Cracking Representations of Emerging Markets: It's not just about Affordability

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This paper will examine the social factors that mediate technology adoption among the emerging middle class in order to show how messaging, positioning, and targeting communications to potential consumers, if based on flawed representations, such as the First Time Buyer, can lead to missed market opportunities, or worse. We advocate an alternative approach based on ethnographic frameworks that can help to gauge the social viability of products, deconstructing these assumptions and notions to help smooth the path of technology adoption in emerging markets. To represent our findings, we created a "tool," the "Social Viability Measure (SVM)," to help private industry and others approach new markets by bringing an understanding of social forces into the strategic planning, messaging and positioning of products.

INTRODUCTION

Emerging markets have recently become a hotbed of technological innovation. The private sector has benefited immensely from tapping into business opportunities in top-tier cities like Shanghai and Sao Paulo, focusing on their affluent, upper income populations. But businesses are still grappling with how to engage the seemingly large and growing demographic now known as the "emerging middle class." This is a sizable and rapidly growing portion of the global population that constitutes a ready market for new goods and services.

In the context of technology adoption, many businesses are busy creating strategies to capture this market of people who might be on the verge of purchasing their first computer. Referred to as First Time Buyers (FTBs), businesses tend to see these new potential buyers through a lens distorted by preconceived notions about just who these emerging middle-class consumers are; why they want something what they desire, and how they will use it when it comes to high tech. These assumptions revolve mainly around two key ideas about

the emerging middle class: 1) they are highly price sensitive, and 2) they are looking for technology that is simple and easy to use. Furthermore, businesses assume that the emerging middle-class consumer is a pre-existing entity, one with a given set of preferences. What is most necessary is to find a path to *connect* to them. Building on William Mazzarella's work (2003), we argue instead that these consumers are fundamentally a *construct* that is invented and re-invented by advertisers, marketers, and private and state entities. Together, and separately, these agents draw upon selective aspects of local and global culture to fashion "portraits" of "the consumer": portraits that can be leveraged to encourage individuals to buy what's being sold.

Our research posed the following two questions: 1) What are the social and cultural forces that mediate technology adoption; and 2) How do these forces impact market opportunities? Not surprisingly, we discovered that they are looking for best value for the money that they intend to spend, not just a low price. However, we found that FTBs in emerging markets are actually not as price sensitive as commonly thought.

Traditional priorities in business strategies for emerging markets tend towards making technologies affordable, useful, and usable, but those aspects are not always sufficient to drive the first-time purchase of a computer. Powerful social forces, above and beyond the economic or technological, are also important drivers and mediators of technology adoption. The computer is crucially a carrier of important personal, social, and cultural meaning. At least as much as it is an economic or technological act, the purchase and subsequent ownership of a computer (be it a desktop, laptop, netbook, or tablet) is fundamentally a social act for consumers. Our findings show that in buying their first computer, citizens are, among other things, establishing a new place in society, fulfilling an aspiration for their children's education and future, and distinguishing themselves from those labeled as "poor".

METHODS

This research was conducted over two years by four core researchers within an ethnography-centric research group at Intel Labs along with many other research collaborators within and outside the corporation. The team conducted fieldwork in sites around the globe, and employed a focus on a device, program, or technology infrastructure to guide the work. The researchers had area expertise in Russia, China, Sub-Saharan Africa, India, and Latin America, and disciplinary backgrounds from cultural anthropology, development studies, public policy, human-computer interaction, computer science, and psychology.

Using each site as a case study in "technology consumerization" (the process of creating technology consumers), the researchers conducted in-depth qualitative interviews and employed participant observation methods, surveys, map making, and policy and document analysis. Interview goals focused on how participants thought about, and interpreted, technologies (and often the associated programs introducing those technologies) in the context of their lives and larger social and political systems. Our methods recognized and took seriously the diverse understandings of different actors, reflecting their particular positions and their social situations. Because of the explicit choice of these methods and

sites, we were able to analyze the case studies, systematically make comparisons, and look for underlying trends and unifying themes.

To understand the role of the consumer in relation to technologies and development and how it figures into technology adoption, we focused on:

- Business and institutional practices and plans
- Government discourses and practices of development, new and old infrastructure creation, and technologies
- Actual technology practices of citizens and social forces, including desires, aspirations, and anxieties that mediate consumption of technologies

We looked at the intersection of all these forces and the cultural web that sits between the physical, institutional, and social structures. We treated "the consumer" as a kind of global assemblage that sits across different actors in different locales, in line with recent work in the anthropology and sociology of globalization.

The case studies explored these different sites and actors in relation to technology adoption, without a set of pre-formed hypotheses. All of the sites incorporated particular themes about the boundaries between public and private sectors, aspirations, class, and identity into the interview guides. We used the literature on the cultural politics of consumption (e.g. Mazzerella 2003), critical geographies of development (e.g. Hart 2002), and individualization (Howard 2007) to guide the research questions and analysis. Below is a list of the different fieldwork sites and research topics that informed the project.

Fieldwork Sites and Related Research Foci

Bangladesh – Mobile Computing and Health
Chile – Urban telecentres
China – Model Digital City and governance
India – First Time Buyers, Netbooks
Kenya – Mobile financial services
Mexico – Netbooks, telecommunications policy
Philippines – Real estate development
Russia – Policy and infrastructure
Rwanda–Mobile phones and Economic development
Scotland – Alternative Energy Development in Orkney Islands
United States – National Broadband Policy, Network Infrastructure Building

THE EMERGING MIDDLE CLASS

The emerging middle classes can be defined as the large population of people in the world who make between $2 and $13 per day. Between 1990 and 2005 the emerging middle class almost doubled, from 1.4 billion to 2.6 billion (see Figure 1). Their sheer size and spending capacity (2005 prices at purchase power parity) has attracted the attention of businesses and economic-development interests.

Figure 1. Growth of the Global Emerging Middle Classes. *Source: M. Ravillion, 2010.*

Our research on the first-time purchase behavior of a computer by a member of the global emerging middle class shows the strong presence of social forces associated with technology adoption. It is not incorrect to understand this behavior as the outcome of an economic decision weighing price against benefits, or the good being purchased objectively as a complex technical system with certain capabilities, trade-offs, and usability affordances.

While not incorrect, neither is this analysis sufficient to explain why such behavior does or does not happen, by which potential buyers, or in which contexts. Especially in the case of first-time buyers striving to include themselves in the category "technology consumer" it is both an *economic* or *technological* act. But more importantly the purchase is fundamentally a *social* act. And, while it may be a "good deal" or may be technically sufficient for its intended usage models, the computer is crucially a carrier of important personal, social, and cultural meaning.

Our research shows that to address effectively, and at a mass scale, first-time technology buyers necessitates disrupting traditional notions and representations of what market segments supposedly want. It entails looking beyond price and notions of individual 'desire' to understanding the social forces and cultural contexts within which these consumers are located. While this may seem self evident, this approach is considered radical among technology leaders strategizing on expanding businesses in these markets.

More generally, this naturalization of the "emerging middle class" as an object for businesses and policy makers to measure and trade with, rather than an ongoing construct maintained by cycles of invention/re-invention, is by no means limited to ICT-based enterprises. Mazzarella's work demonstrated how the very individuals and firms actively engaged in creating and channeling processes of consumerization in the course of marketing a broad range of consumer products, from birth control to fashion, had difficulty seeing their work in these terms.

Studying the shifting patterns of marketing and advertizing in India in the 1990s, Mazzarella (2003) argues that every representation of the consumer is a more or less strategic representation of an already existing world. Yet there is no pre-given consumer who lives "out there" and who is not yet in relation with marketers. Thus marketers see their segmentations of "low end" and "high end" markets as a mere management technique, not as the underlying political and social assumptions. Mazzarella delightfully describes the path that advertizing agencies in India took in trying to change the brand image of the lowly condom from something utilitarian, dull, and government-sponsored, to being something of alluring sexiness. By deeply understanding Indian values - still paying homage to India the nation and pulling in the strong historical cultural icons - the condom brand, *Kama Sutra*, skyrocketed in popularity in the market. Seeing the consumer in this more finely-tuned light helps us to peel away the layers of image-making and discover the underlying – and social – forces that help mold both people's lives and their desires. We now turn to a discussion of these social forces and how and what they mean in understanding technology adoption.

SOCIAL FORCES OF TECHNOLOGY ADOPTION

There are a wide variety of social forces and dynamics that shape the adoption of technology—perhaps as varied as societies themselves. It is well established, for example, that race and gender have an important influence over what technology comes to mean socially, and therefore who gets to use it (Sorensen 2002, Nakamura 2002, Kuriyan and Kitner 2009). Ethnicity, religion, education levels, etc. all play similar roles. Political culture, too, has an immediate influence on what technologies are adoptable and which are not, whether it is through the obvious matter of state censorship, or more subtle forms of control. Our goal is not to list or explore any and all social factors that could or should be taken into account.

Rather, we have chosen to focus on three areas of social life that our fieldwork has shown to have the potential for success and failure of technology adoption programs, regardless of who the responsible parties are (NGO, governments, private industry). Although each force affects individual cases differently, these three seemed to be the most widely shared across the range of cases studied. Though not, of course, the only social forces that matter, the three social forces below are each linked to fundamental aspirations that are particularly instrumental in affecting decision-making regarding the purchase or adoption of technology.

Citizenship

At its most basic level, citizenship is the state of being a citizen of a particular social, political, or national community. It is seen as the relation between an individual and a particular nation and its identity. Citizenship is most closely identified with being a member of a particular nation, but it is also about a sense of belonging in a global community as a nation or as an individual or official representing that nation. Cultural citizenship is defined as the cultural practices and beliefs that create a sense of belonging within a national population or geographic location, which may or may not correspond with national borders. Our research finds that technology use, technological infrastructures, and ICT-enabled services feed into the desires and anxieties about being part of a national identity, representing a nations' rank in the world, and a government's effectiveness. This may take the shape in an individual using an ICT-enabled service to feel part of a national identity. It may be about a government push of a particular ICT infrastructure policy to demonstrate one's place in the global hierarchy. It can also represent a business' marketing strategy to appeal to a wide market under the label of a unified national identity.

Class Identity

Class is an organizing mechanism used to understand how societies divide themselves up into different groups. Typically class is based on an economic definition, particularly based on an income bracket. For example, being "middle class" is defined as "having an income within some interval that includes the median" (Ravillion 2010:3). But we found more useful an alternative conception of class as linked to a set of social characteristics about identity and how one is perceived in society. Education, upbringing, one's social circle, and potential for upward or downward mobility all contribute to class identity.

Recently there has been much discussion about the "emerging middle class" as a potential market for ICTs. Significant efforts have been made by governments, NGOs, and business alike to define and provide services to this class because of their ability and willingness to pay, particularly for technologies. Yet when the middle class do not buy a laptop in the ways predicted, or the poor buy a smart phone before a refrigerator, few point to class as a factor behind these decisions. But our research indicates that this is an important factor to consider.

How a person defines their class standing, where they situate themselves in relation to others in their community and the world, and where they see themselves going in the future have strong impacts on what sorts of technologies one will not just choose, but often be permitted to use, where to use them, and what to desire in the future, and what kind of technology to actually adopt. Our research found that in many countries, the middle class or elites determine what's desirable in terms of the technology for the rest of the population. Devices or services that are considered "respectable" by the upper classes are often seen as respectable for others. Furthermore, class identity may be bound up in what kind of technology a person uses, and this often confers a positive sense of empowerment, respectability, and group belonging.

Individual Agency

A trend towards greater individualization is a phenomenon of globalization and modernity. We define individual agency as the ability for ordinary people to change, control, or influence technologies, or the systems of delivering those technologies. Individualization points to what pieces of a socio-technical system or infrastructure that end users own, or have control over, and how this changes the relationships between system builders, owners, and users. It refers to the power of individuals in shaping, resisting, appropriating, and indeed *consuming* larger systems. At the same time, it refers to the power of individualized infrastructural and social arrangements to *require* people to think of themselves as an "individual"; to take on risk, responsibility, and mobility and to be pushed toward "modern" forms of living, working, and aspiring, and indeed *being*. While this process shapes relations people have with one another, individualization should not be seen as contradicting the importance of family, institutions, and society, but as much reflecting changes in these larger-than-individual domains as creating them. Neither should individualization be regarded as inherently empowering nor disempowering, inclusive nor exclusive, or local nor global, but rather as triggering shifts in power relationships between and amongst individuals, their families, communities, and the institutions that serve them.

Hence, the social forces of citizenship, class identity, and individual agency are at the basis of the success and failures of market strategies and product placement (and by extension, projects falling under the aegis of Information and Communication Technologies for Development, or ICTD). They have actual business or social impact on product uptake and adoption. Yet they are often unexamined or unacknowledged in the design and evaluation of business strategies. In addition, there is also a tendency in many technology-focused projects to have a "global" or "top down" bias in these are meant to scale across a number of geographies. This bias is grounded in the idea that technology comes from

"outside" and is being introduced into a "vacuum" of no particular preconceived notions. Our approach recognizes that many of these social factors operate in multiple arenas and scales. It does not privilege either the local or global, but focuses on the spatial interconnections among the different arenas in which the relationships between technologies and society operate. By focusing on social forces, rather than "global" impacts on the "local", development practitioners can get beyond this impasse.

IMPACT OF SOCIAL FORCES

We found that, at least for ICTD interventions which sought business sustainability as well as positive social and human development impacts, social forces operated to accelerate or hinder such interventions in three main ways. We explicate below the three main ways that social forces tend to influence different types of projects.

1. Determine buy-in and appeal of products and services. The desire for technology-based products or to use technology-mediated services depends on people's perceptions of who they are for, how they are positioned, and whether they are perceived to be of reliable quality. Often times the desire for products, like the computer, are determined not simply by the price of the device or the individual person's needs for them, but by what that person perceives the upper-middle class considers desirable and respectable. Our research finds that in many countries, the middle class or elites determine what's desirable for the rest of the population through their behavior and practices. Devices or services that are considered "respectable" by the upper classes are often seen as respectable for others. This is a real and important factor that impacts purchase behavior.

2. Affect financial sustainability/market development. Who is seen to be using a product and service, and why, can determine the financial sustainability of business strategies. If a service or product, like a stripped-down, affordable computer is *perceived* to be specifically targeting a low-income market, this may limit adoption of the service or product by the broader mass market. Often times associated with a "stripped down" or "low cost" or "affordable" device or service is the assumption that it lacks quality and is only for use by the uninformed, immature, or desperate. Through such processes of stigmatization and deprecation, social forces not only severely restrict opportunities for market growth beyond the initial target, but adoption by the intended "early adopters" themselves.

3. Affect social sustainability and inclusion. In creating perceptions of who *should* be using service, social forces can also redirect the market for an intervention *away from* intended beneficiaries. For example, although a program such as a computer education course may be explicitly established for "inclusion" purposes, if the employees, project staff, or entrepreneurs implementing these classes perceive computer use to be an upper middle-class activity, they may instead cater to these higher-income groups in order to make a wider market appeal and in turn *exclude*

the population that was originally targeted. In contrast, if a service or product is framed to be one that includes all citizens, both poor and rich, and defines what it means to be a citizen of a particular country, this can actually lead to positive perceptions of the service. In these ways, biases, anxieties, and desires arising from the conjunction of multiple social forces have material affects for access and who benefits.

CRACKING REPRESENTATIONS: THE SOCIAL VIABILITY MEASURE

Intel is a highly process-and-measurement-oriented company, as are many governmental and development organizations. In order to translate ethnographic insights and recommendations into a form that would be effective in communicating to and influencing such companies and organizations as our primary audience, we decided to adopt a measurement terminology and process-oriented framework to represent our findings. To attempt to fend-off potential misinterpretations of our work as entirely reducible to a "cook book" or "check list", we embedded these tropes within rich contextual data from our individual case studies.

We named the "tool" we developed the "Social Viability Measure (SVM)" in order to deconstruct often taken-for-granted representations of consumers and to help private industry and others approach new markets by bringing an understanding of social forces into the strategic planning, messaging and positioning of products. This tool acts as a mechanism to disrupt – to *crack* – traditional notions of approaching markets and representations of consumers. It makes salient the different paths, desires, and aspirations that consumers can take in technology adoption.

To be successful economically, technologically, and socially, technology adoption projects – both in the private and public sectors – require a careful systematic look at the social and cultural forces at work in their implementation and their impacts. Yet these major mediating forces are often overlooked in the design, conception, and evaluation of technology programs, development projects, and market strategies to introduce ICT products and services to the poor, emerging middle class, or other targeted populations.

The Social Viability Measure is a three-step analytical tool to help decision makers of pro-technology initiatives with a stake in a particular program. Specifically, for the concrete circumstances and constraints of that program, it is designed to help them to:

1. Identify and scope the relevant field of social forces and measure its strength to program
2. Analyze impact of these forces on the program and its social and business goals
3. Strategize how best to adapt and accommodate these social forces for the purposes of the program

The Social Viability Measure can be applied to government strategies in the ICTD space, to public/private partnerships promoting access to ICTs, to NGO programs targeting marginalized groups and promoting social agendas through ICTs, as well to business strategies developing financially-viable market initiatives. Figure 2 below represents this tool.

Figure 2. Graphic Representation of the Social Viability Measure.

USING THE SVM: THREE EXAMPLES

As decision makers in NGOs, governments and businesses plan, strategize, and evaluate their technology programs, the SVM becomes a useful tool. It enables them to gauge the social viability of a project, to anticipate unexpected consequences of a new product or service, and to shape these social forces to maximize the economic and social benefit of projects. When evaluating a potential opportunity, they traditionally consider return on investment (ROI) of a new ICT product or service (in addition to other factors). However, we argue, considerations of social viability are equally important to gauge opportunity as well as social buy-in and acceptance.

To support this position, we drew upon our case studies to provide opportunities to apply and demonstrate our SVM tool and the issues its application can surface. Here are three:

M-PESA and Citizenship

Context – The M-PESA mobile money service in Kenya was began development in March 2007 by Kenya's largest mobile network operator, Safaricom (which is part of the Vodaphone Group) with support from DFID, or the Department for International Development from the United Kingdom. The payment service via mobile phones was introduced with the goal of creating a financial "banking" service for the poor (Hughs and Lonie 2007). The system, which has grown into the one of the largest and most successful "mobile money" systems in the world, enables consumers, regardless of whether they have a bank account or not, to deposit, transfer, and withdraw money via their mobile phones and the extensive network of Safaricom airtime resellers. The service was largely successful in reaching a broad range of consumers in Kenya partly because the cost of the service was cheaper than traditional money transfer methods (predominantly, the physical transportation of cash). It also filled a gap between mobile phone penetration and banking penetration. The service became part of Safaricom's successful strategy to reach the broader mass market, including the wealthiest segments of the country. They have now expanded the M-Pesa functionality beyond phone-to-phone money transfer to bill payment and financial services that highlight convenience, something for which our research showed all income groups in Kenya are willing to pay.

Scope & impact of social force –This is an example of a service that used notions of citizenship, in terms of what it means to be Kenyan, to promote the widespread adoption of ICTs. Originally, the mobile banking service was introduced in the name of inclusion to target the lower income groups in the country, who were considered to be "unbanked". But as the service gained penetration in the market, Safaricom shifted in its branding and messaging away from the poor and visions of having them participate in a banking

intervention, to a broader understanding of inclusion with the view of the consumer as "everyone" that encompassed perceptions of "the nation" or what it meant to be a Kenyan. Marketing materials used images of Kenyans of all different tribes, and socioeconomic classes. Because the country suffered from hundreds of deaths during the violent period following the elections of 2008, there is a widespread anxiety and desire in the country to "move on" beyond the divisions of tribalism and towards a unified nation. The elections fueled tribal fears, anger, and divides, as a result of a contested election result. The Safaricom marketing strategy for M-Pesa directly addresses these anxieties.

Strategy for adapting/accommodating social force – Safaricom arguably became an iconic brand in Kenya, as the dominant player in the mobile phone space. Whether it was an explicit move to incorporate citizenship into their brand strategy or not, the brand performs an identity myth about a unified nation. It addresses the cultural anxieties of citizens about tribalism which can lead to loss of business prospects, violence, and a disruption to the economy. The aspirations that are revealed in an identity myth like the unified Kenya are an expression of Kenyan citizens' collective aspired identity. This iconic brand helps to smooth over these tensions and helps people create a vision of themselves that is linked to ICTs[57].

The iPhone: Class, Belonging & Russia

Context – "So is there something special you'd like me to bring from America? Something you can't find in Vladivostok?" "Yes…an iPhone." Our local contact in Russia, Sergei, was in search of a 3G iPhone for his wife. He explained that in America, the new iPhones were selling for what seemed to be pennies, and in Russia they were going for well over $700. To his mind, this was an outrageous insult, more than just a problem of affordability. The price had become a potent reminder of the exclusions that Russians face from global consumer markets.

Scope & impact of social force – In the example above, Sergei was not insulted because the iPhone was unaffordable. It galled to pay this high price, because it meant acknowledging Russia's poignantly felt, newfound status as a second-class global citizen. There was a sentiment of injustice at having to pay exorbitant prices which he perceived the rest of the world did not. Purchasing at this price level meant accepting the notion that the Russian consumer was somehow not a "normal" consumer, and perhaps could never be, even twenty years after the collapse of Soviet rule. Our research indicated that this second class citizen sentiment was tightly linked to people's beliefs about global belonging, which was a matter of class.

There are, of course, straightforwardly macroeconomic reasons behind such high prices. High tariffs, centralized customs clearance procedures, and other factors drive up the costs. And indeed, when computer stores held sales, offering cheap iPhones and other gadgets for a limited time as they did in the summer of 2009, throngs of crowds pressed in to take advantage. Yet this behavior was more than just desire for a good bargain. Cheap prices, even prices so low that consumers knew the stores were likely to cynically "run out" of product before they would get it, nevertheless offered the prospect of legitimate, and

normal, consumption. Many people viewed reasonable prices as a restoration of a more rational order of market exchange.

This is a context where many Russians have experienced downward mobility, and even the solidly middle and upper classes are aware that the next crisis could change everything. There are beliefs in Russia about what defines one as middle class based on various cultural norms of how individuals should act and behave. There are also clear distinctions that Russians make between themselves and the rest of the world. Our respondents did not consider themselves an "emerging" market as many African or Asian countries may be categorized and did not want to be compared to them. Instead, they indicated that Russia already belonged to what they saw the "proper order of things", even if it was not reflected in current circumstance. The belief was the Russia should rightfully belong to the global middle class.

Strategy for adapting/accommodating social force – The Russian case highlights the potential to build on ideas and anxieties about belonging, entitlement to a rightful global status, or the sense of inclusion (and exclusion) that already exists. It also reveals a tension between beliefs about status and an existing situation of perceived exclusion from the global consumer economy. Here the tension is creating demand for a mobile device. These are precisely the types of anxieties and tensions which build the foundation for potential strategies for branding based on cultural contradictions (Holt 2004).

China and Individual Agency: A Model Digital City

In China, local concepts of the individual, and ideas about how one exercises one's own agency, are often oriented towards the concerns of those in one's social network. To act "individualistically" often really means acting in the interests of this network of people, as opposed to a formal institution. However, if we choose to broaden our understanding of what it means to act with individual concerns and exercise individual agency to accommodate this local conceptualization, it is still possible to say that individuals play a role in shaping that system.

Context – In a small rural municipality far from Beijing[1], an ambitious project is underway to transform the city from a trading town to a "model digital city" epitomizing best practices in ICT for municipal development. After having made visits to key clusters of technology development in Asia and North America, municipal officials set out on a program that not just lay connectivity infrastructure, but uses highly sophisticated "ubiquitous computing" (or "ubicomp") paradigms to weave together electronic identity credentials, CCTV networks for public safety and emergency response, telemedicine facilities, and home-based multimedia education, entertainment, and energy-management systems. Demonstrations at great expense and with high "production value" had been built along with a new exhibition hall dedicated to house them; the CCTV system was already up and running, with other services in the pipeline. The audience for these demonstrations was not the ordinary local citizen on the

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[1] Name of town kept anonymous for the purposes of research confidentiality.

street, but rather potential investors, international partners, and Chinese government officials.

Scope & impact of social force – At the time of research, there had been little if any public involvement or outreach in communicating current or impending Model Digital City services. Individualized end users were present only implicitly in the form of well-spoken guides who would briefly inhabit model kitchens, home offices, and living rooms as they led exhibition tours. Nevertheless, this ICTD project depended heavily on and had been designed around a kind of consumer: the potential partners and investors for whom the exhibition had been built and for whom the infrastructure had to be transformed into something consumable at a highly personal level. To understand the worth of the project, no expense had been spared to find ways to enable invited guests to touch, feel, and experience this town's vision of the digital future through the use of highly sophisticated technology demos.

Strategy for adapting/accommodating social force – Individualized end-user agency would seem to have little relevance to this Model Digital City case. Local citizens were not consulted as the future vision was shaped, nor did they believe it would have been appropriate for them to be involved in such decision-making. Yet there are indirect but crucial ways that local citizens put pressure on infrastructure developers though not explicitly acknowledged by either state officials or interviewees. A recent UNDP report (2008) emphasizes repeatedly that social security, in the form of basic services provisioning, is the basis of social stability. Social stability is an ongoing concern—one more or less shared by the state and citizens alike. With the turn to what the state calls "scientific development", the state is increasingly sensitive to the expression that dissatisfaction with living conditions might take. If the municipal officials were to get it wrong—either fail to draw in the appropriate set of partners and allies, or if aspects of these plans become wildly out of touch with what it is local citizenry want—they do risk losing legitimacy. In this way the success of this ICTD intervention was subject to, and was designed in some respects in response to this form of individual agency, which has no formal institutions to work through to exert pressure on the state.

CONCLUSION: REVOLUTIONARY/EVOLUTIONARY

In this paper we have described a new tool, the Social Viability Measure that allows businesses, NGOs and governments who are involved in introducing new information and communication technologies to the group known as the "emerging middle class," to make better decisions about deployment of products and implementation of programs.

The SVM is based on ethnographic findings. And ethnography is not a stagnant method, invariable and staunch, but rather it is malleable and adaptable to variable circumstance and times. The very nature of the term *ethnographic praxis* denotes a connotation of living, of change, of evolution. And so it is with the development of our analytical tool, the Social Viability Measure, which is but one example of how ethnographic

information and its application in new situations has morphed over the past century from when Malinowski was first "sentenced" to his fieldwork in the Trobriand Islands (1922).

While this "tool" can be seen as an example of how ethnography can evolve and shape itself to changing needs in an environment full of government and non-government programs and businesses, it is also offered as a provocation of something more *revolutionary*: a change in business practices and related worldviews. The SVM attempts to crack, to revolutionize, representations of the consumer, and hence the role that that constructed figure plays. Is the SVM truly revolutionary? A measured response would be "No." But it is knocking at the pillars of traditional "business as usual" and should the pillars begin to erode and someday fall, evolution will indeed jump forward in a Gouldian type of punctuated equilibrium, and transform into a revolution.

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	1990 (millions)	2005 (millions)
East Asia and Pacific	315.5	1,117.1
Of which China	173.7	806.0
Eastern Europe and Central Asia	355.3	347.8
Latin America and Caribbean	276.7	362.1
Middle East and North Africa	170.2	240.1
South Asia	192.7	380.2
Of which India	146.8	263.7
Sub-Saharan Africa	117.7	197.1
Total	**1,428.1**	**2,644.3**

Should go where Figure 1 is located.
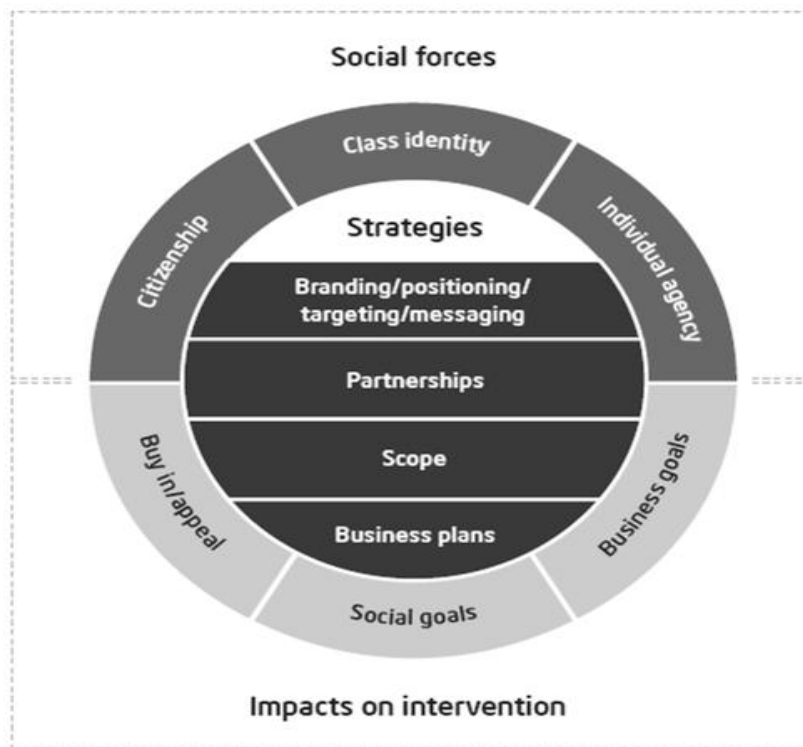
Should be placed where Figure 2 is located in text of paper.