” In Cambodia, the personnel of consumer research firms and mobile service providers could be added to this group of spokespeople. By defining the market based on consumption capacity they conveniently include themselves while excluding the rural peasantry and working class from the market. There is, I suggest, a form of class politics at play that supports the use of income and certain material symbols of socio-economic status to categorize the Cambodian consumer.
The Market as Educated Middle Class Professionals

Consumer research conducted at PPRM used classifiers pertaining to education and occupations to illustrate the consumer of mobile networks as belonging to the middle class. These classifiers were evident in Sven’s numerical model for grading the Cambodian population into socio-economic classes. In particular, formal education was given a priority as a marker of someone’s socio-economic status and capacity to consume. Research participants with a household head who has a post-graduate education received a whopping eight points while participants whose household head had only received a primary school education were allotted a mere two points. Education marked the respondent as a valued consumer and the higher the education the more a respondent was deemed to belong to the addressable market. Education is also symbolic of the urban middle class. Thus, by using education as a classifier the research systematically presented the middle class as the market and reduced the capacity of those with less formal education to make claims on being eligible consumers.

The market research conducted by PPMR endeavoured to highlight diversity amongst an educated middle class. One survey which had allotted ten different education choices had its lowest education level labelled as “up to senior high school”. At the upper end it had five categories for different levels of university including “PhD candidate” and “completed PhD”. Such a prioritization of tertiary levels provides an opportunity for the middle class to articulate their education levels, while those with lower or alternate forms of education are denied a voice.

Although PhD candidates tend to take pride in distinguishing themselves from bachelor or master degree graduates, it is a comical distinction in a country where literacy is a prominent divider that both shapes daily life and determines how some can use a mobile phone and access mobile
networks. According to a 2004 survey the literacy rate was 67.1 percent of the population (World Food Program 2014). However, a UNESCO and UNDP study in 2000 demonstrated that only 36 percent of the population was fully literate in terms of being able to use their literacy in their everyday lives and for income generation. According to the study 27% were semi-literate and 36% had no literacy at all (Pact 2004). Literacy levels relate to how people can access and use communication technologies (Chipcase 2008). They also relate the accessibility of marketing communication mediums. Therefore, examining the literacy levels of mobile network consumers would be valuable in product development endeavours and planning the use of different forms of media to communicate with consumers. Additionally, understanding literacy levels in English and the capacity of consumers to read and use the Roman alphabet would also be constructive.

When fieldwork was conducted most of the phones on the market did not have a Khmer language operating system and could not process Khmer script, which meant that users required some literacy in English and the Roman alphabet to use various phone functions.

Based on readily available statistics on literacy in Cambodia and my own ethnographic research it seemed logical to me that education should be framed in terms of literacy levels. I encouraged PPMR to examine changing how they profiled education levels and to give priority to understanding forms and degrees of literacy among mobile phone users. However, my suggestion was met with bemusement. "How can we interview people who can’t read?" was one response. I was clearly missing something. The purpose of the research was not to explore diversity within the population. It was to reproduce the vision of the middle class educated population as the market of mobile network service. The illiterate and poorly educated were not included in this vision. The firm eventually simplified some of the categories, which were clearly
irrelevant, but they didn't add any additional lower levels. Vanna’s assistant, Sopath, confided with me, "We screen out people with less than a high school education."

Occupations serve as an additional classifier that allowed PPMR and their clients to zoom in on the middle class market. One survey included 14 different occupation categories, which included six categories that covered government officials, professionals and managers. A further three categories covered self-employed and business owners. However, only one category covered agriculture and fishing. Thus, while a diversity of middle class occupations were given status with unique categories, the diversity of agriculture and fishing occupations was denied through grouping them into one solitary occupation. Another survey gave even less attention to possible rural occupations. It included nine possible occupational categories that included student, company staff, civil servant, NGO staff, businessman, housewife, worker, unemployed, and “other”. The category of “other” provided farmers, fishermen, and market vendors an opportunity to articulate their occupation, but in the final representation of data presented as a graph in a PowerPoint presentation their occupation was simply "other", forming a systematic denial of the occupational identity of the largest proportion of the population.

James Scott (1998), in his account of how state officials see and make sense of environments and populations they are tasked with governing, describes how processes of simplification are important for coping with complexity. Scott (1998: 11) argues that state officials adopt a "tunnel vision" which has the advantage of bringing "into sharp focus certain limited aspects of an otherwise far more complex and unwieldy reality." He provides an example of forestry officials who view the forest as an economic resource in a utilitarian sense. They make tables and charts of the forest that measure and account for the trees that can be harvested as lumber and
firewood, but the foresters’ tables and charts "do not quite capture (nor are they meant to) the real forest in its full diversity" (Scott 1998: 76).

The use of a limited range of occupational categories in consumer research is an example of how simplification supports tunnel vision by blurring objects on the periphery while giving sharper focus to valued objects. In Scott's description of forestry officials, the forest is brought into focus through a tunnel vision that gives a variety of names to trees that are deemed to have value, while other species are classed as "trash" and "underbrush" (1998: 13). In research surveys conducted for mobile network providers the market of consumers was brought into focus through a similar range of limited categories. The market defined as middle class and urban was given focus through granting middle class urban white collar occupations a variety of categories. However, the diversity of agricultural occupations or working class occupations associated with flawed or ineligible consumers were either excluded from surveys or lumped into categories, such as "farmer" or "worker", which do not reveal their actual diversity.

Limiting the categories of measurement makes "the phenomenon at the centre of the field of vision more legible and hence more susceptible to careful measurement and calculation" (Scott 1998: 11). This applies equally to corporate marketing executives and consumer researchers as it does to state officials. According to Scott (1998: 8), large scale capitalist organisations are as much agents of "homogenization, uniformity, grids and heroic simplification as the state is." This ethnography supports this view, but I would add that corporate officials are just as capable as state officials of infusing class politics into their methods of simplification.
The occupational categories used at PPRM posed an obstacle for grasping forms of social and occupational mobility that are supported by mobile networks. Mobility implies fluidity and represents a challenge to state and corporate modes of constructing knowledge about populations. Rigg (1997: 197) notes that methods of conducting census in rural areas lead to people whose lives straddle both the urban and rural areas being recorded as rural based on their village registration. Scope for recording more complex lives is constrained by the categories within the census itself. This further applies to how occupations are recorded. Mobility between occupations and locations that any one person or household may experience is either blurred or hidden by rigid categories in census surveys and consumer research.

Based on highly simplified categories, PPMR generated a picture of a population with singular, stagnant and immobile residences, occupations and social identities. My own ethnographic research into how mobile networks are turned into infrastructures of social, cultural and economic life presents a contrasting picture. I illustrate the multiplicity and mobility of occupational and social identities that Cambodians have and cultivate through mobile networks. Through the consumption and use of mobile networks Cambodians jump between variant social identities and move between urban and rural terrains at will. I describe this as a central value that Cambodians associate with mobile networks, but this value is hidden from view by schemes of classification used within consumer research.

The picture produced through consumer research illuminates an urban middle class as the market for mobile networks while pushing a rural class to the market periphery. However, to say that the picture represented a middle class Cambodian version of the world would be misleading. The categories and methods of classifying people within consumer research are partly an
external production transported and reproduced in Cambodia. Firstly, categories are produced at a global level to bring countries such as Cambodia into focus as a market. Secondly, executives and researchers bring with them to Cambodia pre-defined conceptions of the eligible and ideal consumer. For example, Sven carried with him methods of conducting research and models of judging social economic groups as he moved between countries and between firms.

Marketers and consumer researchers carry with them maps developed in other terrains and use them to navigate and compartmentalize the Cambodian population (Taleb 2010). The brand bible of a service provider, which was outlined to me by a middle management employee, highlights how market maps developed in very different environments have been reapplied to Cambodia. The brand bible proclaims that the company’s segmentation model, which was developed in its main market, should be applied in other markets where the company brand is active. The brand bible identifies three key categories that the company seeks to prioritize. The highest priority is the 25-45 age group labelled as stylish and business orientated. They are people with well-paid jobs, who often have families and are more likely to be men. Since they spend the most they should receive the most attention. The second category of importance is what the company calls “modern communicators”, who are 15-25 years old people that tend to be students or new entrants to the job market. The last segment that the bible prioritises is “kids” aged between 12 and 14. These modern communicators and kids gain attention for their potential to spend in the future. I was informed that the brand bible was translated to Khmer without modification, reflecting the corporation’s confidence in the segmentation model and its applicability to different social and economic environments.
As somebody that once took undergraduate classes in international business I found this surprising. The business world's rhetoric of localization didn't appear to have substance. I didn’t encounter an effort to develop segmentation models reflecting the local social, cultural and economic context. Neither did I identify an effort to give voice to different local modes of classifying the population. There was, however, an emphasis on using schemes of classification that are transportable and easily accessible across borders. Research reports needed to be legible to executives in far flung headquarters. If categories could not be compared, they would lack value in regional and global boardrooms. Hence, there was an emphasis on global familiarity and comparability.

Scott’s (1998) claim that global capitalism represents the major force of homogenization in the current era is well supported by the forms of segmentation and market definition I document here. However, there is constant friction between global model of segmentation and local classificatory models. The staff within PPMR readily acknowledged that the models they used for classifying the population did not reflect locally used classificatory models. They, nevertheless, readily accepted them without resistance. Not only did these models give them status, they did not conflict with their own social identity as middle class urban white collar professionals. In short, these models gave them status and allowed them to distinguish themselves from the rural population. But to be fair, there was little that the firm’s personnel could do in the face of the global marketing discipline. Their jobs depended on appeasing their clients, who insist on standardized classification models rooted in the globalized marketing discipline.
The Market as Urban

The prioritization of the middle class as the market for mobile networks is further evident in the portrayal of the urban populace as the main market. In the brand bible's segmentation model there was no mention of rural people, rural lifestyles or the needs of rural people. The map represented an urban terrain that assisted marketing personnel zoom in on an urban middle class population. The brand bible also served to provide criteria for the urban middle class to define their own identity against a rural class of people.

The urban-rural dichotomy that has long been a primary means of dividing and classifying Cambodian society is reproduced and rearticulated through corporate processes of defining the market (Vickery 1984; Chandler 2008; Derks 2008). Within this fresh articulation of the social divide, urban and middle class occupations are given clarity within an image of the market. Moreover, forms of education levels associated with an urban middle class population are granted status. Meanwhile, the rural population are rendered invisible as consumers. Perceptions of their income, education and occupations leave them out of the picture. This division is exacerbated by consumer research that systematically excludes the rural populace through selection methods and socio-economic assessment models. I argue that this exclusion is partly a consequence of global marketing discipline’s construction of “urban” rather than “rural” as the market of consumer products. It is a distinction that gives fresh energy to a local dichotomy between the rural and urban populations and invigorates urban middle class narratives about the social “other”.
At PPMR class narratives about the rural population shaped the research and were actively propagated among clients. At the beginning of this chapter I described Vanna’s narrative of rural people. It shaped the focus group discussions that he coordinated through supporting the exclusion of people with rural occupations. These narratives are utilized and proliferated further by an expatriate community that lead the mobile network industry.

This was evident when I accompanied Sven, the firm’s research director, to meet with a CEO who had recently taken charge of an ailing company that PPMR had previously conducted research for. Before the CEO took charge he had flown in from a neighbouring South East Asian country to view a presentation by Sven on research that PPMR’s had conducted for the company. The presentation contained simple mind maps of the Cambodian consumer that impressed the incoming CEO. So, when the CEO had fully taken charge of the company Sven was invited back to discuss the market in more detail. After a few pleasantries the conversation quickly turned to the incomes of the Cambodian population. Despite the onus put on income and consumption capacity, facts on income levels were not something market researchers such a Sven carried around in their back pocket. The CEO and his assistant considered the salaries of people at the company as a gauge of incomes in the city. They then shifted their attention to rural areas and the CEO asked Sven, “How about rural people? Tell us what you think of this market.” Sven was taken back a little. He admitted it was the first time after numerous conversations with senior executives in the industry that anyone had asked about “rural people”. Nevertheless, he responded confidently, “Rural people are mostly subsistent farmers.” Sven resorted to conveying the subsistence narrative about rural people to an executive whose vision of the market would be translated into market shaping decisions.
By characterizing rural people as subsistent he demarcated them outside of the market. The subsistence label excludes the rural population on two counts. On the first count subsistence denotes a lack of income and capacity as a consumer. On the second count subsistence indicates disengagement from modernity and commerce suggesting little need to engage with a mobile network. The subsistence label therefore consigns rural Cambodians to a different sphere of network ethics. Unlike their urban counterparts, rural Cambodians are framed as being disconnected from market based networks due to their subsistence status. Mobile phones and networks are therefore not seen as constituting infrastructure of market life for rural Cambodians. This point was stressed by Vanna when I raised my concern that large categories of consumers and networks subscribers were possibly being excluded through research participant recruitment. His response was the rhetorical question “what use do farmers have with mobile phones?”

When Sven and Vanna made claims about rural people and their needs it wasn’t based on research conducted by PPMR. Numerical data, while highly prized, was not generated on people who necessarily lived in rural areas to understand them as consumers of mobile services, despite the firm’s claim to conduct research in rural areas. For a considerable time at PPRM I mistakenly thought that the urban and rural were together all-encompassing categories and semi-urban or semi-rural occupied the overlapping space in between. In reality there was an additional category which represents where most Cambodians live: the remote.

From the first research trip I took with Vanna I was intrigued by how he selected rural and semi-urban locations for the focus group discussions. I suspected a well-developed formula that utilized census data so I tried to probe Vanna for details, but he gave vague responses. Eventually
I questioned Sopath, Vanna’s assistant, who had project coordination and data processing responsibilities. He explained that the choice of location was based on Vanna’s discretion. There was not a set means to determine rural or semi-urban. In response I explained that I thought “rural” areas were up dirt lanes off the national roads and usually away from an electricity grid. Then in an instant, Sopath provided clarity. He explained that such areas were of course rural, but the firm classed areas without electricity or running water as not simply rural. They are "remote", he explained.

Based on this method of categorizing territory and people most of Cambodia and its population suddenly appeared remote. According to the UNDP (2013) a mere 15% of Cambodian households have access to grid-electricity. In rural areas where 85% of Cambodians live this number drops to 7.9% of households. By taking a short trip across the Mekong from Phnom Penh bustling downtown and then a brief motorbike ride one can find the "remote" quite easily. Many of the areas on the edge of Battambang City could also be classed as remote using such a definition. Most of Rotanak Mondul District in Battambang where I conducted field research would also be classed as remote.

When Sopath described the remote category he explained that only NGOs ever commissioned research in remote locations. After conducting research for four different mobile service providers they had never been asked to do research in remote areas. This indicates the role of their clients in excluding the remote from market definitions. Remoteness, I suggest, is not only correlated with being poor but also with disconnection from social and economic networks, which indicates a lack of need for mobile networks.
As with many aspects of market definition the economics of inclusion and exclusion requires acknowledgement. According to Sopath, the firm charged 11-12 dollars per interview in remote areas as opposed to 7-8 dollars in provincial or district centres, which suggests a possible element of cost minimization on the part of their clients. However, population sampling was always treated as priority within methodology descriptions and within discussions between the client and the firm, which suggests these additional costs should have been accepted to ensure accurate sampling, but that would only be the case if they actually classified remote residents as part of the addressable market.

It was evident that the exclusion of the “remote” population was practiced in other research firms. The most prominent research firm in Cambodia at the time was Indochina Research Limited, which was commonly referred to as IRL. They conducted media consumption studies on a regular basis, which they sold to companies, such as mobile networks providers, for the purpose of guiding media planning, which determines who and where people are exposed to advertising. These studies, while large in scale, were concentrated in and around five urban centres, and thus treated the media consumption in rural and remote areas as insignificant. Yet, Indochina Research (2011) begins a presentation promoting their Media Index with the statement, “WE ALL, Need to Communicate, Even in Cambodia.”

Confirming Market Definitions

By setting a range of parameters within consumer research to reflect a pre-defined conception of the market, consumer research functions to confirm rather than challenge perceptions of the market. According to Applabaum (2004: 221) consumer research is a "confirmatory ritual". It serves to legitimize a company’s understanding of the market rather than act as a mechanism of
discovery. This ritual was repeated over and over again at PPMR. Instead of using the research to discover locally constituted modes of classification, pre-defined modes of classification and demarcation were projected into the research. Research was repeated on a regular basis with little deviation. This pattern of ritual confirmation was prompted by the firm’s clients who requested that the same questions be repeated in regular surveys. Clients treated research as a mechanism to monitor key performance indicators and not as an opportunity to ask fresh questions that could redefine the market or produce more suitable and locally specific key performance indicators. Research thus had little chance to expose alternate groups or modes of classifying the market.

Research conducted at PPMR demonstrated that companies can go to great lengths to ensure that market definitions are confirmed through consumer research. In one project for a bank the research team screened approximately 4000 households to only identify about 10% of households that fitted the company's criteria of worthy research participants. In order to boost the sample size to a number they considered appropriate, the survey team targeted office workers at some of Phnom Penh's few office blocks. When this practice was explained to the bank's management, a marketing manager interjected to question why they didn't just do a door-to-door survey in Beoug Kaeng Kong, a district of Phnom Penh renowned for its wealthy residents and opulent villas. While they make a mockery of population sampling, booster samples ensure that the ritual of consumer research confirms the shape of the market.

In contrast to my own deep reservations about the picture of the market being presented through consumer research, PPMR’s clients regularly expressed confidence that the data presented was a fair picture of the market since it could be corroborated by their own databases.
Mobile network providers generate tremendous volumes of data on the consumer, especially call and transaction records. Network providers can further develop these databases through the addition of data produced when the consumer completes a SIM card registration form. Consumer data is then mined to produce statistics that are taken as the most accurate representation of the market. However, it is only a version of the market that is made visible by the classificatory systems embedded in the database and the registration forms. Thus, the databases tend to corroborate and confirm pre-defined versions of the market.

What was invisible in consumer databases was clearly visible through ethnography. Field research demonstrated that there was indeed a market in remote areas off the national roads and where electricity grids and running water do not reach. It also demonstrated that farmers, labourers and the poor were indeed consumers of mobile networks. Ethnography projected a definition of the market that seemed more in-line with Viettel’s market definition, which I will elaborate on in chapter seven. Viettel put the rural and remote at the centre of their market strategy. It was a definition that proved to be compatible with the needs of the population and thus generated fast growth and a dominant market position. However, the subscription rates published by Viettel during their period of rapid growth were judged to be a false reflection of Viettel’s market penetration. Executives at a competitor network provider pointed to their own databases as evidence that Viettel was fabricating subscription numbers. Database mining can show the rate of calls from users on other networks. These rates are used to calculate the market share of each network provider, which led to the conclusion that Viettel was giving a false portrayal of their subscription numbers. But Viettel’s weak visibility indicates the limits of using databases to assess the size and shape of the market.
I illustrate in chapter seven that Viettel defined the market in such a different way to their competitors that Viettel’s network subscribers didn’t readily appear on competitor databases. They were communicating primarily with people on the same network who constituted a new market category that had been ignored and deemed outside the addressable market by its rivals. These consumers had not yet made themselves visible on digital database. This highlights a central problem with the use of consumer databases: they project a numerical picture of the present that does not reconcile the past and what people can become. The legitimacy of a person as a consumer is only recognized when they make themselves known as a digital consumer and only attributes of the consumer appear that are codifiable and fit neatly between classificatory parameters.

The focus on existing mobile network subscribers was also stressed in consumer research at PPMR. Despite the rapid growth, research commissioned by mobile network providers demonstrated little interest in building an understanding of the needs and preferences of consumers that were not yet individual subscribers of mobile networks. Being an existing network subscriber was the dominant pre-requisite to have your voice heard through research. This focus on existing subscribers served to corroborate pre-defined versions of the market. It further indicates that executives and consumer researchers were ill prepared to grapple with a rapidly changing market.

The consumer data produced by mobile network providers can only present a picture of a market that is made possible through the company’s market definition and marketing strategy. Market definitions are projected through marketing strategy while marketing strategy reflects back onto market definitions. There are thus reflexive connections that shape markets. The market for
mobile networks is limited in what it can be by a firm’s marketing strategy, which is also a reflection of the market definition. Consumer data can then only capture and present a picture of a market made possible by a marketing strategy which itself is the product of the company's market definition. Conventional consumer research and user databases thus express the limits of what markets can become rather than representing mediums to gain insights into new potential markets.

An example of these reflexive connections was provided by the head of an activation business. His company was commissioned by a mobile network provider to introduce the company brand to Cambodians and sign up new subscribers. Activation campaigns involved holding events over several days in a given location. These events are repeated over and over as the activation team moves around the country. The event organisers park themselves beside or within a physical market area in a provincial district, where they put on concerts and run activities to build brand awareness. The company head explained that they usually ran an activity in the morning at the market and then held a concert in the evening. In between these activities the activation team conducted door-to-door campaigning that involved giving away free SIM cards. However, door-to-door campaigning was not as inclusive at it seems. The team was trained to identify houses whose occupants would make suitable subscribers. In particular, they were directed to avoid houses with thatched roofs and other signs of poverty. These discriminatory forms of sales and marketing are more or less mundane everyday occurrences that are taken for granted since they occur within the context of the market. They are seen as economic calculations rather than social or political ones. Yet, they are informed by cultural knowledge and class based subjectivities. By reflecting back on what the market can become they shape access to goods and services and thus have social and economic ramifications.
Subjective social calculations are particularly evident in network planning and have strong implications for which areas receive coverage. It is in network coverage development that the limitations on what the market can become are most explicit. Each mobile service provider engages in network planning and typically has a network planning department, which makes strategic calculations on which areas and groups of people can gain access to mobile networks through the placement of Radio Base Stations (RBS), towers fixed with cell masts projecting signals in a given geographical zone. Thyda, who worked in the network planning department of one service provider, described for me how her team travelled to every district in the country and used a pre-devised system to apply numerical values to various recognizable features in a district. For instance, if the district had a bank it received a set number of points. If it had a gas station and a market additional points were applied. The team would also make observations of the population’s occupations and their productivity to grant and deny points for each district. The districts were then compared and calculations were made on which districts to establish coverage. Strategically the team never left the national roads to make calculations in the periphery of districts. The population living in so-called remote areas had already been demarcated outside the firm’s market.

The network planning department of another company used an SUV mounted with a camera that was driven along the major national roads. Video footage was then brought back to Phnom Penh and judgements were made on what areas were sufficiently populated and prosperous enough to establish Radio Base Stations (RBS). This company clearly defined the urban as the market and the establishment of coverage in rural areas was only necessary since they needed to establish a network of relaying signal towers between the urban centres. What lay in between was only
considered in terms of covering the routes that urban consumers use when they travel between urban centres.

I wondered, when they examined video footage how did the company calculate where coverage should be established? What did they see that helped them make calculations to define the location of consumers? Thyda provided insight into a possible answer to these questions when I probed her about aspects of her company's numerical model for giving value to aspects of the Cambodian landscape and population, which I thought were open to interpretation. I was hoping she might give more details as to her company's numerical model. Instead, she replied with the simple answer, "Just by looking we can tell. We are Khmer. We know." However, what she “knows” and interprets as a Khmer is based on specific cultural knowledge made up of various narratives about different groups within the population. This cultural knowledge takes on a scientific aura when codified and put into numerical maps of the landscape and population. These maps determine coverage and distribution areas that reflexively set limits on who can access her company's network. Then, when the company conducts research about existing subscribers and mine their database, the market that they had already defined is confirmed.

**Conclusion**

The addressable market of Cambodian mobile network consumers that is corroborated and legitimized through consumer research is firstly defined at a global level. A range of classifiers are used to bring the market into focus on a global level. These classifiers are then reapplied at a local level to carve out and define the addressable market within the broader population. Age is used to mark out the youth market. A variety of socio-economic markers such as education and occupation are applied to identify a middle class market perceived to have sufficient
consumption capacity. These classifiers merge with location classifiers such as urban, rural and remote to enable executives to zoom in on a population they have defined as the market.

The addressable market is eventually carved out through layers of inclusions and exclusions. According to Ong's (2006:16) Neoliberalism as Exception, "Citizens who are deemed too complacent or lacking in neoliberal potential may be treated as less-worthy subjects." Through market exclusions limits are placed on who can access goods and services, which leads to sections of the population being denied rights to make claims on resources as citizens through consumption.

In this chapter I emphasize that the market that includes and excludes should not be understood as self-evident. It is imagined, defined, visualized and classified by social actors such as executives, consultants and consumer researchers who devise and implement schemes of inclusion and exclusion. While these schemes are given apolitical labels such as consumer segmentation, they are underwritten by cultural knowledge and schemes of social classification that are infused with class and identity politics.

Bourdieu (1984: 479) conceives of class relations in terms of "struggles over the schemes and systems which are the basis of the representations of the groups and their mobilisation and demobilisation." Class power, according to Bourdieu, is a capacity to impose its own classificatory schemes and systems. Corporate executives and personnel within PPMR imposed classificatory systems that presented the urban middle class consumers as the market, while denying the rural population claims on being eligible consumers. Consumer research and databases are used to
corroborate and legitimize the definition of the market generated by these classificatory schemes which denote the urban middle class as the market.

This chapter presents an argument that inequalities produced through the roll-out of mobile network infrastructure in different parts of the world should be evaluated and understood in light of how social actors such as executives, network planners and product developers define the market. Discriminatory network development and marketing practices should not be seen as the simple consequence of capital moving at its own accord or corporations being driven by market imperatives and the pursuit of profits. Such a perspective strips market actors of their agency and the cultural knowledge that shapes how they define and construct markets. It presents the market as the cause of inequality and the solution as government intervention. However, by seeing market definition as a social process, inequalities no longer appear as the inevitability of the market. Market formations become open to challenge and transformation.

Markets can be defined and seen in a variety of forms. The research conducted at PPMR presented one version of the market for mobile networks, which contrasted with the image of the market generated by my own ethnographic research into how mobile networks are used and transformed into infrastructures of social and economic life. I identify how mobile networks support projects of mobility that bridge urban and rural divides within the social structure. This advantage is mitigated by methods of categorizing consumers and defining the market that reinforces the urban-rural divide. I describe how networks serve as the infrastructure for remote residents to participate in the psar (market) and reconfigure their social and psar relations. In contrast, the cultural narratives employed at PPMR present a picture of a subsistent rural population disconnected from market and commercial networks that mobile network
infrastructure could support. There is thus an anti-development undertone to the market definitions expressed and corroborated by the consumer research that I observed. Yet, the process is open to transformation, which I suggest begins with acknowledging that markets are not a given. They are defined by social actors that use socially constructed classifiers to make sense of the world.

Seeing markets as socially defined constructs leads us to a better position for comprehending market failures. Much is made of corporate successes and capital moving with ease to sites of optimum return. However, I observed capital moving rather clumsily. Scott (1998) draws a relationship with failures of modern states with their tunnel vision and tendency towards simplification. It is possible to draw the same correlation as an explanation of corporate failures in Cambodia. Some of the mobile network providers I describe above experienced dramatic financial losses. Their failings, I suggest, can be explained in terms of how their executives and marketing personnel narrowly defined the market. These corporations lost out to competitors that saw the market in alternative and more progressive terms. According to Slater (2002), competition between firms is fundamentally competition over definitions of the market. Therefore, the strength of free markets may be the freedom to define markets in alternate forms.
Chapter 6: Marketing Network Value

On the many occasions I crossed the border into Cambodia from Thailand or flew into Phnom Penh prior to and during field research I experienced a conscious transition across country borders that indicated that I had not just arrived in Cambodia but had arrived in the Cambodian market, in particular the Cambodian mobile network market. The physical landscapes within and around the airport and on the roads that flow from the airport and the border crossing with Thailand were coloured with billboards, awnings, shop signage and umbrellas of mobile network providers. On more recent arrivals in Phnom Penh I have been met by a line of kiosks from each of the mobile network providers that sign up visitors after they pass through customs control. International travellers clearly meet the criteria for market inclusion despite their temporary status. The airport, like the border crossing at Poipet, had been turned into a physical market place where mobile network providers compete for the consumer. Through this competition for eligible consumers the landscape has been shaped and inscribed with the brands and advertisements of mobile network providers. This competition has also inscribed the social and physical landscape with particular versions of value systems and class relation.

According to the marketing discipline, what I observed on the streets, at markets and at the border crossing is competition over the communication of value. Marketing by definition is principally concerned with "communicating and delivering value to customers" (Harris 2009: 148). However, if marketers are to communicate value they must have a framework for understanding it. Value is a highly used term within marketing discourse and in the broader corporate arena, yet it is a poorly defined concept. In the Penguin published Dictionary of Marketing (Harris 2009) value appears in numerous conflated words such as "value analysis", "value proposition", and
"value engineering", but "value" on its own is left undefined. It may be that value is considered too commonsensical to the marketer to require definition. In this regard, anthropology, especially economic anthropology, stands in stark contrast to marketing. In anthropology, value is not a taken-for-granted concept. It is accepted there are rival and competing value systems and frameworks for understanding and defining value. Anthropology endeavours to describe these systems and frameworks in order to understand their ideological and cultural underpinnings. Therefore, in this chapter I again turn my ethnographic gaze onto the marketers of mobile networks to understand their framework for defining and interpreting value or values. I argue that this is an important endeavour since through marketing communication corporate value systems become inscribed on the physical landscape and into popular culture.

The additional purpose of this chapter is to draw out a comparison between the marketing discipline's version of value and how anthropology frames and describes values. Value in anthropology, although widely referred to, is also ambiguous term since the discipline is not united in a shared theoretical approach to it (Gregory 1997; Graeber 2001). In order to make a succinct comparison with marketing, I focus on an anthropological approach to value that Gregory (1997) refers to as "radical humanism". Gregory (1997: 12) describes values as "those invisible chains that link relations between things to relations between people." They are what bind people together and people with material objects. The process of creating value occurs in "human consciousness". Therefore, values exist only through human creators. Gregory (1997: 13) writes, "Human valuers are the means by which values exist." It is human agents that transform material objects into gifts, commodities and goods, and through this process objects gain value. However, an object's value changes according to the situation. "A material object such as silver is now a commodity, now a gift, and now a good depending upon the specific context of the
transaction” (Gregory 1997: 13). An object’s value also changes according to the valuer and specific situations. Gregory (1997: 8) argues, "People create multiple value systems for themselves and are constantly switching between them according to the dictates of the moment." The value systems people use and switch between are also not independent of each other in so much as the institutions they work through overlap, namely the institutions of kinship, markets and the state.

The radical humanism’s distinguishing attribute, according to Gregory, is its recognition of rival cognitions and attention to alternative value systems. In stark contrast to the radical humanist stands the free-market anarchist. This label is used by Gregory to describe proponents of free-market principles such as the economist, Milton Friedman. The free-market anarchist follows a single value system that gives primacy to the individual consumer with a shopping cart. According to the free-market anarchist, through consumer choice "individuals seek to maximize utility and it’s the marginal utility of one good relative to another that determines how good a good really is" (Gregory 1997: 16). In order to measure the marginal utility of a given object the free-market anarchist "must study the individual preferences of a consumer and the natural scarcity of the objects from which the individual has to choose” (Gregory 1997: 19). To do this, the free-market anarchist leans on psychology and zooms on the mind of the individual consumer. In this regard, the free-market anarchist label could be replaced with "marketer". Marketing discipline exhibits many of the same attributes that Gregory describes of the free-market anarchist, especially the focus on individual cognition and marginal utility.

In this chapter I explore how marketers of mobile networks understand, calculate and communicate marginal utility, which they describe more commonly as “consumer value”. As with
markets, I do not take consumer value as a given. Just like the process of defining the market, there are cultural and economic processes that merge to determine how consumer value is imagined, calculated and communicated. In fact, the process marketers follow to determine markets and consumer value are somewhat indistinguishable. To imagine and calculate consumer value, the marketer must first identify consumers within the market. In reverse, to imagine a market of consumer, the marketer needs to evaluate whether a product has value to a given population. For instance, the extent that mobile networks are evaluated to have value to a given populations determines the extent that the population is included in the market. Therefore, when certain Cambodians are framed as socially and economically disconnected they can be deemed to find little value in engaging with mobile networks. As a result of these processes of value and market definition, populations are potentially marginalized and isolated. Marketing as an isolating and marginalizing discipline is reinforced by the attribute marketing shares with free-market anarchism: an overriding focus on individual cognition and simplified terms of understanding consumer preference (Gregory 1997).

Contrasting with this chapter’s depiction of how marketing and marketer’s define, create and communicate is my ethnography of mobile network consumption and how mobile networks are turned into infrastructures of social, cultural and economic life. It is through this transformative process that Cambodian consumers create value from mobile networks. Mobile networks are essentially value-less without consumers turning them into infrastructures of social and economic connection. It is in such a form that they can be associated with “values that spring from reciprocally recognized relations of affinity, consanguinity and contiguity” (Gregory 1997: 33). These are the forms of value that the anthropologist and radical humanist in me is most interested in. However, from my embedded position in PPMR I was struck by the lack of interest
in mobile network as infrastructure of connection between people and in the values that
consumers create through these connections. The focus of consumer research was to understand
consumer preferences in order to understand the marginal utility of a brand or product.
Therefore, it was not directed towards understanding the value systems of Cambodians. The
consumer research was already structured based on the marketers own value system and it is
through this system consumer value was evaluated.

The research projects I observed were typically given the label of "Brand Perception Survey", but
the research results they generated should not be considered as a representation of consumer
perceptions of value. I anticipated that the research would prioritize exploring and Cambodian
modes of categorizing brands, products, and services. According to Bourdieu (1984),
perceptions are structured by *habitus*, which are the structures internalized through socialization.
These structures are themselves structured by sets of oppositions such as rich/poor and high/low
that divide people, tastes and goods into classes (Bourdieu 1984: 172). Opposites such as "city
people" and "rice people" structure *habitus* and categories of perception. Therefore, Bourdieu
argues that *habitus* is the principal determinate of taste and consumer choice. According to
Bourdieu (1984: 209), "agents apprehend objects through the schemes of perception and
appreciation of their *habitus*." However, the *habitus* or historical socialization of consumer was
absent at PPMR and among its clients. The version of the consumer perception that marketers
imagined and articulated through consumer research was highly standardized with narrow
parameters of what consumer perceptions and preferences could be. There was little interest in
examining variations in how consumers perceived and categorized the world, let alone any
attempt to comprehend the value systems of Cambodian consumers. Therefore, it is more
appropriate to characterize the research and results I observed as an expression of the marketers' categories of perception and value system.

In this chapter, I argue that terms by which marketers understand value are the consequence of the marketing discipline itself. Marketing disciplines its practitioners to think like a free-market anarchist and see value in the narrow terms of product and brand utility, while rejecting alternative models for understanding value. Sunderland and Denny (2011: 158) argue that marketing, particularly segmentation processes constrict marketers by not allowing “for an analysis of consumption that would consider processes that involve more than an individual.” Through structured practices such as consumer perception surveys, marketers are constricted in their capacity to identify the social dimension of consumption and the values that are derived from social and kinship connections. Value is understood to principally exist in the mind of consumers. Therefore, research has the function of monitoring the consumer mind, which isolates the consumer, cutting them off from the social connections that they cultivate through mobile networks.

The simplified modes marketing uses to interpret consumer value open a void of "silent evidence" about the consumer (Taleb 2010). In this void marketers project their own categories of perception that are the product of their own habitus. These categories merge with models developed by the marketing discipline that structure society as a pyramid. In the depoliticized spaces of consumer research and advertising firms class structures that marginalize poor and rural Cambodians are reinforced. These class structures are then inscribed into infrastructures of mobile networks as well as the network providers’ marketing communication and distribution infrastructure. As a result, the value of mobile networks as infrastructures that bridge class
divides is partly mitigated by consumer research practices and the construction and communication of value by marketers.

**Value in Personification, Mind Maps and Simplification**

The process of imagining consumer value begins with zooming in on the consumer mind. Marketing like the free-market anarchist has a close relationship with the sciences of the mind, particularly psychology (Gregory 1997; Miller & Rose 1997; Hackley 2009; Slater 2011). What is more general knowledge is that marketing also draws heavily on economics to frame consumers as utility maximizing economic agents. In unison these disciplines give scientific foundation within marketing to the focus on the consumer mind. Below I explore the rationality underpinning attention to individual consumer cognition and how the consumer mind is measured.

**The Person-Brand Relationship**

The first exercises conducted by PPMR for its clients are directed at gauging how focus group participants personify the brands. One focus group discussion guide directed the moderator to have the participants close their eyes and empty their mind. After the participants are comfortable the moderator should ask them to visualize a particular brand as a living person. The guide then suggests how to probe the participants. It states, “Explore to find out the physical appearance of this person (man, woman, what kind of clothes does this person wear, what social status does this person have? What is their age? What do you think your relationship with this person would be?” In other cases respondents were asked to draw pictures of the brand as if it was a person, or were given magazine clippings in order to make collages of the brand. These exercises were dedicated to understanding how consumers perceive brands as people and what kind of relationships they could imagine having with the personified brand.
Through these exercises the relationships consumers have with the brand is emphasized.

Anthropologist Robert Foster (2007: 708) suggests that these exercises reflect how marketers have become preoccupied with understanding person-product or person-brand relationships, especially within fast-moving goods industries. While working in an advertising firm in New York, Foster conducted similar research that involved participants making collages of washing powder brands in order to demonstrate the perception of the brand as a person. By drawing on advertising discourse and this experience, Foster argues that creating an emotional connection between the consumer and the product corporations de-commodifies goods, generating what Marx defined to as "surplus value". With a personified brand consumers form a relationship and as consumers maintain that brand-person relationship brand owners are able to extract rent at a premium. He suggests this is critical for fast moving consumer goods such as washing detergents with little product differentiation and when profits are dependent on repeat purchases. The logic applies equally to mobile network providers as profits are generated through the on-going use of the network.

A brand and product’s surplus value is referred to as “goodwill” within corporate accounting language. It is the value of a brand beyond the immediate tangible assets of a company and represents the capacity of a brand to extract profits in the future. A corporation’s accounting ledger keeps track of their brands’ goodwill by various methods of calculation, which gauge a brand’s position within a market of consumers, the strength of the brand’s relationship with consumers and its potential for longevity. However, collages and pictures of brands as people do not lend themselves to numerical calculations of a brand’s goodwill. For this purpose, numerical modes of measuring a brand’s relationship to consumer minds are preferred over interpretive methods.
Personification exercises that I witnessed were rituals of consumer research generate an aura marketers are dedicated to understanding consumers on a deeper and more complex level, but such complexity was not actually welcomed. It was problematic to the firm and also the marketing personnel at mobile network providers. They were at a loss in regard to handling complex accounts of the consumer. The firm was much better equipped to conduct quantitative surveys that could assess the respondent’s awareness of various mobile network providers. This was the prime objective of brand perception survey and took precedence over understanding consumer generated categories of perception or understanding consumer needs and usage behaviour.

**Penetrating the Mind**

The main gauge of brand awareness is top-of-mind (TOM) recall, which was also called “share of heart”. Respondents in quantitative surveys were asked questions such as, “If you think about MSP (mobile service provider) brands in Cambodia what is the first brand that comes to mind?” They would also be asked about the second and third brands that they recalled. Additionally, more detailed questions required respondents to recall brands based on various categories. Commonly used labels for brand association were “coverage”, “youth orientated”, ” best prices”, “best for business people”, “best internet”, “most hi-tech”, “most established”, “best for family and friends”, and “most international”.

The rate by which consumers recalled brands based on markers of value such as most “youthful orientated” or “most high-tech” were used by the research director at PPMR to produce mind maps of Cambodian consumers. Sven, the research director, put the research results through an algorithm to generate perceptual mind maps that displayed positions of different brands in the
mind of respondents. These maps of the mind aggregated thousands of respondents into a single graphical map that could be inserted into a single PowerPoint slide for the purpose of boardroom presentations.

I was intrigued and a little disturbed by these mind maps that aggregated the minds of Cambodians into a single PowerPoint slide and quizzed Sven about them. In response, he recommended that I read the classic marketing book “Positioning: the battle of your mind”. He had read it many years ago and it had guided his career as a consumer researcher and marketing consultant ever since. According to authors Ries and Trout (1986: 2), "Positioning is what you do to the mind of the prospect. That is, you position the product in the mind of the prospect."

Importantly, it is "not reality of the product" that counts, it is the "perceptions of the prospect" that companies should focus on (1986: 8). Measuring perception was the role of PPMR and brand awareness was the key indicator of perception and the positions that their client had taken in the mind of consumers.

The mind maps importantly demonstrated that the mind, like the market, is a competitive place where positions can be fought over and taken. Ries and Trout (1986: 24) explain that to create a position in the prospect's mind a company should take into consideration not only its "own strengths and weaknesses, but those of its competitors as well." Sven’s mind maps conveniently served this purpose by displaying both positions taken by PPMR’s clients as well as their competitors. They showed clusters that indicated spaces of too much competition, openings of less competition and vacant spaces in the mind for the taking by the network provider if they could build brand awareness associated with pre-determined markers of value.
In contrast to marketing’s focus on value as perception in the mind, economic anthropology identifies value as “the invisible chains that link relations between things to relations between people” (Gregory 1997: 12). Miller expresses this anthropological perspective in his *Theory of Shopping* (1998). Shopping, Miller argues, is a medium through which relations are developed and expressed. I substantiate this argument in chapter three and four. Through consumption mobile networks are turned into infrastructures that both support and express the relationships that Cambodians have with one another. The value associated with mobile networks is the support they give to the social and kinship connections that Cambodians have or seek to cultivate. However, brand awareness as the key indicator of brand value narrows what marketers of mobile networks providers can see and interpret as consumer value. It focus on their attention their relationship with consume and not on the relationships that cultivated through the network.

Focusing on the mind of consumers and a limited range of brand awareness indicators responds to the challenge of complexity in marketing. Ethnography revels in the complexity of seeing value in intersecting relations and varied social identities, but this was highly problematic at PPMR and among its clients. In the face of complexity they consistently sought to simplify. On one level, simple methods are selected so they can be practiced and understood across an organisation. On another level, marketers seek methods that are scalable in terms of research and marketing campaigns.

Simplification and the attraction to scalability are evident in the priority given to standardized quantitative studies of top-of-mind (TOM) recall rates over qualitative methods. Focus group discussions were described in methodology briefs as a support mechanism that could guide the development of quantitative surveys, but I observed little deduction from qualitative surveys. It
was very difficult for the firm to find staff that could run focus group discussions. It was even more difficult to find someone to interpret the data and produce reports in English on the findings, but recruiting staff that could use or be trained to use statistics software such as SPSS was considerably easier. Reports were usually written by expatriate staff members, who relied on translated transcripts of the focus groups. Then, in the final report the focus group data was used to provide a touch of consumer voice that could colour what were otherwise dull presentations consisting of mainly pie and bar charts. Taking insights from focus groups and verifying them through quantitative research was also rarely practiced. Clients typically brought to the project a list of standard survey questions that they wanted to be asked before focus group discussions even began.

The evaluation of brand awareness based on a limited range of brand value indicators suited the executives who sought simple abstractions of the market. When I was asked to help prepare research reports I was consistently told, "Keep it simple. CEOs don't have time to read detailed analysis.” What they appreciated was simple visuals such as Sven's mind maps.

Sven's mind maps are based on positioning, a concept that is premised on the belief that consumers require simplification. Ries and Trout (1986: 6) explain that “the only defence a person has in our over communicated society is an oversimplified mind”. To cope with the complexity they claim, "People have learned to simplify everything" (1986: 31). According to Ries and Trout (1986: 32), a feature of consumer simplification in the face of a crowded market of choice is to rank products and brands in their minds. Brand recall rates are a means to monitor the oversimplified mind. I hold reservations regarding framing the mind of consumers as oversimplified and seeing brand recall rates as a fair representation of brand value. However, I
acknowledge that brand recall rates serve an important function for marketing executives. They provide executives and marketing personnel with a coping mechanism for the complexities of the consumer market. The oversimplified mind of the consumer, I suggest, is inverted back on marketers who adopts it to cope with the complexity of the market that they are tasked with understanding and communicating value to.

The Exposure (Share of Voice) Game

A feature of corporate simplification is the measurement of brand exposure, which is also called “share of voice”. Its prioritization was evident early in my field research when I interviewed an expatriate in the advertising industry. I raised the subject of Viettel’s rapid success. Like others, he was suspicious of the subscription numbers they were making public. Inevitably, they would fail, he claimed. “They don’t advertise enough. You see, marketing is all about exposure, exposure, exposure,” he explained to me. According to him, exposure is an essential ingredient for penetrating the mind of individuals. Exposure could be measured through presence in the media such as billboards, TV, radio, and print media. In these terms, Viettel evidently had a weak presence.

How much Viettel and their competitors invest in media channels came up regularly in discussions with industry insiders. They regularly commented that Viettel, compared with other mobile service providers, had a weak “share of voice”. Insiders drew on reports generated by private firms that collect data on advertising expenditure on television and print media advertising. A media manager for an advertising firm that used this data to plan and purchase media space for clients explained that they could not rely on radio or other forms of media to judge advertising expenditure because the costs were not sufficiently standardized like TV or
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Print media. This demonstrates a focus on what is standardized and measurable. The measurability of expenditure produces a market of its own for media space in which mobile network providers try to outdo each other. According to Miller (1997: 4) there can be a “fixation on rival firms that pushes out any interest in or concern with consumers.” Viettel differed in this regard. It appeared to have very little interest in competing over media space with other network providers.

The Colour Game

In competition to penetrate the mind of Cambodian consumers, brand colours were treated with utmost importance and were used to paint the Cambodian landscape. In marketing, colours are treated as a medium for building the brand-consumer relationship since they have a “capacity to link the sensory and the material”, which has led mobile network providers worldwide to make colour based branding central to their communication and value creation campaigns (Horst 2014: 192). Cambodia has been no exception. Consequently, the changing colours in the media landscape tell a story of the changing and evolving market. On occasions visiting Cambodia prior to beginning research I was struck by how the orange colours of Cellcard marked the landscape. Shop after shop was adorned with the brand’s orange coloured signage. Cellcard branded umbrellas surrounded the markets and provided cover for street side vendors. Orange was intermingled with the yellow of the Hello brand and red of Mfone. At the time these companies made up the vast majority of the mobile network provider market in Cambodia, but were being challenged on the edges by new network providers who had just entered the market. In 2008 and 2009 Smart Mobile, Beeline, and Viettel entered the market and in turn new colours and imagery appeared. Bright green represented Smart Mobile. Beeline brought yellow and black stripes, and
Viettel featured a dark green colour. Their colours and imagery could be found on TV, on billboards around the city, on shop-fronts, and in magazines and newspapers.

Colour preferences and the degree to which consumers associated brands with colours were on occasions measured in research. The onus placed on colours was also evident in the production of reports by PPMR. There was a conscious effort to use the client’s brand colour coding in the formatting of reports and presentations. One of PPMR clients repeatedly asked for modifications to be made to the report since the shades of colour we used didn't correspond with the colour profile of the brand. The report would be sent to the company’s headquarters so it was essential to give an impression that the brand's colours were consistently maintained.

**Inscribing Brands on the Landscape**

Penetrating the mind of Cambodians with brand colours was part of competition over top-of-mind recall rates, which led to competition over shop front signs, billboards and signs along roads and around markets. With the abundance of shops selling SIM cards and mobile phones, especially around the market centres, shop frontage provided a prominent space for reaching consumers and exerting the brand. Mobile network providers supplied signage above the shop free of charge, and then paid a monthly compensation to the shop owners for maintaining these signs. This varied from US$15 per month to US$30 per month. In some cases, the network providers would also pay the shop sign tax on behalf of the shop owners. Usually there was no condition for having shop signage provided by a mobile network. However, Mobitel used its size and market share to leverage the distribution of SIM cards from other network providers by not supplying SIM cards to dealers who did not have Mobitel’s Cellcard shop signage. Competition of shop-frontage was also raging within the beer market. Angkor, Anchor and new entrants such as
Cambodia Beer and Kingdom Beer all became engaged in competition to control signage of restaurants, beer gardens, pubs and karaoke bars.

Capital investment in shop front signage, umbrellas and billboards are considered to generate a reasonable return on investment. Billboards are considered particularly favourable in these terms. Mobile network providers’ love affair with billboards caught the eye of Phnom Penh residents at the time of the 2010 Water Festival when three of the network providers established massive billboards along the foreshore of the Tonle Sap River that connects the great Tonle Sap Lake with the Mekong River and is the site of boat racing during the Water Festival. Billboards also dominate provincial towns, especially the areas around town centres and markets. The Psar Nat market in Battambang town was adorned with a Mfone billboard that was wrapped around the entire perimeter of the market’s roof. Smart, Beeline and Cellcard billboards were also stationed around the market. All entry points in and out of the Battambang had billboards erected in order to capture the attention of people moving in and out of the town centre.

Billboards in rural areas were harder to find as their “return on investment” is perceived to be lower. In rural areas and around provincial town markets, corporate marketers turn to the distribution of large acrylic signs that can be hung from walls and balconies of roadside houses and shops. Local firms are contracted to travel around the country to locate roadside houses or shop buildings where they could hang these signs. National roads stretching through the countryside were typically lined with signs hanging from the balconies or across the side of wooden houses. One house north of Battambang on the way to Banteay Meanchey province had a Smart Mobile acrylic canvas wrapped around the entire house. While I was conducting field research in Rotanak Mondul District, the road connecting it with Battambang was being
revamped by Procter & Gamble who had contracted a local firm to put up signs advertising Palmolive. The canvas signs contained an image of the footballer Cristiano Ronaldo. I spoke with one of the residents that recently had a sign put up across the front of her house. She didn’t know who the person was on the sign, but she did appreciate that the company had given her a free acrylic canvas that could protect her house from the sun and rain.

For providers of fast moving consumer goods value creation campaigns stretch down into actual physical markets. During my field research in rural areas I often ran into the distribution agents of Procter & Gamble and Unilever. They distributed signs, acrylic banners, and umbrellas to market vendors. In addition, they engaged in merchandizing activities within market stalls by arranging the presentation of the goods of local vendors in order to manage the consumption possibilities of local consumers.

**Television**

While the physical landscape constituted an important terrain for communicating value and building brand awareness it did not compare with the emphasis placed on television, which was treated as a fundamental element of the marketing infrastructure of mobile network providers. In 2009 mobile network providers were the leading buyers of TV advertising pace. They held the top three positions and six of the top ten positions in terms of advertising expenditure (Green 2009 Sept 17). I suggest that this high rate of investment is due to the measurability of television expenditure, which made TV advertising a point of competition between rival network providers. The heavy investment in television advertising is also a reflection of consumer research, which indicates high rates of TV penetration and the effectiveness of television as a medium for accessing the minds of Cambodian consumers.
According to research produced by Indochina Research, television penetration reached 100 percent in 2009 (Wells 2010 Mar 31). Research conducted at PPMR, also demonstrated the strong position the television in the communication ecology. Surveys consistently asked respondents about the medium through which they recall viewing or hearing advertisements. In these surveys television consistently stood out as the primary medium for which respondents claimed to see advertising. However, the picture presented by Indochina Research and by PPMR contradicted what I observed in the field. I had observed that many households in urban and rural areas did not have a television. Households off the electricity grid that did have television would only turn on their television for brief periods in the evening in order to conserve power. Additionally, Cambodians often preferred playing VCDs of Thai dramas and Khmer music videos rather than watching free-to-air television. Moreover, my observation was backed by statistics. The Cambodia Socio-Economic Survey of 2010 states that nationwide only 64% of Cambodian households have a television and this number drops to 58% in rural areas (National Statistics 2012: 99).

Armed with statistics, I raised my concern that the research results might be giving a false picture of the strength of TV advertising by making a cautionary remark in a research report I helped prepare. The client promptly dismissed my concern and asked that my cautionary remark be deleted from the report since the research results reflected the company's experience in other markets. This was a point when I began to realize that consumer research can be a mere confirmatory ritual. I had also overlooked that the client, PPMR and Indochina Research were not seeing the market as an all-inclusive construct. Public surveys of the population, were therefore, not as relevant as their own research, which could zoom in on what they had pre-
defined as the market of consumers. If there is a message in the medium it is that the market for mobile network providers is defined by exclusion of people that do not own a television. It represents another layer in the marginalization of the poor and rural Cambodians, and is further reinforcement of the rural-urban divides in Cambodia.

**Where is the “Social” in Consumer Value?**

The strong focus on brand awareness and perception in the mind of individuals demonstrated in consumer research and through brand exposure campaigns, contrasted with a weak interest in the social dimension of consumption. This imbalance was particularly striking since this ethnography of marketing and consumer research was conducted simultaneously with my ethnography of mobile network use. Ethnography consistently demonstrated consumption choices to be shaped by social dimensions, particularly the connections that Cambodians maintain, manage and cultivate through mobile networks. Therefore, as an observer of marketing and consumer research I take an interest in how the social is comprehended, evaluated, constructed and framed as having value within market relations.

**The Social and Rational Choice Models**

In addition to seeing choice based on the position of a brand in the mind, consumer research tackles the subject of choice and consumer decision making by asking questions about the factors that drive churn and acquisition. Churn refers to customers switching brands and SIM cards and is associated with brand loyalty. In Cambodia churn rates were particularly high and as result the consumer was deemed to have low levels of brand loyalty. Reducing churn and increasing acquisition is central to the success of a mobile network provider, and thus was given considerable attention in consumer research conducted by PPMR and other companies. Given
that mobile network providers were by and large disinterested in those who had not yet joined the market, churn and acquisition were concepts that were not distinguished within research.

Ericsson, which is a telecommunications engineering company and leading player in the telecommunications industry worldwide, took up the subject of churn in consumer research that it made public for the industry. A survey conducted within several South East Asian countries demonstrates how churn and needs are addressed (Ericsson 2012). To understand the reasons behind churn the Ericsson survey asks “What are the main reasons for changing your mobile data provider?” According to the results, there is no social dimension shaping churn. All possible responses related to the economic and technical attributes of network provision from "pricing" to "data connection reliability". The utility of the product characterized by Ericsson is devoid of human and social qualities. Mobile networks providers are framed as neither personified brands, or a platform for people to connect. In this case, the provision of network connectivity is treated strictly as a commodity.

Respondents can only provide answers based on the categories provided with the survey. To Ericsson, which is primarily an engineering company, it serves their interest to frame choices based on economic and technical attributes. In contrast to Ericsson, PPMR surveys monitored additional non-technical factors. One survey asked, “What is the most important factor that can make you switch to another operator?” It then provided "Price / Tariffs", "Coverage", "Advertisement", "Connection Quality", "Friends/Families", "Prefix, Customer Service", "Well-known company" and "Other" as possible reasons for switching to another network provider. Another survey asked, “If you decide to buy a new SIM or change existing operator, what factors are important for you when choosing a mobile operator? Please rate the importance from 1 to 5
(1 is the least important, 5 is the most important)”. The categories of value provided in the survey were "Coverage", "Price/Tariffs", "Prefix", "Friends/Families", "Voice call quality", "Internet speed", "Promotions", "Customer" and "Service level". Although minor, these surveys give some attention to attributes that are not economical or technical such as “advertisement”, “well-known company” and “friends/families”.

These questions are based on models of rational choice that Sen (2009: 177) points out are still “used extensively as a predictive device” despite existing scepticism towards the assumption that people’s actual behaviour and economic choices follow “the dictates of rationality”. According to Sen (2009: 178), rational choice models do not take into account how people have an “ability to consider and respond to different types of reasoning.” The questionnaires present one version of reasoning while consumers could operate according to quite different sets of reasons. Economic anthropology highlights that social actors can switch between value systems depending on the situation. Gregory (1997: 8) argues, "People create multiple value systems for themselves and are constantly switching between them according to the dictates of the moment." This suggests that consumers can react to a survey questionnaire in one way and draw on an alternate value system when they engage in actual consumption behaviour. Different types of reasoning were also evident among staff at PPMR. While they presented research participants with one model of reasoning, in personal discussions they would present quite different reasons for their own consumption choices. Just like the informants in my ethnographic study of consumption, PPMR staff prioritized using the same network as their family, friendship group, boyfriend or girlfriend, and their boss. Indeed, the firm’s director regularly switched SIM cards so it matched with the network provider of his latest client.
Within the above mentioned survey questionnaires the social is framed as having only a minor dimension. The social factors for choosing a brand were given one solitary category among nine and ten alternative categories respectively. The social drivers of choice were lumped in the category "Friends/family" and thus any difference between kinship and peer group pressure were indistinguishable in the picture that the research presented to mobile network providers. The research could only present a picture based on the categories of value that are listed by the survey designers, who were typically the marketing personnel at the mobile network provider and the lead researchers at PPMR. Based on their categories of perception social connection had only minor value. They leaned towards framing value with technical and economic categories that could be communicated through the mass media and other infrastructures of marketing communication.

I found this minor interest in social connections Cambodians experienced through mobile networks and how these social connections could be dictating social consume choice to be surprising. Not only did my own research highlight how consumption choices were dictated by the social connections they have or are trying to cultivate, but focus group discussions consistently highlighted the social characteristics of choice. The results of these discussions, however, seldom found their way into quantitative surveys. Research primarily reinforced predetermined categories rather than allowing them to be challenge by the voice of consumers. Despite the solitary category that the social was given, survey results consistently showed "family/friends" or what was otherwise called "word of mouth" to be a major determinate of choice. There was nevertheless a reluctance to break this category into parts and understand its dimensions. My main contribution to PPMR was to encourage a separate friend and family in order to identify how different kinds of social relations were associated with different network
providers. It was welcomed at the time and the results proved to be insightful for the firm’s client, but when I revisited PPMR to examine new projects I saw the same questions and the return of friends and family into one solitary category.

The minor interest in exploring the social factors was perhaps more surprising given the role network providers were playing in prompting choice based on social connections. Like in most markets the tariff rates are much lower when calling on the same network. Additionally, several mobile network providers offered affordable unlimited call packages and credit bonuses that could only be used for calls to users on the same network. Examining the role of social factors in consumer choice could point to the relationship between on-network calling and different kinds of social relationships consumers have. However, such insights are difficult to see as applicable to the marketer’s methods of defining the market that cuts through a variety of relationships particularly inter-generational and multi-sited relations that bridge geographical divides.

The Social in Activation & CSR Campaigns

Television and mass media are simple and scalable mediums of communication that suit corporate marketers of mobile networks, but there is acknowledgement that building brand - consumer relationships, brands need to be brought to life. TV and other forms of mass media are considered limited in their capacity to establish close customer relationships. An executive at a mobile service provider noted that in addition to the use of mass media they make a strategic effort to be close to consumers through a variety of events, which are referred to as “activation events”. A director of a firm that specializes in these events explained to me that activation is a “strategic process of bringing a brand to life through experience”. On behalf of mobile network providers and fast moving consumer goods companies his firm organized travelling road shows
around the country that were intended to bring brands to life among target consumers. These events attract people with music, games, and other forms of entertainment. They mostly involve giving consumers a first-hand experience of the product, which can involve either giving away free product samples or selling products at a discount. For mobile network providers it tended to involve issuing free SIM cards and selling discounted handsets.

Usually events would be held at local markets, schools or universities depending on the target audience. Who is targeted by activation programs and who are potential recipients of free or discounted products and services is subject to how companies define the market. I discussed in chapter five how activation campaigns that do door-to-door campaigns deploy discriminatory methods to determine desirable consumers. However, some activation campaigns piggy back on cultural events such as the Khmer New Year and the Phnom Penh Water festival to reach a wide audience.

The Water Festival was held every November until 2010 and constituted the largest activation event in the year for providers of consumer goods and services. The very high concentration of people in one area offered a tremendous opportunity for corporations to interact directly with consumers. This resulted in private companies negotiating with authorities to take control of public spaces along and near the river in order to divide up and rent to corporations and marketing firms to run activation programs. In their simplest form they constitute stalls exhibiting goods, and in their more elaborate form they are large concerts.

I observed the 2010 Water Festival, which had a wide range of corporations promoting everything from cosmetics to beer brands. The corporations with the largest presence were
mobile service providers. The presence of Smart Mobile was especially strong. They had outbid other companies to have an exclusive presence along the main foreshore and in front of the Grand Palace and National Museum. Their sponsorship of the event also included fireworks in the shape of their brand logo and a concert at Diamond Island on the final night of the three day event. Tragically, the event ended in the tragic deaths of hundreds of young Cambodians.

**Corporate Social Responsibility Campaigns**

A senior marketing executive at SMART Mobile described in an interview with me their company’s sponsorship of the Water Festival as well as the US$20,000 they contributed to the families of the victims as part of the company’s corporate social responsibility program. This characterization of their involvement at the Water Festival makes it difficult to distinguish corporate social responsibility activities from activation campaigns and broader branding strategies. This was further evident when I attended the *Pour un Sourire d’Enfant* (For a Child’s Smile) charity party. *Pour un Sourire d’Enfant* is a vocational school focused on providing young disadvantaged people with employment skills in the Steung Menchey District of Phnom Penh. Each year they hold a fair to raise funds for the school. I arrived early for the event and waited outside the school gates until they opened the event to the public. Staff of the school manned the entrance and prepared to accept entrance fees from guests. At the time they were all wearing Kingdom Beer t-shirts provided by the Kingdom Breweries, a new local brewery funded by venture capital from abroad. As it came close to the event beginning, representatives of Smart Mobile arrived and noticed the staff were wearing the t-shirts of a lesser sponsor and abruptly asked them change into Smart Mobile t-shirts. Smart Mobile had negotiated to be the main sponsor through providing bicycles to the school and thus their brand took priority over other sponsors.
As a standard feature of activation marketing, Smart Mobile had a booth within the school grounds where guests could receive a free SIM card. This mixing of corporate social responsibility with activation programs was not a unique case. Many other corporations were busy at the fair that night promoting their brands in the name of charity. In another case, Cellcard were the prime sponsors of the "Fun Fair" held by Friends, an NGO dedicated to supporting street children. Marking the space of the fair and the flyers promoting the event were the corporate brand colours and logo leading me to wonder if the fair was organized to demonstrate the admirable work that Friends do or to promote the brand of a leading mobile network provider.

Local Cambodian celebrities are employed in activation campaigns and so-called corporate social responsibility campaigns. Mfone made the singer Preap Sovath their brand ambassador and also recruited the female singer Aok Sokun. The Hello brand used a famous female model, Duch Lida, and Smart Mobile sponsored the female singer Aok Sokun Kanh. Other brands such as Coca-Cola and Samsung have been active in sponsoring singers and Cambodian talent to perform concerts and appear in the media to present their brands with a social face. Given that there is little income available through the sale of music, corporate sponsorship has proven to be an important ingredient in the development of the local pop music industry. It has also contributed to the emergence of a celebrity culture in Cambodia.

**Aspiration as Mobile Network Value**

The use of celebrities within marketing has a dual function. They personify the brand by providing a social and human face to brand. And perhaps more importantly, they are seen to represent "aspiration", which marketers of mobile network providers see as standing for consumer value. When the consultancy firm Accenture (2010) encouraged multinational
telecommunications corporations to invest in emerging markets they described mobile phones and networks services as “aspirational”. Accenture (2010: 2) explains:

“Although many consumers in these areas live in rural areas and rely on more limited means, their disposable income has risen in recent years. Many such consumers have become more confident about the future, and are now willing to buy aspirational products such as mobile phones and services, even on credit.”

The key to comprehending Accenture’s portrayal of rural people in emerging markets is the word "aspirational”. What does “aspirational product” mean and how could mobile networks be seen to constitute aspirational for Cambodians?

Aspiration, like value, is a term that marketers use extensively. Products and brands are regularly described as aspirational and branding strategies are given labels such as "aspirational positioning strategy". Despite its extensive use, "aspiration" like "value" does not have an entry in Penguin's Dictionary of Marketing (Harris 2008). However, a very lengthy marketing text simply titled Consumers (Arnould, Price & Zinkhan 2004) does provide some insight into how marketers understand aspiration. The authors use the term "aspirational gap" to describe a condition in environments such as the growing economies of Eastern Europe. It exists among consumers when there is a "disparity between the consumption level they earnestly desire and strive for and the level actually attainable" (Arnould et al. 2004: 348). This reflects the sentiment of the chief marketing officer at Smart Mobile who suggested there was demand in rural areas, but it was not matched by incomes. According to his understanding of the rural economy, access to his company’s mobile network could be desired but was beyond the means of much of the population.
In Consumers aspiration comes up again within the term "aspirational reference group". It is defined as a group that consumers have "a strong attraction toward" and can thus influence an "individual's attitudes and behaviours" (Arnould et al. 2004: 611). When products and brands are associated with an "aspirational reference group" they gain value as consumers utilize them as a means to assert their identity in relation to the group. The use of celebrities thus supports a brand’s value by associating it with an "aspirational reference group". They also mark what brands are not and distinguishes them from the "avoidance reference group", which stands in opposition to the aspirational group (Arnould et al. 2004: 611).

According to Bourdieu (1984), consumer tastes and choices unite and separate. “Tastes”, he argues, "are perhaps first and foremost distastes" (Bourdieu 1984: 57). The association of a brand with a so-called aspirational reference group also shows what a brand does not represent. The use of musical artists who are popular among the youth builds a brand association with a youth population as much as it distinguishes itself from older generations. The advertising for network providers, particularly Cellcard, Beeline, Mfone and Hello, used imagery dominated by the urban middle class, especially a class of white collar workers. Projected onto the Cambodian physical and media landscape these images framed this class as aspirational and as a class of taste. In doing this, they also present the opposing category of rural people and people of agricultural and labouring occupations as an avoidance class.

Aspiration in these terms is embedded in class structure and wrapped up in how people see their own social class and the social classes of others: who they are; what they need; what they seek to be and not to be (Bourdieu 1984; Slater 1997). Therefore, when marketers make claims about
aspirations of consumer groups they are making claims and statements about the needs and aspirations of various social classes, including their own. These claims and statements are principally based on the marketer's own schemes of perception. Research conducted at PPMR did not ask respondents to categorize themselves into classes. Neither did research try to understand what consumers seek to be or how products and brands are adopted in aspiration fulfilling strategies. There was thus a void of silent evidence concerning the relationship between consumption and class relations. Marketers fill this void with class-based assumptions about the social "other" that strengthens their position in the social structure while undermining other social groups.

The projection of an urban middle class version of aspiration was evident in lucky draw campaign run by Mfone. Lucky draw campaigns were popular among corporate marketers in Cambodia. Everything from beer, wine to cement, monosodium glutamate and washing powder were marketed using lucky draw campaigns. Lucky draw campaigns are first and foremost customer engagement strategies directed towards building the brand-person relationship, but lucky draw campaigns also allow aspiration to be inserted into the brand. Mundane products such MSG can be linked to products of aspiration that are unattainable in normal circumstances. Offering the usually unattainable further link products to perceived aspirational reference groups that are associated with the consumption of particular products while distinguishing the product and brand from the avoidance reference group.

In the face of diminishing market share Mfone engaged in an aggressive customer retention strategy by focusing on aspirational value in a lucky draw campaign called “Make Your Dream Come True”. The campaign’s first round gave away a Lexus SUV, a prominent symbol of the elite
in Cambodia. The second round involved giving away a townhouse in the suburbs of Phnom Penh. The TV commercial for this round presented an image of a young couple in a barren rice field dressed in stereotypical agricultural clothing. The young male asked his female partner to close her eyes and dream. When she opens them they are transcended to Phnom Penh where they stand in front of their new townhouse. At the sight of the house, tears flow from the young woman’s eyes. Through this juxtaposition of a middle class house in Phnom Penh against the harshness of the Cambodian countryside the dialectical relationship between tastes and distastes, aspiration and avoidance is vividly portrayed.

**The Social Structure and the Trickle-Down Effect**

This representation of class value was projected throughout the mass media to a wide population of Cambodians, but it remains unclear which class of Cambodians were targeted by the campaign. Was it simply a narrow and pre-defined market of existing customers within the urban middle class for whom a Lexus SUV and a suburban townhouse demonstrate who they are and what they want to be? Alternatively, was it supposed to appeal to potential new users in rural areas? I suspect that both of these groups were being targeted since symbols of the elite and the middle class are understood to have a broad appeal across the population. This view of class relations follows the theory of the "trickle-down effect" that was articulated by Veblen and Simmel around the turn of the twentieth century (Üstüner & Holt 2010). According to this theory, the economically weaker classes strive to emulate the upper classes by adopting their tastes and lifestyle symbols. As these tastes and symbols become the norm among lower classes the upper classes distinguish themselves by adopting new symbols of distinction. This is repeated to create a perpetual cycle in which fashion and lifestyle trends are continuously refreshed as upper classes seek distinction and lower classes try to emulate them.
Marketers in Cambodia who accept this theory see that it serves their interest to focus on upper classes, even when the masses constitute their target market, since they will inevitably try to emulate upper classes. Thus, when mobile network providers became aware of a growing rural market they persisted with middle class and urban imagery and resisted making rural lifestyles symbolic of social and market value. Fast-moving consumer goods companies such as Unilever and Procter & Gamble further express this picture of class relations. While they reach deep into rural communities they also resist adopting rural symbolism and imagery. Urban imagery of fair skinned Khmers and other Asians are presented as aspirational and as a result the darker skin tones of the rural population exposed to the physical elements are devalued in the hierarchal structure.

For bottom-of-the-pyramid marketers such as Unilever, Procter & Gamble and mobile network providers, the social structure is indeed a pyramid. For the target market that sits at the bottom there is only one way to look, up. Marketing to them involves presenting symbols of the social classes above them. Therefore, I suggest that the bottom-of-the-pyramid marketing model, which is presented as a medium of development, actually legitimizes a pyramid-like class structure that further marginalizes rural and urban poor populations by symbolically devaluing the symbols of their social class.

The theory of the trickle-down effect in marketing has received considerable scrutiny in developed markets. Even the marketing discipline acknowledges its flaws. The text *Consumers* (Arnould et al. 2004) describes how consumption choices are central to expressing one's class and group identity. The authors of *Consumers* also highlight how the tastes of an underclass such as ghetto "gangbangers" can be emulated by middle classes leading to fashion trends starting in
the lower class and spreading upward (2004: 485). This turns the trickle-down effect on its head so the vertical channel of taste is inverted and moves upward.

Bourdieu (1984) in *Distinction* gives the strongest case against the trickle-down theory. Within a momentous study of French society Bourdieu makes many important contributions to consumption studies. Three stand out in relation to this study. Firstly, he strengthens the case that tastes and consumption choices function as "markers of class" (1984: 2). "Social subjects", he argues, "distinguish themselves by the distinctions they make" (1984: 6). Secondly, he highlights how these distinctions are structured based on a variety of oppositions such as between beautiful and ugly, and form and substance. Through sets of oppositions, social agents comprehend the social world and the world of goods to define themselves and others within class relations. Social agents thus classify and are classified by various oppositions. The upper classes, he argues, prioritize aesthetic qualities and have distaste for necessity. Their tastes are cultivated in opposition to the working class, who prioritise form over substance and have a taste for necessity. The petite bourgeois also contrast themselves against the working class while a bourgeois class seek distinction from the petite bourgeois. These oppositions of class and taste produce a complex web of social and consumption relations that are divorced from the trickle-down effect.

Bourdieu's third contribution to consumption studies and perhaps most significant is the attention he brings to the consumer's *habitus*, which further challenges the relevance of the trickle-down effect theory. According to Bourdieu, *habitus* socially conditions taste along a historical trajectory of life experience, beginning with one's up-bringing. Taste thus has roots in one's class background. Consequently, Bourdieu challenges equating consumption choices with
one’s economic capacity to consume. According to Bourdieu, *habitus* is a far superior indicator of taste and consumer choice than consumption capacity since tastes drawn from one’s *habitus* do not necessarily change as one’s economic situation alters. For instance, a learned taste for substance over form can stay with the individual despite changes in the individual’s economic status and capacity to consume.

Studies of class and consumption in the tradition of Bourdieu's *Distinction*, although prevalent in the developed world, have been largely absent in less industrialized economies with the exception of Üstüner and Holt (2010). While this thesis is far from a comprehensive study of the spectrum of tastes in Cambodia as they relate to class and social identity, it does indicate that such a study would be very insightful in Cambodia and similar countries that have experienced rapid social and economic transformation. It is in the context of rapid economic change that Bourdieu's contribution to consumption studies would be most revealing. In Cambodia for instance, the background of those that constitute the economic elite and the middle class is dramatically different from their current economic status. It would be foolish to assume that the elite and the new middle class have abandoned the tastes rooted in their *habitus*. Studies that explore the relationship between class and consumption, I think, are also necessary to challenge models of so-called aspirational marketing based on the trickle-down effect that marginalize poor and rural Cambodians and strengthen class divides.

**Conclusion**

Marketers proclaim that they act in the interest of consumers and use consumer choice and perception as justification for their marketing strategies. Ries and Trout (1984) stress that value is in the perception of consumers and thus understanding consumer perception is critical to
marketing success. Another marketing text argues that for a company to be successful “it must determine the needs and wants of specific target markets and deliver the desired satisfactions better than the competition” (Schiffman & Kanuk 2004: 10). Accordingly, understanding consumer needs and wants as well as aspirations, tastes and perception are fundamental to the communication of value.

This thesis demonstrates how this can be a misconstrued take on how marketers understand and communicate value in the Cambodian market. Firstly, I demonstrate in chapter five how it is only a limited and pre-defined market of consumers that are privileged with a voice in consumer research. Secondly, in this chapter I demonstrate how value is constructed by marketers in such a way that the voice of the consumer is limited to brand recall, satisfaction ratings, and pre-defined models for determining choice. The restrictive character of research means that a variety of potential important descriptors of consumer value are left out. What is created through consumer research is a void of silent evidence about the market and consumer value and in this void marketers project and construct their version of the world.

Science and technology studies (STS) illuminate that particular versions of the world are launched into technologies, which Neyland and Simakova (2009) argue applies equally to marketing. In this chapter I illustrate how value is interpreted and communicated by mobile network providers in Cambodia. According to marketers, value exists in the brand-person relationship and in the mind of consumers. An atomizing version of human needs and values shapes how value is researched, interpreted and communicated. In this version of value, there is a focus on technical markers of value that can be measured and managed. These markers of value are divorced from what ethnography depicts as the socially embedded values that drive consumption.
What are the implications of the marketer’s version of value I have described? In regard to market definition, my answer is quite clear. I argue that corporate constructed definitions of mobile network consumers can restrict access to a commodity that Cambodians turn into an infrastructure of social and economic connectivity. Limiting access to this infrastructure accentuates social inequalities. However, I am less clear as to the implications of the marketer’s versions of value and their value system. I am not convinced that the atomizing aspects of marketing in fact divide and isolate consumers. Gregory (1997) illuminates that there is constant competition between alternate value systems and modes of cognition. This ethnography does not indicate that the corporate marketer or free-market anarchist is yet dominating. The values embedded in friendship, kinship and market relations still precede the brand-consumer or individualizing values associated with consumer preference.

The implication of a focus on controlling position in mind is also unclear. On one hand, it arguably makes a positive contribution to the media industry, which is used to penetrate consumer minds. On the other hand, it favours forms of media that serve pre-defined target markets. Resources could arguably be distributed in alternate ways that might serve a broader population. What is perhaps more detrimental to the interests of the broader population is the projection of the marketer’s version of aspiration onto the social and physical landscape. This accentuates social inequalities not just in terms of access to resources, but through giving these inequalities a face of legitimacy in the popular culture.

Additionally, the marketer’s methods of accounting for value limits their capacity to see the alternative value, namely the value of their products as infrastructures for pursuing socio-cultural and livelihood projects. The focus on the mind of the atomized individual blinds marketers of
mobile networks from the value that their goods can have between people. According to this thesis, mobile networks are infrastructures of empowerment precisely because they provide links between people.

I've written these chapters on markets and value because my research also indicates that alternative models of how marketers understand consumer value do exist and could be replicated. However, marketers face a challenge. There is much said of marketing being a manipulating discipline that seeks to control consumers, but Sunderland & Denny (2011: 138) make the point that marketing "is more manipulative, controlling, and iron caging" on the actual people that practice marketing. It blinds the practitioner from seeing alternative versions of markets and value. Marketing is very much a discipline in a literal sense of the word. It disciplines the marketer to act and think in certain ways, just as anthropology has a disciplining power over the anthropologist.

On the margins of the academic field of marketing are scholars who are pushing for a more critical approach that can release marketing personnel from the shackles of their discipline (Bettany & Woodruffe-Burton 2009; Brownlie 2010; Skankar 2009). They seek to awaken marketers from an "institutionalized blindness embedded in the disciplinary formation of marketing" by revealing "the habits of thought and prejudices that guide their vision" (Brownlie 2010: 509). I endorse this direction and believe anthropology with ethnography as its methodology can make a valuable contribution to illustrating systems of thought embedded in marketing practice. Anthropologist such as Miller (1997), Moeran (2006), Mazzarella (2003), Appaluman (2004), Foster (2007) and Watts (2005) have created ethnographies of corporations, advertising agencies and design studios that establish a foundation for a form of anthropology
that both describes and critiques corporate marketing. I hope that this study adds to this foundation. In the next chapter I take another step towards this end by describing how Viettel defines the market and frames consumer value. It is an alternative model of corporate engagement with consumers that puts the rural consumers social, community and economic connections at the forefront of value creation.
Chapter 7: The Viettel Approach

"Viettel doesn’t follow the same rules," said one informant. "It’s not just about business for them,” said another informant. Others made comments such as, “They think they can win from political connections.” As I pursued research in Phnom Penh and within rural areas of Cambodia this sentiment appeared to have some grounding. It was clear that there was something different about Viettel and their place in the Cambodian telecommunications market. Firstly, being owned by the Vietnamese military made it stand out among telecommunication companies whose owners were usually vastly removed from the Cambodian borders. Secondly, to industry insiders its connections to Prime Minister Hun Sen gave it unique political clout. Thirdly, its approach to marketing was strikingly different to its competitors. Fourthly, its rapid growth in a short period of time was without comparison in the market. Soon after launching, Viettel achieved a dominant market position in terms of total subscribers. Critics in and around the industry put this down to its ownership that gave it unique military and political connections within the country. The CEO of ANZ Royal expressed this sentiment in an interview with the Phnom Penh Post. When asked for comments on their success he commented, “They have clearly been very aggressive. The extent to which this is a government policy decision versus a genuine business decision, I’m not sure” (Weinland 2012 Feb 17). In this chapter I provide an alternate perspective. I acknowledge that political clout and connections have benefited Viettel in Cambodia, but I suggest that to focus on its political support dilutes the significance of how it saw the Cambodian population and defined the market for mobile networks. Viettel has indeed followed different rules, but many of these rules relate to how they defined and constructed their market and saw value within it. It wasn’t just business for Viettel, but as I stress throughout this thesis, business is rarely is just business.
A central argument in this thesis is that market and consumer value definitions are formulated through the merging of social, economic and political processes. As partly social constructions markets can be reformulated and redefined in a variety of ways. In this chapter I explore how Viettel's approach to developing its network infrastructure and marketing its service represents an alternative to the approaches of market and value definition I have illustrated in the preceding two chapters. Viettel's approach is an inclusionary model to mobile network marketing that puts rural Cambodians and local markets at the centre of its marketing strategy.

I give particular attention to the relationship between development and Viettel's definition of markets and value since they effectively implemented a market strategy that coupled market growth with grassroots development. It thus stands in stark contrast to the corporations, marketers and ways of seeing markets and value in forms. Rooted in the standardized marketing discipline, Viettel's competitors formed market definitions and strategies that undermined the very value that their products and services bring to the population. Some of these corporations failed as commercial enterprises and incurred substantial financial losses. Based on this analysis, I suggest that development and profits are not necessarily mutually exclusive.

There are three key elements of Viettel's marketing approach that I will discuss in this chapter. The first element, and perhaps most significant in terms of bringing wider access to telecommunications in Cambodia, is their inclusionary approach that puts rural Cambodia at the centre of its market strategy. This element includes aspects related to coverage, affordability, language use, and a family orientation that crosses generational divides. It acknowledges that all Cambodian’s are either part of or seek to be part of economic, social and kinship networks that bridge urban-rural divides, which I argue are reinforced by conventional corporate approaches to
marketing. The second element is Viettel's positioning with local psar communities as a participant and supporting actor, which I argue challenges the dichotomy between corporations and local market enterprises. Through Viettel’s engagement in rural communities it has played a positive role in addressing social inequalities, especially between the urban and rural population. However, there is a third element in Viettel's approach, which reinforces local political structures and patron-client relations. Viettel effectively applied schemes of governmentality to manage consumer behaviour by intervening in community relations. On one hand, Viettel enhanced the freedoms of Cambodians by bringing greater mobility to rural and poor Cambodians. On the other hand, it reinforced potentially constraining social and political structures.

**Viettel's Inclusionary Rural Market**

The first element in Viettel’s marketing that I give attention to is its inclusionary model for mobile network provision, which includes coverage, affordability, language use, and cross-generational marketing. Viettel's inclusionary model differs significantly from its competitors by resisting an urban first model. The rural focus was first developed and implemented successfully in Vietnam and turned Viettel into the prize profit making asset of the Vietnamese military. Using a model with a rural focus, Viettel has been able to successfully expand into Cambodia and in a variety of emerging markets with similar economic characteristics. As a result, the profit generating capacity of the Vietnamese military has been greatly expanded (Thayer 2012). Ironically, it could be Viettel's military and communist roots, which has enabled it to see rural populations as a market of consumers that can drive their expansion.

The communist states of China and Vietnam were formed through building a support base in the countryside first. Mao’s communist revolution was achieved by first capturing the countryside.
The Red Army could then encircle the cities, leading to their eventual capture. The Economist (2012) rightly compared Hauwei’s marketing approach that initially focused on the Chinese countryside and minor international markets with Mao’s approach to encircling and then capturing the cities. This comparison can be applied as well to Viettel’s marketing approach of focusing on rural areas while having a low profile in the city. This does not mean that Viettel does not consider urban areas as important, but it does indicate a rebalance between urban and rural consumers, and an understanding that urban communication needs are interrelated with the communication interests of the rural population. There is an acknowledgement within Viettel’s marketing strategy that both urban and rural Cambodians are part of economic, social and kinship networks and these networks straddle urban-rural divides.

**Coverage**

Cambodia was the first stop on Viettel’s expansion of their inclusionary and rural focused marketing approach. To make this expansion possible Viettel developed extensive network coverage before its launch in 2009. Coverage has since defined Metfone, Viettel’s brand, and distinguished it from its competitors who, by and large, built their coverage on a piecemeal basis after launching their networks. Viettel’s competitors have tended to adopt a conservative approach that begins with developing coverage in Phnom Penh and other urban locations to the point they could launch their networks and then expand coverage to other areas. This is considered a safe route to expansion, but it has its own dangers. Without sufficient coverage demand for network access is restrained, especially in regard to rural to urban and urban to rural communication. In contrast, Viettel did not launch its network until it had developed coverage deep into rural Cambodia. It was an approach that did not prioritize the urban over the rural, or
accentuate inequalities as the urban and rural population gained access to Viettel’s network at the same time.

This approach necessitated that Viettel accepted a considerable delay on its return on investment. Viettel first acquired its operating licence in 2006. It then took three years to build its network before its launch in 2009 (Po 2010). When it did eventually launch, its network coverage area significantly surpassed any of its competitors. To make this possible, Viettel’s initial investment was considerable. It installed 16,000 kilometres of fibre optic cables around the country (Brennan & Weinland 2011 Aug 24). The lines of cable reached far along rural roads that were absent of electricity lines and other signs of modernity. They were connected with low energy consuming Nokia Siemens Flexi Base Stations that brought coverage to remote communities far from the national roads and district centres that competitors had focused on. The Cambodia country manager for Nokia Siemens in an interview with me described Viettel as “visionary” in its unconventional approach to prioritizing network coverage development in rural areas of the country. While Viettel’s competitors sliced through districts, Viettel encompassed them in an inclusive coverage strategy that incorporated remote residents on the fringes of districts far from national roads.

**Affordability**

To encompass rural areas and be inclusionary Viettel made a strategic effort to supply affordable phones. In this respect, they have benefited from the rise of the telecommunications manufacturing industry in China, especially the manufacturing powerhouses Huawei and ZTE, who have played a central role in increasing the affordability of phones across the world. Huawei and ZTE have contributed significantly to pushing down the price of handsets and wireless
desktop phones. While the developed world consumer has benefited greatly from lower priced electronic goods from China, it is possible to argue that the developing world consumer has benefited relatively more as communication tools have become increasingly accessible.

Eventually nearly all mobile networks providers in Cambodia have come to distribute Huawei or ZTE manufactured devices under their own brand. It was Viettel, however, that took the lead in making phone affordability a key attribute that network providers competed over. Viettel's first offering was a Metfone branded phone including a Metfone SIM card that had some initial credit. At only US$17 it was well below Nokia's cheapest handset that was US$28 at the time. This contributed to individuals becoming phone owners for the first time. According to an executive at KTC, the distributor of Nokia phones, their sales did not diminish but increased as a result of these phones. Once consumers had become phone users they soon up-graded to a better quality handset. Alternatively, Metfone branded phones were added to Nokia phones and vice versa in an assortment of devices that Cambodians use to communicate.

Viettel also introduced a wireless desktop phone called Methome that contained a Metfone SIM card. Although it worked on their wireless network these phones were based on a fixed-line license and came with local numbers that were subject to lower minimum fixed line tariff rates. These phones became available at only US$10 and included a SIM card and substantial free credit. The widespread introduction of these phones transformed the communication landscape. Households throughout the country finally had a communal desktop phone. Methome also became a prominent feature of market stalls and local grocery stores. Apart from basic calling and SMS functions it had radio and calculator functions that were readily used by families and market vendors. During research around markets it was common to see vendors using their
Methome desktop phone to calculate the price of goods they were purchasing from a supplier or the goods they were selling. In contrast, when another network provider followed Viettel by introducing a desktop phone they opted not to include a calculator function, and instead included a music playing function. They saw a youth market with an interest in entertainment and not commerce.

Viettel's Methome phones transformed a long standing business of vending phone calls. I had a unique view of this transformation when I volunteered at the Cambodian Village Phone Company (CVPC) prior to commencing research. Although independent vendors of phone calls widely existed in Cambodia, the development sector judged that it was necessary to support the development of a company to facilitate public call vending services. Thus, under the guidance of GTZ and the UNDP, the Cambodian Village Phone Company was formed. In a deal with the now defunct Mfone, the Cambodian Village Phone company distributed Mfone SIM cards to phone call vendors and received a commission based on the volume of calls. At its peak the company had about 20,000 phone call vendors. However, upon the entry of Viettel and the distribution of Methome desktop phones, the Cambodian Village Phone Company went into demise. The Methome desktop served as a much more appropriate phone for public use. It was a desktop phone as opposed to hand phone and it had a Khmer operating system. Also, it belonged to a network with superior coverage. Furthermore, Viettel had established an entirely different market model that was much more concerned with the rural phone user than even the "Cambodian Village Phone Company". Despite its name the vast majority of its call vendors were based in Phnom Penh and other provincial cities. Viettel in contrast used its network of branch offices in rural Cambodia to reach deep into rural Cambodia to distribute Methome phones and in the process became more deserving of the name, "The Cambodian Village Phone Company".
**Language**

In defining the market as rural, Viettel also defined the market as one that mostly reads and speaks Khmer. This may seem common sense, but prior to the entry of Viettel to Cambodia it was very difficult to find Khmer language phones. English language phones without a Khmer language option dominated the market place. This made it impossible for a texting culture using Khmer script to emerge and greatly inhibited the use of mobile services beyond voice calls. A lack of literacy in the language of the communication devices and software has been identified as a major contributor to the digital divide (Warschauer 2004). When I met with the executive of KTC, the Nokia distributor for Cambodia, it was explained to me that Nokia was involved in the localization of operating systems, but the pressure to localize came from headquarters rather than from his company. According to the executive I interviewed, localization and the distribution of Khmer language phones was not a priority. He explained that most people in Phnom Penh can read English sufficiently. It was sentiment mirrored by the bemusement of PPMR staff when I suggested they examine the literacy levels of respondents in the consumer research we conducted for mobile network providers.

Viettel saw a market in which literacy levels were indeed an issue and Khmer language phones were valued. Therefore, in co-operation with their manufacturing partners in China, Viettel developed and distributed phones in Khmer. At the point these phones arrived on the market, the lowest priced Nokia phone with a Khmer operating system was US$35, which was double the price of Viettel's Metfone branded phone that had a Khmer operating system, a SIM card and calling credit. Six years later Khmer language phones are abundant. When other mobile service providers developed handsets and desktop phones under their own brand they too began to
insist on Khmer language models. Nokia and Samsung also significantly increased the range of Khmer language phones that they supply to the market.

**Family & Cross-Generational Marketing**

The development and distribution of Methome phones using a Khmer language operating system was part of a broader strategy that prioritizes the family as a consumption unit. Viettel further acknowledged that Cambodians seek to use mobile networks as infrastructure for communication between family members. Consequently, Viettel developed a family orientated marketing strategy that crossed generational divides.

At the heart of this strategy were “family kits”. According to a Viettel employee I interviewed, they were the company's most successful product. Rather than selling individual SIM cards, Viettel bundled SIM cards together in packs according to the number of family members using phones. The SIM cards in the kit all had similar numbers. Typically they differed only in their last digit, which made it easy for family members to recall each other’s phone numbers. These were sold to household heads so they could then be redistributed to other family members. Thus, a son or daughter working away from home such as in a garment factory in Phnom Penh could be given a SIM card by their parents and asked to use it for family communication. It demonstrated the main purpose of mobile communication is the maintenance and management of kinship ties. It further illustrates that the family and its structure is a medium through which consumption pressure flows and choices are made, which is mirrored in my ethnography of consumption.

Viettel put the family at the centre of their market definition, but this does not mean that other network providers were not associated with families. Cellcard also has had a strong association
with family due to its long standing place in the market. Many people I came across claimed to use Cellcard because "my family uses Cellcard" or "my parents use Cellcard". Even Smart Mobile, which has had a predominately youth orientated marketing strategy, emerged as a company that families choose to use because of its attractive tariff rates. A motorcycle taxi driver I regularly used in Phnom Penh had always used a Metfone SIM card, but upon returning to Phnom Penh more recently I noticed he had switched to using Smart. He explained, "All of my family use it".

By targeting families, Viettel’s segmentation model bridged a range of divides including geographical, income, occupation and particularly age. A favoured population classifier is age, which has led mobile networks to focus on the Cambodian youth. Segmenting the market based on age divides families by including and excluding family members. It further devalues the role of kinship dynamics in consumption choices. However, the successful bundling of SIM cards for distribution to families, especially families in rural areas demonstrates that the choice of mobile service providers is very much a family matter. More than that, it shows that choice can be determined by older family members, particularly a father or mother. Viettel reflected this in their advertising imagery that included a grandmother making a phone call and an old farmer in the field with a hoe over one shoulder and mobile phone in the other hand.

In the context of families that straddle urban - rural divides Viettel demonstrates that consumption pressure can flow from rural to urban areas and a corporate devised marketing strategy can encourage it. Importantly, Viettel's recognition and support of consumption dynamics that cross generational and geographical divides highlights that corporate prioritizations of youth and urban markets are not necessarily the inevitable result of capital working to its own accord. Marketing is a social process driven by actors with agency to shift the
axis towards rural populations and older generations to reflect the dynamics of consumption within kinship networks.

**Viettel and the Psar: The Prince and the Peddlers**

The second element of Viettel's marketing approach that distinguished it from its rivals was its participation in and support of local market communities, which leads me to question the relationship between corporate capitalism and local market enterprises. Economic anthropology has long taken an interest in different kinds of markets and market actors. Geertz's (1963) book *Peddlers and Princes* described two kinds of markets that existed in Java. According to Geertz, there are the peddlers that belong to “the bazaar economy”, which is competitive and individualistic. Under these conditions market actors have little opportunity to accumulate capital wealth. Princes, in contrast, are enterprises that belong to "the firm economy". Through political privilege they gain special operating conditions that minimize competition and allow capital accumulation. Firms that acquire licenses to build and operate public infrastructure, such as mobile network providers, fall into this category.

Daniel Miller (1997) presents a similar but different version of market actors in *Capitalism: An Ethnographic Approach*. Based on ethnographic research into business operations in Trinidad, he identifies a struggle over competing forms of capitalism between capitalist actors. According to Miller (1997: 9) there is "the kind of organic capitalism that describes the day-to-day practice of commerce." This form of capitalism has developed organically in the local economy. It is made up of successful and not so successful local firms. Organic capitalism, he argues, is in competition with what he calls "pure capitalism". It is based on dry economic models of capital accumulation and is practiced by large corporations.
The struggle between princes and peddlers and between pure and organic capitalists is evident in the debate over the benefits of the bottom-of-the-pyramid (BoP) model. Proponents of the model position multinational firms on a moral high-ground in relation to local enterprises. Prahalad and Hammond (2002: 6) encourages multinationals to not think of themselves as exploiting the poor by entering the bottom of the pyramid market place by claiming that “the informal economies that now serve poor communities are full of inefficiencies and exploitative intermediaries.” A report on the NextBillion.net website, which is dedicated to promoting the bottom-of-the-pyramid model not only describes “current low-end markets” as “informal, inefficient, exploitative” but also as often being “dominated by monopolists, quacks, or crooks” (Karamchandani, Kubzansky & Frandano 2009: 20). Rather than being exploitive, the multinational corporation is a liberating agent that frees the consumers from dominating and disempowering local market relations. Critics of the bottom-of-pyramid model, however, look at the relationship between multinational corporations and local enterprises differently. The intrusion of multinational corporations into local economies is understood to dislocate and displace pre-existing local enterprises (Bendall 2011: 125). According to Bendall (2011: 125), "too often there is a net benefit for the multinational corporations but no enduring benefit to the disadvantaged communities in the form of employment or infrastructure."

In these versions of market relations two distinct kinds of market actors are framed as dialectically opposed. Between them there are winners and losers. The monopolistic and privileged prince grows while the peddler in the bazaar is restrained by competition and a lack of external support. The organic capitalist firm with local roots is threatened by larger and more powerful national and international businesses. Local enterprises are displaced by bottom of the pyramid multinational firms. However, Viettel challenges this dichotomy. It operates in the firm
economy and is very much a corporate prince. It is privileged with an operating licence and to a large extent is protected and supported by the state in both Cambodia and Vietnam. Yet, it has built valuable infrastructure that benefits local enterprises and has incorporated itself within the bazaar economy as a participant and supporter, which suggests that princes and peddlers can co-exist and interact in mutually supportive relationships.

**Viettel’s Presence in the Psar**

Veittel’s relationship with local enterprises such as bazaar economy peddlers is evident in its presence in district level *psar* (market) communities, which has been achieved through the establishment of branches or showrooms. The industry standard has been to establish branch offices primarily in urban areas and provincial centres such as Battambang, Siem Reap, and Kampong Cham. Veittel, in contrast, developed branch offices in every district in the country. In cases that the district is divided into distinct *psar* communities, Veittel established a branch office for each community. For example, Veittel established two branch offices in Ek Phnom District of Battambang province. One was located in the community along the Sangkhæ River close to Battambang city and another was located in community that exists on the Tonle Sap Basin. Even in the floating communities on the Tonle Sap Lake, Veittel established branch offices.

In all cases Veittel established their Metfone branded offices in or around the main physical markets of the district. In Rotanak Mondul district, where I conducted field research, Veittel established their Metfone branch office in the Sdau market, which represents the centre of the whole district. A regular Metfone branch office was a simple shop house. It served as a service and sales centre for consumers in the community, and gave Veittel a physical presence in each market community.
The branch offices had two important functions in the community. The first function was as a local sales and service centre. The second, and perhaps more important function, was as an operational centre for rural marketing and sales campaigns that reached remote villages. Local university students and graduates were recruited to operate the branch offices and conduct marketing activities throughout the respective marketing region.

Staff at the Rotanak Mondul branch were recruited mainly from universities in Battambang City. They were mostly from Battambang province, but in Sdau they were far from home so the Metfone branch office also served as lodging for the staff. There wasn't much happening in Sdau, especially at night, so Viettel staff killed time in the evenings by drinking and eating with phone and SIM card vendors that operated at and around the Sdau market.

At branch offices around the country Viettel employed in excess of 2000 staff. Much of their work was dedicated to developing community relations and conducting direct forms of marketing in the local community. These practices were mostly out of sight of corporate executives and researchers working in Phnom Penh. In rural areas, however, Viettel's Metfone brand and prefixes were present through their branch offices and far reaching sales and distribution networks.

**Viettel’s Network of Collaborators**

The Nokia Siemens country manager, who was one of very few non-Vietnamese or Cambodians to professionally engage with Viettel, commented for me on the importance of Viettel's direct
selling network. To support sales in their respective marketing area, Viettel branch office staff developed and managed a network of independent local and community based sales agents who were doing commission based direct selling. According to a Viettel middle manager that I interviewed these sales agents are called "collaborators". He explained they use this title to make them “feel important, not below the company and... like they are free and independent!” At the time of the interview, the number of collaborators had reached 3000. As a result, there were 5000 people in total dedicated to the promotion of the Metfone brand throughout Cambodia. No other network provider came close to this volume of people that were exclusively dedicated to supporting their brand.

Based on extensive ethnographies of the bottom-of-the-pyramid marketing in Africa, Dolan (2012) highlights the widespread use of personal direct sales networks. She describes how large multinational corporations use a population of poor people, in particular woman, as a medium to market products at the bottom-the-pyramid. Dolan argues that aspiration is used within corporate governmentality schemes to turn the poor into entrepreneurial subjects. The benefit to the corporation is twofold. By developing a network of independent distributors they release the corporation from much of the risk of conducting marketing and sales in rural areas. Dolan argues that this redistribution demonstrates that the bottom-of-pyramid model is a mechanism for transferring development responsibility to those at the bottom. My ethnography indicates that Dolan’s analysis does not necessarily apply to mobile network providers in Cambodian.

The use of networks of direct sales people by mobile network providers was not widespread beyond Viettel. Although mobile network providers are portrayed as champions of the bottom-of-pyramid model my research indicated that they actively avoided those at the bottom, let
alone applied strategies to turn them into entrepreneurs. There was a lack of recognition that rural and poor Cambodians had either consumption or entrepreneurial capacity. It ironically took a company with communist roots to develop a network of independent entrepreneurs to support their sales and marketing program.

I also do not equate Viettel's use of direct sales people with a governmentality scheme that transforms people into entrepreneurs. I think it is important to acknowledge entrepreneurship as a pre-existing aspiration. According to Derks (2008: 169), “A common goal for many young women, whatever their occupation, is be able to *luek-dou* (trade) either small-scale once they get back to their village or, for the more ambitious, on a greater scale in one of their larger markets in Phnom Penh.” A flexible workforce of independent sales agents has its advantages to Viettel, but as Derks argues, it should be recognized that flexibility as well as mobility are mediums for Cambodians to navigate exploitive working conditions and explore alternative opportunities. In Rotanak Mondul District most of the available labouring opportunities were flexible jobs in which one would be paid based on production volume. This ranged from the volume one could pick chillies or maize to the amount of hessian bags of dried maize one could fill. At the Ek Phnom *Brahok* (fermented fish) market labourers were paid based on the amount of fish they could pack and process. Many men and woman did contract sewing in and under their houses for shipment to Thailand and were paid only for what they produced. The recruiter from the company Philimore that I interviewed expressed the difficulty of finding workers to commit to work contracts in Thailand. According to him, most of the young people in the area preferred the flexibility of informal illegal migrant work. Therefore, Viettel’s use of collaborators appears consistent with local aspirations and practices within the local economy.
Radical Faith

Viettel’s relationship with the *psar* in rural Cambodia is further characterized by close engagement and a radical faith in both the population as consumers and as entrepreneurs.

Within Dolan’s analysis of the bottom-of-the-pyramid approach to corporate marketing and poverty reduction there is a redistribution of responsibility to the poor. She argues that it "allows companies and their partner development organizations to govern BoP markets at a distance, absolving them from the cost of managing and reproducing labour" (Dolan 2012: 6). Through reducing engagement and costs they also reduce risk. Despite the public image of entrepreneurship and risk taking, multinational corporations tend to be risk adverse and conservative. Management of mobile network providers generally kept the rural populace at arm’s-length and adhered to risk minimisation strategies in the development of infrastructure.

Network coverage development occurred on an incremental basis to reduce risk. Consumers who were considered unprofitable were avoided. In rural areas network providers opted for developing sales and distribution through dealers rather than directly engaging the population. Hence, Dolan’s description of multinational corporations being distant and risk adverse in their engagement with rural and poor populations is consistent with most of the mobile network providers, but it does not apply to Viettel.

If Viettel’s rivals have been conservative, then Viettel has surely been radical in their faith in the rural market. Viettel absorbed both costs and risk in developing fibre optic networks and mobile coverage where no company had gone before. As a result, where electricity lines do not run there are lines of Viettel’s fibre optic cable. Radical faith in the rural market is further evident in the establishment of the extensive network of branch offices that brought close corporate engagement with local markets. Additionally, Viettel differs from Dolan’s characterization of
bottom-of-the-pyramid marketers through its relationship with its network of collaborators. According to Dolan, corporations use networks of direct sales people at the bottom-of-the-pyramid to relinquish responsibilities and risk, but in Viettel’s case, goods such as SIM cards, handsets, and desktop phones were given to their collaborators on consignment. Viettel received payment only when the goods were eventually sold. There were of course stories of collaborators running off with goods not to be seen again, but the approach shows faith and trust in rural social and market relations, which put Viettel in a very different space to their risk adverse and conservative rivals. Therefore, I argue that the relationship between large corporate princes and peddlers of the bazaar or psar is not necessarily dichotomous. In Viettel’s case they are bonded in mutual interest.

The Political Dimension

In Viettel’s radicalism and in the conservatism of other companies there is a political dimension that cannot be overlooked. Western companies entering emerging markets are advised to find a "local partner - who knows the right buttons to push and the right officials to groom" (Hooke 2001: 4). In Cambodia, multinational mobile network providers can turn to someone like Bretton Sciaroni to introduce a suitable partner. As a former Reagan official with long standing relationship with Hun Sen he was labelled as "America's Fixer in Cambodia" (Silversetein 2011). Close relationships with the right people facilitated by someone like Sciaroni enables a company to protect its investment and lubricate dealings with the local bureaucracy. A senior marketing executive at Smart Mobile referred to the benefit of political connections in terms of "administrative support" and claimed that "some companies have more administrative support" than others. With greater support a company can have more confidence and security enabling it to be more radical in its approach to the market.
If political connections have been the barometer of administrative support, Viettel has been unrivalled. From public support from Prime Minister Hun Sen to its relationship with the Royal Cambodian Armed Forces, Viettel appears to have operated under special conditions, which gives credibility to the claim that it "plays by different rules". However, what remains undetermined is the extent that these relationships and support actually benefited Viettel and shaped the development and marketing of its mobile network infrastructure. Did it lower their cost, reduce their risk and allow them to reach out to rural consumers more effectively?

Viettel could well have paid much lower prices for operating licenses. There is speculation that the Royal Cambodian Armed Forces physically supported the development of infrastructure around the country. Viettel may also have benefited from lower costs in locating and renting spaces for radio base stations. However, none of this is verifiable without deep examination of the political dimensions of infrastructure development and I question whether such detail could be sufficiently unravelled. My primary interest was in the marketing of networks and even in that there is evidence suggesting that Viettel benefited from political support that allowed them to push the boundaries a little more than others. However, what is also evident is that political support was not a given based on Viettel’s relationship with the political elite. It was cultivated at a grassroots level.

An important function of branch offices was to build relationships with local political leaders such as commune and village chiefs in each district. There are multiple benefits to building these relationships. Firstly, local political leaders could make the necessary introductions to local enterprises that could become vendors of Metfone phone and SIM cards in remote locations. When the Metfone brand was launched the village chief in the Kandal Steung village was
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approached to introduce local enterprises that could distribute Mefone SIM cards, devices, and top-up cards. Secondly, support from commune officials may have provided a range of local level administrative support. On an infrastructure development level, it could have freed Viettel from some of the bureaucratic procedures related to building radio base stations. Additionally, it appeared to allow them to push the boundaries regarding how they registered new network subscribers.

According to the opaque industry regulations, SIM card vendors must complete registration forms and copy the new subscribers ID and submit them to the mobile network provider. This creates a major obstacle in rural villages where photocopy machines are non-existent, let alone the electricity needed to power them. To overcome this, Viettel applied an alternative registration system that did not comply with standard procedures. I became aware of this alternative approach when I interviewed the grocery store owner located on the northern side of the foot bridge that unites the village of Kandal Steung. She had been introduced by the village chief to sell Metfone SIM cards and top-up scratch cards when the brand was launched in 2009. She didn't have a photocopy machine, but was provided with simple registration forms that she could fill out on behalf of new subscribers. Rather than a signature and a copy of the user’s ID, it required only a fingerprint of the SIM card purchaser. This system of recording subscriber information addresses an additional issue: many rural Cambodians do not have an official ID. At the Sdau market I also observed vendors who ignored the registration process all together. The staff at the local branch office in the same market admitted that it was quite normal. They explained that it was up to the discretion of the SIM card vendor, who was registered with the SIM cards until the point another subscriber name is verified through the submission of
registrations forms. As a result, vendors willingly distributed SIM cards without any paperwork to locals they knew and trusted.

Following Viettel’s lead other companies endeavoured to reduce the administrative process to make it easier for rural residents to register. Beeline simplified the process themselves by equipping their sales agents with digital cameras to take photos of IDs. In 2014 when there was mass exodus of Cambodian migrant workers from Thailand due to a fear of crackdown on illegal workers, multiple mobile network providers were accused on giving away free packages of unregistered SIM cards and calling credit to returning migrants at border crossings (Kunmakara 2014 Jun 27). Network providers flatly denied the practice but it suggests that mobile network providers might be willing to bend or circumvent regulation when they acknowledge a market. It further suggests that there has been an evolution in how mobile network providers define the market in Cambodia.

**Gift Giving**

While it is claimed that Viettel operated under special conditions, it is important to recognize that the relationship Viettel had with local political leaders was not the simple consequence of a command from the top. Viettel’s relationship with local officials was cultivated at a local level by local branch employees. They were instructed to meet with them and build relationships. Fundamental to this relationship was offering local political leaders free usage of Viettel’s network. According to a Viettel middle manager I interviewed, a commune chief was typically granted 6 months free usage and village chief could be granted 3 months free usage. To a political economist this may represent wide-spread and systematic corruption. To the marketer it could be seen as a mega-marketing program directed at garnering political support for the
development of a market and a clever means to develop lead-users within the market (Humphreys 2010). To the anthropologist it would be framed as representing a culture of gift giving and reciprocity.

The granting of free usage was part of a broader program of gift giving that Viettel engaged, which is consistent with the political and market culture. Gift giving has been used extensively by the Cambodian People's Party to build patron-client relationships and elicit loyalty within the electorate (Hughes 2006). Further, as discussed in chapter two, Hun Sen has been active in issuing the royal title of Oknha to major financial supporters (Ear 2011). Kith Meng, who's Royal Group owns Mobitel, is one of many businessmen who have been granted the title of Ohkna (Crispen 2007). In chapter two I also documented the close financial relationship Mobitel had with So Khun, the Minister of Post and Telecommunications. Indeed, on numerous occasions Mobitel received special administrative support. I also think it can be assumed that gift giving was a fundamental feature of the negotiations over the granting of licenses to mobile service providers in general. Transparency International (2015) ranks Cambodia in 2014 at 156 out of 175 countries in their corruption perception index and describes the government's budget openness as "scant or none". It is therefore hard to imagine negotiations between mobile network providers and government officials without elements of gift giving.

Mobile network providers were also active in making themselves known as givers through corporate social responsibility programs that mix brand promotion with social and economic development. Viettel has been very active in this form of giving. An important feature of their brand launch was the announcement they were providing free internet access to schools (ITU 2010). They also ran a variety of other programs such as a program to reunite missing family
members (Viettel Group 2011). As with most corporate social responsibility campaigns, Viettel was concerned with facilitating a particular image and gift-giving was an important part of the image.

**SIM Cards and Patron-Client Relations**

Within the mobile network sector, Viettel was strongly associated with the giving away of free SIM cards. I was regularly told that their success is due to this practice. I thought these claims were odd because giving free SIM cards away was a standard feature of activation campaigns run by most companies. However, unlike their rivals, Viettel made giving away free SIM cards an effective strategy to build subscription rates. An aspect of their strategy was a program to give free SIM cards to students. A student could drop into any branch office, show their student ID and receive a free SIM card.

Viettel's broader program of giving away SIM cards demonstrated a much more astute understanding of social and political structures in Cambodia. Viettel’s personnel working at a local level were directed and trained to identify hierarchal social structures to insert Metfone SIM cards. More precisely, they were trained to identify people that governed a definable group of people such as the head of a government department or the head of a school or university. Viettel personnel then used these individuals as a medium for distributing free SIM cards. For example, Chea acquired a free Metfone SIM card at the university in Battambang where he was a teacher. The assistant to the university director asked him and his colleagues for a copy of their IDs and in return they received a free SIM card. They were told that the SIM card was a gift from the university director and then they were informed of the director’s new Metfone mobile phone number that they could reach him on. A Viettel employee I interviewed, who was well versed in
these practices, explained that Viettel’s local staff would have given the head of the university a free SIM card with a certain degree of free credit in return for distributing free SIM cards as gifts to his staff. Thus, the product became embedded in a patron-client gift relationship, which may dispose the recipient to show his or her gratitude through using the SIM card and incur the costs related to using it. Viettel did this systematically through the armed forces, government department and other institutions where Viettel’s personnel could identify hierarchal structures that were ripe for inserting their products.

Viettel used its astute knowledge of community and political structures to govern consumer behaviour. This stands as further evidence that Viettel acknowledged that their products and services took on additional value when they were embedded within social relationships as a link that connects people. Their competitors saw their products as serving individuals rather than relationships and endeavoured to manage the brand positioning in the mind of individual consumers. They both surmount to programs of governmentality as they are aimed at directing the behaviour and choices of individuals (Rose 1999). One seeks to intervene in the mind of individuals by using instruments of mass media and the other intervenes in social relations through gift giving and making the product an expression of social bonds. However, The latter has proven to be more in-tune with local aspirations and the socially embedded character of mobile network consumption in Cambodia.

**Conclusion**

Viettel's expansion in Cambodia has corresponded with a dramatic rise in mobile phone ownership and access to mobile networks, which has bridged urban-rural divides to some extent. This chapter demonstrates that the rise of ownership and access is strongly related to Viettel's
approach to marketing and how they have defined the market and consumer value. Viettel's approach to market definition has been fundamentally inclusionary. It has put rural Cambodia, where the great majority of Cambodians live, at the centre of its market.

In this chapter I have documented several elements of Viettel's inclusionary approach. The first element has been Viettel's coverage, which has reached deep into the Cambodian countryside. The development of coverage has been achieved without firstly favouring urban areas. This has been fundamental for ensuring equity in network provision. The second element has been the marketing of affordable devices. Through cooperation with Chinese companies, Huawei and ZTE, Viettel made affordable communication devices an attribute that other mobile network providers have come to compete over. The third element was the wide introduction of Khmer language phones, which has made mobile phones more functional for the broader population. Lastly, Viettel's approach put families at the centre of how they package their products and services. This has involved cross-generational approach that encompasses kinship networks. It is an approach that recognizes that Cambodians, young and old, rural and urban, do not exist independently as conventional segmentation models suggest. They live in an interwoven world of social, kinship, and commercial networks that cross a variety of geographic and demographic divides.

Viettel's approach challenges certain conventions of marketing in emerging markets. Firstly, it demonstrates that the prioritization of urban and middle class consumers or the youth market through dividing principals that include and exclude people is not a necessity of profit-orientated enterprises. Alternate models that do not divide but unite social classes are possible through
corporate marketing. In addition, Viettel challenges the dialectical relationship between large
corporate enterprises and local enterprises that participate in the *psar* (market).

Through the establishment of an extensive network of branch offices in local markets, Viettel
made itself a member of local market communities and not a rival. Through the establishment of
branch offices and an extensive network of independent collaborators, Viettel has demonstrated
faith in rural economies and the future of rural people, which contrasts with the risk adverse and
conservative approach of its competitors.

I stress in this chapter that there is a strong political dimension to Viettel's marketing strategy.
Firstly, Viettel has benefited from close ties to the political elite, which has given it some leeway
to push the boundaries in its rural marketing. Secondly, Viettel’s personnel at a local level have
engaged in the strategic development of local political alliances to enable their efficient
operation in local communities. They did this by providing free SIM cards and subscription to
local political leaders. Thirdly, Viettel demonstrated an astute understanding of local social
structures and consumption behaviour by intentionally inserting its products into hierarchal
social structures.

Viettel's approach resonates with my own ethnography of consumption. I describe how
Cambodian consumers have turned mobile networks into infrastructure for configuring and
maintaining kinship and market relations, navigating geographical divides and expressing social
bonds. As a result, phones, SIM cards, phone numbers, and mobile network brands have become
symbols of social bonds. This chapter indicates that Viettel's approach embraces and supports
how Cambodian consumers transforms mobile network into infrastructures of social and
economic life. In contrast, their rivals’ approaches to defining the market and communicating consumer value contradicts and even detracts from how Cambodians configure their social and economic lives through mobile networks.

The different corporate approaches to marketing and understanding consumers I’ve presented in the last three chapters present a paradox. They both contain elements that reinforce the social structure and constrain the agency of everyday Cambodians. The conventional approach I document in chapters five and six isolate individual consumers by cutting them off from the relationships that they cultivate over the phone and by accentuating the social division between urban and rural Cambodians. Viettel alleviates these divisions through an inclusionary approach that encompasses rural and urban Cambodia, but through intentionally embedding their products in social relationships, particularly patron-client relationships, and by grooming local political elites, Viettel has reinforced existing forms of constraint and authority in local political and social structures.
Conclusion: Imagining Futures in Cambodia

When Ponleak's family welcomed a new angel to protect the country in the coming year they
looked forward to a better year to come. The Khmer New Year is an occasion to imagine and
contemplate the future while also looking back at the past. It is a time to consider the potential
of progress. This research project has been driven by a very similar process of reflection,
imagination and looking forward. On several visits to Cambodia prior to commencing this
research, I became captivated by the possibility of change due to the rapid proliferation of
mobile phones and network coverage. Morely (2007: 236) describes how we have become
"surrounded by new rhetorics of how these new technologies will transform our lives". I had not
only taken on these new rhetorics of change as a subject matter, I thought that mobile networks
and Cambodia could lead me in to an alternate future. Just as I imagined new possibilities upon
completing a PhD degree, I imagined a future for myself, which mobiles networks and the subject
of new technologies might bring. I am thus intimately aware that this thesis is driven by projects
of change and visions of the future. In conclusion to this thesis, I reflect on my answers to
principal research questions while exploring the processes of imagining and constructing futures
in Cambodia. Additionally, I examine how anthropology and ethnography can be mediums for
imagining the future.

The first of my principal questions has been, "How have mobile networks been turned into the
infrastructures of social and economic life in Cambodia and how do these infrastructures support
and transform the socio-cultural and livelihood projects of everyday Cambodians?" In this thesis I
have answered this question by documenting how Cambodians have turned mobile networks
into infrastructures of mobility, which allow them to traverse geographical divides in order to
manage and cultivate a range of metaphysical, social, family and market connections at a distance. Mobile networks have been turned into bridges that traverse the country mobile networks enabling young Cambodians to explore a range of romantic, sexual and social connections. Mobile networks and the social connections that are cultivated through them act as a *ksae* (a rope) for young people, which they use to pull themselves up out of the metaphorical well to explore the world beyond the confines of their immediate social and kinship connections.

Mobile networks have also been turned into infrastructures of market life in Cambodia. Through mobile networks rural and remotely situated Cambodians are forming bridges over rivers and muddy roads to bring markets closer and to enable more active and intense market participation. These bridges are channels for looking for work, remitting money, coordinating transport and negotiating prices. Moreover, Cambodians are using mobile networks to cultivate market connections and reconfigure the networks through which they make a livelihood and socialize. Through this process the constraints of distance and urban-rural divides are partially lifted allowing Cambodians to reimagine what could be a potential market relationship and the geographical range of where they can work and trade.

Consistent with the multi-actor analysis that runs through this thesis, I stress that how Cambodians have turned mobile networks into infrastructures of social and economic life is just one side of how Cambodia is being transformed and how the future is being created through mobile networks. Oliver de Sardan (2005: 53) argues that societies are "traversed by diverse rationalities". They are shaped by various ways of making sense of the world and seeing the future. He suggests that the point where different rationalities intersect "is the best vantage point from which one may understand currently on-going changes" (2005: 53). I have endeavoured to take such a vantage point by positioning myself in a space where multiple
projects, ways of making sense of the world and seeing the future converge. From this point I
have a view of the dynamics of social transformation and how futures are being made. I arrived
at this point by also turning the ethnographic gaze on to corporate marketers of mobile networks.

Contrasting with the majority of ethnographies of mobile network and phone use, this
ethnography gives strong attention to the corporations that develop and market mobile
networks in Cambodia. Not only do corporations own the networks through which Cambodians,
and people the world over, are increasingly living their lives, but theirs rationalities - ways of
making sense of the worlds - are increasingly pivotal to how societies are transformed and
futures are shaped. The rise of neoliberal economic doctrine has accentuated their dominance
and ability to shape society. In Cambodia but also in much of the world public access to essential
goods and services are now largely dependent on corporations and their processes of marketing.
But marketing as a process has received scant attention in the social sciences. The lack of
attention is reflected in studies of mobile communication in developing countries, which have
overwhelmingly focused on the consumption and use of mobile phones while pushing marketing
practices to the periphery. However, in this thesis I have argued that the equitable access to
networks hinges on how corporate mobile service providers' conduct marketing, namely how
they define and construct the market. Access to infrastructure, such as mobile networks, is not
just dependent on one's capacity to consume. Access in a market economy is also dependent on
being identified as a consumer and having one’s needs and aspirations recognized. Therefore,
my second principal question has been, "How do the marketers of mobile networks in Cambodia
imagine and define the market for mobile networks?"
From inside the consumer research firm, PPMR, I ethnographically explored the social and technical processes of constructing knowledge about consumers that enable markets and consumer value to be defined. I also drew on interviews with a range of industry insiders and conducted analysis of marketing campaigns to illustrate corporate marketing rationalities and their consequences. From this vantage point, I conclude that the market and consumer value is defined through processes that merge class based subjectivities with schemes of classification drawn from the global corporate marketing culture. Methods of inclusion and exclusion are used to carve out the market. Through this process the value of mobile networks as infrastructures of mobility is mitigated. In particular, the divide between urban and rural Cambodia, which mobile networks are used to bridge, is reinforced and possibly accentuated. Exclusionary definitions of the market are projected into networks and onto the physical and media landscape. As a result, limitations are set on access to essential infrastructure, and the popular culture is inscribed with class distinctions that devalue the rural and working class.

I contrast my ethnography inside PPMR and among their clients with an examination of how Viettel defined the market and communicated value. I demonstrate that their approach is inclusive, and supportive with how Cambodians were transforming mobile networks into infrastructures of social and economic life. Viettel’s approach is evidence that corporate marketing can be instrumental in delivering infrastructure and resources that support the interests and projects of everyday Cambodians by bridging urban-rural divides. In Viettel’s approach there is a degree of radicalism, compared with the conservatism of their rivals. In this concluding chapter I argue that in its radicalism there is also a definite optimism. Viettel’s definite optimism about the future, I argue, has been projected into the mobile network
infrastructure it has constructed and marketed, and has been instrumental in shaping the
development trajectory of rural Cambodia.

**Projecting the Future into Networks**

Laura Watts' (2005: 225) ethnography of a design unit in a mobile phone manufacturing company
describes how “the future is made into a product”. She asks what kind of future and whose
future is being imagined and made possible in the design of mobile phones. These are intriguing
questions in an age where there is an outpouring of new gadgets and applications. Projected into
new technologies and infrastructures are versions of how the planner, designer, marketer or CEO
imagines the future.

The marketing is fundamentally a future orientated pursuit. Marketing is about making plans for
the future and imagining what tomorrow will be like. How marketers of mobile networks define
the market of the future determines how they plan and develop network coverage. Success and
failure in the market hinges on what kind of future market they imagine. Therefore, competition
between mobile networks providers and firms more generally, is not just over market definitions,
it is also over different versions of the future and what people will become. How marketers
imagine and define the future not only shapes the firm's future, but determines the range of
possible futures available to populations at large. I've argued in this thesis that Viettel imagined a
quite different future for the rural population of Cambodia than their competitors. Its Viettel's
vision of the future and its approach to creating the future that makes it a major driver of change
and development in rural Cambodia.
Viettel is, however, just one of many actors that imagined the future in Cambodia in relation to mobile networks. So Khun, the Minister of Post and Telecommunications, imagined a future of significant foreign investment from multinational mobile networks providers when he invited more companies to invest in the country. He probably also imagined the consultancy and administrative fees that could be procured in the process of issuing licenses to new operators. The investors and multinational companies that acquired licenses and built infrastructure imagined future profits that could be acquired from a fast growing market. When consumers purchase mobile phones and SIM cards they also imagine who they can connect with through mobile networks and what they could be become through those connections. These actors and their different versions of the future have converged and collided to produce social and economic transformation through mobile networks.

Development practiced by NGOs and government agencies in the developing worlds is also invariably a future orientated practice. As Crew and Axelby (2012: 214) put it, "the practice of development is partly lived in the future." Through the development work of creating "visions, plans, proposals, policies, and needs assessment exercises, the future is continually created and evoked" as participants in the process are "invited to live in the future in their imagination and articulate what they see" (Crew & Axelby 2012: 214). However, development discourse tends to make distinction between who do development work and theorise the future, and who are the subjects of development work. According to Slater (2013: 22), there is the category of the "development theorist who can define both the norms and visions of social transformation" and then there are others who "are the facts or objects, or – worse – ‘beneficiaries’ of these development narratives; they are to be developed.” Slater (2013: 6) argues against this distinction and makes the case that: “Everyone has to be a development theorist, in the most
empty sense that all action is based on fallible hypotheses as to how the world works and changes.” This is particularly the case in regard to how development and change is imagined and experienced through new forms of network infrastructure and information communication technologies (ICTs). New communication technologies, Slater (2013: 99) argues, have become “central to the ways in which most people, most places, imagined and acted upon ‘the future’, how they imagined change and ‘development’". However, Slater points to a division in ethics in which certain kinds of people are imagined to be transformed through new technologies and networks of communication, while others are framed merely as tool users who use information communications technologies to achieve unaltered ends. Slater (2013:101) challenges this divide by arguing that all people should be seen as development theorists and asks, "How do people calculate futures and ways of getting to the futures they desire through ICTs?" In the next section, I reflect on this question in relation to the social actors in this ethnography.

The Future and Cambodian Consumers

The Cambodians that I have depicted in this thesis all have futures of some sort. In small and sometimes major ways they are engaged in their own development projects that are individual or family oriented. These projects include the livelihood, market-orientated and socio-cultural projects. In pursuit of these projects, Cambodians have turned mobile networks into supporting infrastructure. Through mobile networks Cambodians are reconfiguring their social and economic networks, and reformulating how they pursue projects and arrive at their desired future. But this process of transformation can also transform how they imagine the future and the projects they can pursue.
Ponleak, the young man I shared Khmer New Year with and who shared with me his encounter with a ghost, was deeply involved in shaping his own future and the future of his family. He was one person among many Cambodians that illustrated for me how movement and progress in the afterlife is a fundamental project that Cambodians have. Releasing his family from debt was an important goal he had. He was tied to his family and the expectations of his father. To meet those expectations, he had pulled himself out of the metaphorical well to work in Siem Reap and later in Phnom Penh.

For many young Cambodians, living up to the identity of a son or daughter has involved migration. During field research Ponleak left to work in South Korea. For many other Cambodian the destination has been Malaysia, and for hundreds of thousands of Cambodians it has been across the border in Thailand. In these physical movements there is also a movement forward in time as the future is imagined, how to get there is calculated and steps are taken to reach the future. New forms of labour mobility are transforming how Cambodians make these steps towards their future. The result is often Cambodians making leaps from the metaphorical well to realize opportunities far from home, which require planning, support and a tremendous amount of will.

Cambodians have been travelling in search of work and a better life well before mobile networks were extended through the country. Derks(2008) highlights that much of the Cambodian population is “on the move.” But movement has become more possible and achievable through mobile networks. Some of the associated difficulties of movement and migration are being alleviated. As infrastructures of mobility, mobile networks are used to make recruitment and job-search processes a little more efficient. They are also used to alleviate some of the stresses of family separation as mobile networks are turned into infrastructures for reducing distance.
between people. As a result, projects geared around being a certain kind of mother, son, or
dughter becomes an on-going endeavour even where there is physical separation. Fulfilling
what people desire to be and live up to can therefore require constant attention. This has its own
stresses, but mobile networks are also infrastructure for managing expectations and living up to a
desired identity. A part of mobile network infrastructure are SIM cards and numbers, which have
been transformed into symbolic expressions of the relationships and identities Cambodians have
and aspire to fulfil.

Migration is more often than not driven by family orientated economic projects of the present
and the future. Infrastructure for remitting money is therefore important to family orientated
projects just as it is for trade and commerce in rural Cambodia. The mainstream press and donor
agencies have focused on technological innovations by large corporations that can bring cost
effective banking services to the masses in developing countries. Cambodians, however, did not
wait for mobile banking services to be launched by large banks and donor agencies. They
transformed existing networks and technologies into infrastructures for remitting money within
Cambodia and across borders. These remittances, I suggest, are an affirmation of the
relationships between Cambodians and the identities they are creating.

Cambodians are both maintaining and cultivating new social, kinship and market connection
through mobile networks. Through this process there is a reformulation of what could be a
potential relationship and what kind of future they could have through these relationships. In
particular, young Cambodians expand their possibilities for sexual and romantic connection.
Mobile networks are technologies through which futures with sex, romance, and marriage are
imagined and brought to fruition. From making wrong number calls to strangers, to publicizing
one's phone number in magazines, Cambodian youth have turned mobile networks into infrastructures of courtship, sex, and romance.

Through mobile networks young Cambodians can imagine a quite different future to one without mobile connectivity. They experience expansion of possible connections and as a result they are altering what they imagine as possible relationships. The young Cambodians I encountered dared to imagine and form connections with people far from their homes in distant villages, towns and cities. Based on these distant connections new marriages have resulted and families have been formed. Consequently, young Cambodians are reshaping the geography of kinship in the country.

Miller and Slater (2000) coined two useful terms that illustrate the transformative process of adopting new technologies and encountering material culture. They argue that "people engage with material culture through versions of themselves that are both articulated and transformed through that encounter" (2000: 10). The first term that characterizes this process is "expansive realization". It refers to a process in which "a version of oneself or culture that is regarded as old or even ordinary but can finally be realized: through new means, one can become what one thinks one really is (even if one never was)" (2000: 10). New technologies, such as the internet, help "people to deliver on pledges that they already made to themselves about themselves" (2000: 10). This resonates in this thesis. Mobile networks are infrastructures through which Cambodians articulate who they are as a son or daughter, and a young person who explores the sexual and romantic world, a parent that continues to nurture his or her off-spring at a distance, or a trader and participant in distant markets.
The second term Miller and Slater (2000: 11) coined is "expansive potential". It refers to how people "envisage a quite novel vision of what one could be". Through the dynamic of "expansive potential" people "glimpse quite new things to be (or even an escape from what they were)" (2000: 12). It is perhaps this dynamic that captures the excitement that I sensed among Cambodians as I began this study. The mobile networks communication technologies provided a glimpse of alternate futures and a possible escape from the past. As Miller and Slater emphasize (2000: 14), "the line between expansive realization and expansive potential is a fine one: it partly depends on how we and they understand novelty." To what extent are possibilities imagined and acted on, represent novelty or pre-existing aspirations is a challenging question. It would perhaps be sensible to consider how these two dynamics merge and overlap. This appears to be the case for young people that seek love and marriage through wrong number calling or by advertising their number in the personal pages of magazines. Expansive realization is at work as the aspiration to meet a partner is reached, but there is also an element of expansive potential at work as the range of possible connections are extended far beyond what could previously have been imagined. There is therefore significantly more mobility in the futures Cambodians are reimagining through new forms of infrastructure.

The dynamics of expansive realization and potentials apply to market relations. For Cambodians, especially people in remote areas, mobile networks are infrastructures that support market participation. I argue that market involvement is pre-existing aspiration or ideal for many Cambodians, including rural Cambodians who are often dubbed as following subsistent lifestyles. Cambodians have long been part of networks of trade and commerce. However, there is also an element of "expansive potential" at work. Through mobile networks Cambodians are envisioning quite different market forms and connections. Skinner's ethnography of rural peasant life in pre-
Conclusion: Imagining Futures in Cambodia

Communist-era China describes the Chinese peasant's marketing area as the range of territory that a peasant trades. The marketing areas of rural Cambodians are geographical formations that I argue can be conceptualized as *psar* (market) communities. Through mobile networks Cambodians have intensified connections within *psar* communities, but they have also transformed how they imagine their marketing area and the opportunities within it.

* Brahok* (fermented fish paste) traders in Ek Phnom are envisioning and participating in much wider markets of suppliers and buyers through the connections they maintain and cultivate through mobile networks. Farmers in Kandal Steung village in Rotanak Mondul check prices with traders far from their own village. Sokhem, the owner of the stall by a railroad crossing in Battambang, could purchase software for his music service from a programmer located in Phnom Penh. Vithu, the software programmer in Phnom Penh, formed a network of people around the country that could use and distribute his software. Cambodians are reimagining and reconfiguring the market for the goods and services they produce, trade and buy through mobile networks and other forms of infrastructure. This process of expansion and intensification of market imaginings will, I suggest, only continue. The futures of Cambodians will be increasingly connected and through those connections Cambodians will transform how they imagine the future.

**The Future According to Marketers**

Above I describe everyday Cambodian consumers as change makers. They are people engaged in constructing the future and mobile networks have been turned into infrastructure for reaching the future. This fits, with some discomfort, into a neoliberal model in which citizenship is reduced to being a consumer and claims on resources and one's future are made through consumption.
Based on the model consumers interact with private sector actors, particularly corporations, to meet their needs and aspirations. Therefore, corporations represent the other side of the neoliberal model and should also be seen as agents that make and shape the future.

The vision of corporations as change makers and agents of development is encapsulated in the bottom-of-the-pyramid model, which portrays corporations as best suited to address the needs of the poor in developing countries by applying principals of marketing. Under the label of social marketing, the range of what marketing can do is extended further to include addressing pressing social issues. In *Up and Out of Poverty: the Marketing Solution*, marketing guru Philip Kotler and Nancy Lee (2009) hark back to modernization theory by linking poverty with behaviour. By applying principles of the marketing discipline, they argue that behaviours of the poor can be shaped so they can lift themselves out of poverty. They describe social marketing as "a process that applies marketing principles and techniques to create, communicate, and deliver value to influence target-audience behaviours" (2009: 67). While I conducted field research in Cambodia it was evident that belief in the power of marketing principles to alter behaviours and bring about social change was abundant among the community of donor agencies and NGOs in Cambodia. An organization called *17 Triggers* (2011) claims, "We believe in the power of marketing for positive change. If marketing can influence the masses to smoke cigarettes and eat fast food, it can also inspire people to live healthier and happier lives". It seems that there is little that marketing cannot achieve.

To see corporations and marketers as agents of change and development is perhaps not too much of a stretch of the imagination. The process of marketing unquestionably shares a variety of similarities with development work. It involves making plans and conducting studies of
populations. In marketing, like development work, the future is constantly evoked and imagined. This is particularly true in industries that require significant time for infrastructure and product development. The success of such corporations is dependent on their ability to plan for the future and align their business with what the market will become. Moreover, corporations are also market makers as they act on their future predictions. Thus, for better or for worse, marketing and its practitioners in corporations and supporting firms are agents of change. They shape what is and what can be. However, my ethnography points to a need for caution regarding drawing on the marketing discipline to guide social change and development initiatives without dismantling the politics, hidden subjectivities and classificatory schemes that are embedded in marketing processes.

If marketing is to be characterized as a discipline of development and social change, then we should ask questions about whose and what kind of futures are imagined through marketing. We should further ask if these futures are in line and supportive of the futures imagined by populations that are framed as the beneficiaries of marketing. These questions give further poignancy to this study since mobile network providers are the very companies that are framed as acting in the interest of populations seeking better futures.

This thesis has grappled with the question of how do mobile network providers define the market and consumer values, and whether these definitions are aligned with how Cambodians are turning mobile networks of social and economic life. By asking these questions I have inadvertently asked how mobile network providers imagine and construct the future. My participatory vantage point was inside a consumer research firm, PPMR. From there I gained a picture of how mobile network providers and marketing practitioners imagine the market today.
and in the future. The statistics that are produced through consumer research are used to plan the future. Therefore, I could uncover evidence of how the future is imagined and how it is being constructed.

When I entered PPMR I naively expected a visionary approach that endeavoured to comprehend a rapidly changing market. It was the rapid change in the market that drew me to this study, but I soon realized that inside PPMR and among marketing executives there wasn’t a strong sense that the future would be very different from the past. Indeed, the future was imagined based on what the past had been or at least what researchers and marketers perceived it to have been. There was consistently a disinterest in so-called potential customers. I prefer calling them the not-yet subscribers, since there was a degree of inevitability regarding the majority of the population becoming mobile network subscribers. Trends globally, and in Cambodia, all pointed in the same direction. However, within PPMR and among personnel at mobile network providers that I interviewed there was strong reluctance to accept this change. On one level, there was only marginal research dedicated to consumers that were not yet mobile network subscribers. On another level, there was a denial of the rapid success of Viettel reflected in an industry-wide belief that they could not possibly be making such headway in rural and remote areas among a populace with little money and with little need to communicate.

Why was there this reluctance to imagine and accept an emerging market of rural consumers is a question that perplexed me throughout this research. At the forefront of the answer I’ve arrived at is the class politics embedded in how the market was being defined and imagined. Consumer researchers and marketing personnel brought to the process of defining the market and predicting the future their own class identity, typically of a middle class city person. Juxtaposed
against their identity is the rural class that is perceived to be subsistent, immobile, poor and uneducated. While the urban class is seen to be part of a networked economy and the rural class is disconnected and isolated. The social construction of class identity is reproduced and legitimized through consumer research. Built into the research are a variety of exclusionary classifiers that are readily deployed to deny or muffle the voice of the social other. Thus, an alternate picture of rural Cambodians as a mobile population active in markets struggles to emerge.

The prevailing picture of the future market is prompted and reinforced by a globalized corporate image of emerging markets that includes Cambodia. This image is of a growing urban populace of educated consumers with rising incomes. The future according to this image is an urbanized middle class with sufficient consumption capacities to participate in a global consumer society. Cambodia has gained attention as an emerging market that can reward investors in the future precisely because it has a high youth population, a growing urban populace and fast growing economy. Therefore, a vision of the market as urban is coupled with a vision of a middle class of professional white collar workers. This forms an overlap between the classificatory systems that are projected globally in business discourse and the local categories of class used by the urban middle white collar professionals that hold positions within mobile network providers, advertising agencies and consumer research firms. As a result, the rural population receives minor interest within corporate visions of the future.

Where there is an acknowledgement of the growing rural population of consumers, they are cast as having urban and middle class aspirations. They would eventually follow in the footsteps of the more economically prosperous sections of the populace. This deflects any need to bring them
into focus by giving attention to their needs and perceptions. Consequently, the futures imagined and constructed by rural and working class Cambodians did not figure in the consumer research that I observed. Their aspirations were assumed and not studied.

Mobile networks have been readily associated with the aspiration of consumers in developing countries. I have thus questioned what do marketers and consumer researchers imagine when they think about consumer aspiration and the futures that consumers imagine. What do Cambodians do with mobile networks and what do they aspire to achieve through them, were questions I asked myself and I expected that I would find people asking the same kinds of questions as I entered PPMR. However, I was surprised to discover that the social, cultural and economic aspirations of Cambodians were not of significant concern in consumer research about mobile networks or other products that I observed. Instead, aspiration was assumed to relate to upward class mobility. The consumption of mobile phones and aspirational brands is a mechanism to experience class transition. This is, however, an unsubstantiated version of aspiration that legitimizes class elitism and the social devaluing of rural and working classes. My ethnography demonstrates that aspiration may be better seen as the cultivation and maintenance of social and kinship ties and the identities they constitute.

The capacity to see markets and value in alternate forms is limited by the marketing discipline. It creates lenses that draw heavily on economics and psychology to zoom in on the mind of individuals, which inhibits seeing consumers as part of complex social, economic and political connections. Rigid methods of classification further limit seeing the multiple social identities that are expressed through consumption and encounters with material culture. These limitations are
further accentuated by a lack of critical and reflexive analysis within the discipline (Brownlie 2006, Bettany & Woodruffe-Burton 2009, Shankar 2009).

Critical marketing scholars, Bettany and Woodruffe-Burton (2009), advocate inserting reflexivity into marketing practice. They argue that the reflexivity practiced within the critical social sciences should serve as a medium for marketers to expose their own prejudices. It may also help marketers envision the future in alternative forms that could be more favourable to the futures of consumers and populations at large. Ethnographies of marketing can also play a pivotal role in unravelling the constricting systems of thought and the class politics that shape how marketers define markets and envision the future.

By conducting an ethnography of marketing, particularly of consumer research, I have intended to describe the lenses through which mobile network providers comprehend markets and the futures. Through this process I have been able to detail not only what mobile network providers see, but how they see what they see. My ethnography of Cambodians consumers exposes market shapes, consumption practices and particular futures that are not visible through the lenses of marketing executives and consumer researchers.

This was not my intention as I set out on this research journey. I began it with a concern that marketers have a disciplining power over consumers. I considered marketing methods as forms of governmental technologies. Indeed, marketing is intended to guide and manage the choices of consumers through the communication of value. However, I conclude this thesis with a concern for how marketers are constricted by their own discipline. As Sunderland's and Denny (2011: 138) argue, marketing is more manipulative and controlling of the very people that practice it. In
particular, I demonstrate the disciplining power of schemes of classification used within PPMR and among mobile service providers. My own experience indicates that these models are widespread across consumer research firms and marketing departments of large corporations throughout the region. They have the function of producing a tunnel vision that allows the marketer and researcher to zoom in on a pre-defined market that is urban, middle class and mostly young. They also inhibit seeing the market and the future in alternate forms.

At PPMR the intention was to capture a picture of the Cambodian mind by reducing it to brand ranks and product satisfaction metrics. This kind of simplification and the tunnel vision it generates, according to Scott (1998), has an important function. For officials of the modern state it facilitates bringing “into sharp focus certain limited aspects of an otherwise far more complex and unwieldy reality” (1998: 11). For marketing personnel and consumer researchers it supports the navigation of complex and diverse markets. However, simplification is a double edged sword as it also inhibits seeing consumers in their full complexity. The simplification processes that were visible inside PPMR inhibited the recognition of the *habitus* of consumers and the social, cultural and livelihood projects that they pursue.

Even when personnel were well aware that their methods of simplification produced disconnections from the realities of even their own lives, they were compelled to use them without question. The models belonged to a marketing discipline that is globally practiced. They produce pictures of consumers that can be related to and communicated in Phnom Penh, Singapore, Amsterdam or Moscow. Marketing models and language allow its practitioners to communicate across borders and markets. It thus supports globalized management structures. Hence, Scott (1998: 8) makes the claim that “today, global capitalism is perhaps the most
powerful force of homogenization”. However, Scott also makes a distinction between simplifications enacted by the state and capitalist actors such as corporations. "For capitalists”, he states, "simplification must pay"(1998: 8).

This leads to a very important point, which is that often corporate simplifications don’t pay, both in terms of delivering on the neoliberal promise of addressing human needs and in terms of delivering capital growth. This is why Miller (1997) argues that ethnographic attention should be turned on how capitalism doesn't necessarily work as a mechanism for addressing human needs. In this thesis I have detailed a case for how corporate simplifications can blind certain marketers responsible for seeing the market and the value of their goods and services to the population. Simplifications and their resulting tunnel vision obstruct corporations from being agents of development capable of addressing human needs and from accumulating profits. Some of the mobile service providers I depict failed to deliver on meeting the needs of the Cambodian population and to make their simplifications pay.

My argument in this thesis is not against capitalism, neoliberalism or marketing per se. It is intended to challenge the exclusionary and decisive features of marketing that shape futures in Cambodia and elsewhere. Ong (2006) argues that under neoliberalism a range of inclusions and exclusions are produced. "Citizens who are deemed too complacent or lacking in neoliberal potential may be treated as less-worthy subjects” are excluded from neoliberal market-development projects (Ong 2006: 16). I have made the argument in this thesis that large swaths of Cambodians have been excluded from how markets are defined and constructed by corporations based on calculations that deem them be ineligible consumers. As a result, social and economic divides between rural and urban Cambodian are exacerbated.
Based on this analysis, I encourage that the socio-cultural process of everyday commerce and marketing be brought into critiques and analysis of neoliberal and market-based models of development. Critics of neoliberalism or market-based models jump to frame the market as the cause of a variety of social and economic problems. But according to my ethnography, the market or markets are not a given. Markets are not fixed or stable and neither is there a universal understanding of what markets are. Markets are social constructions as much as they are economic and political creations. I echo Slater (2002) by arguing that the definitions of the market are what commercial enterprises compete over. Some of these definitions have paid and produced significant growth for the respective business, while others have led to failure and significant capital loses. Some definitions of the market, I argue, have been detrimental to social and economic equality, but not all.

Given the range of possibilities of what markets can mean and can be, I do not accept the term “market rationality” (Ong 2006). There are multiple market rationalities and methods of making sense of markets and defining them. According to Foucault (1982: 779-780), "What we have to do is analyse specific rationalities.” My intent in this thesis has been to detail different versions of market rationalities and expose how they can be detrimental or supportive of social and economic progress. If we are to scrutinize the inequities in market formations, analysis needs to be directed at the very processes that make markets seem natural and a given.

**Seeing the Future with Definite Optimism**

In Cambodia, Viettel stood out as a company that defined the market in very different terms to its competitors. In doing so, it reshaped how the market was defined by the wider market of
mobile service providers. It can also be argued that Viettel also envisioned the future in remarkably different terms to its competitors. Blake Masters and Peter Thiel (2014), who is a venture capitalist and founder of Paypal, provide an interesting model for categorizing different approaches to the future, which highlights Viettel's difference. Masters and Thiel break the binary categories of pessimism and optimism into two parts: definite and indefinite.

Except for perhaps Mfone, most mobile network providers seemed to have an optimistic approach to the market. They were confident that the market would grow and their company would grow with it. Otherwise, it is difficult to grasp how they could invest in the country and build physical infrastructure. However, their approach has mostly been an indefinite kind of optimism. According to Masters and Thiel (2014: 28), the indefinite optimist thinks that "the future will be better but it doesn't know how exactly, so he won't make any specific plans." Mobile network providers in Cambodia for the most part have not had a clear vision of the future beyond a simplistic vision of a growing middle class and urban population. They have tended to react rather than make changes in the market. Indefinite optimism is reflected in their piecemeal approach to developing infrastructure and the introduction of new products and services. This reflects risk aversion, which is further demonstrated in a tendency to follow and copy competitors and apply old and repetitive models for understanding and acting on the market.

While their competitors can broadly be described as indefinite optimists, Viettel is arguably a definite optimist. "To a definite optimist, the future will be better than the present if he plans and works to make it better" (Masters & Thiel 2014: 64). Viettel imagined a future market of Cambodian consumers that was wider and more inclusive than the market which existed when Viettel arrived in the country. It did not wait until the Cambodian population proved themselves
as eligible consumers before building the necessary infrastructure. It did not wait for another company to introduce Khmer language phones. Viettel went ahead and had Khmer language phones produced and distributed them to people who would become phone owners for the first time. It was this kind of definite optimism that made a new market in rural and remote Cambodia, which has supported development and bridged urban-rural divides. The indefinite optimists have since taken note and followed Viettel by beginning to pay attention to the broader Cambodian population.

Viettel also demonstrated a much more optimistic view of the Cambodian population. In this respect it differs from its competitors, but also from many NGO workers I came across and social scientists that focus on the deterioration of communities in the face of modernization and commercialisation (Walker 2012). This difference is illuminated in a meeting I had with the head of an NGO dedicated to ICT (information communication technology) development in Cambodia. In response to explaining my research he half-jokingly stated, "You know, if you give a computer to a rural person, he will try to eat it." This was a pessimistic view of the state of the rural population and where it was heading. It contrasted dramatically with the optimism on display in the 16,000 kilometres of fibre optic cable that Viettel built around the country, the extensive network of branch offices and the army of sales agents it developed in rural communities.

Viettel's definite optimism towards the future is not necessarily easily adaptable. It can require deep pockets and perhaps a high degree of political protection. This suggests a role for the state and donor agencies. Perhaps we should be asking how the state and donor agencies can support private enterprises to be definite optimists. However, a change in how private enterprises classify populations, account for value, and envision the future may also be necessary. There is very little
point in the state or donor agencies providing support to market-based endeavours if these
endeavours are driven by indefinite optimism and use classificatory models that accentuate
social and economic divisions rather than address them.

Seeing the Future as an Anthropologist

In this last section, I would like to explore how ethnographic versions of the future may fit into
the intersecting relationships between definite and indefinite outlooks and optimism and
pessimism. There are strong definite goals that drove this research and writing this thesis, but I
have realized, sometimes painfully, that ethnography has a strong indefinite element. It is flexible
in its exploratory approach and invites the unexpected and unintended. In comparison, the
consumer research that I observed was remarkably definite in its approach. The research firm
and their clients were quite clear about what they were seeking to identify. Their firmness was
taken to the point that they impose restrictive categories to ensure their vision of the market is
confirmed and legitimized. In contrast, anthropologists use ethnography to expose and even
celebrate “rival cognitions” (Gregory 1997: 11). I think this indicates anthropology’s public value,
especially in regard to framing what is possible.

Hart (2013) argues that anthropologists are reluctant to present their discipline as a public
science because "the fundamental method of anthropology doesn’t stand up to scientific
scrutiny." But anthropologists, according to Hart (2013), should make a virtue of ethnographic
methods because it is their methods that make anthropologists "often more right than other
practitioners whose methods are more strictly positivist." I suggest that one virtue of
ethnography is its indefinite element that facilitates seeing futures based on rival cognitions and
alternate value systems.
Kipnis (2008: 286) argues, "Ethnography offers a unique perspective from which to document the distorting effects of giving a numeric value to that which is not so easily and appropriately quantified." My research shows how the use of numerical value systems in consumer research distorts definitions of markets. However, my research also shows that it is not so much the use of statistics that creates distortions but the imposition of the marketer's categories of perception. Based on my time inside PPMR, I conclude that the use of distorting categories should not be seen as inevitable and there is significant scope and need for ethnographers to engage with marketing and consumer research. I also think that anthropology can take a more public position in addressing how corporations and marketers project their categories of perception into society. To do this, anthropologists need to own up to their methods and make a virtue of them.

If anthropology is to have greater public recognition as Hart advocates, there is a need for anthropologists to reflexively acknowledge their relationship to statistics. My intellectual relationship to statistics has always been uncomfortable. Ethnography suits my mind much more than quantitative methods. However, inside PPMR I could see the value in numbers. They present crisp and accessible pictures of populations and change. This must be recognized, especially given the fast emerging field of "big data" analytics, which is increasingly dictating access to information, goods and services. There is a degree of urgency for anthropologists to engage with the numerical social sciences to unravel the hidden cultural narratives and subjectivities that are embedded in the production of numerical data-based pictures of the world (Boyd & Crawford 2012). It may be the case that statistics are a necessary friend of anthropologists who seek to depict alternate futures.
My own ethnography highlights a number of possibilities for statistical research in Cambodia. I think it would be insightful to statistically explore the changing geography of kinship due to spouses meeting each other through wrong number calling and other means of connecting in the digital age. In a very similar way, quantitative research methods could be used to construct a numerical picture of the changing marketing areas of rural Cambodians as mobility increases. It would also be interesting and valuable to assess statistically the relationship between the literacy rates and the extent Cambodians use different kinds of digital devices and applications. Statistical studies are necessary to understand the relationship between income and mobile phone ownership, if there is indeed any relationship. My ethnography of marketing also indicates a significant need for statistical analysis of the relationship between class, *habitus*, and consumption, which can be guided by ethnography. Bourdieu was an avid developer and user of statistics and *Distinction* has been very influential in terms of how social scientists, including anthropologists, think about consumption, but there has been scant research in developing countries that follows in the tradition of Bourdieu’s *Distinction*. If such studies are not conducted, the marketers of goods and services will be unconstrained in projecting their own categories of perception into their goods and services and into the popular culture. I suggest that alternative statistical measurements guided by the indefinite element of ethnography can present alternate possibilities in Cambodia and elsewhere.

Alongside ethnographic methods, the anthropologist’s outlook is also a product of varying degrees of optimism and pessimism. From the beginning of this thesis I have reflexively displayed my own optimism and I accept that my optimism has directed my choice of subject matter. My first principal question is framed based on an optimistic perspective that Cambodians are turning mobile networks into infrastructure to support their social, cultural and livelihood
projects. A more pessimistic perspective may have framed a question about how mobile phones and networks are a source of moral decline and the weakening of local face-to-face community relations. My answers would have perhaps have focused on the ease in which young people connect with strangers over the phone and the associated dangers. I may also have shed light on growing access to pornography over the phone or the use of mobile phones for illicit acts. Indeed, a concern over the accessibility of pornography was the basis for Hun Sen’s initial ban on 3G phones in 2006. He stated, “Maybe we can wait for another 10 years of so until we have done enough to strengthen the morality of our society” (BBC 2006).

I may have also given more attention to the relationship between mobile communication and the maintenance of the political apparatus. While I give some attention to rent seeking opportunities within the political economy of the mobile services industry, there remains significant scope to explore the role of mobile phones in Cambodian politics. It was suggested to me that Phnom Penh political elite are now more effectively able to reach down to have a hand in rural politics after the expansion to mobile connectivity to remote villages. When I first visited Kandal Steung I spent a night at the house of the village chief. As we prepared to sleep, the village chief called the commune leader to let him know that a foreign researcher was staying with him. It was an indication of how surveillance can operate and villages are more closely linked to the broader political apparatus.

However, even in regard to Cambodian politics I remain an optimist. I did not engage in an in-depth study of mobile networks among political activists due to limitations on the scope of research, but I did encounter evidence that mobile networks are used to mobilize and coordinate efforts against land evictions within Battambang and surrounding provinces. I also have
confidence that the mobilization of garment factory workers in their campaign to achieve better wages was enhanced by worker connectivity through mobile networks. Social media will increasingly play a role in the Cambodian political culture and I am confident that an exploration of social media and communication practices among political activists would be a very fruitful line of research.

Chandler (2008:300) concludes *A History of Cambodia* with a pessimistic view of a "bleak" future for Cambodia given that the government is “unprepared to be genuinely responsive to people’s needs.” Chandler’s pessimism is shared by scholars concerned with social and political change (Ovensen et al. 1997; Springer 2010). Pessimism is further applied to the role of markets and money in Cambodian society (Ovensen et al. 1997; Springer 2009; Sedra 2011; Hughes & Un 2013). In the region there is a pessimistic view that interconnectedness is weakening local community formations (Walker 2012). However, Walker (2012: 188) argues for a more optimistic outlook and suggests that "community can endure in a context of modern interconnection."

According to Walker (2009, 2012) community is continually being remade through a dialogue with the state and the market. I take a similar optimistic view as I end this thesis. Interconnectedness through mobile networks is a medium for community to endure, reproduce and transform itself while Cambodians embrace mobility to fulfil everyday aspirations and address the challenges of contemporary life.

I conclude this thesis by expressing my own sense of optimism about the future in Cambodia and the potential of Cambodians to embrace new technologies and infrastructures to transform society and the economy. At the beginning of this thesis I noted that my sense of excitement about the proliferation in mobile networks connections among Cambodians during my early visits
there. I think that excitement could be best characterised as optimism, which drew me to this study. Mobile phones, mobile networks and new social media platforms are symbols for Cambodians of new possibilities and the potential of a more connected and prosperous future. The tragedies of Cambodia's recent history suggests a pessimistic people, but looking through the prism of how Cambodians are forming social and economic connections through mobile networks I saw an optimistic people, many of whom were active constructing their future through mobile networks and new forms of media. My ethnography, however, demonstrates that it remains a pressing concern that corporations, the principal providers of goods and services in the new economy, recognize the needs and aspirations of all Cambodians. It is not only the government that determines the future. The future is also being made through an interaction between everyday Cambodians and corporate marketers who provide and deny a range of material opportunities to imagine and construct the future.
Bibliography


Agüero, A., Silva, H. de, & Kang, J. (2011). Bottom of the Pyramid Expenditure Patterns on Mobile Services in Selected Emerging Asian Countries. *Information Technologies & International Development; Vol 7, Issue 3 - Fall 2011 (Special Issue: Mobile Telephony Special Issue)*.


Ballard, B. M., Sloth, C., Wharton, D., Fitzgerald, I., Murshid, K., Hansen, K., ... (2007). We are living with worry all the time. Phnom Penh: CDRI.


Blumenstock, J. E., & Eagle, N. (2012). Divided we call: Disparities in access and use of mobile phones in Rwanda. Information Technologies & International Development, 8(2), 1-16


Bibliography


PR Newswire (2015 Apr 09) Viettel Strengthens Global Portfolio with Aquisition of Beeline Cambodia as Part of Its Global Expansion Plans. Retrieved from


