Producing the Internet and Development: an ethnography of Internet café use in Accra, Ghana

Jennifer R. Burrell

Department of Sociology
The London School of Economics and Political Science

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Abstract

The United Nation's World Summit on the Information Society (WSIS), that took place between 2003 and 2005, elevated the 'information society' to the level of 'gender equality' 'environmental sustainability' and 'human rights' as one of the central Development tropes of our time. The concept of the network has come to figure heavily in the political discourse of both developed and developing nations and transnational agencies. These organizations employ statistics, academic theories, popular wisdom, and utopian visions shaped by Western experiences to extrapolate an expected impact of new technologies on the developing world. However, to date there has been very little on-the-ground research on the diffusion and appropriation of these technologies as it is taking place in developing nations and how this might challenge and reorient the expectations of traditional Development perspectives.

This thesis seeks to provide such a response drawing on the experiences of Internet café users in Accra, the capital city of Ghana where an estimated 500 to 1000 of these small businesses were in operation. Departing from the categories and hierarchies favoured within Development circles, my approach is to look holistically at the way the Internet was produced as a meaningful and useful tool through the practices of users. The practices that defined the Internet in Accra encompassed not only individual activities at the computer interface, but also other formal and informal, collective and everyday rituals such as story-telling, religious practices, and play and socializing among youth. A similar production process was observable in the activities of the Development experts and government officials who arrived in Accra in February 2005 to discuss the role of networking technologies in socio-economic development at the WSIS Africa regional conference. The activities of both groups reconstituted the Internet, Development and the relationship between the two, but along very divergent pathways.

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Chapter 1 Introduction

Technology in Representations of 'Africa'

Representations of 'technology' and those of 'Africa' in European and American media spheres tend to fall towards opposing extremes. While the former serves as a symbol of affluence and progress whose newest forms are thought capable of bringing total societal transformation, the latter is still often imagined as the 'dark' continent, lost in time, non-productive, and abysmally poor. With the recent arrival and rapid (if uneven) diffusion of the Internet and mobile phones in certain spots on the continent, media narratives have been forced to reconcile this imagery. Many have turned to the rhetoric of Development suggesting that the intrinsically progressive character of these technologies just might bring this stagnant and struggling area of the developing world into economic growth and prosperity[1]. This thesis challenges such a juxtaposition of imagery along with its implications of unidirectional causality through an account of Internet cafes in Accra, Ghana that explores the dynamics of user agency. In 2004 it was estimated that 500 to 1000 Internet cafes had been opened in this urban capital city (Foster et al. 2004) mostly through the small-scale entrepreneurial efforts of locals. There has been very little attention paid in the mass media, in the development industry, or in academic work to the active role citizens of developing nations are already playing in bringing about technology adoption in places like Ghana and other African nations. Their efforts have been mostly invisible within Western discourses on technology and development.

Over the past decade powerful transnational institutions such as the United Nations, the World Bank, the International Telecommunications Union, and the G8 have begun to promote the value of new technologies such as mobile phones, computers, and the Internet to Africa and other parts of the developing world in a growing 'technology for development' movement. These devices are considered significant as distributors of *information* distinguishing them from past waves of techno-optimism in the development industry that prompted investment in projects ranging from industrial dams to modified home stoves. Such concerns have been propelled forward by the concept of a 'Digital

Divide' that relates a prosperous, technologically-advanced West to 'Africa' that in comparison appears nearly untouched by such modern commodities. For example, a document titled 'Open Access for Africa' published in 2005 through the United Nations ICT Task force, begins with the assertion that, "the absence of modern tools for gathering information and communicating is particularly evident on the continent of Africa" (Dufborg 2005, pp. iii). This statement is a lead in to descriptions of various low-cost connectivity systems that are promoted as possible solutions. This rhetorical setup is carried throughout the text and by each of the many contributing authors. Technologies appear only where development interventions have been initiated and are downplayed or ignored outside of the institutional sphere of influence.

A contrasting image comes from my fieldwork in Accra, Ghana where I found a society revelling in the presence of new technologies, not its absence or inadequacy. The Internet and particularly mobile phones were making an impact in unexpected ways that evaded an explicitly 'development' focused framing. Much of this diffusion was taking place through open market forces and the efforts of locals. There is growing evidence that Ghana is not alone in this respect. Processes of technology diffusion and appropriation (of the Internet and mobile phones in particular) have been documented in Senegal, Tanzania, Nigeria, Uganda, and Rwanda (Gueye 2003; Mwesige 2004; Donner 2005; Mercer 2005; Smith 2006; Molony 2007). Notably in Accra, patterns of technology diffusion did not follow predictably according to the wealth or Westernization of the population. Mamobi, for example, a very poor, densely crowded neighbourhood in central Accra was very media rich. Although the area lacked basic, reliable infrastructure for distributing clean water and dealing with sewage and garbage, every home I visited had a television set. Numerous communication centres offering telephone service, kiosks selling mobile phone recharge cards, Internet cafés, and videography shops on the streets of Mamobi did a brisk business. Poverty and technological enthusiasm existed side-by-side without apparent contradiction.

What explains the disjuncture between the worldview of the Development text and these observations from the field? In her book Performing Africa, Paulla Ebron refers to "*The Africa*" as "a term that collectivizes Africa and marks the importance of representations that fix the continent as a homogeneous object" (Ebron 2002, pp. 1). It is

worth considering, as she does, the many purposes such a conceptual object serves to those who employ it. She highlights both dystopian and utopian engagements with a continent that for some represents a failure to modernize and for others represents the successful evasion of modernity and its corrupting and constraining forces. In the UN document quoted above, this discursive object – 'Africa' – (conflated with a real geographical location) is put to use to claim a lack of technology access and competence in African societies. This 'Africa' proves useful (as it has many times before) as, "a metaphor of absence…against which the lightness and whiteness of 'Western Civilization' can be pictured" (Ferguson 2006, pp. 2). Such a metaphor wipes the continent clean of 'technology' to be reclaimed as a gift of the West extended under certain conditions. It preserves the role and furthers the interests of development experts who wish to play a central role in provisioning technology access.

A silence on emerging and existing technology practices in 'Africa' in Western discourses relates to the powerful association between Africa, poverty, and development in the West that makes it difficult to speak about the continent *at all* (outside of certain small specialist communities) without explicitly addressing issues of development. By difficult, I mean that to speak about the mundanity of everyday life in Africa, of TV watching habits or fashion or football fandom lacks a discursive anchor and therefore seems to lack relevance. To analyze everyday technology use in Ghana in a way similar to how researchers study technology in industrialized societies in the West seems frivolous and marginal in light of the widespread public representations, particularly within the media, of 'Africa' as a continent in extreme crisis. How can one speak of computers when people are starving? This message of misplaced priorities is heard even among the techno-elite who might otherwise be expected to champion technology for all. For example, Bill Gates commented in 2000, "The world's poorest two billion people desperately need healthcare, not laptops" (Helmore and McKie 2000). The necessity of speaking about 'Africa' through the lens of poverty and development has a strong impact on representations of Africans. Inhabitants of the continent are portrayed two-dimensionally as either barriers to development (i.e. corrupt politicians, warlords) or as development stakeholders. As Escobar points out, development literatures have historically failed to portray citizens of developing countries as fully realized human

beings with agency, cognitive powers, and multi-faceted aspirations that extend beyond a development framework (Escobar 1995). This is not an argument against the reality of crisis on the continent. There are indeed problems of poverty, violence, and governmental breakdown in numerous regions. In terms of technology, the diffusion of the Internet and mobile phones in the U.S. and Western Europe as well as throughout Asia has so far reached far more individuals per capita than it has in the countries of Africa. The point, however, is that the notion of the entirety of the African continent as a place where the material forms we associate with modernity are 'absent' creates an exaggerated asymmetry that has a long history of use in rhetorical strategies that are meant to benefit the interests of Westerners. Ghanaians themselves expressed how this asymmetry has a negative effect on how they, as Africans, are perceived outside of the continent. It also has consequences for how and to whom development funds are allocated.

A similar invisibility of technology practices taking place throughout the African continent has, for a long time, been the case in academic disciplines but for wholly different reasons. In anthropology, holistic studies of everyday life in non-Western societies were historically the *modus operandi*. In the past, by seeking out remote societies, ethnographers were able to find differences and diversities in systems of kinship, work, exchange, religious ritual, the supernatural, etc. in human societies. Through juxtaposition with their home society in the West, anthropologists were able to generate innovative new forms of social critique. In light of this academic project, to the extent that societies were interconnected (i.e. by shared media and imported goods) and therefore potentially derivative was uninteresting to scholars. Subsequently, the field's methodological underpinnings have undergone major changes for many reasons, not the least of which was the criticism that this focus on difference was a way of constructing an 'other'. It also reflected a nostalgia for an imagined purity and authenticity that relied on the fictitious notion of autonomous cultural origins (Rosaldo 1989; Gupta and Ferguson 1997). The culturally hybridized and rapidly urbanizing cities of the southern hemisphere did not at first hold much appeal or even seem to be methodologically sound sites for fieldwork. The study of 'modern' practices including technology consumption

that were often concentrated in these urban settings could become a focus only after this changed.

By contrast, technology has been examined, debated, and documented as a social phenomenon in the West from the very birth of the social sciences, from the industrial revolution all the way to the dot.com boom. Such attention has yielded an abundance of primary documents that prevent the vast technological past of the Western world from being either remote or invisible to contemporary analysts. Technology in the West has been a major preoccupation in public discourse; in the mainstream media, in government, and in academic work in the social sciences. Technology has served as a central image in various domains of life and death from modern warfare to modern medicine. It has been employed in visions of capitalist efficiency and advantage in the business world as well as tied to improvements in convenience and cleanliness in home life through domestic technologies. Technology has played a leading role in the totalizing, teleological mythologies of the rise of Western civilization. The innovation and diffusion of these tools have been treated as tangible, material evidence of the triumph of Enlightenment thinking in the West (Misa *et al*. 2003) and as a source of nationalistic pride (Marvin 1988; Hughes 1989). Various phases of technological development have been described as leading periodically to total economic and social reorganization creating new eras and societies: the Industrial society, the Atomic Age, the Information society, the Network society (Bell 1974; Castells 1996). The prominence of this powerful mythology has generated great interest among artists, writers, and intellectuals many of whom have described equally universal and epic visions of the role technology would play in the downfall of humanity[2]. The well-documented history of debate about technology in popular and academic forums in the West has built a solid foundation of source materials accessible to academic work. A corresponding documentation of technology appropriation and use, of both indigenous and foreign innovations, was lacking until very recently in discussions about 'Africa'.

By focusing on the emergent adoption and use of Internet cafés in Accra, Ghana, this thesis documents what is present rather than lamenting what is absent at one particular spot on the African continent. This is not, however, an attempt to show how use of the Internet is evidence that Ghanaians are no different from Westerners. This is a

common way that critics overcompensate in questioning the media and development trope of 'Africa in crisis.' For example, an American technology expert working in Ghana spoke about the misrepresentation of 'Africa' in an interview where he commented that, "*…so much is wrong in terms of how Africa is represented. Yeah there are terrible things going on in Africa, but it's one part of Africa and there's probably 90% of Africa that's just boring and like everywhere else. You know, supermarkets and airplanes flying around.*" Notably, his choice of examples were equally unrepresentative of ordinary life in Ghana where few of the people I encountered were able to do much air travel (and if they did it was certainly not treated as boring) and none bought food at any of the city's supermarkets that catered primarily to expatriates. Similarly, in a development context, existing users of ICTs in developing countries are sometimes described as 'elites' (i.e. Mwesige 2004). This serves as a way of dismissing their forms of technology use by implying that they are the members of society who either lack significant problems or are essentially westernized and can therefore be expected to use technology in already established ways. This thesis seeks to navigate an alternate path that does not succumb either to an absolutist identification or non-identification between Africans and Westerners in the dialogue over new technologies.

The process of Internet appropriation in Accra had its own trajectories that could not be readily identified by Western templates. Through the use of the Internet, Ghanaians developed new knowledges about the technology. These new knowledges arose from the unique intersection of forces – global, local, virtual, symbolic, and material that define the particular milieu of technology consumption in Accra. The chosen fieldsite has some distinctive and novel properties and is a place where issues of technology appropriation have not previously been explored by researchers. But the contribution this thesis attempts to make does not rest on a simple comparison, noting Ghanaians alternate and unexpected interpretations of technology in contrast to a more dominant Western world of high-tech development and dissemination. It also looks at processes of connecting or disconnecting that were enacted between these Internet users and the Western world through activities such as Internet scamming. This study draws upon models of post-coloniality and other theories that are fundamentally relational. This approach brings out some of the implications for 'development' practice advancing the

concept of 'socio-technological momentum' (in Chapter 6) as a little used resource of existing technology expertise and motivation among users. Looking at the enactment of connections and disconnections also addresses issues central to technology studies (in a sociological vein), particularly the matter of international technology 'transfer' and the consequences of uneven processes of technology diffusion within and between societies. This unevenness is taken up in the concept of the 'Digital Divide.' While I'm sympathetic to the focus on social justice in this debate, the tendency to reduce this to economic and technical concerns, issues of technology provisioning, and matters of public policy has resulted in the neglect of some important, related processes. I will argue that a particularly intractable dimension of this 'divide' is found in the breakdowns and dysfunctions of cross-cultural interaction within the new connections made possible by the Internet. This thesis will document several processes through which access or lack of access, connection or disconnection is produced and enforced socially by both nearby and distant social agents.

There is a relevant body of theory in the field of Science and Technology Studies (STS) and related work on consumption theory that has not yet been connected to issues of 'technology and socio-economic development.' Work in these areas model the relationship between developers, users, and technologies in various ways. In relation to socio-economic development issues, it is the activities and agency of the targeted beneficiaries of development interventions, the 'users' and potential users that is particularly under-theorized. To address this problem, this thesis will explore the matter of user agency and technology appropriation in a part of the world that has frequently been the target of various forms of development assistance. This work is facilitated by a framework for thinking about user agency that is inclusive of a broad range of practices carried out by these 'users,' from the hands-on manipulation of the machine to the work done to define the Internet in church sermons, rumours, and other social processes. This framework will be elaborated in the following sections.

Dimensions of the Empirical Case

To begin, it is useful to highlight some of the distinctive characteristics of this fieldsite as a space of technology appropriation that mark it out from previous case studies in STS. One main concern addressed by past research is the question of how technologies end up taking on their particular *material form* and *identity* and in what ways this is a social process. The choices researchers make about what cases to examine affect the theories that are consequently derived. From case to case, these studies vary according to what space they occupy in (at least) four dimensions: (1) the particular technology under examination (2) the posited roles and relationship between 'users' and 'developers' of the technology and other groups (3) the technology phase (development, early use, or widespread diffusion) (4) the location(s) of the study (laboratory, home, office, leisure environments, online, etc.). Researchers have been able to develop and critique theories by altering these dimensions in their own empirical studies thereby illuminating some of the assumptions underlying previous work. They work with different definitions of technology and different models of the ordering that exists between technology developers, users, and the rest of society. Consequently these critiques build on past work, in part, by showing how much more variation there is in the terrain of technology development, diffusion and use than was previously supposed.

According to these dimensions, several characteristics of the Internet café scene in Accra make it a distinctive subject of empirical research. First, it is a case of technology transfer, a study of a set of imported technologies designed largely in the West with one set of ideas about users moving into and being used in a *wholly unanticipated* locale. This set of imports includes end-user products: the desktop computer, computer monitor, accessories, and software. It also includes infrastructure technologies such as networking equipment (routers and servers), network software, as well as the standards that define the Internet. Howes taking a consumption theory approach describes this movement of goods across borders as a disruption in the cycle of production-exchange-consumption such that, "the culture [goods] 'substantiate' is no longer the culture in which they

circulate" (Howes 1996, pp. 2). The consequences of such a displacement are quite unpredictable. The end-users of the Internet in Accra specifically were at a great social and geographic distance from and maintained no direct communication with those who originally designed these imported technologies. Furthermore, these users were not considered part of what the high-tech industry defines as the market for such commodities. This particular process of technology distribution contrasts with many previous studies that have examined how through various mechanisms including marketing, public debate, and user research, developers and users have been able to exert a reciprocal influence.

Those who employ these foreign high-tech commodities in Accra including local ISPs, telecommunication company offices located within Ghana, and Internet café owners are all positioned as consumers in some sense. At the same time, within Ghana this chain of providers alternately play a role as developers of the Internet for the Ghanaian market. Foreign corporations responsible for developing and supplying the key pieces of equipment needed to access the Internet were notably absent. There was no local Intel advertising campaign or sales office in Accra and no Apple store. Instead, local intermediaries including small-scale resellers and diasporic family social networks played a primary role in equipment provisioning largely outside the purview of these corporations. These informal technology supply methods were embedded in the moral economy of diasporic families. A lack of documentation of these circulations meant that much of the electronic equipment that ultimately ended up in Ghana would be accounted for in marketing data as British or American technology consumption. This was another way that the technology adoption practices of Ghanaians were rendered invisible.

Another characteristic of the Internet in Accra is its early phase of diffusion. The Internet remains something of a novelty and its future entrenchment is still quite unpredictable. The newness of the Internet in Ghana means that many hold onto the enticing possibility that it might yet effect a total transformation of society. In industrialized nations, by contrast, much of the utopian thinking about the Internet's revolutionary potential has settled into the mundanity of checking e-mail and shopping online, practices embedded in ordinary daily routines (Bakardjieva 2005). Access to the Internet has diffused extensively in the West becoming almost universal, while in Ghana

it remains a way of distinguishing oneself from one's peers as a more cosmopolitan and connected individual.

Nearly universal access to the Internet in the West vs. its recent arrival in Ghana is a matter of concern from a 'development' perspective where the differential in phases of diffusion is conceptualized as the 'Digital Divide.' The way the 'Digital Divide' is conventionally conceived places a frame around the 'negative space,' the gaps and absences in the developing world thereby discounting and ignoring emerging and existing technology practice in places like Ghana. Such a framing excludes consideration of users and local technical competency. This divide was conceived in the beginning (although this is now changing) as a binary between those who had access to technology as opposed to those who did not. This thesis, taking a relational perspective, looks instead at the complexity of representations and interactions within established connections, particularly between Ghanaian Internet users and non-Africans online. Internet users in Accra found in inhabiting these virtual spaces that they were forced to make accommodations to meet with the already established norms and social practices in cyberspace. When they did not they faced sudden, often unexplained exclusion. The delayed diffusion of the Internet in Ghana meant that Internet users in Accra encountered spaces of interaction online that have already been staked out and normalized before their arrival.

A final distinguishing feature of this study is the particular technology under examination. The Internet is a particularly thorny 'object' to define. It evades any conventional definition of a technological artefact. The Internet fits a number of definitions. It can be described as a language outlined by a set of documents (called RFCs[3]) that are maintained by an international body. The standards contained in these documents, their distribution, and importantly the global agreement and adherence to these standards by technology manufacturers, service providers, and system administrators are the seed that generates the coherent Internet that users interact with. The Internet is also, in another sense, a vast assemblage of servers and routers all communicating with one another in this language. The mutual comprehensibility of the language spoken by a server in the U.S. and another one in Timbuktu, Mali is the infrastructure that paves the way for a system of global communication and information

distribution. The realization of the Internet also depends on the individuals and organizations who participate in this system providing content, offering themselves as chat partners, etc. These descriptions of the Internet give only a small picture of this vast and complex technology, but point out the extreme contrast between the Internet and other types of technologies studied in the past by social scientists, such as the bicycle or microwave that are more ontologically apparent having a perceivable weight and substance. Unlike the Internet, those objects are multiple and (typically) individually owned. The open-endedness of the Internet, the way its collective material development is delegated worldwide amongst people who might or might not identify themselves as either developers and/or users and its dual status as both tool and place (Poster 1995), culture and cultural artefact (Hine 2000), media and object (Silverstone *et al*. 1992) tests the parameters researchers use to define technology.

Un-defining Users, Developers and the Boundaries of the Technological Object

The direction this research took was guided by questions about the capacity for these users to *change* the technology itself. Through what processes were they able to do so, on what scale was this change effective, and *what* exactly was the Internet they produced? And reciprocally, what capacity did the technology have to change its users, through what processes, and who in the end was the 'user' it produced? In the course of exploring these questions, notions of 'technological change' (a term that proved to be malleable enough for these purposes) had to be redefined as well as the relationship between 'users,' 'developers,' and the technological object. A question foregrounded by a concern with socio-economic development was whether this 'user' was someone who considered themselves to be living under better (or even different) conditions with the incorporation of the Internet into their everyday lives. And how did users model 'development' and relate technology to this model? I was similarly concerned with limits on the capacity for these users to act and effect desired outcomes through an engagement with the technologies and what form these limits would take – whether human, technological, mental, or institutional. Addressing questions of 'socio-economic development' via an examination of this 'co-construction of technologies and users'

(Oudshoorn and Pinch 2003) was intended to yield a reinterpretation of debates about 'technology for development' and the 'Digital Divide.'

The peculiarities of this particular fieldsite as described in the previous section, made many existing theories of 'user agency' inapplicable. Therefore, in order to proceed with this analysis I sought to devise a framework borrowing and incorporating various points of theory into a conceptualization of what constitutes technological change and the users' role within it. The outcome is a much broader notion of the role users play in constructing technology than most existing models. The coherence of the concepts of 'change' and 'user agency' employed in this thesis rely on a particular way of defining the technological artefact that rejects conventional thinking about its boundaries as self-evident and fixed. This ambiguity of the Internet as an 'object' has already been raised in the previous section making a theoretical argument along these lines easier to envision. The purpose of this framework is to define the spaces and modes of action that can (and should) be attended to in order to understand how users *alter* technology directly and indirectly, individually and collectively.

This framework for examining user agency draws, in part, from Actor-Network Theory (ANT) that proposes a symmetrical relationship between all actors in socio-technical processes including humans and non-humans (Callon 1999)[4]. Certainly this radical symmetry extends to the roles of developers and users. The genealogy of such a perspective can be traced back to the Social Construction of Technology (SCOT) model (Pinch and Bijker 1984; Bijker 1995) and its reconsideration in feminist studies of technology. The SCOT approach made an early contribution to models of user agency by asserting that users or consumers of a technology could effect technological change and were not merely passive recipients of the fruits of technical progress. Users played this role by persuading developers to enact desired changes. The archetypal example was that of the bicycle, whose pneumatic tires were the outcome of public debate (carried out in newspapers among other venues) over safety (Bijker 1995). This notion of technological change referred to *the creation and arrangement of internal mechanical components* and not to what a technology symbolizes or how users choose from among a range of possibilities the technology presents. Ultimately, the power to make physical changes to a technology was conceived as the province of developers working in a formal role.

Hughes in a similar theory of technological systems extends this capability to a number of roles including engineers, managers, politicians, and financers (Hughes 1987). All of these roles are those of formally recognized and legitimated decision-makers. The SCOT and systems approaches introduced a notion of user agency that modelled an asymmetrical relationship between the roles of user and developer.

Feminist approaches in technology studies were some of the first efforts to look at spaces of technology consumption and to question the privileging of formal development environments in studies of technology development. This shift in focus was a consequence of the fact that, "…women as a sex were distant from the laboratories, drawing offices and board rooms from which decisions about new technologies were emerging" (Cockburn 1992, pp. 36). Cowan, for example, studied the 'consumption junction' referring to the point where consumers made decisions for or against the purchase of a particular technology from among a range of options (Cowan 1987). She highlighted a form of consumer-driven technological change focusing on how and why, from a constellation of technologies, some items become accepted and some are rejected and forever disappear from the market. Feminist researchers also expanded the canon of technologies under study to include domestic technologies such as microwave ovens (Cockburn and Ormrod 1993) and stoves (Cowan 1987) that were disproportionately used by women. The study of microwave ovens was spread across several domains and locations of technology development and change and looked at the process chaining together engineering work, test kitchens, retail spaces, and homes (Cockburn and Ormrod 1993). The effect of these efforts was an expansion of the spaces and actors considered relevant to the success or failure of particular technologies.

Studies of technology *consumption*, particularly of the time period just after a technology is first encountered by consumers, demonstrated that these spaces could be dynamic and unpredictable like the inventor's workshop, scientist's laboratory and other sites of technical work and innovation that, up until that point, were more commonly studied. In both spaces of technology production and consumption individuals seek to create knowledge and build systems through the manipulation of materials. This work in spaces of technology consumption forwarded a broader definition of technological change as a matter of choices made by users about a world of products rather than just the

material evolution of a single item. This redefinition of 'change' was an important inaugural step towards more direct questioning about how to define the boundaries of a technological object.

Cowan's argument for the 'consumption junction' drew on a network approach (with reference to ANT theorists) to demonstrate how a study centred on the consumer could produce a wholly different understanding of who and what is responsible for the way technology development and diffusion processes take place. While early work on Actor-Network Theory often involved the study of people in formal development roles, such as scientists and engineers, it proved to be a particularly flexible theory that was illuminatingly applied to diverse settings from scientific innovation in 19th century microbiology (Latour 1984) to the maintenance and use of water pumps in Zimbabwe (de Laet and Mol 2000). A SCOT approach by comparison circumscribed processes of technological change to a brief window of time. Strictly adhering to SCOT principles, one would presume that Internet café users in Accra were incapable of impacting technological change. Their lack of influence would be attributed to their delay in access to a point in time after formal development phases have completed and to a lack of communication with developers working in a formal role. Since ANT presumes no such a priori roles for user and developer both laboratory work and the spaces of Internet use in Accra, Ghana can be studied in the same way. The principle of symmetry incorporated into the framework that guides this analysis treats the construction of knowledge and artefacts as taking place through the same activities regardless of where the 'actors' are located and regardless of their role.

The thinking that blurs a distinction between developer and user is in line with recent trends in technology design that have further challenged a hierarchy or asymmetry between roles. Programmers, particularly of networked software, now often delegate part of the development process to users. How the role of user and developer and the relationship between the two is performed also relates to the particular technology under consideration as has been noted by Akrich (1992) and de Laet and Mol (2000). For example the design of software to manage a nuclear power plant will not be akin to the design of a multiplayer online gaming environment. The former will by necessity be quite regimented and focused on predicting, controlling, and minimizing all possible user

choices to avoid deadly mistakes whereas the latter will be designed to maximize choice so that the game will be self-sustaining and endlessly creative and absorbing. Programmers now often intentionally provide space for alternate and unpredicted interpretations and material changes through use[5]. Technologies designed for this sort of extensibility depend on a relationship of cooperation between developers and users rather than a feedback cycle in which limitations on users are further extended and refined (i.e. Woolgar 1991a). Much of what makes up the Internet can be characterized as extensible since it is comprised of a large set of open standards, a hallmark of the technology. The recent preponderance of extensible systems is evidence of a shift in thinking away from planning models of human action in user-interface design that were notably critiqued by Suchman (1987). Such thinking resulted in innumerable artificially intelligent, expert systems including the notoriously unhelpful (although certainly cute) Microsoft Clippy. Developers in many circumstances now actively provide 'construction tools' for users *hoping* and celebrating the way users take it in previously unimagined directions.

The movement towards collaboration in network environments and of extreme user configurability, as described above, still suggests a relationship where technology developers are gatekeepers who delegate power to users or withhold it from them. To fully incorporate this principle of symmetry in the activities of users and developers requires a redefinition of the technological 'object' and its boundaries. The notion of relational materiality from ANT builds on the assertion of symmetry in roles by explaining *how* different positions within socio-technical orderings can be considered symmetrical. By adopting this property of relations, the activities of 'user' and 'developer' can be studied as precisely the same sort of work.

The concept of relational materiality in ANT (Law 1999) asserts that a single object has a definition and identity exclusively through its association with other entities and the object is therefore boundary-less. The term 'entity' is applied to technologies and to all humans and non-humans in the material and natural world. No entities meaningfully exist in isolation, but only as part of an assemblage (Callon and Law 1997; Latour 2005). These assemblages are what make a computer a tool for household budget management to one user and a tool for testing factory equipment to another. Users fundamentally construct the technology through the work they do configuring and

assembling it with other entities. Through this configurational work, users act as 'heterogeneous engineers' (Callon and Law 1997) to bring a particular technology together with other technologies, materials, people, media, etc. We perceive such an 'object' as detached from its surroundings and as having characteristics that are intrinsic, but this is a perceptual simplification and these characteristics are a product of relations. Through the concept of relational materiality, the object is turned inside out. The work that produces it is understood as taking place externally to what we perceive as the object's boundaries. Technological change through this concept of relational materiality is not limited to 'technical' work or only to the activities that have to do with configuring mechanical components in the object's interior.

Adopting 'relational materiality' into the framework that guides this research means that the methodological object can be understood as the larger system constructed by users that the computer and Internet is made a part of. Lally provided an example of this approach in her study of domestic computer use where she described how various objects (including computers) were brought together by inhabitants in the home in order to construct a, 'machine for living' (Lally 2002). The computer was defined not simply in terms of its components: the motherboard, the hard drive, etc. but in relation to other items in the home. This configurational innovation should not be understood as the make-do strategy of disempowered technology consumers who were blocked from truer methods of invention. Suchman makes an observation that supports the symmetrical treatment of 'users' and 'developers' when she points out that among insiders to formal development processes in the high-tech industry there was an awareness that, "'new' technologies comprise reconfigurations, extensions and other modifications of elements already in circulation" (Suchman 2005, pp. 381). Technological change can be accomplished through the configuration of a single object (as in setting the preferences on a piece of software) and it can involve bringing the technology together with other entities (Fleck 1999; de Wit *et al*. 2002; Lally 2002; Shove 2003; Suchman 2005). It is not a supportable assertion to distinguish technology 'developers' as building 'from scratch' from 'users' who ostensibly do not. All participate in the work of reconfiguring and assembling. In keeping with this model of the users' role, the analysis carried out in this thesis works to identify the various entities that Internet café users 'assemble' to

define the Internet and, more importantly, to describe the practices, unfolding over time, through which this 'assembly' work is carried out.

One implication of turning the technological 'object' inside out to understand the productive capacity of users is that fieldwork need not be chained to the machine or even the immediate environment of its use. A practice that alters any part of the assemblage (although we may perceive it to be external or even distant from the 'object') can redefine the technology. The researcher may follow connections and circulations extending out from the perceived 'object' into entirely new spaces. The relationship between a technology, its users and society is not defined solely at the human-machine interface. Engagements with the machine interface, as understood through this framework, are not given a special material privilege over other forms of activity.

The need for a broader framing (and a challenge to the special privilege accorded to direct human-machine interaction) was confirmed by observations from an early period of fieldwork. In a series of interviews, I was told stories by Internet café users about how the Internet worked and what it was useful for that did not at all match their personal experiences at the computer interface, as they themselves admitted. A model of how 'big gains' could be realized by making contact with foreigners through the Internet circulated in rumours and other forms among Internet users. Users seemed to believe whole-heartedly in such a model and acted in accordance with this belief in their activities at the Internet café and their forays online. They did so without any direct experiences with the machine that would fully validate such a model. Therefore other modes of engaging with the technology were clearly informing the construction of utility. I was able to locate various forms of social interaction between people (including rumours and schoolyard play among youth) that played a role in constituting the Internet. Where conflicts existed between personal experience and these models of the technology, users often showed a preference for the models. This upended the notion that direct manipulation of the technological artefact had a special material concreteness that would make it the privileged mode for users to gain an understanding of technology and its utility.

One consequence to this research of the move out and away from the user interface is that the work of constituting the Internet in Accra came to be understood as a

collective, social process taking place amongst users and non-users rather than taking place only or primarily through an individual's direct manipulation of and reasoning about the machine. Studying these social processes further supports the symmetrical treatment of users and developers by showing how 'users' as well as non-users do more than interpret technology for themselves, they also produce the technology for others.

There is an opposing model of the relationship between users and developers that needs to be addressed to clarify the conditions that make it possible for the activities of 'users' to be considered a *production* of the Internet, not just for themselves, but for others. An alternate model maps developers and users onto a distinction between production and consumption. In such a model, developers as 'producers' make decisions that are materialized through a manufacturing apparatus that replicates and disseminates artefacts to many consumers. Each product bears the developer's mark, materializing their design decisions in precisely the same way. Users, by contrast, situated as 'consumers,' make their own interpretations that redefine the 'object,' but do not *produce* it for anyone except themselves. This distinction is implicit in the concept of 'technology as text' (Woolgar 1991a; Woolgar 1991b; Akrich 1992, Akrich and Latour 1992) that addresses how designers imagine users and inscribe them into the material form of a technology. Users in turn, interpret and may subvert these inscriptions through a process of de-scription. There are limitations with any metaphor and the image of textual immutability and linearity in the 'technology as text' model. The Internet, by contrast, is literally a text continually being made and remade by 'users' for one another. A common critique of the 'technology as text' model is that it closes off a reciprocal capability for inscription by users for developers or for other users (Mackay et al. 2000).

What goes unstated in an argument where users are treated as interpreters only and not producers of technology is the legitimation of one particular *apparatus of technology manufacturing* - assembly-line and digital duplication processes. These processes facilitate an exact and universal replication from a developer's prototype. Yet, not all commodities are made in this way and the Internet, as a totality, cannot be considered an output of just this one form of production. The 'symbolic investment' of technologies as well as user configurations and contributions to centralized databases are all examples of how a commodity is 'produced' in multiple ways. The assembly-line

does not produce all of the technology, but only a part. To preserve an understanding of 'users' as producers of technology, the *scope* of technological change must be considered variable. Users often do not have access to these universal mechanisms of production and they consequently produce the technology for a subset of other users. How to understand this scope and its limits will be worked out in the substantive body of this thesis and revisited in the conclusion through the concept of "technology cultures."

Woolgar's consideration of the 'moral order' between user, developer, and technology is a useful bridge between Science and Technology Studies proper and a recent interest among those studying technology with broader theories of 'consumption' (i.e. Silverstone and Hirsch 1992; Lie and Sorenson 1996; Mackay 1997; Miller and Slater 2000; Lally 2002; Oudshoorn and Pinch 2003; Monteiro 2004). Woolgar describes as a "moral order" the particular relationship between users, developers, and technologies, perceptions of how firmly bounded they are (or should be), and ways of attributing characteristics as well as "rights and responsibilities" to these entities (Woolgar 1991a, pp. 66). There are different implications for the entities in one 'moral order' versus another. Woolgar goes on to work out one such order in the way technology developers imagine and 'configure' users in their technical work seeking to circumscribe users' activities. His effort is, in part, to show how the machine itself participates in defining social relations through its material form. Social scientists and historians who study technology also construct moral orders through their writing. In fact, their arguments can be understood as attempts to show the importance of figures who are missing and marginalized in conventional accounts, a strategy of retrospective empowerment via text. In reviewing a number of these orderings I have argued that these efforts went far, but sometimes not far enough to anticipate how the users of Internet cafes in a West African capital city might also serve as agents of technological change.

Research in the domain of 'consumption studies' is concerned with ways of understanding the 'moral order' acted out in production-exchange-consumption relations. There is a similar compatibility between 'relational materiality' in ANT and an engagement with semiotics that can be found in two leading exemplars, Bourdieu's *Distinction* (1984) and Douglas and Isherwood's *The World of Goods* (1979). The focus of such work was originally on the acquisition and possession of objects, symbolic

display, and of exchange relations. In relation to the study of 'moral orders' of users, developers, and technologies, what marks out this work is its concern with how the 'social self' is produced through relations with material goods. Bourdieu's account, for example, describes the production of class distinctions through consumption practices. This 'moral order' centres not on the commodity (as STS studies of technology development often do), but on the 'user/consumer' and how that role is produced through relations with commodities.

The turn to consumption studies acknowledges that technology is a particular form of material culture, one that could be consumed in ways both similar and different to clothes, food, sacred objects, cars, fine art, and less tangible 'materials' like information or media imagery. This particular approach to technology studies has forwarded, from the very beginning, a more active conceptualization of the individual consumer. This approach evolved, as Miller points out, in a very general sense as a reaction to Marxism and to theories of structuralism in anthropology that viewed members of society as essentially without agency, as acting out an *a priori* social structure (Miller 1987). This role for consumers moves beyond acknowledging consumer choice. What is done by consumers with an object after purchase is examined as a rich practice, a creative *process* of appropriation. However, the role of consumers in this process is not without limits. Although they can act or can interpret objects and media in multiple ways, this does not mean they are faced with limitless opportunities or are not faced with constraints or counter-forces exerted by more powerful actors. Ultimately an inability to move into a desirable relationship with a technology or any other commodity remains a real possibility (Miller 1987; 1988).

Studies of technology that apply theories of consumption work also with a broad definition of technological change that understands 'symbolic investment' as another important 'production' process that constitutes technology. The meanings imbued in technological artifacts are changeable and may be altered by users and other groups. They can be expected to vary over time and over the demographic and cultural terrain of technology appropriation. This again highlights how the *scope* of technological change can be thought of as variable. A common approach is to analyze how the news media and advertising attempts to construct technologies for users (Haddon 1992; Hubak 1996;

Mackay 1997; Lally 2002). Lally, for example, looks at the way advertisements of the Apple personal computer attempted to reframe the technology through domestic imagery to encourage consumers to think of it not as an office machine, but as a robust device supporting sociable, home-centred family activities (Lally 2002). But it is not only the representational domain of advertisements and other texts where symbolic work is done on and with technologies. Early theories of consumption focused on how commodities themselves serve as a physical instantiation of cultural categories (Douglas and Isherwood 1979; Bourdieu 1984; McCracken 1988). The meanings invested in objects may bear an arbitrary relationship to what is known about the objects materiality and its practical uses, although this distinction is problematic and has been too often overextended. A more integrated reading of technology's symbolic and social role, practical uses, and material imperatives will be proposed as part of the framework that guides this research.

Consumption approaches altogether question an active/passive dichotomy that divides developers and users. They also break down an absolute division between the technology and the user arguing that they are interdependent entities. They place a central focus on how the social self is constructed through relations with the material world. Therefore in the quest to understand how the 'user' is reciprocally constituted by technology, the models proposed by theories of consumption prove useful. Consumption is the process, "by which society reappropriates its own external form – that is, assimilates its own culture and uses it to develop itself as a social subject" (Miller 1987, pp. 17). This is a process of co-construction where both the user and the commodity develop. Miller's argument does not fuse the two, but it does question a too clear distinction between human and non-human entities and any assertions of unidirectional causality, supporting neither the social construction of artefacts nor the technological determinism of social behaviour.

Consumption studies propose a model of technology acquisition and use that is not reduced to a pure instrumental utility grounded in material imperatives. This approach is focused on 'meaning,' technology's role in relations between people, and more specifically, the processes of establishing social status. It explores a particular set of 'moral orders' that are of special interest to social scientists (sociologists and

anthropologists in particular). Yet there is a static feeling to those particular approaches in 'consumption studies' that conceive of the material world simply as a carrier of cultural meanings casting off all other roles. A more recent trend in consumption studies seeks to reunite meaning with purposive action steering away from the passivity of notions of symbolic display and the tendency in past approaches to overemphasize the acquisition and exchange of commodities and neglect the complexity and particularity of their functionality and use. The research on practice in consumption theory (Shove 2003; Warde 2005) moves the focus into a post-acquisition phase noting that "consumption occurs within and for the sake of practice" (Warde 2005, pp. 145). This approach, by centering on practice, is able to overcome a tendency to treat the utility value of technology as absolutely distinct from its sign value. The consumption of a commodity constitutes the user not simply through proximity to a possessed object and its attributed meanings, but in the temporal activities of using it. And practices generate and frame the motives that drive consumption.

Drawing from these practice theories of consumption, this analysis of Internet café use in Accra focuses on documenting, in each substantive chapter, different practices that play a key role in how users make sense of the Internet. Up to this point I have spoken about the work users do in 'assembling' systems that come to define the Internet without elaborating on what that means except to suggest that it can take place 'outside of' and in relation to the artefact in question rather than exclusively through alterations within the object's perceived boundaries. The verb 'assembling' itself sounds much more mechanical and instrumentalist than the processes of making meaning and informing action that will be analyzed in this thesis. Processes that 'assemble' orderings are highly varied. It is not a matter of purchasing, corralling, or otherwise acquiring things into a static, atemporal collective. These processes unfold over time through coherent *practices*. Their order and situational logic is illuminated by the narratives people produce that draw out how they see the relationship between 'things' in their world and how they correspondingly act. People understand relations in all sorts of widely-recognized patterns. 'Cause and effect' is one of these patterns. They can descriptively elaborate on affiliations distinguishing, for example, between 'love,' 'seduction,' and 'witchcraft.' Ideas about 'witchcraft' (to take one particularly 'local'

example) arose from time to time in Accra demonstrating how different groups model human behaviour in quite unique ways. This thesis will examine and describe several forms or *genres* of practice unfolding over time that came to define the Internet in Accra. Importantly, this definitional work is accomplished, in part, through the mass media and in forms of face-to-face communication that (Spitulnik 2002) refers to as 'small media' where people negotiate a new technology outside of direct interaction with the machine. That kind of work also impacts what users choose to do at the machine interface and what options they close off from consideration. Speech about technology is an integral part of the embodied and material activities that will be explored in the substantive sections of this thesis. It is incorporated into the flow of activity that alters and redefines the Internet.

The framework for understanding 'user agency' in this thesis draws from these recent insights into how consumption takes place within practice. It also takes seriously Sahlins argument that efforts to act come down to matters of "meaning" that precede utility (Sahlins 1976) and this thesis will show how through practices, the way humans act in coherent ways in the world, this meaning is developed. Sahlins argues against integrating the social and material by merely showing how material objects are used in social relations (i.e. to define social status). Both practice theories of consumption and Sahlins' work focus on the issue of use and the characterization of 'utility.' Sahlins takes on the issue of utility by noting that this dimension of an artefact cannot be read from material properties alone, but is derived from its "cultural encompassment." This means that the processes undertaken by Ghanaian Internet café users yield and manipulate "meanings" that in turn define functionality (rather than being additional to it). By centering on the way 'meaning' is determined and linking this to the question of utility there is no longer a need to distinguish between 'symbolic' and 'practical' uses of a technology. They are ultimately part of one continuous and self-reinforcing process. To do this also requires a deft touch with language and speech treating them as part of technology appropriation processes rather than as a separate and privileged domain of 'symbolic' work.

The Role of Language in the Production and Circulation of Meaning

This thesis places a central focus on users' attempts to construct the Internet as a *meaningful* tool in Accra, but at the same time seeks to redress the way meaning is treated in some theories of consumption. One problem is the artificial separation of an objects 'utility' from its communicative, symbolic role (Sahlins 1976). This distinction has been drawn in two main ways, one that favours the material and one the symbolic. One argument is that 'utility' arises from the concrete materiality of an object alone and the symbolism that comes to be attached to the object is merely an obfuscation of its utility (Slater 1997). A similarly problematic, but opposing distinction is found in consumption theories that put aside the specific materiality of objects in considering their social role (i.e. Douglas and Isherwood 1979; Bourdieu 1984). Instead objects are described as substantiating ideas or values that are seen as bearing an arbitrary relationship to the material form of the object. Miller (1987) suggests that this tendency arises from an overextension of linguistic methodology to the study of material culture. He notes that language by its very nature associates arbitrary signs and sounds with things, ideas, and meanings. However the material world with its particular concreteness can not be treated in the same way. Supporting this point, Miller notes that humans can perceive distinctions amongst objects in the material world in a much richer way than can be expressed by language.

Where symbolism is treated as detached from materiality and functionality, technology is thought to have a bearing on expressive identity only through a static notion of display. Following from this distinction, some examinations of technology that draw on consumption theories have misleadingly positioned identity in opposition to action (i.e. Lie and Sorenson 1996; Monteiro 2004) and technology's sign value as disconnected from its utility value (i.e. Oudshoorn and Pinch 2003). Yet, new and complex technologies like the Internet highlight the importance of more closely considering the issue of utility. The *uses* of the Internet are non-obvious to those encountering it for the first time and are part of what users determine through a process of sense-making and appropriation. In Ghana, rather than being external to utility, what the Internet symbolized (futurity, wealth, foreignness) shaped perceptions of this functionality and consequently affected patterns of use.

A common approach to addressing technology's meaning is through the analysis of communication *about* technology, for example through textual and image analysis of advertisements (Hubak 1996; du Gay *et al*. 1997; Lally 2002; Nakamura 2002). This work is used to illustrate a world constituted through language, but does not connect this to how these meanings are consumed and redeployed in everyday practice, what bearing they have on the technologies they represent or the users they speak to. To counter this detachment between technology representation and technology practice, throughout this thesis I will pay particular attention to what instances of language, particularly speech acts, *do* to the Internet and to users. What meanings about the Internet circulate amongst Internet users in Accra and by what mechanisms do they reach these users? How are they deployed and with what material outcome? The purpose of asking these questions is to bring these language-based acts back into the range of actions taken in relation to a technology instead of treating them as a separate representational world. Research in media studies has demonstrated the unpredictability of how audiences appropriate and deploy the text and imagery of TV, newspapers, radio, or online sources (Miller 1992; Silverstone 1994; Ang 1995; Ginsburg *et al*. 2002). Not all media messages are received by individuals or interpreted in the same way. Media representations do not travel intact, but are taken apart, selectively remembered, and reinvented.

Language was explicitly described as an important tool by Internet users in Accra in a variety of domains. Speech, in particular, held multiple roles in the process of Internet appropriation. In interviews, Internet users recalled speech events that took place online and offline. One type of consequential offline speech act was the rumours told about Internet fraud. These rumours emerged as a particular media form that Internet users relied on to make sense of this secretive and ephemeral phenomenon that many had little direct experience with. Online, a conversational style of speech rendered as text was the central format for social interaction. Chat interfaces were the primary tool used on the Internet, particularly among teenage and twenty-something users.

Language was used as a social sense-making and information sharing mechanism among Internet users and was also perceived as a form of power. This power came from both language competency and language style. Competency was the ability to speak English which meant the ability to be comprehended by powerful and resource-rich

foreigners online or offline. Style was a further dimension that involved adeptness with the language. The ability to persuade was part of style and was something expressed, for example, in the careful selection of words to woo a love interest. Language and speech as power also related to common forms of spiritual practice in Accra highlighting parallels in the ritual aspects of Internet use and religious practice. Through ritualized speech acts in traditional religions, spirits could be summoned to work on one's behalf. Furthermore, one's enemies, witnessing these speech acts against them, could be cowed into submission. In Pentecostal Christian churches throughout Accra, speaking in tongues was evidence of deep faith. In all cases speech acts registered a force, having effects both on social relations on the human plane of existence and in the supernatural realm. Therefore language and speech tied together human, virtual, and supernatural spheres in Ghana.

The matter of language style has been highlighted in post-colonial studies. Franz Fanon pointed out how linguistic mannerisms and dialects taken up by citizens of French colonies were a way of manipulating identity. He saw the adoption of colonial languages by colonial subjects as a way of "assuming a culture" that had once subjugated them. The rejection of the local language was therefore a form of self-hate that divided the self. The continual use of a particular language can have the effect of working over the speakers identity, independently of what is actually being said (Fanon 1967). In accordance with Fanon's observations, Ghanaian Internet users sometimes employed the discourse of 'African crisis' to seek sympathy. Among Internet scammers this was a common scamming strategy that sometimes led to conflicted feelings about performing a false and unflattering identity for what they perceived as the ignorant and narrow presumptions of foreigners. Language as expressed in the speeches made and documents written in the development industry is interesting for related reasons. Its silence on matters of existing technology practice in Africa and vociferousness on matters of technology's potential is connected to rhetorical strategies, but ones that take advantage of a representation of Africans as lacking and helpless.

An Actor-Network Theory approach to describe the work Internet users do is in many ways compatible with a closer consideration of how various acts of speech are deployed to constitute a new technology. When Internet users speak about the Internet or

when they speak to chat partners *on* the Internet or even when they speak in other domains this does something to the assemblages they are building with the Internet. There is some precedence in the ANT literature about what instances of language accomplish (Latour 1987; Callon 1991). In Latour's discussion of scientific papers he illustrates how, through the associations constructed in sentences, an assertion can be rendered less or more factual. When authors refer to other scientific papers as supporting their argument, the author recruits allies. In contrast, by associating a scientific 'truth' with its origins in a laboratory process it can be rendered less factual.

Theorists have made efforts to reconceive ANT outside of the scientist's laboratory and inventor's workshop as a more general theory of the social (Law 1994; Latour 2005). The social, in a nutshell, is defined as the associations between non-social *entities*. Through these associations 'assemblages' are built that are heterogeneously composed of humans and non-humans. These assemblages *do* things like prove scientific facts (Latour 1987), create a new law, or form something tangible like a bridge (Suchman 2000). However, Latour argues that the social is only fleetingly visible and only at the moment when new associations are being made, when the assemblage is unstable. Studies of science and technology take place in dynamic and unstable environments where associations are constantly being formed and altered, therefore by ANTs definition, the social is often visible in these spaces. This is a contrast to previous sociological work in more stable, unchanging environments that has relied on *a priori* categories (such as class, politics, or the market) to understand and define social phenomena. Latour calls this past approach the *sociology of the social* and argues that a *sociology of associations* (aka Actor-Network Theory) despite its origins in science and technology studies provides a way of rethinking all other domains of sociological investigation (Latour 2005). His argument directs sociologists towards examining points of change where previous assemblages are breaking down and new ones are in the process of being built.

Although ANT approaches and some theories of consumption both draw from semiotics, the relationality of ANT does not treat the material world as only a language-like symbolic system. Instead it re-centres the material world as a force with a bearing on matters of the social. ANT is both notable and controversial for including non-humans –

machines, animals, texts, institutions, parasites – among the entities that constitute the social. Non-humans are described as full members of society endowed with a force and an ability to act just as humans are. This claim was founded on the observation that social order and social effects could not be explained purely as an outcome of the activities of the human body such as speaking, fighting, and touching. Law notes that, "…some materials last better than others. And some travel better than others. Voices don't last for long, and they don't travel very far. If social ordering depended on voices alone, it would be a very local affair" (Law 1994). The extension of social order across greater expanses of time and space relies on texts, machines, and other durable non-humans. Therefore to understand social orderings, the materiality of things cannot be minimized. ANT also re-centres everyday action as the matter of social study. Actor-Network Theory proposes that assemblages must be constantly performed to accomplish their social effect. On the matter of meanings expressed through language this emphasizes that *what* is expressed is not as important as when and where it is expressed and the effect of these linguistic acts.

However, critiques of ANT have particular relevance to the study of Internet café use in Accra. Descriptions of how the social is constituted are accomplished by tracing the relationship between entities forming an assemblage. Yet, whatever is excluded from the assemblage is treated as irrelevant. This is true from a perspective within the assemblage, but not from the viewpoint of the excluded. In this case of technology transfer, the emergence and diffusion of the Internet initially took place without the inclusion of the individuals in Accra and their delayed inclusion is of material consequence. Star highlights this as a problem of membership, where from one perspective an assemblage looks stable, but from another it does not (Star 1991). Furthermore, ANT in its rejection of *a priori* social categories is also inadequate to the task of explaining or addressing longstanding patterns of difference and disadvantage. It provides no language with which to address issues of gender (Cockburn 1992). And similarly it provides no language for issues of race. ANT suggests the social inertia of something like race-based disadvantage or prejudice could be an effect of durable non-humans that carry social orderings across time and space.

One way this thesis attempts to address issues of race and prejudice without throwing ANT over entirely is by doing ANT-style description of Internet use in Accra that is not limited to ultimately successful assemblages, but also attends to failed attempts and to disconnects. Internet users narrated both what they attempted and what ultimately they were able or unable to do with the Internet. The matter of failed assemblages as they constitute exclusions touches on issues of race and disadvantage. The experiences of Internet users in Accra include cases where they were refused membership (such as in online environments) and where their attempts to recruit allies were rebuked with an explanation that pointed to race and nationality. One significant disconnect addressed in this thesis is between Internet users and development institutions (chapter 6). These two separate assemblages produce and are produced by distinct and contradictory circulations of meaning about the Internet.

Conclusion

The elements of a theoretical framework for understanding user agency that were outlined in this chapter were developed throughout the research process working back and forth between the theoretical literature and field data. These insights shaped the working dimensions of the fieldsite and helped to define primary research questions. This study of Internet cafés in Accra, Ghana ultimately is a study of technological change brought about by users. The framework that guides and supports this assertion starts with a symmetrical treatment of the activities of users and developers. Their activities are both fundamentally capable of constructing technology. Drawing from Actor-Network theory and the notion of 'relational materiality,' the work of constructing technology is defined as taking place outside of the perceived boundaries of the 'object' in the way it is assembled with other 'entities' through various practices. The process of enacting these associations defines the object. This work is carried out by users both 'inside' the Internet in its many cyberspaces as well as 'outside' of it. The scope of this technological change is not universal, but users do have the capacity to construct the object for other users. Users are not limited to interpreting the technology for themselves alone. The

scope of the changes they are capable of enacting and who exactly they produce the Internet for will be a focus in following chapters.

As a particular instance of technology, the Internet lends itself particularly well to this exploration of technological change through use. Its lack of clear boundaries is apparent. It fails the definition of 'object' from the very beginning. The Internet is an assemblage of global scope made up of millions of computers and people, routers, servers, modems, telephone and cable lines, and most importantly standards that define how these computers can talk to one another comprehensibly. It also is not an 'object' whose existence can be attributed to a clear and finite set of developers. It is as much defined by the cyberspaces that are an output of the textual work of millions of users as it is by its infrastructure.

By proposing an alternate 'moral order' between developer, user, and technology through a symmetrical approach, questions of marginalization and of the 'Digital Divide,' issues of how race and racism relate to technology appropriation can be considered anew following from the experiences and social commentary of users. It is therefore an attempt to reset the research agenda on 'technology for development' issues. A new order proposes new ways to think about these important social issues in ways that go beyond the question of access to technological artefacts or an assumed dependency upon 'gatekeepers' in the corporate high-tech sector to create appropriate technologies for these citizens of the developing world. By flattening the field in this way, the full extent of what users are able to do with the technology for themselves can be examined uncovering, at the same time, some of the hard and immutable limits.

The following chapters in this thesis are primarily dedicated to examining the assemblages that users build or seek to build, their 'machines for living' (Lally 2002) that incorporate the Internet. The term 'living' refers to both matters of subsistence and matters of fulfilment. The question of technology appropriation is a question of where and how users place the Internet within those self-made systems. It is also a question of what existing resources users are able to bring into association with the Internet. The resulting 'machines' provide insights into how Internet users in Ghana (most often in their teens and twenties) envision ideal lives for themselves and how they go about pursuing these ideals. Through their construction of the Internet they seek wealth,

business and migration opportunities, spouses and education. If they are school-aged boys they seek admiration and camaraderie from their schoolmates. Through 'machines for living' Internet users construct their identity as they want it communicated to others.

The relentless focus in this thesis on the capacity for and limitations of user agency on the matter of technological change is, in part, a strategy for resisting a 'development' framing of the issues. This ordering attributes a predictable and universal determinist force to technologies. It constrains the agency and potential for insight among citizens of developing nations by absorbing and reconfiguring it to accord with Development truisms. As noted at the beginning of this chapter, this way of ordering the world has rendered invisible existing technology practices in 'Africa'. The topics given primary weight in this thesis are not defined according to the priorities set forth by development, but reflect issues collaboratively raised and discussed in interviews with Internet users in Accra. There are substantive chapters therefore on youth identity, fraud, and religion and not on favoured development subjects such as health or democratization. Development priorities are established according to an intra-institutional logic that Internet users in Accra do not participate in. Instead, through the experiences relayed by these Internet users, an alternate narrative about the Internet and about Africa is produced.

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[1] A selection of recent media reports juxtapose imagery of an archaic 'Africa' with the transformative potential of the mobile phone. They include, "In War-Torn Congo, Going Wireless to Reach Home: For Poor, Cellphones Bridge Digital Divide" (July 9, 2006) Washington Post. IEEE Spectrum Online refers to Africans "dialing into the 21st century" in an article titled 'Africa Calling' published in May 2006. Also "Phone Revolution Makes Africa Upwardly Mobile" (March 4, 2006) Times Online - http://www.timesonline.co.uk/article/0,,3-2068420,00.html and "The Real Digital Divide" (March 13, 2005) in The Economist. On the BBC website there is, "Rural Africa Joins Mobile Revolution" (December 6, 2004) at http://news.bbc.co.uk/2/hi/business/4036503.stm

[2] Brey (2003) points to Marx, Weber, and Habermas. Also Marcuse and Simmel (on the tragedy of culture) are theoretical reference points. None had sufficient imagination to foresee technologies move from tool of capitalist production to consumer entertainment product and from commodity to network.

[3] RFC stands for 'Request for Comments'

[4] This is not to be confused with the 'principle of symmetry' in early work on the Sociology of Science which suggests that the knowledge claims of scientists be treated in the same way whether they are successful or unsuccessful (Bloor 1976) rather than treating successful claims as the product of 'objective' reason and unsuccessful ones as the product of social, political, or economic forces. This idea of symmetry was extended by Pinch and Bijker (1984) to the consideration of technologies that succeed or fail.

[5] see Howard Rheingold's book Smart Mobs (2002) for a multitude of examples of 'users' as creators of technology. Other recent examples of this trend include Wikipedia and weblogging. The latter is an extension by user/developers of the capabilities of the language of web page design – HTML. While the rapid diffusion of network connectivity certainly has pushed this movement in technology design and

development along, there are earlier examples as well as efforts to analyze the flexibility of technological artefacts in the hands of users. For an example in an African setting see de Laet and Mol (2000) on their analysis of several designs of water pumps in Zimbabwe.

Chapter 2 Methodological Issues in an Urban and Virtual Fieldsite

A significant feature of my fieldwork experience was the striking way that I was approached, shouted at, beckoned, and greeted 'obruni, obruni' (meaning white person/foreigner) everywhere I went in Accra. While these greetings were almost universally friendly they prompted an uncomfortable sense of conspicuousness. This was partly due to the urban setting of my research where I continually encountered new people and never became an expected part of the setting. On a daily basis I was asked to explain myself, my reasons for being in Accra, my profession, my country of origin. I was often asked, 'what is life like in America?' and 'How do you find Ghana? What do you think of Ghanaians?' When I attended social events, the proceedings were altered by my presence. I was seated in the front, sometimes on a stage and pulled into dances and fund-raising rituals. Once at a youth group event I was asked to give an impromptu motivational speech. So much for being 'a fly on the wall.'

The overwhelming amount of attention I experienced and the eagerness with which I was approached indicated two things that had methodological consequences. First, it forced a reconsideration of what was meant by my role as 'participant' in the fieldsite. I could not realistically think of myself as having an equivalent role to those I was studying since I had been assigned the role of *foreigner* from the moment I entered the field. This had a significant effect on the way people interacted with me, the subject matter they chose to speak to me about, and the way they spoke and presented themselves. Therefore, my methods and analysis needed to incorporate a full and direct engagement with all of the ramifications of my heavily connoted position as a young, white, unmarried, foreign woman within the fieldsite. The knowledge about the Internet gathered in interviews and observations in this alternative participant role was therefore a 'situated knowledge' (Haraway 1991).

The general interest among Internet users in Accra in what was foreign points to the second methodological issue of defining the fieldsite in spatial terms. The challenge was to be reasonably specific about the fieldsite while taking into account the seemingly external or mobile forces that were part of the way Internet appropriation and use was defined in Accra. The attention I received and the questions I was asked such as 'what is life like in America?' reflect the outward-looking orientation of many of the people I

encountered in Accra. The everyday lives and aspirations of Internet users, in particular, were oriented by virtual and imagined geographies, that of cyberspace, as well as mythic notions of America and Europe. The material world and the mediated messages that urban residents of Accra encountered and were surrounded by came from diverse, ambiguous, and/or multiple locales near and far. They incorporated these materials into the construction of their idealized identities. This meant that the spatial terrain of this research could not be conceived of in conventional terms as a bounded fieldsite where cultural forms could be explained and analyzed referring only to phenomena fully contained within narrowly specified territorial boundaries. Studying the use of Internet cafés did not mean studying only what went on within the Internet café or within the city of Accra. Instead it was a social phenomenon that transgressed the boundaries of the city and country.

To address these methodological challenges of space and perspective I have defined my fieldsite as a heterogeneous network. This network included portions of the Internet, but also the road network of Accra, and the social networks of Internet users that were connected by a multitude of communication technologies. To conduct research in this fieldsite as network, I positioned myself at various fixed points starting with Internet cafés. I intercepted the flow of messages and goods through the network, many coming in digital form through the Internet, but also along more traditional routes such as rumour networks. Furthermore I studied the network by moving with people along roads between fixed points in the city. This also involved addressing my role as foreigner by examining the position in the network that was allotted to me by Internet users and others I encountered in Accra. While the fieldsite as network is a continuous whole in the sense that one can get from one point in the network to any other point it is also a partiality since the points in the network (in fact, in any heterogeneous network) expand infinitely outward and a decision must inevitably be made by the researcher about how far to follow these connections.

The advantage of defining the fieldsite as a network is the ability to cover a vast, but continuous terrain while remaining relevant and specific to the social phenomenon under study. The result of the study conducted in this way is a rich, holistic representation of the social phenomenon. At the same time this representation avoids the

mistake of conflating holism with completeness since the network is conceived of as extending beyond the specific points, intersections, and circulations that are examined. Therefore the network as fieldsite strikes a careful balance, making it possible to develop rich forms of knowledge while avoiding the oversimplifications of completeness and the false dichotomy between local and global.

Strategies Underlying the Selection of Internet Cafés as a Fieldsite

Internet cafés were the starting point of this ethnography of a network. So it is necessary to explain how they were selected and why Internet cafés in Ghana specifically were chosen. From the very early stages of this research it has been conceived of as an ethnography. This decision was based partly on a desire to maintain continuity with other similar studies of Internet appropriation in order to be able to contribute to some of the themes generated in these studies (Silverstone and Hirsch 1992; Turkle 1996; Miller and Slater 2000; Lally 2002). It was also partly an effort to diverge from the methodological approaches of past technology for development studies that employ pre-determined survey categories and universal 'readiness' indicators in their research efforts. These processes impose a structure that creates blind spots to incongruous local situations. They also tend to focus narrowly on particular projects through feasibility studies, needs analysis frameworks, and other highly structured research practices that are peculiar to development circles. Consequently, much less energy has been directed towards understanding existing patterns of technology diffusion and related processes of communication and information management in the developing world. Therefore an ethnographic approach was employed as part of an effort to formulate a critique of the development literature.

I am interested generally in the appropriation of the Internet throughout Africa. However it was necessary to narrow my focus down considerably by selecting a fieldsite that would be manageable in scope. In the interest of contributing some new insights to the literature on this issue I sought a fieldsite that had the potential to challenge much of the received wisdom about Internet use in Africa. Firstly, that the Internet was not being used to any notable degree in Africa. Secondly, that if it was being used it was only

through the philanthropic efforts of development projects largely funded by foreign capital. Thirdly, that beyond development projects, the Internet was only being used by the most wealthy and privileged members of society. These are the presumptions implicit in a number of texts produced by the UN and its connected agencies and in much of the academic literature on technology for development in Africa.

The bulk of my fieldwork took place in Accra, Ghana's capital city, however I began with a period of preparatory research conducted on technology use among Ghanaians living in London. I did 17 interviews that took place, in most cases, in the interviewees home. I also participated in a variety of social events including a hometown association and a clan association meeting. I went to a Sierra Leonian wedding with a Ghanaian couple, I attended church services at a Charismatic church with a dominantly Ghanaian membership and I went to the Notting Hill Carnival where Afro-Caribbean ethnicity and cultural traditions are publicly celebrated. This work was not drawn on heavily in this thesis[1], but does inform some of the analysis related to migration and migratory aspirations. Following this preliminary work I relocated to Accra to begin an extended study of Internet cafés and the owners, operators and users who inhabited these spaces.

Accra emerged as a good location to conduct this type of research for several reasons. It was logistically feasible since Ghana was an open society with a stable government that has escaped much of the violent upheaval of its neighbouring countries. In addition English was widely spoken in the urban capital. Mainstream media reports indicated that Internet and mobile phone use were in a significant upward trend in Accra. One article described how hundreds of small Internet cafés were cropping up throughout the city[2]. Several other articles highlighted unconventional technology development projects being implemented in Accra that provided an alternative to traditional government and NGO technology access programs[3]. Geekcorps was one of these projects. It was conceived of as analogous to Peace Corps but focused on providing technology experts from the West to educate, train and assist Ghanaian businesses. The second was BusyInternet, a large Internet café that was guided by a social mission to bring technology access and training to the masses, but was also being run to generate a modest profit in order to sustain itself. While these media reports suggested a variety of

interesting activities taking place in Accra, the development literature did not reflect an awareness of these trends. For example, while a certain segment of this literature argued for the importance of deregulating the telecommunications industry, there was little attention being paid to the outcomes in places, such as Ghana, where this deregulation had by and large already taken place.

Despite these indications of rising technology use, Ghana was far from being a particularly prosperous African country, like South Africa or Egypt. In fact it was among 18 countries that the World Bank has identified as a Highly-Indebted Poor Country (HIPC) and targeted for debt relief. Therefore the Internet in Ghana was a case of technology appropriation under conditions of widespread poverty, but in a generally peaceful setting with few government restrictions on information access. It therefore presented a counter-example to the presumed link between economic prosperity and technology use.

Public Internet cafés had the potential to counter all three of the presumptions about the Internet in Africa mentioned above. The sheer number of Internet cafés in Accra (estimates suggested there were somewhere between 500 and 1000 (Foster *et al*. 2004)) indicated significant and widespread Internet use. The fact that they were privately-owned and run as for-profit businesses indicated technology use outside of development interventions. By charging hourly rates they provided access without requiring any financial overhead potentially attracting customers who were not wealthy.

Internet cafés in Accra therefore presented an opportunity for exploring how far Internet use had penetrated urban society in Ghana beyond the domain of the wealthy, well-educated elite by offering a less expensive and less restricted form of Internet access. It was a priority of this research to ascertain (if possible) a social discourse on ICT use that was not determined by the most privileged members of society alone. More expensive forms of Internet access including private connections at home and in offices were available in Accra and it is important to emphasize that Internet cafés were not the only locations where Internet access was available. However, in defining the fieldsite, sites of private technology consumption have been purposefully excluded from consideration. The likely consequences of excluding Internet use in homes and

businesses is the inclusion of fewer elites in this research and less emphasis on the part the Internet plays in formal, professional-class medium and large businesses in Accra.

The spaces and places within Accra where my feet have literally tread serve as a useful starting point for describing the fieldsite in concrete terms. First and foremost, I spent time in a variety of Internet cafés. There were logistical reasons for this as well as reasons discussed above that related to my research questions and the existing literature on Internet use and international development. Internet cafés served as an ideal place for exploring the issue of Internet appropriation because they were publicly accessible sites of concentrated interaction with new technologies making it easy to recruit people for interviews and observe behaviour online and offline. Internet cafés served as a home base and meeting point for further explorations into the surrounding neighbourhood where I sought to better understand the lives of Internet café users by following them to their homes, churches, and businesses. Beyond these enclosed spaces, I also spent time hanging out and passing through the streets and other interstitial spaces. I travelled to and from these urban sub-spaces through the larger city on foot, by tro-tro[4], and by taxi.

Ghana's capital city is composed of a variety of neighbourhoods with large differences in demographic characteristics. These differences stem from Accra's particular history of migration trends, urban planning (or lack thereof), ecological changes, agricultural history, and political episodes among many other factors. In this context of urban diversity, my guiding principle in selecting Internet cafés and interview subjects was to explore the greatest possible range of Internet users and uses. In one sense my ethnography was multi-sited; I intended to select 4 Internet cafés (but ended up frequenting 6) in various neighbourhoods to yield a maximally diverse set of users and uses. This was based on the presumption that Internet cafés largely drew their clientele from people living or working nearby.

The demographic profiles of the first two neighbourhoods where I selected Internet cafés to study exhibited striking dissimilarities. The first café was located in an area on the outskirts of Accra named La Paz that was not densely populated. Residents on average were neither particularly wealthy nor poor in relation to the rest of the urban population. The Internet café was located on a partially paved road. Only people living nearby frequented this Internet café since it was near no major attractions, main roads,

markets, big businesses, nightclubs or tourist sites. The neighbourhood was interesting as a fieldsite that was somewhat bounded, where the everyday lives of Internet café users were typically contained within the neighbourhood. There were fewer strangers circulating through this area of La Paz than was the case in more urban settings.

A second Internet café named Mobra International Ventures was situated just off a busy main road in a neighbourhood called Mamobi located in central Accra. Mamobi was a more densely populated and poorer area and was home to a more ethnically diverse population composed of Akan people (from central and coastal regions of the country) as well as people who had migrated from the north of Ghana. It was also home to a significant Muslim population. In contrast to the café in La Paz, the one in Mamobi was in a visible and accessible position near the main road and drew many non-residents who were travelling through the area. Despite the significant demographic differences between these areas, there were also essential similarities in both the users (typically young men) and the uses of these cafés. Use was largely limited to using chat software or e-mail to communicate with foreigners or family living abroad.

Due to the lack of diversity among Internet users and uses in these two Internet cafés I decided to take an alternate approach to select two more cafés[5]. These two cafés were located within larger organizations. The third café, BusyInternet, was the largest and, arguably, fastest in Ghana and was part of a social enterprise that sought to provide technology access, education, and the exchange of information and ideas to generate and support a high-tech industry in Accra. BusyInternet provided 100 Internet-accessible terminals as well as conference space, printing services, office space, and an attached restaurant and bar (see figures 2 and 3). It was not only the largest, but also the most expensive Internet café in the city charging 12,000 cedis per hour (approx 70p), about twice the typical rate of the small Internet cafés. It was located on a main road in an area with financial firms and many large and medium sized businesses in the technology and media industries. BusyInternet attracted a large number of foreigners including tourists, missionaries, businesspeople, students, and NGO workers. Besides foreigners, I observed more middle aged people and more women at BusyInternet than at the other cafés. Beyond the diversity of users, there was also a much broader set of Internet uses taking place at BusyInternet ranging from researching business ideas to playing games.

I selected a fourth Internet café at the University of Ghana at Legon campus. This café was located in a women's dormitory and attracted a more highly educated, wealthier, and predominantly female clientele. Like BusyInternet the range of Internet uses was quite broad although school research was quite common. So too was chatting with foreign pen pals, reading about broadcast media (such as TV shows), as well as multimedia activities such as downloading ring tones for a mobile phone.

In late January of 2005, some controversy over my presence at the café in Mamobi emerged. Suspicion was circulating among customers that I was conducting covert research on behalf of the American government as a CIA agent. As a result, the owner indicated (in so many words) that I should discontinue my visits to the café. I obliged and began frequenting another café named FocusNet on the border of Mamobi in an area called Kotobabi. I added a third café in the Mamobi area named Lambos not far from the first that was also located on the main road running through Mamobi. These three cafés were very similar in layout, price, décor, and clientele and I will group them together by referring to them as the 'Mamobi cafés.' An example of the modesty and minimalism of Internet café interiors in La Paz and Mamobi is shown in figure 1.

In contrast to the cafés in Mamobi and La Paz, BusyInternet and the café at the University were interesting because they were embedded within centrally run and well coordinated organizations. At both BusyInternet and the University café, there were top-down efforts on the part of the café management to provide connections between the Internet and various additional services. Furthermore, both cafés had explicit missions that were carried into day-to-day operations either by the customers and their interests or through more top-down efforts. In the case of BusyInternet a close connection between the Internet café and the organization was a given since the café by and large was the most visible and dominant component of the organization. In the case of the University café this was more open to question since the University was not, by any means, defined by the café. Compared to the cafés in La Paz and Mamobi, these two cafés also had a better technical infrastructure with better trained staff, newer computers and faster Internet connections making certain forms of high-bandwidth use easier. The organizational connections, unique missions and variety of services had the potential to lead to different forms of use and attract more atypical users.

My initial 8-month fieldwork period was followed up by an additional three weeks of fieldwork in February 2007. I was able to reconnect with some of the people I had interviewed during my initial stay in Accra. Additionally, I conducted interviews primarily with affluent families about their use of video to document social events such as funerals and to mediate relations between family in Ghana and abroad. The purpose of this research was to initiate a broader examination of the urban communicative ecology (Tacchi 2006). Data from this recent trip contributed to a more comprehensive societal picture of how Ghanaians see themselves in relation to the West. In the context of this thesis research, these family interviews and home tours also provided some perspective on the relative non-affluence of many Internet café users and their families who were initially interviewed for this project. Families that employed the services of a videographer typically enjoyed an unusual degree of mobility, a widely dispersed family social network, and material affluence that included ownership of land and accumulation of electronic goods. At the same time, they struggled with financial limitations and less than ideal family arrangements that involved great periods of absence from the homeland and distance between immediate family members. Video practices were an attempt to reconcile such absences. These practices represent yet another heterogeneous network of technology, infrastructure, and social formations.

The Fieldsite as Network

In one sense my fieldsite was the city of Accra since all of the Internet cafés I studied, homes I visited, and roads I travelled during my fieldwork phase were within the city or its suburbs. However, the city is paradoxically both too complexly heterogeneous (too inclusive) and too geographically limited (too exclusive) as a unit of analysis. It is too inclusive in the sense that it is composed of layer upon layer of intersecting and overlapping activity. Most of this activity, however, had little relevance to my main research interests. In highly complex spaces such as cities it is impossible to define the fieldsite with such geographical boundaries and then attempt to study everything that falls within. Instead a way to more selectively define the fieldsite is necessary, outlining its

social and material shape within the city, making the social phenomenon visible within a complex social space.

The boundaries of the city are also too exclusive since a variety of locales, institutions, and people near and far have a direct bearing on the appropriation and use of the Internet in Accra. For example, the foreign chat partners of Internet café users, their family members living abroad, and the immigration regulations of countries such as the U.S. and U.K. are among the many external and yet relevant constitutive forces that define Internet use in Accra. Therefore the fieldsite must be defined without relying on broad territorial boundaries that are too imprecise to define the contours of the social phenomenon.

The example of the city introduces some of the problems of spatial complexity that are central to defining a fieldsite in studies of contemporary, urbanizing, media-connected societies. The term 'fieldsite' refers to the spatial characteristics of a research project, the stage on which the social processes under study are acted out. For ethnographers, defining this space is an important activity done before fieldwork commences to identify where the researcher should ideally be located as a participant-observer. Once fieldwork concludes, an ethnography cannot be written without at some point defining this spatial terrain where the social phenomenon under study took place. This is both an act of exclusion and inclusion indicating what the research does and does not cover.

However, the inclusive/exclusive work of defining the fieldsite has become significantly more difficult in the past few decades as many assumptions about ethnography as a methodological approach have been called into question and as other disciplines have begun to apply ethnographic practices to new domains. In this trend towards reflexivity, ethnographers have questioned the traditional reliance on a methodological oversimplification that constructs the fieldsite as a bounded space isomorphic to a whole culture and conceived of as self-contained (Gupta and Ferguson 1997). In the anthropological tradition the *place* of fieldwork was frequently a village. This simplification has proved to be particularly untenable in new ethnographies of the media, cyberspace, migration, and global institutions such as the United Nations and multi-national corporations. All are examples of phenomena that leave a complex and

ever-changing footprint on vast geographic spaces. Some studies of cyberspace in particular have taken this idea to the furthest extreme arguing that this space is incompatible with notions of geographic spatiality (Batty 1997). Instead cyberspace is described as an alternative geography existing on a separate virtual plane. This is often tied to the post-modern claim that Cartesian space has been entirely transcended in our current era (Harvey 1990).

Beyond the issue of boundaries, the notion of cultures as internally homogeneous has also been called into question. Hannerz argues that cultures vary in complexity and that various aspects of culture may have an uneven impact on members of a society (Hannerz 1992b). In this process of calling into question both the boundedness of culture and the homogeneity of its diffusion, researchers have shifted from a notion of culture as essentially stationary to culture as constituted by intersection and flow (Appadurai 1990; Hannerz 1992b; Marcus 1998a). In this newer conception, movement and mobility of objects, of individuals, of ideas, of media, and of the fieldworker herself are attended to, uncovering insights missed by studies that assumed culture was spatially fixed.

This study of Internet appropriation and use is a study of culture, not of a whole culture, but rather a particular socio-technical phenomenon as it is complexly articulated with various cultural forms. The difficulty of bounding this social phenomenon arises from several conditions. Firstly, the subject matter is the Internet, a global network of machines, information, and people and yet the Internet is too vast be studied as a whole. Secondly, this is a study of everyday life in Accra that, beyond the Internet, is lived in the broader context of daily interaction with a material and media culture that has ambiguous and/or multiple origins. The distinction between local and foreign goods and media is often blurred. Strategies of naming intentionally render the local more global and the global more local. For example, it is common for businesses and churches to include the prestigious term ‘international’ in their name despite the fact that they have no branches abroad. In contrast, region specific advertising (i.e. for soap or beer) purposefully rubs-out an indication of the foreign source of many products re-inventing them as local through imagery and narratives about family, gender, work, and recreation. These ambiguities of origin may be intentional or accidental, either way they serve to thwart those efforts to describe culture that employ a dichotomy between local and global.

These examples illustrate how everyday life in Accra is oriented towards the external world, but furthermore that local and global are meaningless as distinct categories. What was once firmly external has been pulled into the city incorporated and hybridized into an infinity of new cultural forms (i.e. language, advertisements, music, clothing styles). Many ethnographies of cultural change while acknowledging that even remote cultures are not hermetically sealed have tended to reassert this disjuncture between local and global. They have often valorised these cultures as indigenous and pure, bravely weathering and accommodating or resisting the onslaught of foreign systems (Gupta and Ferguson 1997). The mistake in this approach is that it remains committed to the notion that cultures have autonomous origins and that these origins can feasibly be identified. It treats cultural change as a new phenomenon in the history of global societies. Marcus proposes that ethnographic accounts must begin to treat cultural change in a more complex way acknowledging that cultural formations are defined (not just affected) by mobility and circulation (Marcus 1998a). The construction of these formations must be examined as a process that relies on a diversity of resources near and far. This is how the appropriation of the Internet will be treated in this work.

To reconcile these spatial complexities I have conceived of my fieldsite as a network composed of fixed and moving points including spaces, people, and objects. This particular fieldsite as network heterogeneously connects a variety of already familiar networks such as the Internet, Accra's road system, phone networks, and the social networks of Internet users. Importantly it treats these networks as interconnected and includes only those portions of these existing networks that are relevant to the study. Therefore only part of the Internet and part of the city are incorporated into the fieldsite. The fieldsite is defined by the connections that can be followed from the Internet café.

In a 'fieldsite as network' the point of origin, the destination(s), the space between and what moves or is carried along these paths is of interest. This is essentially what Marcus describes as multi-sited ethnographic research, "designed around chains, paths, threads, conjunctions, or juxtapositions of locations in which the ethnographer establishes some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography" (Marcus

1998b, pp. 90). He proposes several techniques for defining these paths by, for example, following the movement of people, things, metaphor, or story.

Defining the fieldsite as a network is a strategy for drawing the social phenomenon into view by foregrounding it against the social complexity of its urban setting. To foreground is to draw the contours of the phenomenon distinguishing it from the competing and intersecting activities also taking place within the spatial field that is defined more traditionally by the territorial boundaries of the city. The term 'contour' best describes the outcome of this act of foregrounding by indicating that greater precision is achieved than would be obtained relying on the boundaries of the city, the country, etc. At the same time this term preserves the quality of irregularity and the notion that the social phenomenon is outlined rather than detached from its context.

One advantage of defining the fieldsite as a network is that it maintains the continuity of the space without presuming proximity or even spatiality in a physical, Cartesian sense. It therefore rejects the disjuncture of local and global. Along these lines Strathern notes that, "a network is an apt image for describing the way one can link or enumerate disparate entities without making assumptions about level or hierarchy" (Strathern 1996, pp. 522). Continuity implies a sense of holism, but not homogeneity or unity. Instead continuity implies connection. The continuity of a network is evident in the way that any point can be reached from any other point.

Another advantage to studying the fieldsite as a network is the way a rich and holistic account of the phenomenon under study can be generated without making claims to completeness. It is holistic in acknowledging and examining the diverse and heterogeneous connections of the fieldsite, but not in the sense of treating the fieldsite as a self-contained system. As proposed in Actor-Network Theory, anything and anybody is a network and not only a network, but an infinite network. Referring to these things or people by a single term hides how additional meanings emerge from the collective of connected entities that compose it. Following from this notion, an Internet café is defined by all the technologies inside of it and the people and media moving through it. Those technologies and people and media and their movement in turn are defined by government regulations, weather systems, other people, and an infinite number of other connected forces. The connections can be followed indefinitely from one place or object

or person to another. Researchers therefore, in studying networks make a decision about how far to follow the connections and in what direction.

To study the fieldsite as a network the researcher must also make a strategic decision about what positions to take within the network. In this study, I sought to trace out the fieldsite using Internet cafés as a starting point. From the Internet café I oriented myself in two different directions. First, by tracing paths through the city defined by Internet users to get a sense of their everyday lives. For example, I followed a young woman from the Internet café where she chats with her foreign husband to the market where she is apprenticing with a hair dresser in preparation to her move abroad to the Western Union office where she receives money from her husband earmarked for the purchase of a flashy new mobile phone. This approach provided a richer sense of the interconnections between Internet use and other aspects of Internet users' lives.

However, there is also the issue of more distant locales and of spaces more geographically ambiguous than the city. The Internet, its virtual spaces, and the geographic places it links together should of course not be neglected as a second direction that can be taken by tracing virtual connections from the computers in the Internet café. One approach would be to follow messages from their origins in the Internet café to their destinations at the points of Internet access for chat partners in any number of countries. However, this was not feasible. Instead I took a second approach as advocated by Marcus to study a single site with an awareness of its multi-site context (Marcus 1998b). I interpreted this to mean that the Internet café should be treated as a point of intersection where the Internet as an idea was produced in part by the conversations and circulation of information through these computers. Studying this point of intersection meant maintaining an awareness of the connections from this site to other distant sites as well as tracking the movement of real and digital objects and people circulating through the café including their history of travel.

Internet cafés can be thought of as spaces that have momentarily captured people and materials from global flows and are sites through which global (particularly digital) flows are constantly circulating. As a point of intersection the digital objects and the messages they bear can be intercepted as they move through particular computers before the eyes of their recipients in the Internet café. This provides a way to avoid the

unwieldiness of expanding the fieldsite to include whole other countries. What is most relevant in the context this research is what it is from these distant locales that makes its way to these Internet users via the Internet or other channels. What do Internet users do with what they receive? How do they manipulate, redirect or make sense of these items? The origins or circulation record of these objects, if available, is also of interest although as I have previously acknowledged this is, in many cases, ambiguous.

Distinct from the fieldsite as a space of research, but no less significant from an analytical perspective was the way spatiality was perceived by Internet users. These perceptions produced socially imagined spaces that were significant because they guided the aspirations, Internet encounters, and everyday lives of Internet users. For example, Ghanaians constructed a notion of cyberspace and who was in it from their experiences and other sources of information. From conversations it became clear that many Internet users conceived of chat rooms, dating websites, and other online spaces designed for mixing and mingling as providing access to a diverse mixture of individuals, but primarily from wealthier developed countries. They expected that philanthropists, potential business partners, and wealthy older people would have the time and inclination to hang out in chat rooms, not just young people. Based on their experiences, however, they tended to encounter teenagers and twenty-somethings in these spaces. The particular technical configuration of chat rooms where the bodies of participants were concealed, where ambiguous screen names were used, and where an unknown number of individuals could be 'lurking' without speaking facilitated such speculative imagination.

This conception of cyberspace relates to the broader social imaginary of Internet café users, "the ways in which people imagine their social existence, how they fit together with others, how things go on between them and their fellows, the expectations that are normally met, and the deeper normative notions and images that underlie these expectations…the way ordinary people 'imagine' their social surroundings" (Taylor 2002, pp. 106). By using the term 'surroundings' Taylor defines a sense of spatiality within this concept. Anderson's notion of 'imagined communities' is defined as a sense of belonging to a larger community of whom one only ever meets a few of the members (Anderson 1983). This concept is contained within the social imaginary. Ghanaians in various ways conceived of themselves as members of global cosmopolitan communities

and they valued the Internet for the opportunities it provided in expressing this belonging, transcending their location. In the sense of spatiality as imagined by Internet café users in Accra, Internet use went along with the idea of being part of something global – being a member of a global community. This was often paralleled or worked in conjunction with being Christian, another form of membership in a global community. In fact Christianity was often used as a common ground for finding like-minded individuals in cyberspace as a way to transcend differences of ethnicity, race, and location.

Geographic territories, places such as foreign countries, were also imagined by Internet café users. Their fantasies were constructed partly from what they encountered in mediated form through Internet chat partners, websites, the news media, music videos, TV shows, movies, stories told by Ghanaians returned from abroad, encounters with foreigners in Accra, and rumours. The United States as a real space had an impact on the appropriation of the Internet in Ghana, most tangibly as the material source for many of the technologies that make up the Internet, but also in terms of government regulations on foreign immigration that constrained the mobility of most Ghanaians. However, the United States was also a space that was constructed in the social imagination of Internet users in Accra as a desirable destination for education and employment and a source of enormous wealth. Certainly the effect of imagined spaces constructed from media representations was a result of how frequently they were mistaken for the real thing and correspondingly acted upon.

Imagined spaces are products of sense-making. They emerge from a process of creating spatial order out of partial information. These imagined spaces are part of the fieldsite itself as well as being a product of the fieldsite. They were produced by Internet users through their attempts to put together something coherent out of the messages they received about 'real' or 'virtual' geographic spaces, messages travelling through e-mail, television, migration networks, rumour networks, etc. The sense of spatiality developed by Internet users informed their actions and what they put back into the cultural flows that define the fieldsite. As Latour notes, "spaces and times are traced by reversible or irreversible displacements of many types of mobiles. They are generated by the movements of mobiles (Latour 1988, pp. 25)." Examining the way Internet users spoke about spatiality, how they explained membership in communities across geographic

spaces, and the borders they defined to divide up space is one component to understanding how they received and understood the cultural flows that constitute the fieldsite.

I selected Internet cafés as a starting point for research into the appropriation and use of the Internet in Accra, but never with the intention of limiting this research to what went on inside those walls. They served strategically as a public space for meeting people to interview. Internet cafés were focal points, points of circulation and intersection from which I was able to expand outward tracing the contours of the social phenomenon of Internet use. I accomplished this both by following the movement of Internet users through the city and by intercepting the flow of media through the Internet as it arrived in the Internet café. This made it possible to narrow the scope of the fieldsite considerably while still acknowledging how forces from various locales near and far registered an impact on the setting.

Interviews and Observation

Those who inhabited Internet cafés generally fell into one of three main roles. First, the Internet café owner was the person who had acquired the financial capital to start the business and was therefore usually overseer of the café's operations. The second role was the Internet café attendant. At smaller cafés there were usually two attendants working at the same time. Their responsibilities included keeping track of the time users spent on the computers, handling payment, helping users to get online and navigate the Internet, and dealing with basic computer problems. Some cafés also provided a few additional services such as typing and burning CDs. The third group were Internet users who made up the bulk of my interviewees. I interviewed 60 Internet users in total, 9 Internet café attendants, and 6 Internet café owners.

I used Internet café attendants and owners as an initial point of contact at each Internet café and usually began by interviewing the individuals in this role. During or after the interview I requested permission from the owner to approach users in the café for interviews. When the owner was out of the country or impossible to contact I sometimes obtained permission from the Internet café attendant. My overall intent in

recruiting interviewees was to seek maximum variation of Internet users and uses. I began by approaching individuals at random usually visiting the cafés before noon trying to arrive at these air conditioned oases before it was too hot outside. The random approach was initially successful, but as time wore on I found I had talked to quite a few young men and that I was hearing a lot of repetition in my interviews. Most of these users were seeking pen pals and meeting people in chat rooms. In order to generate greater variation I made two changes to my recruiting strategy. First, I started arriving at the cafés later in the day, often after dark to get a good mixture of people working different shifts, unemployed people and students. My second strategy was to use a snowball sample asking Internet café attendants and users if they knew of anyone who was doing something 'interesting' with the Internet.

Using this approach I completed 75 interviews (see table 1) recording 61 of these on tape. In the case of about a dozen of the people I interviewed I was able to develop a certain amount of rapport that made it possible to meet the individual again on several occasions to watch them use the Internet, to meet their family, and perhaps even meet at a third location such as a workplace. However, many of my requests for interviews were evaded or refused. Those who I had arranged to interview sometimes simply neglected to show up. With many of these individuals I rescheduled the interview only to be stood up once again. I learned in my other interviews and casual conversations that some of the Internet café users thought I might be working for the CIA. I can't say for sure what the rationale was for those who refused interviews, but I presume it was related to this fear or a more general suspicion about my intentions. It is likely that some of the people who refused to be interviewed were engaged in or knew about illegal Internet activities or refused to talk to me out of a sense of community solidarity.

	Sky Harbour at La Paz	Mamobi cafés	BusyInternet on Ring Road	Volta café (U. of Ghana at Legon)	Misc. cafés	**Total**
Unknown	2	1	3	0	0	**6**
age 11 to 20	0	10	2	1	0	**13**
age 21 to 30	12	10	12	8	2	**44**
age 31 to 40	2	3	3	0	1	**9**
age 41 to 50	0	0	2	0	0	**2**
age 51 to 60	1	0	0	0	0	**1**
Men	13	19	14	4	2	**52**
Women	4	5	8	5	1	**23**
Total	**17**	**24**	**22**	**9**	**3**	**75**

Table 1 - interviews by age, gender, and Internet café affiliation

I was also able to interview a number of Internet users who admitted to doing Internet scams or fraud. These interviews had to be specially arranged outside the normal flow of recruiting and interviewing since these admissions never came out in the course of an ordinary interview. This was likely due to a lack of trust, the desire of Internet users to represent themselves positively, and/or the rareness of these activities. To arrange these interviews I relied on an intermediary. I hired a young Ghanaian man who was a very active Internet user to do this recruiting. He convinced some of his friends who were doing these activities to sit down and talk to me. His trustworthiness amongst his own friends and his trust in my intentions made these interviews possible. He also spent time late at night at Internet cafés identifying people who appeared to be doing scams or fraud. His presence in cafés generated less suspicion than my presence making it possible to initiate contact with scammers he had not previously met. Some of these people whom he approached randomly at Internet cafés refused to speak with me but spoke at length with my research assistant and so I have also relied on his field notes from those encounters.

In the case of Internet scammers and fraudsters, ethical issues were central. Many were quite concerned that speaking with me could do them harm in some way. I reassured them that I was interested only in information, not bringing them to justice, but I also made it clear that I planned to incorporate the information they communicated to

me into publications that would potentially be available to anyone. This meant that their scamming strategies could be made public to an extent. My research assistant did the same and with this awareness a few refused to speak to me. Both with Internet scammers and ordinary users, I made clear my affiliations with the London School of Economics, my status as a PhD student, my intention to publish the material I gathered in interviews and observations as a thesis and in journals or at conferences. I also expressed my commitment to make the names and any identifying features of the people I interviewed anonymous through they use of pseudonyms. Additionally, I provided contact information for myself so that these individuals could follow up with any concerns and questions via phone or e-mail. This approach seemed successful and my interviews with the small number of recruited scammers were lengthy and richly detailed. The attitude of these scammers during the interviews was cautious, but open.

At the end of an interview with both scammers and other Internet users, I sometimes requested a second meeting to observe their use of the Internet. These observation sessions were specifically arranged to take place after the interview because it provided an opportunity to confirm some of what they said in interviews and also because the likelihood that they would consent to and be comfortable with me observing was higher after we had spent time talking and developed a certain level of rapport. Among those I interviewed I was able to observe 20 people using the Internet for around one hour. I usually was able to do this only once. I would have liked to spend more time observing the Internet use of those I had interviewed, but logistical constraints made this difficult. Few Internet users came to the café regularly enough to make it possible for a spontaneous meeting and I was visiting cafés in four different areas in and around the city.

Much of this thesis focuses on the ways the Internet was talked about in interviews, but this was also connected to what I saw through observation and what users described as their experiences on the Internet. Often a single observation session generated great insights and clarity about the nature of the relationships Internet café users were carrying out online and their style of communication. I was able to get a sense of how intimate the relationship was based on the frequency of communication and what

was said in online conversations. I also better understood how tech savvy the Internet user was and how capable they were with written English.

Beyond these intensive observation sessions I also spent hours observing Internet use while hanging out in Internet cafés. This provided plenty of information about what Internet applications were most popular (Yahoo e-mail, chat clients and chat rooms) and least popular (online games, information searching). Beyond that I also captured browser history records in these cafés (where it was possible) to see what websites were being visited. This combination of interviews, observation of Internet use, and visits to secondary sites important to the users' everyday lives is the basis of my understanding of users' personal histories and relationship to the Internet.

Who I did *not* interview has had an effect on the direction this research has taken. I did not interview successful Internet scammers due to a lack of access. This lack of access is certainly related to judgements of risk. For scammers to reveal their proven strategies and/or potentially be arrested (if their suspicions about my secret identity as CIA agent proved to be true) is counter-productive to their aims. Therefore the pervasive sense of failure surrounding scamming activities in this thesis relates to this methodological issue and reflects the difficulties of scamming, the small number who are doing it successfully, and my lack of access to them. This research also does not include an extended engagement with non-users. An alternate approach would have been to choose one neighbourhood and one Internet café and to talk to both users and non-users. However, due to the logistical limitations of time and my own labour power and in order to seek out the most diverse range of Internet users possible I opted to look at several neighbourhoods and at users only. Some of the context of non-use was obtained through family interviews, however, ultimately this perspective is underrepresented in this ethnography. The perspective of non-users would have provided some insights into failed appropriation and rejection of the Internet as well as some indication of local perceptions about Internet users from a standpoint external to these activities.

The Voices of Internet Users in Accra

The use of qualitative interviews accomplished one of the central goals of this research which was to identify a social discourse on computing technologies (the Internet in particular) that was being produced by Ghanaians themselves rather than by technology or development experts on their behalf. The ways in which this discourse was distinct from or reorganized established institutional discourses provided a challenge to development discourses on ICTs that currently dominate thinking about the role of the Internet in Ghana and other African nations. Hegemonic discourses shape and constrain the way many non-Africans and people in positions of power talk about the Internet in relation to developing countries like Ghana. Uncovering a discourse among Internet users in Accra provided some insights about where they stood on the issue of technology access. In a sense I sought to 'give voice' to a group of people by providing textual and temporal space for this social discourse in journals and at conferences that might otherwise be allotted to the more dominant development themes. Providing this platform would ideally result in a better understanding of the ways that technology access initiatives emerging out of a development discourse on ICTs are short-sighted in relation to the needs and interests of citizens of one particular developing country.

My intention, however, was to go well beyond the particularities of the development debate over technology access to look at the multitude of meanings Ghanaians ascribed to new technologies and their sense of self and society as it was evolving in the new millennium. I recognized that Ghanaians could not be merely reduced to "development agents" and found in interviews that they did not generally conceive of themselves in this way. The diffusion of Internet access is indicative of a continuing amplification of mobility and connectivity that is being both embraced and resisted in various ways in Ghana's largest urban centre. Therefore in writing this ethnography I intended to provide a response to what Hannerz described almost two decades ago as the surprising absence of, "a post-colonial ethnography of how Third World people see themselves and their society, its past, present, and future, and its place in the world; a cultural analysis of their fantasies and of what they know for a fact (Hannerz 1987, pp. 547)."

However, in this day and age, ethnographers can no longer make the claim that they are transparently 'giving voice' to marginalized communities without being accused of either naiveté or the desire for some form of domination over those they claim to understand or empower (Spivak 1988). Disciplines that rely heavily on qualitative research now recognize that to transport voices from one locale to another requires an act of translation by the ethnographer from its multitude of sources to the cultural milieu of its destination. This destination is often an academic setting where empirical data must be couched within theory and make reference to the debates and priorities set by members of the discipline. This is a process of mediation. In light of these (and other) realities of fieldwork, the neutrality of the ethnographer has been convincingly refuted in the debate over cultural representation and methodology extending from anthropology in the 80's and 90's.

Many influences produced the complex and contradictory social discourse on new technologies as it was composed by the multitude of voices I encountered in the field and that I attempted to textualize in my interview transcripts and fieldnotes. One of the particular factors I wish to examine was how my presence as a non-African, unmarried female played a significant role in what was said and how it was said. This was sometimes apparent in small ways. For example, I noticed how upon being introduced, most Ghanaians offered their Christian name to me. I did not realize until later that some people were offering me names that they were not called by on a daily basis. I became aware of this when one young man corrected a friend who repeatedly called him by his Ghanaian name in my presence. This was an example of one way the people I encountered made an effort to bridge social distances when speaking to a foreigner.

In the classic notion of fieldwork, where the object of study is a remote village that is treated as a synecdoche to the culture as a whole, the relationship to the outside world is elided, treated as essentially limited and inconsequential as I addressed in the previous section on defining the fieldsite. In this context there could be few connotations attached to the arrival of a foreign researcher. He is merely a curiosity. Nigel Barley's fieldwork account in The Innocent Anthropologist is an example of this way of rendering the foreign researcher. He explains how among the Dowayo people of northern Cameroon his presence was tolerated because his bumbling attempts to master the

language and fit into the community were such a source of amusement (Barley 1983). There was no sense of portent or promise attached to his arrival in the village. Few ethnographers arrive at their fieldsite anymore so innocently and so unmarked. Media exposure is one way foreigners are marked before their arrival. In contrast to Barley's account, Diane Nelson notes that upon her arrival in Nebaj, Guatemala when she gives her name, crowds of children begin chanting 'Diana, queen of the lizards!' At first wondering if this was the product of anti-imperialist education in the area, she later learns that 'Diana, queen of the lizards' was a character in an imported science fiction show they had watched on television (Nelson 1996). Similarly, my arrival in Accra was met in short order with chants of 'obruni, obruni (meaning white person/foreigner)' a term that was also imbued with many meanings. I discovered that much was presumed about me by virtue of my being foreign, American in particular. This meant that I was not entirely a mystery, and to an extent I had already been 'figured out' before I even spoke.

Presumptions about foreigners could be intractable blocking any efforts to alter these representations. A former colleague, a middle-aged white man with gray hair, came to Ghana for a short time to visit my fieldsites. While in Accra, he was practically hounded by young Ghanaians who 'recognized' him as someone from the American embassy. Once returned to the U.S. he had a Yahoo chat conversation with a man he had met in person at BusyInternet. In the conversation dated from June 2005 the chat partner asserted, "well i think u don't want me to be friend with you but i know you in the counter 3 of the us embassy." He replied, "what do you mean 'friend.'" His Ghanaian chat partner ignoring the comment added, "es coz u just don't [want] me to know that you work at the US embassy, [but] you have to know i am not a kid." There seemed to be no way for my colleague to convince these young Ghanaians of his actual affiliations. They expected him to conceal his valuable connection to the embassy and presumably his ability to sway decisions about travel visas. His troubles reflect how foreigners were often approached in Accra not as people to understand, but as instruments for acquiring opportunities.

The idea that media exposure, both fictional forms such as soap operas and non-fictional forms such as international news, build up shared, imagined notions of what foreign locales and foreign people are like is well established. In a place like Accra,

however, media exposure was only one source of contact with ideas about foreigners and foreign lands. There were many expatriates who lived and worked in Accra affiliated with embassies, NGOs, multinational corporations, as well as small business owners in the tourism industry, those doing research (like myself) and those who had met and married Ghanaians taking up permanent residence in the country. People I interviewed at the Internet cafés mentioned encounters with foreigners in a variety of public spaces including the beach, in night clubs, at restaurants, or on the street. The high number of Ghanaians who have left the country meant that ideas about foreigners were also constructed through experiences abroad or through contact with family or friends in the diaspora.

The various spaces where it was possible to establish contact with foreigners were frequently perceived (particularly among young Ghanaians) as spaces for networking and opportunity seeking. This search for contacts is related to Marcus's notion of complicity in fieldwork. In one of the various definitions of complicity he explores, he recognizes that the people encountered while in the field, the informants, may see some benefit in cooperating with the fieldworkers questions and intrusions. He describes this as an, "acknowledged fascination between anthropologist and informants regarding the outside 'world' that the anthropologist is specifically materializing through the travels and trajectory of her multisited agenda" (Marcus 1998c, pp. 101). However, an inhabitant of the fieldsite may envision a positive outcome from having this foreign contact that is much more pragmatic (such as paid employment or educational assistance) than a mutual interest in generating knowledge.

Contact with foreigners was a central focus of Internet use in Accra. The content of my casual conversations in Internet cafés as well as more formal interviews often centred on relations with foreigners, as so many Internet users sought to make and collect foreign contacts in chat rooms and through pen pal or dating websites. Their explanation of these relationships and their attempts to befriend and gain favour with these foreign contacts made it abundantly clear that they had their own projects of personal development in mind that heavily shaped the conversations they had and the words they chose to use with their foreign chat partners. To have these contacts was a source of pride, often for reasons that they could not explicitly verbalize. However, some more

explicitly linked the possession of foreign contacts to the potential to travel abroad, to initiate business endeavours, or to receive gifts. In this way gaining foreign contacts was an attempt to build social capital that would lead to personal development. I was not exempted from this social capital building activity and found that many of the Ghanaians I had met would later propose joint business endeavours or request small or large gifts or assistance with education or foreign travel.

In interviews with the few Internet fraudsters and scammers I made contact with I also realized that the way Internet users in Accra performed their identities online for foreign contacts at their most extreme could run counter to their personal beliefs, values, interests, and even basic facts about their life (gender, employment, etc). Instead online identities were constructed entirely to gain the sympathy and trust of the foreign contact who was the target of the scam. These identities read purely as they were performed said little about the real life of the performer, but were rather constructions for the foreigners gaze as it was imagined by the performer. This extreme disjuncture between online and offline self-representations, between what Internet users say and what they believe should not be mistaken for the norm. I had the benefit of maintaining ongoing relationships with many Internet users and visiting them in several different sites that helped me to confirm correlations between their lives and technology uses and what they told me in interviews. However, in the case of fraudsters and scammers the Internet was a tool they used to push self-representation to the furthest extreme, evidence of an interest in complete flexibility of self-presentation as a strategy to persuade others.

My sensitization to this particular issue of subjectivity led me to focus much of my attention on analyzing the effects accomplished by performances of speech made by those who were part of the Internet café scene whether these performances were made face to face or mediated in chat rooms or other Internet spaces. In particular, I have sought to examine what these performances indicate about ideas of personal success in urban society in Ghana and how these ideas make material or symbolic use of the Internet and other technologies. I have also sought to examine what these performances indicate about perceptions of the foreign gaze that emerge as of central importance in many uses of the Internet. These alternative ideas about personal success are a commentary on how development and notions of success are conceptualized in the development literature.

This approach to analyzing performance without equating speech and belief has provided a way to escape the facile approach of trying to connect what interviewees say with what they 'really, truly' believe, a project that has grown meaningless in light of the post-structuralist critique of fixed, essentialist notions of identity. By acknowledging the potential for multiple identities, these voices produced in the presence of foreigners such as myself or foreign contacts met online cannot be conceived of as a mask covering some true underlying voice. Instead they reflect the contemporary situation in Accra where the perceived necessity of relating to the 'outside' is part of how people create their ideal selves and work towards uniting their everyday selves with this ideal. This pressure to alter identity is also significant as an indication of the shifting of societal norms and beliefs by the necessity of economic self-interest and survival in what people perceive to be a globally connected era.

In the process of understanding speech as performance I have also come to understand that many Internet users in Accra perceived speech to hold great power. They conceived of the art of choosing words and expressing themselves through speech as a powerful tool of persuasion. They understood that speech was not just the way to make thoughts, beliefs, information held in the brain accessible to others, not just a way to externalize what is internal, but a way to exert a force, to effect activity in another. They consciously understood speech to be a potential force. For example, in explaining how men successfully wooed foreign girlfriends Kwaku notes, "…*some of them can use loving words to tell the person they love you …. The person will fall in love with you, so whatever you tell the person, the words, they don't use any magic, but it is the words that you use because words are powerful. So if they use that words it will change people's mind.*" This way of perceiving speech as force is a theme that carries through this thesis.

As researchers continue to enter fieldsites weighed down by local definitions of foreignness, the role of participant will need to undergo a revision. In the ideal of participant-observation the researcher becomes a member of the community, a participant in everyday affairs to the extent that this is possible. Traditionally this meant participating as a fellow villager while still retaining something of an outsider's perspective as an observer. This positioning required that members of the society under study continue to treat the researcher as an innocent, untaught in the ways of the society

and needing continual explanation. A new participant role for researchers can be illustrated by a television show that recently debuted on American network television called, "Thank God You're Here" that showcases an improvisational theatre game. On this show one actor (the 'outsider') enters a room where a group of actors (the 'insiders') have already determined his role. The outsider is incorporated into a scene by the group. He in return must guess his role and properly act it out based on the behaviour and reactions of the insiders. The outsider may enter an apartment to discover he is a plumber, or a conference room to discover she is presenting a real estate development project. Similarly, an ethnographer finds upon entering the fieldsite that, as in this improvisational exercise, she is already part of it. She has been given her own position in the network albeit in a role different from the people she is studying. In this situation examining the particular role she has been given and how her presence is interpreted is one route to understanding the highly-connected lives and global orientations of people and societies in the 21st century.

Conclusion

This chapter has primarily addressed challenges in defining the spatial terrain of the fieldsite and in understanding how the voices of Internet users were constructed through the reciprocal influence of interviewee and interviewer. The issue of spatiality returned to the theme of boundaries initially brought forward in the introduction to this thesis. The theoretical frame of this research questioned the existence of impermeable boundaries around the technological object and opened up a broader space for considering user agency. Such boundaries emerge and disappear through many forms of social practice, not just official technology development processes. The perception that they exist and the constitution and enforcement of such boundaries by humans serves a variety of useful social purposes. Boundaries (around cultures most importantly) have also historically served as powerful methodological constructs that have helped to define the field of anthropology. Yet the shortcomings of such constructs and their essentially illusory character has been a central argument of recent work on the study of culture through ethnographic methods. In this chapter, broad, fixed boundaries have been

replaced by more precise and fluid contours as the fieldsite is reformulated as a network. The connection between the two methodological concerns of spatiality and voice are related to the way this proposed spatial configuration reorganizes the relationship between the foreign researcher and the group under study. When entering the fieldsite is no longer a simple process of crossing a boundary from outside to inside, then there are a multitude of possible ways to define the connection between researcher and researched. Understanding the nature of this connection is key to understanding how the voices of research subjects are produced.

The central methodological concern related to spatiality was what to include and what to exclude in defining the fieldsite and finding a way to do this by establishing, "some form of literal, physical presence, with an explicit, posited logic of association or connection among sites that in fact defines the argument of the ethnography" (Marcus 1998b, pp. 90). This 'logic of association or connection' was accomplished by defining the fieldsite as a heterogeneous network. This made it possible to trace out the social phenomenon of interest by following the movement of Internet users through the city and also by capturing digital flows moving through the Internet cafés. In their sense-making activities both mental and social, through speech and other forms of action individuals produced meanings that defined places. These places including both the tangible realness of the Internet café and the imagined spaces of cyberspace and 'America.'

A new role for the researcher emerged from the reconfiguration of the fieldsite. In the process of conducting fieldwork it became apparent that the voices of Internet users were constructed by complex motivations, not simply by the desire among these users to be understood. By recognizing that my interviews and daily encounters with Ghanaians were being altered by my presence as a foreigner I became more aware of how Internet users were making sense of the 'foreign' and how they treated speech as persuasive performance. I had access to these performances from two perspectives: as audience and as confidante. My role as audience for performances of self represented one of my roles as participant in urban society in Ghana and in the Internet café scene. But I was a participant not by attaining a status as equal and unremarkable member of the community, but as a potential foreign contact, just like the foreign contacts Internet users were seeking online. In contrast, as confidante I was situated in an observer role. When

Internet users treated me as a confidante in interviews, they stepped back to provide a commentary on their own performances and to reflect on their experiences. In these conversations they confessed some of the concerns, problems, and strategies related to their online relationships and encounters. These reflections expressed how the intersection of the foreign gaze and the performed self is a space of tension where foreigners may be viewed in some ways as barriers and in other ways as vehicles to the realization of ideal selves. These two perspectives as audience/participant and as confidante/observer proved complimentary; one providing the content of the performance and the other providing the performers self-analysis of their performance. From these two primary perspectives (among others) emerged the complex and contradictory voices of Internet users as they are portrayed in this thesis.

Both the cases of spatiality and voice pointed to the necessity of considering the way individuals in connected, contemporary societies make sense of their opportunities from a perspective that often embraces the global. This chapter has proposed ways to include what is distant in ethnographic research without either converting external to internal or drawing an absolute distinction between the two. This was done first by incorporating distant locales into the fieldsite through connections to the Internet café and messages received along these connections. Second, by acknowledging the researcher is a participant in the fieldsite as a foreigner and as a member of the network without being converted into a member of society in equal standing to people being observed and interviewed. These methodological strategies are applicable to a wide range of ethnographic studies that explore global trends and increasingly outward looking societies throughout the world.

The structure of the four following chapters is in keeping with the spatial design of the fieldsite that begins with the Internet café itself as a starting point and moves outward following users into other spaces. In chapter three, the distinctive characteristics of the Internet café as a place will be explicitly addressed. The cafés were claimed, at times, by youth for imaginative and playful activities beyond the surveillance of older authority figures. The space served to mediate local relations between peers and between the older and younger generations at the same time as it mediated between Ghanaians and their foreign contacts. Following that discussion the analysis moves towards themes that

transect many spaces within the city as well as media spaces and virtual spaces. The topics of Internet fraud (chapter 4), religious practice (chapter 5), and the perceived role of ICTs in Development (chapter 6) draw from observation and conversations in Internet cafés, as well as homes, churches, at restaurants, on the street, at a hangout in an unfinished building, at the Accra International Conference Centre, and in online chat rooms. The 'place' of the Internet café was not always in the forefront of users minds. In moments of total immersion in online chat the technical equipment, the chair, the place itself could fade from users' active awareness. The offline experience at the Internet café could at times be profoundly asocial as all attention was directed to conversations taking place in cyberspaces. Internet cafes were not spaces shut off from tradition or ongoing processes of social change in Ghana. They did not produce an abrupt break from what came before. As the following chapters will demonstrate, they have been rapidly and broadly incorporated into social formations, sense-making systems and everyday practices in Accra.

[1] Findings from this preliminary research on technology use among Ghanaians living abroad are forthcoming in Burrell J. and k. Anderson. "'I have great desires to look beyond my world:' trajectories of information and communication technology use among Ghanaians living abroad." New Media and Society.

[2] Hale, B. (9 June 2003a). "In search of a profitable connection." BBC News Online. URL: http://news.bbc.co.uk/2/hi/business/2974418.stml.

[3] a) Hale, B. (16 June 2003b). "Dot.com tycoon turns to Africa." BBC News Online. URL: http://news.bbc.co.uk/2/hi/business/2977598.stm.

b) Hall, M. (22 September 2003). "Volunteers Get a Career Boost: IT pros who work with the underprivileged find new skills, and new meaning, in their work." ComputerWorld. URL: http://computerworld.com/careertopics/careers/story/0,10801,85082,00.html.

c) Segan, S. (9 February 2001). "Non-Profit Sends Tech Skills to Africa." ABCnews.com. URL: http://abcnews.go.com/Technology/story?id=98890&page=1.

[4] Tro-tros are Ghana's answer to public transit. The term tro-tro derived from a small Ghanaian monetary unit that has long since disappeared in the wake of rapid inflation. These vehicles are privately owned and run regularly along predictable routes within Accra and between towns in Ghana.

[5] I also briefly visited a number of other Internet cafés throughout the city either on scouting missions, for interviews, or for personal use. I found that it was typical for Internet users to visit two or three Internet cafés in the neighbourhood where they lived treating them as fairly interchangeable.

Chapter 3 Internet Cafés as Spaces of Youthful Exploration

"But again I was thinking it's probably our youth that have also, you know, taken up this cybercrime and 419 and again that's a national issue. Why is it that our youth have nothing to do, that they are free to take up these illegal activities? Why aren't they being properly educated? You know, why aren't they being given opportunities to work, to get work experience and to get a decent job. You know, I don't believe that all our youth are criminals. I think everyone has a good streak in them somewhere and wants to do a good day's work, but are there those opportunities for them? And again it's a national issue and when young people have nothing to do and they're bored, they get up to naughty things." – Estelle Akofio-Sowah, managing director BusyInternet[1]

Accra's Internet cafés were primarily frequented by teenagers and twenty-somethings many of whom had not yet completed schooling, had not established themselves in a line of work, and had not yet married. The practices of youth in Internet cafés sometimes took on the distinctive form of competitive and collaborative game-like social rituals. The Internet and the space of the Internet café were employed in forms of adolescent and post-adolescent 'play.' These social rituals centred on the acquisition of foreign goods, foreign media, and foreign contacts in tests of independence and expanding control. The Internet allowed young people to engage imaginatively and interactively with aspirations they had formulated growing up in a society pervaded by a shared desire to strive towards greater global connectivity and a more modern and cosmopolitan identity. The social games of youth that incorporated the Internet were often group-based and took place not only in the Internet cafés themselves, but also in school yards and informal hangouts. These collective efforts brought forward issues about the Internet café as a *place* for technology consumption containing both people and commodities, computers as well as infrastructure, furniture, and décor. The relationship between these co-located individuals and between individuals and commodities in the space structured the technology's appropriation as it was negotiated by Internet café users, attendants and owners.

Given the fixation among Internet users on the technology as foreign and as a mechanism for making contact with foreign lands, the appropriation of the Internet in

Accra may look, on the surface, like a process of localization that has failed or remains unfinished. The escape fantasies of young people, the particular pressures they were under in relation to older members of society, and the concerns they had about their role in the ever-changing global order shaped this process. The appropriation of the Internet by young users did not result in the tool becoming incorporated into established, everyday practice rendering it mundane. Instead, users preserved it as a highly visible symbol of the foreign. Instead of ameliorating the distance between the commodities origins and their own by absorbing it into a local vernacular, this distance was put on display as a valued aspect of the commodity. Processes of appropriation were framed by the space of the Internet café. The interiors of many of the smaller Internet cafés in Accra had a homogeneous quality. They looked similar to one another and to many other types of small business. They lacked much décor and their spatial design was not particularly 'scripted.' The term 'café' is a misnomer as few of these facilities served food or drinks of any kind. In contrast to past studies that focused on how the rich material culture and spatial configuration of the Internet café communicated technology's meaning to customers (Wakeford 1999; 2003; Laegran and Stewart 2003), the Internet cafés in Accra were distinguished by their material minimalism. Yet, the resulting absence of an elaborate localization via spatial configurations in many of Accra's Internet cafés did not interfere with users' appropriation of the Internet. The undefined quality of these spaces served the projected imaginations of young users very well. This is not to say that the Internet cafés in Accra accommodated all users and all meanings. The claims young people made on the physical space of the Internet café were sometimes exclusionary and defined the Internet café as a space meant only for certain types of people. The efforts of youth to assert a degree of independence from authorities via the Internet café also undermined some of the intentions of Internet café owners in configuring the space for an alternate set of more desired users such as businessmen or students.

What explains this affinity between youth and Internet cafés? The notion that young people adapt to new technologies with an ease and intuition that is lacking in adults is a popular trope in the Western media and popular culture but has been more recently exposed as something of a myth (Facer and Furlong 2001; Facer *et al* 2001;

Livingstone 2001). The activities of young users in Accra's Internet cafés also call this popular notion into question. The skills demonstrated by young Internet users in Accra were strikingly narrow and most had developed only a very limited repertoire of uses. The greater resources older users had at their disposal (education and income in particular) proved to be an advantage to their ability to use the Internet broadly and effectively. The fact that young people often used very few Internet applications (heavily favouring e-mail and chat over web browsing) suggests that the opportunity to sit and experiment with a new technology, by itself, does not necessarily lead to the development of either deep or broad technical knowledge.

The reason Internet cafés were primarily frequented by young people was related not simply to a natural ability with the technology (or the absence of this ability in older adults), but to their peer relationships, aspirations, and available free-time. The Internet provided unique thrills through instantaneous contact and synchronous conversation with foreigners feeding into fantasies of unencumbered mobility and media-driven visions of Western affluence. Online contact with foreigners was an extension of another popular activity among youth that predates the Internet; corresponding through letters with foreign pen pals. The term 'pen pal' was used to refer to an extremely wide range of relationships including same-age peers, boyfriends, girlfriends, older patrons, business partners, and philanthropists. Some young people valued these relationships for the enlightening conversation and the creation of social bonds. However, others valued them primarily as strategic affiliations for realizing material gain. Daniel, a former scammer who was teaching at a primary school, saw his pen pal collecting activities as continuous with credit card fraud noting that, "*apart from the using of the credit card I take pen pals just for exchange of items and actually I don't take my size, I take sugar mommies and sugar daddies because if you take your size they are unemployed. So if you ask them something which is very huge, they wouldn't get it for you. So you have to go in for the grown ups like 50 years, 40 and above so they are actually working and they have the money so they can buy whatever you ask them.*" Abiba described the focus of her peers on pen pals as an addiction observing that, "*some people they like friends. You see they are addicted…getting Net pals and letting them sending them things. You see some people they are fashion crazy…*" In these types of relations, through the mediation of the

chat room, chat partners were completely objectified as suppliers of niceties, fashion items, and mobile phones. These examples point to a form of acquisitional play, within a range of recreational activities that will be further explicated in subsequent sections. In contrast to the standard model of pen pal relationships as an exchange between young people, many Internet users expressed a preference for older pen pals who were considered both wiser (and therefore useful as advisors) and more affluent.

The fact that searching for foreign pen pals was the dominant activity in Internet cafés does not mean that this behaviour can be categorized as leisure. Stephen, an unemployed 21-year-old who had recently completed secondary school treated pen pal searching as a narrowly focused and goal-directed effort to realize migration opportunities. He observed, "*when you go to the cafés, you see a lot of websites, pen pal clubs…one thing I did was to visit the Christian pen pals. We have the snail mails, we have the prisoners, we have the missionaries, but sometimes when you write them through the mail…they don't take it serious.*" Stephen spent time in chat rooms exclusively seeking 'invitations' to visit foreigners. He noted that many of the people he contacted, "*want to know you for some time before…they will give you the e-mail address, they will ask you to write to them, to communicate with them for some time before* [giving an invitation]." Having no patience for such a time-consuming effort and seeing no redeeming value in the process itself Stephen noted, "*when I chat and I see that you are not willing, I have to* [quit talking to you]." He had so far been unsuccessful in obtaining an invitation or a visa to travel. These alternate motivations (seeking migration assistance obtaining status objects rather than the sociability of conversing) provide a partial explanation for why Internet users often held such fleeting and superficial conversations and maintained so many open chat windows at one time.

The popularity of Internet cafés among youth was also related to the absence of older authority figures in these spaces. For young people Internet cafés served as an unclaimed terrain where they had the freedom to pursue interests and explore an emerging sense of self. They were spaces outside the constraints of home, school, church, and other institutions where young peoples' presence was subject to the terms of authority figures rather than their own. Some of these older authority figures, in turn, eyed the Internet cafés suspiciously as a possibly threatening rather than beneficial

presence in their communities. Some believed that their primary or sole use was for criminal and immoral activities such as credit card fraud and porn viewing. Less serious, but still troubling, some felt that Internet cafés distracted young people from their studies and other responsibilities. Some young people expressed agreement on this matter. Bernice, a 16 year old senior secondary school student stated that, "*since this invention of the computer, children go. Instead of them staying beside their books, they just go* [to the Internet café] *and waste a whole lot of time.*" While the bulk of this research was conducted with Internet users, most of whom were rather young, these users also relayed some of the concerns they had heard from elder family members. This view was confirmed directly in discussions with older individuals (typically non-users) in several family interviews as well as in conversations at churches, social events and other public spaces. The concerns they and younger users expressed about criminal activity in the Internet cafés seemed exaggerated in relation to what I observed in the Internet cafés, but they were not entirely baseless.

Given the preponderance of young people in Internet cafés in Accra it is worth examining how youth is experienced and described as a distinctive social category and in what ways this maps to technology practices. In Accra, the social category of youth was constituted by a characteristic set of conditions that typically began somewhere in adolescence and extended for many as far as their late twenties or even early thirties. These conditions included having not yet attained the widely standard markers of adulthood; marriage and child-rearing. For many young people, an incomplete education and/or lack of reliable full-time employment also went along with this. There was an affective dimension to this state including a frustrating sense of stagnation and feelings of total uncertainty about the future. While stagnation was not just a concern expressed by young people, for the young it was specifically related to an inability to move into this adult stage. Young people struggled to gain access to the economic resources required to attract a spouse or complete their education.

These conditions of unpredictability and stagnation were not unique to Ghanaian youth and are widely shared among youth in many geographies. Willis in his study of youth creative cultures in Britain asserts that, "*All young people experience one aspect or another of the contemporary 'social condition' of youth: unwilling economic dependence*

on parents and parental homes[2]*; uncertainty regarding future planning; powerlessness and lack of control over immediate circumstances of life; feelings of symbolic as well as material marginality to the main society; imposed institutional and ideological constructions of 'youth' which privilege certain readings and definitions of what young people should do, feel or be*" (Willis 1990, pp. 12-13). Much of this description is also applicable to young Ghanaian Internet users many of whom felt that a restricted role was imposed on them and was enforced through family interactions as well as religious and educational institutions.

While young people in Ghana and in affluent Western societies shared a general sense of marginality, uncertainty, and disempowerment, the particular conditions and social shifts in these societies that impacted technology and media consumption patterns diverged in some significant ways. Livingstone documents the growth of technology ownership and private media consumption by young people in homes in the UK relating it to the 'risk society' (Beck 1992) and a growing perception of urban public spaces as dangerous. Restrictions on where young people could go and with whom they could spend time drove the purchase of media technologies to outfit young people's bedrooms in the family home. These efforts were framed as safety measures (Livingstone 2002). In Ghana, by contrast, there was little emphasis on safety. Restrictions on youth emerged through the efforts of authorities to cultivate disciplined young bodies and minds through educational and religious institutions. Family roles and duties also placed substantial restrictions on how young people expressed themselves to their elders, how they spent their time and in whose company.

Young people in Accra were tied into a traditional gerontocratic ordering of society and its principles of social authority by elders, a system that endures despite the uprooting process of rural-urban and international migration in Ghana. This played out in the everyday lives of young people in a variety of small and large ways. For example, Miriam had a younger sister living with her who swept the room they shared every morning, fetched water for Miriam's bath, and sat at her drink-selling kiosk all day while Miriam was free to come and go. In exchange, Miriam was expected to take care of her sister's financial needs including her education. Similarly, Abiba, a 16-year-old senior secondary school student was the youngest member of her household which was made up

of her grandmother, and several aunts and uncles. Her family was Muslim and although she was both an Internet user and liked listening to American rap and hip-hop artists and dressed in Western-style trousers and tops, she also wore a headscarf in public. She was allowed to leave the house only when necessary and only for short periods of time. She slept at night in her grandmother's room in case the grandmother needed anything (a glass of water, for example) and she did chores of all types (cooking, cleaning, errand running) around the compound. Abiba, like many young people was expected to do quite a bit of work on behalf of the family and was almost constantly under supervision. The structure of Abiba's home life was continuous with the school environment which similarly held students to exacting standards of good behaviour. Schools were oriented towards discipline and orderliness. This theme was underlined at the annual competition between schools that perform in uniformed marching squads at the annual Independence Day celebrations on March 6th. These squads compete for awards based on their precision and conformity. Both at home and at school there was no tolerance for young people arguing with, questioning, or talking back to their elders. Supervision and enforcement of behaviour was not limited to home and school, but could also be witnessed on the streets. I once watched Kwadjo, a young man who was unmarried and had no children, discipline a young girl sitting on the lap of her mother for not responding politely to his question. Although these checks on behaviour were limited by the unavoidable anonymity of urban living, it was socially acceptable and expected that older members of the community would monitor and regulate the behaviour of young people whether or not they were kin.

While urban youth had a certain amount of choice in profession and life trajectory that their rural counterparts were unlikely to experience, frustration over their inability to progress to normal adult status was a refrain frequently heard among young men in Accra. They defined this desired status as marriage and the ownership of property and modern goods such as cars and electronics. Isaac for example, an Internet café operator, complained that his current job was taking him nowhere and he couldn't make enough money to get beyond base-level subsistence. To address this stagnation he planned to travel to mainland China to, in his words "*escape the poverty cycle*." Recognizing that this effort was far from a sure thing, he described the plan as a, "*risk adventure*," but

added that he really had no desire to leave Ghana except to find a way to make and save money. Yaw, another Internet café operator similarly complained of his inability to make any progress in life with his current employment. He emphasized that marriage was an impossibility for him at his income level. For young Ghanaian men marriage required a demonstration of economic viability through the many gifts given to a girlfriend culminating in a formal engagement ceremony where gifts of money, clothing and yards of fabric, domestic equipment (often a sewing machine), electronic devices (often mobile phones), and bottles of alcohol or cases of soft drinks are given by the groom's family to the bride's family.

The sense of stagnation expressed by young people was exacerbated by periods of boredom and inactivity that many faced after they completed a level of schooling. There were long gaps where students were not actively enrolled in school, but were preparing for exams or waiting for exam results to come out. An exam was taken after junior secondary school typically at age 15 and again around age 18 many students took the Senior Secondary School Certificate Examination or university entrance exams. Students took these exams in the fall, but didn't hear their results until the spring. Those who did not do well enough to advance had to re-sit exams and wait again for results. Some young people were also forced to wait until they or their family members could gather the money to fund their next level of education. Many were eager to find a way to fill the extra time. Isaac was offered the position of driver's mate on a tro-tro bus[3] by his father while he was waiting for exam results. He readily agreed to the job noting that, "*I was lonely at home doing nothing.*" Many young people took computer and software training courses while waiting. Spending time at Internet cafés was another way to fill this void. As Fauzia, an unemployed 23 year old noted, "*Sometimes instead of sitting in the house, making noise, it's better to go to the café, to go and chat*." Going to the Internet café was not only an enjoyable way to pass the time, but the skills and foreign contacts gained might prove beneficial in the future justifying the investment of time and money.

Youth vs. Adult Internet Users

Internet cafés were not exclusively the domain of youth, but older users had quite different patterns of use and alternate reasons for frequenting these spaces. It became clear in the course of this research that Internet activities roughly correlated to age, gender, and education level. Young people often fixated on certain forms of use – collecting foreign pen pals and seeking romantic partners, chatting and hanging out – usually to the exclusion of all else. They also spent more time than older users visiting Internet cafés in groups as a social activity pursuing entertainment and play on the Internet by watching music videos, finding music lyrics, through inventive competitions (detailed later in this chapter) and occasionally playing computer games. Older users pursued a greater range of uses and were more often versed in information searching and were typically more effective in using the Internet for research. Several young people who were interviewed described or demonstrated difficulty with identifying whether the information they had found was valuable and valid and were susceptible to falling victim to online scams. It should be noted that older users also tended to be rather affluent and well-educated and so their patterns of use cannot be disentangled from these aspects of their background. University students although young also used the Internet to do research and acquire information with great adeptness.

	High School education or less	**University education**
Youth	• Communication with foreign pen pals • Communication with family/friends in the diaspora. • Consumption of music and music videos.	• Information searching • Research • Communication with foreign pen pals • Communication with family/friends in the diaspora.
Middle aged	Not represented among Internet users that were interviewed.	• Information searching • Research • Communication with family/friends in the diaspora (but not pen pals).

Table 2 - forms of use correlate with life stage and educational attainment

The typical Internet user in these cafés – young, educated but not to a university level, and usually *not* from affluent families – had a different relationship to 'information' than older, university educated, and affluent users. In particular, the typical Internet user did not relate to it as a neutral and impersonal commodity. This definition of information is common in popular and political discourse in the West and can be traced to the mathematical concepts of information theory in the post World War II era that were concerned with the transport and storage of data (Roszak 1986). Information has many characteristics including a detachment from context and source and consequent ability to circulate without changing. Technological infrastructure preserves its movement as perfectly replicated packets of bits. The realization of the tools to store and distribute it reliably was a remarkable technical feat. Perhaps related to this technical breakthrough, the data itself has come to be characterized as an unassailable good. Yet this definition of information and the technologies designed to facilitate its transport (including the Internet) circumvent traditional human mediators of such information. This has shifted many processing burdens onto the humans who receive such data.

By contrast, when Internet users in Accra sought answers to questions, they often expected these answers to be embodied in a trusted source. Many interviewees had never used or heard of Google indicating a reliance on direct communication rather than third-party information systems. They searched for 'advice' rather than information. Among those who did use Google there were some dramatic misconceptions about how information searching worked. For example Frank, a young and enthusiastic Internet user, sought buyers on the Internet for the glass beads his aunt produced locally. He searched for customers by going to Google and typing in a string of keywords such as: "`business men contact business in London dealing with beads works`." Once the search results were returned he would sort through the links very quickly without reading them. Instead of recognizing each search result as a site to be evaluated for relevance, he used an e-mail extractor tool to pull out any e-mail addresses on the page. He described Google (inaccurately) as a vetted business directory as he noted, "*Everyone who is on the Google registered it…so if I go to Google and say I want to know the business people in maybe Jamaica, those who registered in Jamaica Google will open it, straightforward.*" Relying on this mental model he assumed that all his

search results for potential business partners and customers were accurate hits. This resulted in some very mis-targeted advertising. For example, one of the results for his search terms was an e-book about the 19th century businessman John Jacob Astor. I watched him send an e-mail to the e-text project at the University of Virginia about buying his glass beads using an e-mail address he had pulled from the page. Frank related to the Internet as a network of individuals and groups with Google as the mechanism for facilitating introductions, rather than a network of machines that mechanically sort and circulate data.

Instead of using search engines, several web users mentioned memorizing or guessing URLs. Some received URLs passed along by friends via e-mail or chat clients. This of course meant that the range of media young people accessed on the web (outside of e-mail and chat) was quite narrow. The sites most often mentioned included a few news websites, archives of music lyrics, and e-cards. However, these Internet users did not perceive that their Internet skills were lacking; to them chat and email, collecting foreign pen pals in particular, was what the Internet was all about. It was through personal contacts, not de-personalized information, that both entertainment and real opportunities could be found.

Limited use of the World Wide Web and search engines did not mean that young people did not formulate questions and seek answers on the Internet. Instead of search engines, many used their foreign chat partners to collect information about educational opportunities, international news, and everyday life in other societies. In certain situations this provided some added advantages. They were able to borrow the media and technology literacy (and sometimes bandwidth) of chat partners who had better connections and more experience with the Internet. Charles, for example, a teenager who was preparing for his senior secondary school exams, had a friend in the U.S. evaluate education and scholarship opportunities to prevent him from falling for a scam. Education itself was also something that Internet users sought through interaction with human sources. A young man called Moscow by his friends said that on the Internet he, "*would want to meet an educative person. Someone who is educated, a teacher or a scientist…so that he could be telling me more about this science course, it will be easy for me when I go to school.*" When asked what 'benefits' there were to knowing people

living outside of Ghana, he added, "*when you got a friend either from America or London he teaches you English.*" The digital information young people received often could not be de-personalized and was embedded within their online interactions. It was not always data that these Internet users sought, but a learning process, a sounding board, or someone who could open doors.

Besides the use of the Internet for information searching, what distinguished the Internet uses of students at the Volta café on the campus of the University of Ghana at Legon was related to their greater degree of mobility that came with a more privileged background. The Internet supported their movements in pragmatic ways. Prince, for example, was using the Internet to check his bank account in London when I encountered him in the café. He had been working on an online application for a job with multi-national corporation Maersk. He had also previously spent time in London working for a florist and living with his aunt while on a work holiday visa and was considering a return to London for a postgraduate course. Several University students also described how access to the Internet made up for their inadequate and outdated University library. Manuela, who had also spent time in London, was participating in a research project and used e-mail to communicate with the professors working on the project including one at Johns Hopkins University in the US. The Internet allowed these students to route around inefficient national infrastructure (such as the slow postal system) to engage with European and American institutions. Yet greater mobility and broader capability with the Internet did not necessarily preclude an interest in meeting foreigners online. There was still a fascination among some users with everyday life in foreign lands. Some of the Internet users at the Volta Hall Internet café on campus described chatting with foreign chat partners. Adama was the most involved in these activities. Similarly to the Internet café users in Mamobi or La Paz, she prized her vast foreign social network boasting that, "*I have so many friends in Europe.*" Her main chat partners included a Norwegian, a Swede, and a Nigerian. However, the social relationships University students maintained were typically valued for the leisure, sociability, and possibly status they provided and less explicitly for material gain or migration opportunities. Often these University students were able to navigate through formal channels for such opportunities.

The relative level of affluence among Internet café users is a question that is more effectively addressed through a qualitative description. In the context of development discussions, Internet cafés are sometimes dismissed as the domain of elites and as an example of emerging digital divides within countries compounding those that exist between countries (Robbins 2002; Alhassan 2004; Mwesige 2004; Mercer 2005). In the small, less expensive Internet cafés, particularly in poor neighbourhoods like Mamobi, young Internet users experienced very little privilege. Many had parents who were jobless, marginally employed, or dead. Bernice's father for example was an electrician who complained that, "*Here [in Ghana] if you're electrical contractor, you don't get the job, there's no job. You only call yourself electrical contractor, but there's no job for you.*" Her six family members lived as tenants with several other families in a single unit within a compound house with an outdoor toilet and no running water. Other Internet users lived with parents who were bakers, drivers, and did other types of work that required no more than a junior secondary school education and often less. These young Internet users had typically managed to obtain more education than their parents, up to a senior secondary school certificate and were literate (to varying degrees) in English. The money young people managed to collect to pay for Internet use was often skimmed from the daily 'chop money' their parents gave them for food and transportation. Saadiq, a senior secondary school student who lived in Mamobi, said he received 2000 cedis (approx 10p) each day from which he was able to save about 1000 cedis. Over several days he managed to acquire enough to use the Internet for an hour. He also was able to get a little extra money from friends. Fauzia similarly described the circulation of scarce resources among friends noting that, "*sometimes I do use my own money, I save for it because I meant to use the café. Sometimes too I do go there, when I see friends I ask them to buy me the code. I just say, 'oh, Charley, you know what, I want you to buy me a code, I'm broke. You know I'm broke.'* " Internet cafes were frequented in poor neighbourhoods like Mamobi because they held a particular attraction to marginalized youth. The Internet cafés existed as a symbol of opportunity and a potential mechanism for subverting the constraints of global economic and political infrastructures in an attempt to realize a better life.

Altogether, age, life stage, gender, income, and educational attainment roughly translated into distinct styles of Internet use. Despite the differences, certain themes of Internet appropriation carried across demographic groups. The search for international opportunities, whether through formal or informal channels, and the cultivation of foreign contacts was one pattern of use that was present in all demographic groups and more generally characterized the appropriation of the Internet in Accra's Internet cafés.

Youth in Groups

In light of the burdens and boredom borne by young people, Internet cafés held an appeal as spaces where they could escape the surveillance of their elders. Internet cafés, by contrast to home, school, and most public spaces, were spaces dominated by young people and there was limited, if any, supervision by elders. The Internet café had less history and fewer interconnections with social processes in the larger society and therefore could be more easily appropriated on users own terms. Internet café owners were typically absent most of the time and operators were often of similar age, acting more like peers than supervisors. Young people could also arrange to visit cafés when they knew older people would not be around. For example, Gabby noted that he and his school friends, "*will leave the school around 10, midnight because by then the price is low and then older people will not be in the net…. They will tell us to stop watching this pornographic*." Internet cafés therefore became spaces for forms of mischievous, youth-centred and peer-oriented behaviour that would undoubtedly be disapproved of by authority figures. These activities included watching and emulating music videos, flirting with foreign chat partners, trying to hack the computers to get free browsing time, playing online games, or finding ways to obtain free things such as pamphlets, bibles, or CDs of computer games. Activities were sometimes configured by users to fill the space of the Internet café. For example, on one occasion I walked into an Internet café where everyone was gathered around a computer monitor watching "Top Gun." On another, I observed a young man with some friends studying a video by the hip-hop artist Usher and emulating his dance routines. The ability to escape parental supervision and create personal space is described as similarly motivating teenagers in the West to spend time

on MySpace and other popular spaces online (boyd 2006), consume music and television in private bedrooms (Livingstone 2002), use mobile phones (Green 2002), and spend time in Internet cafés (Laegran 2002).

Of great concern to some older members of society in Ghana was the possibility that young people were using Internet cafés to look at porn. A publication titled "The Word of god on Sex and the Youth" handed to me by its author Victor Olukoju has a chapter on the Internet that warns about Internet pornography: "*Thousands of youth worldwide are already addicted to this ungodly practice…People keep ungodly appointments to go and chat with boyfriends and girlfriends on the Internet. They occupy their time with such chats and do not have enough time to sleep early so they come to Church anytime they want. What sort of world are we living in? People pay money to commit sin!... The youths now steal and borrow money to browse the net just to 'enjoy' these nude pictures and other immoral acts or films.*" Olukoju as a religious figure lamented the way the Internet café kept young people out of church. Educators correspondingly lamented the way young people skipped school to spend time in cafes. These spaces were seen to challenge the dominion of these institutions over young peoples' time.

While the prevalence of these activities were undoubtedly exaggerated in Olukoju's and other similarly alarmist accounts, it was occasionally possible to witness individuals and groups looking at porn in Accra's Internet cafés. Sadia described how some of her classmates – both male and female - went to the Internet café to watch 'obonsam cartoons.' Obonsam means 'satan' in Twi and the phrase was a coded and humorous reference to porn videos. These schoolmates would discuss and tease each other about what they had seen when back in class out of the earshot of the teacher. Young people were certainly aware that watching porn was a transgressive activity and did not defend them. Sadia warned, "*there's a saying that anything that the eye sees it enters the mind and what enters the mind wants to be practiced. They looking at pornographic pictures… and they will like to practice and at their age I don't think you could do that.*" Altogether, these activities that their elders would likely consider frivolous or outright harmful quite clearly served youth as a way of claiming personal territory, flouting social norms and exploring alternatives, and establishing themselves as individuals, distinct from the expectations of parents, teachers, and older relatives. These mischievous

activities depended on such alarm and disapproval among elders. This reaction was the sign of having escaped the hold such authorities had on young peoples' minds and behaviour. By asserting an awareness that this activity was considered harmful, they marked their defiance and agency. In this way porn viewing and other transgressive activities in cafes served as a reaction to what Willis describes as, "institutional and ideological constructions of 'youth' which privilege certain readings and definitions of what young people should do, feel or be" (Willis 1990, pp. 13). Internet cafés were spaces where young people were able to contravene these constructions.

Mischievous and playful activities were frequently carried out by young people in groups, often schoolmates on their way home from school or off campus from their boarding schools. As Sadia mentioned above, some discussed their forays online in the classroom and schoolyard thereby subversively expanding this terrain of youthful independence into spaces where they were highly supervised. Printers and scanners made it possible to do so in multiple formats. Gabby noted about his early Internet experiences, "*I followed my seniors to town and we went to the café and then you see, when we got there…the pornographic pictures, sites, we have them plenty.... We go, scan them then we paste them in our dormitories.*" Through these actions youth found new ways to challenge authority in a subversive competition over turf.

Additionally, Internet café use served as a way of building friendships and social cohesion among peers. Kwaku, Daniel and three other friends from school visited the Internet café together regularly and ended up forming a club. They formalized the group by going online to the British Airways website and signing up for the frequently flyer programme receiving membership cards by Post. The British Airways programme was called the 'Executive Club' and so they took this name for the group. Although they never planned to use the cards, they were pleased to note that they could charter flights and receive other benefits from their membership. The group also developed a level of technical savvy by searching for "illegals" or ways of hacking into Internet café computers to get free online time. These tricks spread by word of mouth in the schoolyard and quickly became overused, so the group was constantly on the hunt for new "illegals." Beyond technical tricks Kwaku, Daniel and their friends invented a competition where they would order free things online to see who could collect the most.

The example given was a CD of computer games. The goal was not the computer game itself but the accumulation of a commodity that had travelled from a distant locale.

A theme carrying through these youth activities online and offline was a fascination with abroad and with whatever evoked travel and connectivity with foreign lands. Airline membership cards and CDs or books by mail personalized with a name and address provided this sense of global interconnectivity that was far more compelling to young people than the gambling games the CDs contained. The Internet provided opportunities for making faraway places very tangible and personal – marked with the most intimate of labels, one's name. Accumulating mail was a way of demonstrating power spanning great distances with whomever collected the most material declared the victor. This thrill was also evident in the most popular of Internet activities among youth – collecting pen pals. This activity was often conducted with such brevity and divided attention by Internet users in Accra that it became clear that a moment of contact rather than the content of extended conversations had value in and of itself (Slater and Kwami 2005).

The incorporation of the Internet into youth activities was not solely responsible for producing these youth clubs but rather extended pre-existing peer-oriented social practices. In the neighbourhood of Mamobi where Kwaku and Daniel lived, young men came together to form 'bases.' These 'bases' were composed of friends who were associated with a certain informal hangout spot such as an unfinished building or a street corner. These groups often competed against one another in football, although some described their motives and activities as extending beyond just playing football. Some pursued entrepreneurial ventures and/or community service. Alternately, mixed-gender groups came together to form youth clubs concerned with education and community service. 'Bases' and youth groups had certain naming conventions, often favouring place names making use of the symbolic potency of places in the West, most often place names from the United States. For example, among the names mentioned were: Alaska Youth Club, Nebraska Youth Club, Dallas Base and Canadian Academy.

Many of the activities of young Internet users described in this chapter have been characterized as entertaining and engaging diversions. However, many of these young Internet users also had an eye on more purposive and goal-oriented uses of the Internet

that would yield tangible improvement to their opportunities in life. Users varied in terms of how focused they were on making gains from the Internet. Some fluctuated between positions identifying a distinct point in time where they became more serious about the Internet. Gabby for example ultimately determined that it was pointless to look at porn on the Internet noting, "*…I didn't really gain anything from that. You see, so I started, since my friends introduced me to this, I saw it was going to be more beneficial than watching these stupid* [porn videos]." Yet, the result of this attempt to shift towards more focused and purposeful activities sometimes meant spending less time at the Internet café. Kwaku and Daniel both indicated that once they finished school and had found jobs the members of the 'Executive Club' no longer had the time to frequent the Internet café. While both had spent a brief period of time trying to gain money through a form of Internet fraud, when neither were successful they soon quit as Cospy notes, *"I've seen that it's not beneficial to me and I have not get anything out of it, I stopped."* As they age, some young people have difficulties reconciling the meaning they attach to the Internet (as a fascinating, exploratory tool) with a more explicitly goal-directed focus.

A Woman's Place?

For some young women who spent time in Internet cafés, the transgressive activities of other users detrimentally affected their ability to inhabit and use these spaces. Young women expressed concerns about their ability to maintain control over the media and forms of social interaction they were exposed to at Internet cafés. Some were particularly concerned with restricting their exposure to sexual material. The locus of control varied between young women and men; women typically spoke about pornography and sexual content as being imposed on them by male chat partners whereas their young male counterparts tended to speak about it as a temptation that must be avoided. Sexual material was perceived not as something that would warp young women's minds, but as a personal affront committed against them, something intended to pollute or violate them. This was a problem they identified both in cyberspace and in the Internet cafés themselves. Their concerns mirror an early debate in Internet studies about the sexually explicit, aggressive behaviour that was frequently directed at women (at that

time a minority group) in cyberspace (Frissen 1992; Dibbell 1994; Brail 1996; Soukup 1999). At the time there was concern that this male-dominated cyberculture would diminish women's interest in using the Internet and that these virtual spaces would continue to be disproportionately frequented by men (Harcourt 1999). Likewise, the concerns of young Ghanaian women and their families had significant consequences for their Internet activities. For some, questions about the suitability of both Internet cafés and cyberspace as places for young women to visit limited the amount of time they chose to or were allowed to spend online and altered their online activities.

Many young women, at least initially, perceived Internet cafés as unwelcoming spaces because of the kinds of activities they believed and had been told were taking place there. Maureen, a 23-year old student in a tertiary business programme, noted, "*my first time of visiting the café I heard kind of when people go to the Net, kind of browsing pornographic stuff and stuff like that. Yes, so it was like going to the café no, no, no I won't even try it.*" Although Maureen eventually became a regular at the Internet café in La Paz and determined that Internet cafés were not primarily used for porn viewing, her introduction to the Internet was delayed by these concerns. Abiba, whose family responsibilities were described above, faced a three-fold restriction on the amount of time she spent at the Internet café[4]. She struggled with unwelcome advances from young men at the café complaining, "*You see, when you go to the café, sometimes you go you see plenty people and there are a lot of guys there. When you go there they will just disturb you. They say, 'oh, this, I want you to be my girlfriend' and those stuff. I don't like those things. So sometimes I don't feel going out.*" Yet even in her willingness to put up with some of this behaviour in order to check her e-mail and chat with a pen pal, she was further restricted by the time she was allowed to spend out of the home by family who wanted to keep her under supervision as much as possible. She added, "*I'm not even allowed out more times. I'm always restricted. Before I go out I seek permission, the time is given, go and come at this time. Don't stay long, so I'm being restricted...*" To resolve the problem of the obnoxious young men, Abiba began going to BusyInternet, because of its size and more affluent, older clientele. As she noted, "*The place is always busy, there are a lot of people up and down that place. You don't see people worrying another, everyone is concentrating on the Net. That place, that is what they do there.***"**

At BusyInternet she benefited from the anonymity a larger café offered. Unfortunately, the price of the café was twice what it was at the smaller neighbourhood cafés she went to so this was yet another restriction on the time she could spend on the Internet.

The experiences of young women suggest that Internet cafés in Accra are the domain of young men, not simply because they are uniquely appealing to that particular group, but also because young women are actively discouraged from frequenting them. They faced this discouragement disproportionately and in accordance with an alternate logic than young men. By contrast, in two separate interviews, young men described the admiration their fathers expressed about the mysterious knowledge and contacts their sons had acquired at the Internet café. This emerged in an interview with Frank, the young businessman whose Google search strategies were described earlier in this chapter. During an interview with his family, Frank noted that his father "*used to laugh. He said, one day they will arrest you. Maybe he [read] a paper about fraud.*" His father who affectionately referred to him as 'Internet man' added, "*I advise him that if you want to use the Net, you have to use it correct way, not devious way*." While aware that fraud activities were sometimes taking place in Internet cafés and even indicating suspicion that his son might be involved with such activities, Frank's father positioned himself as his son's advisor allowing Frank a great deal of autonomy.

The threat of paedophilia on the Internet was mentioned by young women exclusively. Adama, a University student described the Internet ambivalently as, "*it's the best thing. It's the best, at the same time the worst thing because sometimes I also read about it, like how children meeting paedophiles and I'm thinking wow yeah the Internet, it isn't good. At the same time when I sit behind the computer I spend like 4 hours, I just can't get myself to get up.*" Ada, a young Nigerian woman, also a student at the University of Ghana at Legon described a movie she had seen to explain why she was reluctant to share her e-mail address, she noted, "*…people can start sending some really rude messages, email and everything like that. [I don't give out my e-mail address] just to prevent that. There was a movie I watched, something similar to that, um, this woman and her daughter. Her daughter was always on the Net and there was this psycho guy she met him in a chat room. Eventually he got her e-mail address and really sent her some really explicit messages…I was so moved by that.*" For Ada protective measures

entirely shaped her Internet activities. She approached chat rooms with deep scepticism noting that she, "*just believed everybody was lying on the Net to make themselves look good.*" When she started using the Internet as a young teenager she would make things up about herself, give out a fake age, pretend she was from China, and she never gave out her e-mail address. This precaution combined her interest in identity play on the Internet with her desire to protect her actual identity.

This is not to suggest that all women met the Internet with such hesitation. Don Slater and Janet Kwami observed Asma, a young Muslim teenager at an Internet café chat with up to 15 chat partners at one time quickly and easily identifying and ending conversations when they turned towards sexual innuendo (Slater and Kwami 2005). Asma was at ease in cyberspace confident in her ability to control the nature of her online interactions. Akosua, a successful 42-year-old entrepreneur, narrated her relationship with the Internet in a way that excluded men entirely. She suggested a compatibility between women and the Internet via their domination of the markets in Ghana noting both that, "*…Here, women are more enterprising, you know…A woman can just put a table in front of her house, display her wares, she's selling. You understand I have to tell you that the economy here is run by the women, essentially the market women,***"** and that the Internet is, "*…a tool for you to really be on top of the market.*" For Akosua, men were irrelevant to the Internet café, a space where she gained a competitive advantage against other entrepreneurial women.

Akosua was able to ignore men completely in her use of the Internet. The activities she chose to carry out on the Internet did not involve conversing with men and she spent most of her time at BusyInternet where in this more anonymous and larger space people tended to keep to themselves. Ada and Asma were not able to evade these issues given the ways they wanted to use the Internet. These young women were treated in a particular way by young men in these spaces (both online and in person) that they found disturbing. Families, peers, and the media projected an interpretation of the relationship between women and the Internet that was also discouraging. Where schools or religious institutions were involved, by contrast, they seemed to discourage or encourage men and women equally. All of this had a profound effect on the patterns of use pursued by women. It shaped the information they gave out, their decisions about

starting, continuing, and stopping conversations, whether or not they represented themselves authentically, and whether or not they engaged in virtual chat with strangers or simply stuck to chat and e-mail with friends from 'real life.' Their patterns of use sought to balance what they wanted to do at the Internet café and on the Internet with the need to protect their reputation and/or avoid contamination to the body and soul from the unwanted advances of young men.

Internet Cafés as De-territorialized Places

The activities of young men and women in groups shaped the space of the Internet café transforming it (from time to time) into a domain of youthful mischief. This rarely reflected the intentions described by Internet café owners. However, beyond the way young people inhabited and socialized the space, for the most part Internet cafés in Accra were strikingly place-less. With some notable exceptions, Internet cafés were typically located in bland, often windowless rooms, sparsely decorated, the walls lined with computers with no effort to promote interaction between customers. The arrangement of equipment and furniture was in some cases designed to provide customers with privacy making it easier to avoid interaction altogether. While young people sometimes arrived at the café in groups most Internet café users noted that they had met few people (if any) at the café and were acquainted only with the Internet café operators. These spaces did not play as significant a role as social centres as the Internet cafés in Europe, Trinidad and elsewhere that have been examined in past studies (Wakeford 1999; 2003; Miller and Slater 2000; Laegran 2002; Laegran and Stewart 2003).

These previous studies of Internet cafés have often focused on the kind of social setting constructed intentionally or unintentionally through the arrangement of space. Wakeford described the Internet cafés she studied in London as "landscapes of translation" where technology is "re-territorialized" by staff and customers. In an Internet café that targeted a female clientele she observed the efforts made to demonstrate a compatibility between women and technology through décor, graphic design, and staffing practices (Wakeford 1999). Internet cafés in Accra, however, were experienced in quite the opposite way. Users perceived these spaces as "de-territorialized," providing

a suggestive, but incomplete dislocation from place. Internet cafés did not succeed in translating technology into some Ghanaian visual or verbal vernacular. Instead they served as places of escape (Slater and Kwami 2005) transporting customers, often to someplace indistinct, but a place that was definitively *not* located in Ghana. This dislocation was desirable because it fed into the fascination with abroad. Walking into the Internet café, customers were suddenly transported from a hot, tropical climate to the air-conditioned environment required by these machines from the cool North. There was limited décor (if any) in most cafés, but when it was present it often made use of foreign imagery. For example, one Internet café was oddly decorated only with large poster-sized pharmaceutical ads that the café attendant said were brought back by a friend from Germany. In Mamobi, a café had images of Mecca and other important Islamic sites displayed on the wall. The naming of cafés also reflected this de-territorialisation. "Sky Harbour" in the La Paz neighbourhood was named for the airport in Phoenix, Arizona. Mobra International Ventures was named to reflect the owners not yet realized aspiration to become a globe-trotting businessman. These names are indefinite and suggestive rather than pointing to particular, well-known sites. They generically evoked the non-local. In this sense Internet cafés as places accomplished a negation or transcendence of a 'purely' Ghanaian identity rather than successfully accommodating and re-interpreting it. It provided this transcendence without supplying an alternate identity in its place. Instead the Internet café provided a canvas for imaginatively exploring cosmopolitan yearnings.

One exception to this tendency towards "de-territorialisation" in Internet cafés was the interior design at BusyInternet, the largest Internet café in Accra with 100 public terminals. The product of both local and foreign investment, the café was a profit-making venture guided by a social mission to cultivate technology education and investment in Ghana and throughout Africa. To demonstrate a compatibility between African ethnicities and cultures[5] and a technology culture was part of this mission. Management made efforts to decorate the space with imagery of Ghanaians using technology. Local artists also had their work displayed and sold in the space. The attached restaurant and café served as a very hip hangout with a club atmosphere at

nights that was popular with young people providing social interaction beyond technology use.

BusyInternet was a space where a compatibility between Ghanaians and techno-culture was powerfully performed. It was common to see Ghanaians of a variety of ages using the most up-to-date technology gadgets. Yet, BusyInternet was exceptional in the Internet café scene of Accra. It attracted a wealthier, older, and more international clientele and it drew women in much greater numbers than the smaller cafés. At the same time BusyInternet hosted its fair share of teenagers and young men in groups. Over time the management at BusyInternet had implemented several new regulations in order to create a space where a diverse clientele would feel comfortable and welcome. This often came at the expense of a younger, rowdier clientele. The 'Nima Boys' presumed to be from the rough neighbourhood of Nima were notorious for rowdy behaviour and fraudulent activities. They were gradually discouraged from using BusyInternet as their constant hang out. Management at Busy eventually closed off access to all secure web sites in an effort to prevent credit card fraud from taking place in the café. Rowdy youngsters did not disappear from the space, but were forced to keep a lower profile. Furthermore, customers were allowed to sit only two to a screen preventing groups from crowding around a single terminal. The attached restaurant and café was conceived of as a space entirely open to the public, however eventually due to a shortage of space and problems with loitering a rule was implemented that required customers to pay for food or beverage in order to use the space.

Undermining the space-dominating activities of young men did have the desired effect at BusyInternet. Abiba, the young Muslim teenage girl mentioned above, went out of her way to spend time at BusyInternet because she felt more comfortable there than in the smaller neighbourhood cafés where customer behaviour went unregulated. Management did not simply construct the space by restricting behaviour, but through special seminars and public events sought to promote new forms of face to face interaction. These events were both business-minded and recreational – the café projected football games onto a wall and a conference room played movies on the weekends. For an older, more affluent crowd BusyInternet served as a popular public space for networking. A number of small businesses were run out of Busy rather than

from a traditional office space. Some of these entrepreneurs applied Internet skills to established businesses. This was the case with Sandra who used the Internet to do research and communicate with suppliers for her nascent label-making business. Others such as Kwame, a recent university graduate, were attempting to open up new markets, developing unique new products and services. He and a partner were creating a GPS system for tracking cars and trucks with a web-based interface. His business model intended to help vehicle (i.e. taxi and tro-tro) owners to monitor their drivers and help government officials to collect appropriate import taxes on trucks transporting goods through the country. BusyInternet became a social centre for the new media industry in Accra frequented by graphic designers, IT consultants, and people pursuing entrepreneurial projects.

Yet, the efforts at BusyInternet were not always interpreted by Internet users as intended by management. Benjamin, a University student who worked as an "Internet advisor" at BusyInternet described how the furniture at the café made an impression on him, "*…I never saw these kind of seats in Africa. I've never even seen. They only time I saw that kind of seat was in a magazine. My sister is a marketing personnel and they buy these kind of things for companies. So I've only seen it in a magazine, but I didn't know. I mean, a whole company can buy this much chairs,* ***all imported, you know?***" He defined the experience of entering the space as instant dislocation as he notes, "*the first day I entered, I didn't believe it. I didn't believe it was Ghana.*" While BusyInternet was ultimately quite successful in creating a space where a wider range of society felt comfortable and where the compatibility between Ghanaians and technology was demonstrated every day, to an extent the 'foreign' quality of technology and its setting of use prevailed.

Identity and Escape in a Post-colonial Society

The perception of technology as non-African and spaces of technology use as outside of Ghana points to more troubling aspects of the ongoing struggle over national and cultural identity in postcolonial societies. On the use of colonial languages by the formerly colonized, Fanon uses this same metaphor of detachment from place when he

suggests that, “[adopting] a language different from that of the group into which he was born is evidence of a dislocation, a separation" (Fanon 1967, pp. 25). This principle can be extended to the embracing of alien material cultures. The adoption of the Internet was intended by young Internet users to serve the purpose of dislocation, fulfilling a longing to transcend and leave behind the limitations of one’s origins. Indeed rather than providing advantages, young people often perceived their background as primarily serving to limit them.

While young people in Accra approached the Internet with an openness to future possibilities and with an eye on personal transformation, at the same time they relied on a lifetime of interpretive resources, a legacy of their cultural heritage to make sense of the technology. Their cultural positioning was therefore impossible to escape entirely. In the narratives Internet users provided about themselves and about the Internet, they accomplished the translation of the technology into something locally comprehensible, a translation often occurring in a verbal/oral modality through speech and story-telling rather than a spatial one (i.e. through the configuration of space in Internet cafés). While young people incorporated ideals of modernity and post-modernity attributed largely to the West in their engagement with the Internet, they also demonstrated a much wider embrace of the global that included an interest in ideas and opportunities coming from multiple directions, not just from the north. Therefore, as the following examples will demonstrate, technology use did not simply westernize, civilize, or modernize Internet users.

To address these complexities of technology appropriation it is useful to look at the self-portraits of youth and how they made use of computers and the Internet in their biographical narratives. Much of this work was done in interviews, but the Internet was also used, in a few cases, as a platform for producing personal web pages as a durable self-portrait in a rich, multi-media format. Personal web pages were on the continuum of activities carried out by young Internet users that incorporated new technologies to reach a particular audience and provide support for their claims of accomplishment and affiliation. The case of two young men, both particularly adept Internet users, who posted their personal biographies as web pages will be examined in this section. Additionally digital media practices that were used to supplement online *and* offline

interactions, such as photo attachments sent by e-mail, will also be detailed. I am purposefully drawing on my role as audience and as potential 'foreign contact' in this analysis including self-portraits that were directed to me in the context of interviews (before, during, or after) as well as those constructed for a foreign audience online. These self-presentation strategies made use of personal heroes, foreign contacts (with the teller sometimes brandishing proof in the form of a photo or letter), and idealized self-representations that often selectively highlighted and exaggerated personal details and credentials. These cases can also be related to the personal web pages produced in other regions highlighting some significant differences in the way nationality and ethnic identity are represented.

Isaac, a man in his late twenties who worked as an Internet café operator, put together a website for a bid for political office. He was planning a campaign to run for MP in 2008. The site includes a lengthy and eloquent manifesto where he describes his platform addressing the concerns of as many of his potential constituents as possible. He emphasizes four distinct components of his biography and involvements to make his case: 1) his high-status family ties, 2) his foreign contacts, 3) his fluency with technology and 4) his outsider status. As evidenced by the way he addresses his readers, Isaac envisions both Ghanaian citizens in the district as well as interested foreigners or Ghanaian transnationals visiting the site. On one page, for example, he provides bank details so that individuals living outside of Ghana can donate money to his campaign.

The first aspect of his biography appeals to distinctly Ghanaian markers of social status and is communicated in the very opening lines of the website where he notes that he was, **"***Born on Saturday, 11th February, 19xx to* [name], *the Paramount Chief of xx Traditional Council, and the President of the xx Traditional Council and Madam xx, the Queen Mother (now deceased). I am the third born boy in a row of three boys and also the third born of five children from my mother, but the 14th born of 16 children from my father, the Makorsor of xx.*" However, Isaac devotes much more space on the site to detailing his foreign contacts through text and imagery than to these traditional status indicators. On a page titled "Business Partners / Advisors" Isaac references an African-American businessman in the U.S. (whom he had an ongoing partnership with) and another advisor from Germany. Photos and contact information provide proof of their

existence. On his biography page the right hand side is lined with photos, on top a photo of his father, a chief, leaning in to consult with a middle-aged white man dressed in traditional Kente cloth. Underneath are two photos showing Isaac standing in a group with other young people of both white and black ethnicity. In the context of his bid for MP, claiming foreign contacts is a way of demonstrating to the constituency that he is a man of means and has access to valuable social and financial resources. He credits the Internet with facilitating access to these foreign resources noting that,

> "*Our state has endured floods and droughts. The floods displacing people and the drought starving us. We had to get help from NADMO. These help will come a three-fold. Trust me, as* ***I have the links worldwide by the power of the Internet*** [added emphasis]."

Isaac translates his technical knowledge into a benefit for the district by pointing to foreign contacts as a source of help (as above) and by describing the Internet as the terrain where he cultivated his skills as a salesman as he notes, *"I am an Internet salesman by nature. And now most of my energies will go into selling* [district name]. *If I can sell houses, cars and plots of land on the Internet, you know I can sell just about anything.* [district name] *is the easiest sell I will ever have.*" Yet, in my interactions and interviews with Isaac over a period of 8 months there was no indication that he had sold any of these goods. Therefore, this claim serves as a likely example of the tendency that I observed among young men towards fictional and exaggerated claims in self-representation and the conflation of a realized and aspirational self.

Isaac recognized that his youth and inexperience was a liability to his aspirations. Rather than deny this, he sought to reclaim it as an advantage. Conjuring a vision of impotent and corrupt 'career politicians' he positions himself as a reformer arguing in his manifesto,

> "*Frankly, these people — several of the candidates — have been in [district name] for 20 years, they've been saying the same things… It is no secret that I'm a newcomer to politics…I will talk to address the problems facing my*

> *Constituency and have then solved which my predecessors have and could not do. And I will work hard to reform government, but* [sic] *bringing openness and full disclosure of how I will spend the MP's Common Fund. I will enter this office beholding to no one, except you, my fellow citizens.*"

Isaac also attempts to substitute experience in the domain of technology for his inexperience in the domain of politics. He turns the tables on the other candidates by casting them as perhaps experienced in (but also corrupted by) politics, but inexperienced with the Internet and computing technologies. As he notes, "*I am rather sad to say that not even some of the other contestants have email addresses of which they can correspond to the outside world by the touch of a computer keyboard."* To drive home this point, he illustrates his technological fluency with several photos. At the bottom of the list of photos on his biography page are two photos showing Isaac in the Internet café. In one photo he is wearing sunglasses and actively interacting with a computer with one hand on the mouse and the other on the keyboard. In another he is wearing the same sunglasses looking authoritatively into the camera, seated next to a computer with his arms crossed. His body positioning communicates his comfort with and command over these technologies (see figure 4).

Isaac was motivated by the pragmatic and fairly short-term need to raise funds for his campaign. A second website, by a secondary school student named Mohammed was politically-minded in a way that was similar to Isaacs. His site, however, was not tied to a specific goal such as election to political office, but had a more abstract and open ended purpose. It served to encapsulate and represent his interests and to project them out to the wider world. On one of his web pages, he describes as his ambitious and far-reaching aspirations, "TO BECOME SUCCESSFUL IN BUSINESS AND POLITICS SO AS TO CHANGE MILLIONS OF LIVES GLOBALLY." Mohammed's site is divided into three sections. One section describes the youth group he and a cousin had started and provides links to their constitution and calendar of activities. A second section details social problems in his home neighbourhood as a way to educate other young people and to put political pressure on authorities. A third section contains his biography. Like Isaac's website Mohammed also has photos of social contacts of various ethnicities and

nationalities as a way of highlighting his foreign ties. Mohammed also includes several images of his role models, mostly American politicians and political figures including Malcolm X and Bill Clinton. Photos of people he knows personally include friends and family living abroad; one, a white pen pal named Liz and another identified as "Brother Zaindeen in Japan." Unlike Isaac, in his biography Mohammed omits any information about his family ties (that were low-status) beginning instead with details about his more promising educational attainment. Other photos on the site show Mohammed depicted as a leader, holding a microphone in the midst of giving a speech, wearing a suit, standing next to a local politician and a lawyer. Unlike Isaac, Mohammed did not use imagery of computers and technology to construct his self-portrait although he did describe "surfing the web" as one of his hobbies.

It is notable that in none of the personal websites created by Ghanaian Internet users was there any effort to mark the site with national symbols such as the Ghanaian flag. The number of websites produced by Ghanaians who were part of this research comes to about a dozen or so altogether including personal profiles at the social networking sites Hi5 and sms.ac.uk. This is a contrast to the websites produced by Trinidadians (similarly from a post-colonial nation) that were heavily marked by such national identifications (Miller and Slater 2000). Neither was there an effort to educate website visitors about Ghana. Instead, website developers made an effort to distance themselves from this identity, emphasizing instead their connections to abroad, their common interests shared with foreign visitors. For example, another website created by a pastor named Alexander underlines mutual belonging to the realm of Christendom[6]. Alexander's concern was with remedying his 'otherness' in the eyes of a foreign audience by foregrounding sameness through linguistic phrasings and shared stories from the global Christianity movement.

Internet users also found ways to incorporate media forms (digital and non-digital) into the personal biographies they delivered verbally in interviews. These media forms constructed, supplemented, and provided proof of their spoken self-representations. One young man during his interview presented a postmarked envelope with a female name and return address in the U.S. to demonstrate the existence of an American pen pal. Two young men initially contacted in Internet cafés, followed up their conversations with

me by sending e-mails with photographs as attachments. Like the images on Mohammed and Isaac's web pages, the photo sent by Charles attempts a similar construction of cosmopolitan identity. He accomplishes this through clothing style rather than making visible his affiliations with foreigners. His photo depicts him alone on an anonymous beach (see figure 5). The almost non-existent background fades into the black night providing no indication of location. In the foreground, Charles stands looking directly into the camera. He is wearing a knit hat with the words NYPD and a heavy oversized track suit. The jacket he is wearing has the words "New York" written in graffiti-style script. His attire locates him on a cold, American beach although from his self-reported lack of travel experience it is clear that it was actually photographed on a beach somewhere in Ghana. It is not clear what the circumstances were for the creation of this photo, but this was the sole image Charles chose to send to me as a representation of himself.

Given the explicit sender and receiver structure of e-mail, photos sent as attachments, unlike those posted on web pages, could be incorporated into exchange relations. Emmanuel sent a set of 11 photos to my e-mail address after our interview. They depict him neatly dressed in either traditional or Western style clothing. They were extended as a free gift, attached to an e-mail that said, "*I really want us to be good friends and i dont want to be missing and i will be glad to take you as a sister in the Lord and i will also love to learn so many things from you and the same way i will also teach you more things*." The photos therefore served not only in representing connections with foreigners through their content, but also played a role in effecting such connections. E-cards and greeting card style mobile phone text messages with cute poems[7] were similarly employed to build bonds between young Internet users and foreign contacts as well as amongst friends and family locally. Beyond signifying cosmopolitanism to an audience or providing an expressive outlet for such fantasies, these digital objects served to build and maintain affiliations between people across distances that could not be as easily or frequently bridged before the arrival of these technologies.

Yet, media objects could also be used by adversaries to undermine efforts to impress and build trust with contacts by contradicting the self-representations carefully assembled by the young and ambitious. Isaac, the aspiring MP whose website was

analyzed above, had worked with Emmanuel when both were operators in the same Internet café. After I interviewed Emmanuel, Isaac handed me a print out of an e-mail he had found in the café. It gave evidence of Emmanuel's attempt to scam money from a foreign televangelist thereby calling into question his moral stance and good intentions. Altogether, documents and photos supported idealized and aspirational self-presentation, provided proof of affiliation and location, and served as gifts to build social bonds. In all of the above examples, the uses of imagery, documents, and web pages show how Internet users were inclined to complement the flexibility and ephemeral nature of speech with the concreteness of more tangible and durable media objects. They had the weight of proof that could either convincingly support a coherent self-representation or undermine it.

One feature of both Mohammed and Isaac's websites was a list of role models and similar lists were also referenced in several interviews. These role models contributed to the project of self-presentation, but were also sense-making tools. The biographies of role models were resources that Internet users referred to in selecting ideals and determining paths towards a desired self-realization. Through the role models young people selected, they embraced global influences from many directions, not just Europe and North America. They drew their own interpretations about these biographies relating it to personal challenges and aspirations rather than simply absorbing versions of heroism legitimated in the West. Instead, young men expressed an ambivalent relationship to the West, an admiration and envy of Western prosperity and at the same time support for and identification with those seen as successfully challenging Western hegemony. This ambivalence yielded striking and unresolved juxtapositions. For example, in their research in the Mamobi neighbourhood, Don Slater and Janet Kwami found a group of young people at a 'base' who had designed a flag depicting an American $100 dollar bill with Osama Bin Laden's face in the centre. The young men described both an admiration for the 'almighty dollar' and American power while simultaneously seeing Bin Laden as a disciplined Muslim that they admired for his commitment to his faith.

Clarence was another example of the attempt to extrapolate commonalities from the lives of individuals who in public political and media discourse in the West are characterized as enemies. The role models he listed included Bill Gates, Kwame

Nkrumah, Colonel Gaddafi, and Saddam Hussein. On Gaddafi he tells a story of triumph against adversity, "*you know, Gaddafi was on sanctions for almost 50 years, but in his country nobody begs for food. You have places where you can just go and eat for free. Over there if you are a citizen. You know? Even in Ghana, we've not gotten to that level yet. Imagine somebody on sanctions, it's an Arab land. You don't have much favour in Europe and America and they've managed to make it that way. He's really worked hard. You've got the best of roads in Libya, you know?*" Clarence's presentation of this and the other biographies of role models was idealistic and simplified, cleared of complications and inconsistencies.

The reinvention of role models sometimes went much further than over-simplification and omission of part of what is documented about these famous figures. This was the case with stories about Bill Gates. These stories facilitated the self-creation that comes out of hero stories in a way that could be linked directly to the possession and use of computing technologies. What was particularly interesting about the Bill Gates story was the inaccuracies that were introduced in the version told in Ghana and how this served the storyteller. Gates biography was told as an IT version of the rags to riches fairy tale. Below are two striking retellings of this story, both contextualized by the tellers as a source of motivation for their own Internet activities:

"*You see Bill Gates of the America, he entered into Microsoft. You know he was an illiterate, if you don't, I hope it's on record…He was a dropout at school I think at the age of 12 or 8, I'm not very sure, but now look at Microsoft it's big. It's like a Coca-Cola bottle, almost everywhere they know it. So, some people as my role model I realized I can do something not necessarily, you know, because I didn't have that means and I was schooling at the same time...*" – Kwadjo

"*Bill Gates, was no one. He had to drop out of school because he wasn't able to pay, you know? So he's no different…you realize that look, you can make it because people are making it and you read their background, it's no different, you are even better off. You are far better off. So, basically that inspires you, it makes you feel, look, I'm on the right*

track, but if you don't know much about other people, you are forced to believe they were born rich and look you were born poor." - Clarence

In both examples, the teller translated the story of Bill Gates into a version that was locally intelligible. Whereas in the public media version told in the West Bill Gates was a Harvard undergrad who dropped out to focus his energy on his entrepreneurial aspirations, in these retellings, Bill Gates had a much more modest beginning. He dropped out of school long before reaching university because he could not pay. This revision of the story gave it greater resonance among young Ghanaians for whom dropping out of school follows from deprivation, not from an overabundance of opportunities. The translation of the Bill Gates story made information technology a field ripe with opportunities well suited to youth in Ghana who often face extreme difficulty in attaining the formal education they desire. IT was portrayed as a field that rewards those who work hard and have sharp minds rather than those with the privilege of a formal education. This process effectively re-territorialized the biography of Bill Gates as a Ghanaian fairy tale. Computing technologies thereby became a domain highly compatible with the conditions youth face in Ghana.

Internet users made use of a wide range of source material including images of people and goods (including technologies), selective personal details (notable for both what was included and what was omitted), as well as the borrowed and re-constituted biographies of role models. These materials were brought together in unique ways to construct idealized self-portraits that produced similar representations of young people's lives both in informal interviews as well as more permanently on personal web sites. The Bill Gates story is a good example of how source materials were transformed through their appropriation. The way narratives and imagery were altered and juxtaposed in unexpected and contradictory ways (by Western standards) counters any notion about a simple internalization of foreign media messages about technology.

Internet users in Accra expressed both conscious appreciation of the abstract potential of this technology and the settings of its use while justifying their use (and the positive outcome to this use that they were convinced was imminent) by underlining its compatibility with their life situation. Users sought to bring the technology within reach

while at the same time maintaining a distance that preserved the possibility of self transformation through contact with this foreign object. Users did not wish for the Internet to fade into the background of their lives, serving as an invisible supporting structure, instead they fantasized that it would launch them into a wholly better lifestyle.

Conclusion

Appropriation is a process through which technology users attempt to reconcile the distance between an abstract commodity and themselves. This chapter has attempted to highlight the complex ways that users effect such a reconciliation calling into question simplified visions of how the 'natives' social self is transformed through a relationship with 'foreign' goods. The outcome is not the automatic westernization of the subject through contact with Western technologies. Neither is it the translation of what is foreign into a completely local vernacular. The Internet does not have to be explicitly Africanized for young Ghanaians to meaningfully engage with it. Indeed it was precisely the technology's qualities of foreignness that attracted many young people.

A total localization whereby the Internet comes to be identified as having local origins[8], or is thought to better facilitate some distinctively national lifestyle or mindset (Miller and Slater 2000) was not largely in evidence in Accra. The absence of this type of localization was not a failed appropriation. Rather it related to the way Internet users, particularly young people, negotiated a relationship with the West. The Internet was not defined as intrinsically Ghanaian in part because so many Internet users sought to distance themselves from this identification. The models of success communicated by young people in idealized self-descriptions frequently underlined a rejection of being too place-bound, provincial or "bush" (a reference to rural life implying ignorance of modern/city living). Technology use was part of this process of becoming more cosmopolitan through contact with foreigners and the development of internationally transferable IT skills. Furthermore, the presentation of the Internet in the space of the Internet café with air conditioning, minimalist décor, and ambiguous or abstract business names referencing foreign locales created a de-territorialized space where users could escape local conditions and project alternate fantasies of location and dislocation. In a

postcolonial context, such a rejection of national and ethnic identifiers suggests that an insidious process of self-negation may be at play. Alternately, their efforts at self-presentation in interviews and on websites could be interpreted as evidence of a very forward-thinking desire to transcend national boundaries, a vision that finds a compatibility in the boundary-less ambiguity of cyberspace. Either way, the absence of a connection between the technology and an explicit sense of being Akan, Ga, Ewe, Ghanaian or African distinctively characterizes how the Internet was appropriated by many Internet café users in Accra.

The activities of youth, particularly the competitive games and mischievous exploration of illicit media, bring into sharp focus the often exploratory, non-instrumentalist nature of technology appropriation. Users' interests were not driven solely by the pragmatic efficacy of the Internet. Rather, the Internet enabled potent symbolic functions, as when young men made foreign goods (like bibles and CDs) magically materialize via the electric impulses of the Internet to demonstrate their expanding control over vast global distances. Mercer makes the point that there is an 'African Exceptionalism' at play in the way technology is related to African development in hegemonic Western discourses (Mercer 2005). This expectation is that the Internet in Africa *should* serve primarily as a tool for realizing pragmatic improvements in living conditions through health, education, government, and business applications. By contrast, in the West the Internet has a recognized and legitimate role fulfilling entertainment needs and (among youth in particular) facilitating identity play. Mercer challenges this exceptionalism asserting that uses of the Internet in Tanzania were broadly similar to tendencies in developed nations. However, while this argument is appealingly egalitarian, it is rather too general and glosses over the alternate motives and constraints that exist in different settings of technology appropriation. By emphasizing similarity the interpretive flexibility of technology and the capacity for user agency is downplayed. Taking the opposing route, examples throughout this thesis will further detail the processes that distinctively localized the Internet in Ghana. This chapter has shown that even within Accra there was a fundamental diversity in styles of Internet use that related to age, gender and education level. The distinctiveness of Internet use in Ghana was tied simultaneously to a particular local sense of Ghana's position in the

world order as well as the peculiarity of local social formations, such as the relationship between youth and their elders, between peers, and between men and women.

Besides delving into the complexities of localization, this chapter has also introduced the notion that the appropriation of the Internet in Accra was fundamentally collaborative. An analysis of youth activities in the Internet café has looked at innovative group play. This play made use of language, multiple media formats, as well as richly embodied practice such as dancing to music videos and 'being noisy' to claim ownership of space. Yet, these practices contradict assumptions about the inherent sociability and cohesiveness of shared technology access spaces like Internet cafés. Activities taking place in the Internet cafés of Accra were also shaped by conflict, competition, and exclusion. Appropriation occurred through human to human relations, not just human-machine relations. Users and non-users looked to others for information, direction, encouragement, and even permission to relate to the Internet and to inhabit the Internet café in particular ways. Youth who visited the Internet café together in groups were an easily observable and visibly apparent case of a collective appropriation. These practices will serve as a stepping stone to an examination of more subtle forms of collective sense-making in later chapters of this thesis that took place outside of the Internet café and through other social configurations. Examples in this chapter from classrooms and dormitories as spaces where memories and materials from the Internet café were transported demonstrate the broader terrain of collective engagements with technology. The following three chapters incorporate observations from a still wider range of spaces to make the point that use of the Internet was not limited to a direct interaction with the keyboard and screen within the walls of the Internet café. Collective practices could also circulate in the representational form of language. The next chapter examines the circulation of rumours about Internet fraud as an informal media that defines functionality and sets expectations for users while outlining a relationship between the user and the technology. Like this chapter, the next will continue examining how Internet users narrate a place for themselves and others in relation to the technology and how the sense of their place in the world is impacted through an engagement with the Internet.

[1] From a radio show publicly broadcast in Accra February 2006

[2] Dependence on parents was a concern for youth only in the situation where their parents were unable to provide for them. Ghanaian families operated much more as an economic unit with money flowing towards whomever most needed it and typically from older to younger family members. There was not a strong sense of pride in economic independence and self-sufficiency or shame about dependence.

[3] The driver's mate is the person who collects money, announces the route of the bus to those waiting at bus stops, and arranges seating. Trotros are the primary form of low-cost public transportation in Ghana. The vehicles and routes are not government funded or organized, but rather privately owned and operated.

[4] It is likely that the restrictions faced by young women related to whether they were Muslim or Christian. However, this empirical 'hunch' is based on a very limited number of encounters with young female Muslim Internet users.

[5] BusyInternet was initially meant to be the first of a chain of Internet cafés spreading through West Africa and beyond

[6] see chapter 5 for further discussion of the role of religion in transcending geographic and social distances.

[7] Some examples of text message poems:

1) "The ,-#-.-#-.
Heart # '#' #
Of '#, ,#'
A Friend '#'
Knows
No
Boundaries.
No
Limits
Just
Endless
Love and Care!
Have a pleasant day."

2) "A morning is a wonderful blessing…whether stormy or sunny, it stands for hope, giving us another start of what we call…L-I-F-E ! Good morning"

3) "Today's Weather Forecast – THERE SHALL BE SHOWERS OF BLESSING ALL OVER U & A HEAVY DOWNPOUR OF GOD'S FAVOUR. Be ready to be soaked in it. Have a great day!"

[8] For example, the German liquor Schnapps has been thoroughly incorporated into traditional gift exchange rituals given as brideprice at weddings and as gifts to chiefs. In one interview I was told that Schnapps was a local drink. This may mean either they believed the distillation process originated in Ghana, that the locally consumed bottles were produced in Ghana, or that it was thoroughly entwined in the practices of local ethnic groups. With time the foreign origins and any attached cultural meanings have been expunged from the way Ghanaians interpret the commodity. For a similar account, see Miller (2002) on the cultural positioning of Coca-Cola in Trinidad and Classen (1996) on Coca-Cola in the Argentine Northwest.

Chapter 4 Telling Stories of Internet Fraud

"*there is something really about this Internet, there is something that is really making my friends rich...*" – Gabby

Face-to-face conversation between Internet users, particularly through the modality of rumour, constitutes a 'use' of the technology that challenges the supremacy of direct human-machine interaction in establishing a meaningful understanding of how the Internet 'works.' To establish this claim, this chapter grapples with an intriguing disconnect, that users sometimes described how the Internet works generally and how it was relevant to them personally in a way that was contradicted by their personal experiences using the technology. This was nowhere more apparent than in the case of Internet fraud and scams which seemed more widespread as a phenomenon of speech and social imagination than as one of Internet use. Many young Internet users who had never made a dime on the Internet expressed the conviction that it was being widely used by clever, young Ghanaians (and/or others) to acquire thousands of dollars, the latest fashion, or the newest technologies by duping unsuspecting foreigners. This mental representation of the Internet as a tool for making big gains was socially constructed, in part, through rumours about Internet crime that played an important role as a mechanism for making sense of the Internet through the creation and diffusion of meanings.

In their forays online, however, Internet users had to work with the material capabilities offered by the Internet: the keyboard, the mouse, chat rooms and other virtual spaces, and the people they encountered in these spaces. Users were at times confronted by a mismatch between the behaviour of these 'others' (human and non-human) and the way they were alternately represented in rumours and other speech. They had to reconcile their own failure to 'make gains' or achieve personal transformation through Internet use. In short, the Internet often didn't behave as expected or desired. In light of their experiences, Internet users revised the definitions of the Internet and Internet crime they had described in speech. They pointed to the need for additional resources or referred to forces at work that they had not previously been aware of to explain this difference between representation and experience. However, these explanations served only as caveats. The notion of the Internet as a tool for making 'big gains' had a

paradigmatic quality and remained remarkably intact despite contrary evidence. While the details about effective Internet use might alter in light of user's experiences the essential shape of the narrative presented in rumours did not.

The endurance of rumours about Internet crime is explained by the role they played in reducing the threat and uncertainty presented by these illicit activities and in amplifying the sense of purposefulness and efficacy in Internet use. Among all forms of Internet use in Accra, Internet crime had the highest stakes. It was an activity that held the promise of unlimited financial opportunity while at the same time representing a dangerous entanglement that could damage the morality and finances of those involved. The idea that these crimes were being committed by their peers cast suspicion on young male Internet users and contradicted the positive representation they sought to portray of themselves and their society. In rumours about Internet crime, therefore, young people negotiated issues of morality, opportunity, and aspiration that seemed altered and newly challenged by the technology. Through speech, Internet users worked to create a sense of predictability and stability that would alleviate this threat. Therefore Internet appropriation in Accra was a process that involved far more than concerns about functionality and local usefulness, but was also about defining a relationship to the technology that preserved or amplified perceptions of safety, effectiveness, and morality.

Beyond reducing threat and unpredictability, speech about Internet crime activities also served as an implicit social commentary on north-south relations. Internet users who were either witnesses or personally involved in the Internet crime scene were cynical about the potential for Internet connectivity to incorporate marginalized societies, such as their own, into the global economy, a claim that is made as part of the debate over the digital divide. They expressed the conviction that in order to succeed in the global economy they had to work against rather than in cooperation with prevailing powers. These powers provided them with no legitimate position from which to acquire capital or participate productively in the global economy. These activities, however, have had a negative effect on representations of Africa and Africans in virtual spaces leading to an exacerbation of stereotypes and have served, in some online venues, to reinforce a racist discourse of black criminality.

A Typology of Internet Fraud and Scams - Defining Deviance

Nigerian 419 e-mails[1] are a widely known scam associated with the West Africa region. In these e-mails the author often claims to be a wealthy former member of the corrupt Nigerian government needing to quickly transfer money out of the country. The extraordinary circumstances are explained by the death (often by plane or car crash or murder by political opponents) of a family member or business contact. The e-mail recipient is asked to provide assistance often by making their bank account available for the money transfer. As a reward, the recipient is promised a hefty percentage of the gain often in the amount of several million pounds. Victims are asked to pay upfront fees for bribes or other costs and this money disappears. There are a number of variations on this e-mail scam including ones about lottery winnings, church projects, or business deals, all falling roughly into the same category. The e-mails are not limited to the Nigerian political scene and authors often claim to be from other African countries. They describe political problems and civil wars on the continent to provide a concrete reference point that is meant to create a sense of plausibility. The conflict over diamond mines in Sierra Leone and Liberia and the seizure of white-owned farm land in Zimbabwe are some of the plot points that have been employed. While Nigeria continues to be commonly identified as the source of these e-mails, the content locates them more broadly on the African continent.[2]

The sorts of scam strategies that Internet users (scammers and non-scammers alike) in Accra described were similar to the Nigerian approach that employed misrepresentation and persuasive story-telling. However, scammers in Accra used simpler stories that did not reference the region's political history. They often initiated contact with potential victims through chat rooms or dating websites instead of e-mail. Rather than pose as a wealthy government official, young male scammers took on an alternate female personae while online in order to find a foreign boyfriend. These scammers worked with a few contacts at a time rather than using machine harvested e-mail addresses to send out mass e-mails. Invariably the primary scammer was male, although he might recruit a sister or a female friend to assist by taking phone calls from the foreign boyfriend and by sitting in front of a web cam while the scammer typed. Once the boyfriend was properly seduced the scammer would invent a scenario. He

might ask for money to pay for travel so that they could meet in person or he might claim a family member was gravely ill and ask for help with medical expenses. In contrast to the Nigerian approach, the Ghanaian scammers tended to appeal to the sexual desires and altruism of foreigners more often than their greed.

Another approach was the use of stolen credit card numbers to make purchases on e-commerce sites. Credit card numbers were obtained from contacts overseas or from local four star hotels among the few places where credit cards were accepted and commonly used in Accra. Some used a website to generate credit card numbers although most agreed that this was fairly ineffective. The purchases made this way (often electronics or fashion inspired by American hip-hop and rap videos) were shipped to a friend in the U.S. or U.K. who re-routed them to Ghana where the fraudster resold the goods for cash. The use of an intermediary was necessary since many e-commerce sites did not ship to Ghana (where few people have or use credit cards) and a similar process of misrepresentation and story-telling was often used to woo foreign intermediaries if friends or family abroad were not available. It was clear from my observations that *attempts* were being made to use credit cards in Accra's Internet cafés. From time to time I saw young men at Internet cafés copying credit card numbers off of hand-written lists or from e-mails into e-commerce sites. However, I never witnessed anyone succeed with these practices.

In the broader context of Internet use these were the forms of use that were invariably defined by Internet users in Accra as deviant. However, these were not the only forms of Internet use in Accra that made use of knowing misrepresentations. More generally, the Internet was used to contact people abroad to make requests for assistance with finances or migration. These contacts abroad could be foreigners or they could be family or friends from Ghana who had migrated. To represent oneself favourably and sympathetically online was, of course, the goal. From speaking with Ghanaians living abroad I learned that requests from family in Ghana were often treated with scepticism since they could involve misrepresentations. Samuel, a Ghanaian working as a social worker in the U.S. noted, "*they will even tell you stories about 'well I'm not feeling well the doctor says this' it's medical, so you send money to them. Then they just go and spend the money…*" To a certain extent this problem arose from a misunderstanding

between those abroad and those in Ghana who believed those outside (family or foreigners) to be stingy (or racist in the case of some foreigners) and themselves as legitimately in need of the money. As Samuel added, "*the concern has always been like every other family…they always think that you are making too much money, you're here, so you have to send them money.*" This motive for misrepresentation (stinginess, greed, the failure of the wealthy to redistribute wealth) is a theme that carries through to other forms of Internet use including Internet crimes.

Beyond cases of what would be considered socially acceptable misrepresentation for financial gain, there were, in contrast, examples of legitimate gains made over the Internet that were portrayed as transgressive. For example, a few young men described how, as schoolboys, they used to go to the café in groups and visit websites to request shipment of CDs of computer gambling games or free bibles. Among friends, they would hold a competition to see who could get the most copies. The magic of 'gaining something for nothing' through the Internet provided a thrill. At the same time this behaviour was criticized in the same way many criticized Internet crime. One of these former schoolboys, Kwaku, described the motive for CD and book collecting as, "*you just want to be greedy, that is the reason....*" Some of this sense of greed or criminality related to different perceptions of value. The level of general poverty in Accra is such that access to books and papers are fairly limited. While in work environments in developed countries we may feel like we are swimming, or even drowning, in papers, in Accra to give someone your business card was treated with reverence as a material gift. Business cards were referred to as 'complimentary' cards highlighting its characterization as a gift. Similarly, from time to time people I encountered in Accra brandished creased and stained 'letterhead' from an organization as proof of their affiliation, but did not have the resources to provide me with a copy. Some of this reverence around paper relates to the power of affiliation and having contacts, but some of it is also about what producers in the north see as valueless being interpreted as valuable by consumers in the south.

Local interpretations of value and distinctions made on a case by case basis between need and greed explain how, amongst similar activities, some could be interpreted as deviant and others as socially acceptable. The nature of the social tie and the level of obligation between giver and receiver was another factor. Financial gains

made through established ties of obligation where some form of misrepresentation was employed (i.e. a non-existent illness, money sent for a school book is used for something else) was a gray area. This rationale of need was also taken up by Internet scammers and fraudsters as justification for their activities. On the issue of obligation, a young woman who had assisted a male friend with an Internet scam defended her role by asserting that it was her duty to help a friend whenever asked. This was true, she implied, despite any moral reservations she might have about the activity. One reason gender-switching Internet scams are defined as deviant is the non-legitimacy of the obligation between the male scammer and foreign boyfriend by virtue of the scammers misrepresented gender. Obligation and need were justifications that overrode moral transgressions in online interaction drawing a distinction between how Internet users defined Internet crime/deviance in opposition to ordinary and harmless misrepresentation. Internet users often contextualized rumours about Internet crime using this rationale of need versus greed providing an instant register of their position as sympathizer or critic of these activities.

Rumours Generate a Discourse of Meaning about the Internet

In media-saturated societies, dominant messages about new ICTs often diffuse through marketing campaigns, the news media, the education system, and/or the government. Studies of these formal communication systems have shown how these public discourses attempt to structure and motivate use and make sense of the Internet and other technologies for users (Haddon 1992; Hubak 1996; Mackay 1997; Lally 2002). However, in Accra the information about ICTs that filtered through these formal systems was limited. The Internet was primarily being consumed at the grassroots level by youth. These youth were clearly developing some of their own shared meanings sometimes by rearranging and reinterpreting the messages coming through formal channels such as the mainstream media and institutional discourses. As an alternative information source, Internet users also referred to rumours, a mechanism of communication far more informal than the news media or mass marketing, but a mass media nonetheless. Rumours provided a way of transporting and diffusing shared meanings about the Internet.

Rumours served as discursive units that were memorable and had entertainment-value making them durable and well-suited to travel widely.

As White notes, rumour "is a very poor term with which to discuss stories that the storytellers think of as true" (White 2000, pp. 58). It is only among sceptical outsiders that the term 'rumour' is used. When an ethnographer identifies a unit of speech as rumour it is a moment where she sheds the role of community member and 'believer' and turns a cold, analytical eye towards the phenomenon. That the same unit of speech can be called rumour by one person and fact by another is a way of circumscribing a group of people defining believers and non-believers, insiders and outsiders. Insiders do not necessarily constitute a community, but they likely have in common a set of concerns, beliefs, and assumptions that lend the rumour plausibility and this may extend from a common background (Shibutani 1966). For example in her study of rumours circulating within African-American communities Turner found many well-known rumours that had never been heard by white Americans. She also found that certain rumours were inverted and circulated in different forms and for different purposes within these two very heterogeneous groups defined by race[3] (Turner 1993). Internet crime rumours were primarily told by male youth expressing the concerns of that particular group within Ghanaian society. The analysis of these rumours can tell us something about these common concerns based in part on what they interpret as plausible.

However, plausibility and belief is a long way from unquestioned fact. While rumours were believed, and treated as true, they did not have the status of fact, instead marking out spaces of uncertainty and controversy. The teller uses a rumour as evidence, a way of convincing the listener. Latour refers to the way rhetorical strategies are pursued in language through associations such as the references in scientific papers (Latour 1987). This same process applies to all rumours. By telling a rumour, one refers to a source to support or defend the belief that corresponds with the story. 'I heard' or 'a friend told me' is a way of recruiting allies to bolster the claim by saying 'it's not just me.' A similar effect results from associating a belief with a concrete event. However, the inability of a belief to stand on its own as 'fact' without these allies is an indication that the issue is still contested. The use of a rumour is a way of establishing the plausibility of a belief by recruiting allies in the form of people and places. Rumours, in

this way, can also be employed to contest authority by opening up a closed debate and recruiting allies against official closed 'factual' statements (Kapferer 1990). In this sense I am arguing that rumours do not create belief out of thin air, but often draw from and provide reinterpretations and new evidence for existing beliefs or reflect the shifting of beliefs into new domains. Cohen argues along these lines that rumours match the mood of the group providing evidence to sanction what the group wanted to do anyways (Cohen 1972). For example, the notion in Ghana that Nigerians or people in Mamobi were the ones committing crimes such as armed robberies preceded and fed easily into the belief that these same groups were the ones doing Internet fraud.

Rumours have a certain notoriety because people will accept as plausible what later turns out to be completely false. However, rumours are not necessarily false and are sometimes self-fulfilling (Shibutani 1966; Kapferer 1990). Rumours convey information that is important and consequential to cope with situations of uncertainty and therefore often lead to action (Allport and Postman 1965; Kapferer 1990). Rumours often accuse individuals, groups, or institutions of deviant or criminal behaviour. These accusations of deviance can shape how the accused is treated stimulating action or inaction. Ambiguity is an important factor in the identification of deviant groups. Cohen argues that scapegoating occurs in situations of maximum ambiguity. He notes that in labelling 'folk devils,' a collective sense-making process identifies meaning and causes in order to reduce the discomfort of this uncertainty and to develop a response (Cohen 1972). One category of these collective accusations are rumours about the criminal activities of corporations that target African-Americans as consumers. For example, a rumour spread that Church's Chicken put something in their food that led black men to become sterile and this resulted in boycotts (Turner 1993). Recently in August 2005 rumours about violent mobs and armed gang members (that later proved to be false) resulted in victims suffering and dying in the aftermath of Hurricane Katrina by preventing aid from reaching those left homeless and immobile by the disaster. In the case of Hurricane Katrina, rumours were believable enough to be widely circulated by the media and by high-level government officials. Therefore the notoriety of rumours relates to the potential for injustice to result when groups are labelled deviant and actions are taken against them based on what seemed plausible, but was false or exaggerated information.

Exaggeration is another relevant aspect of rumour and 'moral panics.' We can expect rumours to shape perceptions of the Internet in a unique way because of the characteristics of the kind of narratives that travel this way. Rumours are not about ordinary experiences. They are entertaining, best or worst-case scenarios. Similarly, the news media's sensationalist Internet panic routine highlighting addiction, abduction, and adultery reflects that what is 'newsworthy' are notable, extreme cases, not typifications. Both rumours and the news media communicate stories that are, "not grounded in normality" (Kapferer 1990, pp. 42). Yet the public often interpret these notable stories as being representative of some larger trend, as shown by recent examinations of how perceptions of risk relate to media coverage (Glassner 1999). This quality of rumour shaped how the Internet was perceived by those who heard rumours about Internet crime. As a consequence extreme cases of outrageously successful Internet crime (whether celebrated or lamented) were over-represented in the public discourse. This evoked both fear and an amplified sense of the efficacy of Internet crime and Internet use more generally since users did not hear about people wasting time, money, or making only small gains through the Internet.

The nature of rumours makes them a durable mechanism for transporting social meaning. Rumours are re-told because they reflect things that matter to those who hear them and are therefore memorable. The number of people who will potentially receive and pass on a rumour depends on how plausible it seems and how important and consequential the information it conveys. In the case of Internet crime, through rumours young Internet café users expressed shared concerns about making a living, getting ahead, losing money, and moral behaviour. Rumours also reflected how young Internet café users imagine themselves in relation to their peers, foreigners, and the opposite sex. Because rumours are treated as true they lead to the actions that would follow from those beliefs. The examples in this section demonstrate how rumours are not 'idle talk' and are not spread only by the naïve or uneducated or only in the absence of formal mass media. I have defined rumours above to show how they should be treated seriously and analytically as an influential source of information that may lead to action and therefore as an influence on both material and symbolic aspects of technology appropriation.

Structure and Strategy of Rumours about Internet Crime

Internet crime rumours existed in several forms and were told by different groups of Internet users for different purposes. Many were told as 'success stories' emphasizing the prosperous outcomes of these activities. These were typically told by young men who had attempted Internet fraud or scams themselves. Others were told as tales of deceit highlighting the scamming process and the misrepresentations scammers carry out in their forays online. Those who told 'deceit' rumours often contextualized them within stories about defending foreigners from scams. This served as a way to position themselves as affiliated with foreigners in a protective capacity serving as cultural insiders. Rumours were also told as victimization stories. These were told by both men and women and described local rather than foreign victims revealing a greater sense of vulnerability and a less morally sound portrait of these activities. In these various modes young Ghanaians describe Internet crime as an attractive activity or as an activity that was feared or lamented. However, all rumours about Internet crime took for granted that Internet crime activities were widespread and successful.

'Success stories' often told by aspiring scammers tended to be the most elaborate Internet crime rumours and had a common structure. They started with the acquisition of a link to wealth located abroad. This was either a personified link (such as a boyfriend from a dating website) or a non-personified link such as a functioning credit card. The scammer/fraudster used the link to gain money or goods through Internet purchases or money transfers from the scam victim. In the narratives' resolution the scammer effected a total life transformation where his gains provided a jumpstart to legitimate, sustainable, and prosperous adult status. Scammers disappeared from the scene after their big gain. "I think he lives abroad now," was a typical epilogue to a scamming story. Internet crime was never described as a permanent way of life, but rather a means to an end. These rumours served as fantasies of capital accumulation.

A particularly detailed example of a scamming success story is the one I was told about a young man who gained $20,000 through a scam. The scammer was said to have posed as a woman on the Internet. "She" found an American male chat partner whom she convinced to pay for her schooling in the U.S. The scammer went so far as to apply for and gain acceptance to an American university as a woman. The chat partner paid the

school fees directly to the school in the U.S. Then the scammer cancelled his enrolment and took the refunded money. He used half of it to buy a house and the other half to buy treasury bills using the interest to buy and sell ladies clothes and shoes.

Much more can be said about each of the elements in this general rumour structure to understand how meaning is generated about the Internet and the tellers relationship to the technology. In deconstructing rumours a number of questions can be asked such as: What institutions, what documents, and what local or foreign people were involved? What were the nationalities and the genders of the people involved? What goods or monetary amounts were gained? How was trust established and the victim persuaded? What were the consequences of the events that took place? I will address some of these questions in the following section by looking at some commonalities in Internet crime rumours, particularly the various ways Internet crime victims and perpetrators were characterized.

Rumours and Self-representation Strategies, the Preoccupation with Morality and Efficacy

Internet crime rumours played a significant role in strategies for constructing desirable representations of self and community. Rumours could serve as both self-confirmation and as 'impression management' for those who told them (Paine 1967; Goffman 1971). These rumours were used by Internet café users primarily to establish themselves as either *good* or *effective* (or ideally both) in relation to the Internet. These two qualities reflect a shared interest among Internet users in the new opportunities presented by the Internet as well as the moral trade-offs potentially required to pursue those opportunities. Through rumours Internet users cast characters, including themselves, in an unfolding drama around Internet crime. The following conversation between an admitted scammer, an Internet user, and myself demonstrates the 'casting' of characters:

Gabby: "*sometimes the people whose credit cards are being used are these rich people…they don't really notice it, the money is reduced.*"
Kwadjo: "*laptop to Bill Gates is a peanut."*
Gabby: "*he will not see it. Last time I heard on the news that this lady, Oprah Winfrey, $60 million dollars was missing on the credit card or something like that whilst all the things the money was used for she didn't order them. And I don't know whether they arrested people who bought the things.*"
Kwadjo: "*60 million dollars!*"
Jenna: "*but are most Americans like Oprah or like Bill Gates?*"
Gabby: "*eh hehh, well if I get the credit card of Bill Gates…*"

This conversation is an example of how foreign celebrities or sports stars were sometimes cast as scam 'victims' who were impervious to harm. Similarly to Gabby's comment above about Oprah Winfrey, Daniel noted in his interview that, "*in Ghana here we have some people who are having …direct access to people's accounts. I learned some months ago, they've utilized the money in Mike Owens* [Michael Owen football player for Liverpool] *account.*"[4] Invoking the names of famous celebrities in this way created distance between the criminal and victim of Internet crime. This distance maximized non-identification with scam victims in general since they were represented in these rumours by celebrities who are utterly different given their fame, wealth, and nationality. As Gabby noted, "*sometimes the people who's credit cards are being used are these rich people.*" My appeal (as the owner of several credit cards) for more accurate representation of scam victims in the comment, "*but are most Americans like Oprah or like Bill Gates,*" was ignored by Gabby who instead followed up by fantasizing about obtaining Bill Gates credit card. Internet users in this way construct a scenario where scammers are stealing from the very rich (who are unharmed by this act) and giving to the poor whom they define as themselves. For example Gabby who had spent 6 months attempting to scam people online claimed his deceitful activities were not greed but, "*because of circumstances that I'm doing it. Sometimes if I'm not really in need I wouldn't go and dupe somebody for money*." Through these casting strategies rumours

functioned to create a more morally sound relationship between young Internet café users in Accra and foreign 'victims' of Internet crime.

Constructing non-identification has historically been a strategy of moral justification and there is a precedent to the use of rumours to cast groups and individuals out of the human race entirely as superhuman or as subhuman. Celebrities, sports stars, the fabulously wealthy are the urban folk equivalent to superheroes and as such they represent something verging on superhuman. At the other extreme, as Turner notes, in the first encounter between English explorers and native Africans, both groups concluded that they had made contact with cannibals. For the colonialists who followed, this rumour was a strategy of attributing their greatest taboo to Africans casting them as subhuman and served to justify dehumanizing exploitation of their bodies and their land (Turner 1993). In this way victims of exploitation or crime are seen as already too depraved or too privileged to need or deserve a measure of human sympathy.

Just as Internet users 'cast' Internet crime victims to put their peers in a relationship with the Internet that was 'good' or morally sound, they also 'cast' Internet crime perpetrators using similar strategies of non-identification. This also served to maintain moral stability through the identification of scapegoats. For Internet users this was as simple as ascribing Internet crime to maligned local minority groups. In Accra these were Nigerians, Liberians (often refugees), Muslims, and people living in certain crowded slums in Accra such as Nima, Mamobi, or New Town. Muslims in Mamobi, whom I spent time with as part of my research, expressed an awareness of their marginalized and maligned status particularly in relation to the Internet. However, they found ways to reinterpret this status so that it could serve as an advantage. In Mamobi, Internet users often confirmed a tendency towards Internet crime activities in the area, but reframed it in a way to enhance their self-presentation strategies.

Mamobi is an area in central Accra that has historically been a destination for rural-urban migrants coming from the north of Ghana. For this reason it has a large Muslim population, but unlike neighbouring Nima which is dominantly Muslim its inhabitants are from a mixture of ethnic groups and there are significant numbers of Christians and people with traditional beliefs living there. Mamobi is part of a broader area that includes the adjacent neighbourhoods of Nima and Newtown. The significant

presence of minority groups in the area including Muslims, Nigerians, and people from smaller ethnic groups in the North of Ghana, contributes to this marginalization. In addition, the area is very poor, densely populated and has an inadequate infrastructure. People in Mamobi typically live in compound houses, shared among unrelated tenants or in various sorts of repurposed housing. In one area of Mamobi families were living in windowless structures that were constructed for market storage. While I was there, the water taps were locked and for months women and young people had been walking several miles early in the morning to buy and bring back water for daily needs. There were also major problems with sanitation, trouble with getting garbage picked up by the city, and a severe shortage of toilet facilities. Inhabitants of Mamobi referred to it as a 'Zongo' sometimes drawing an analogy to the American urban term 'ghetto.' 'Zongos' like Mamobi were seen as areas with high crime rates including armed robbery, mobile phone snatching, and Internet fraud. While acknowledging problems with crime in the area, there was also a general sense in this community that the government and their representatives were neglecting their needs and concerns.

In this marginalization, however, inhabitants were able to reframe their community's reputation to build an empowering narrative of self-sufficiency. Hamza, a young man I met at an Internet café in Mamobi, but who had lived in neighbouring Nima his whole life noted that as a result of their neglect by those running the government people in Nima have developed survival skills and self-reliance. He commented that they don't need access to any formal institutions for this, they resolve community problems on their own. Here he was implicitly referring to a sort of informal justice system[5] used to deal with problems of thievery and cheating. He added that by their sheer numbers the government depends on his community for votes and must win them over and in this sense they have power collectively.

In contrast, Mohammed, a very adept young Internet user and local community activist, used a similar reframing approach to enhance the self-portrait he constructed of himself but not his community. Rather than defend his peers from vilification he stated plainly, "*there are people who try to buy things…from outside like use credit cards to buy things…basically* ***I would say majority of the people who goes to the café that is what they do****… Yeah, yeah, in our community I would say it's true…so I don't take part in all*

these things. [added emphasis]" By distancing himself from his peers in the community he claims a status of 'apartness' and 'specialness' that was coherent with the way he portrayed himself as a diamond in the rough, a young man with a disadvantageous background who was fighting the odds to make a success of himself.

As mentioned before, rumours define a boundary between insiders and outsiders by revealing that those who hear and believe a certain kind of rumour are members of a group of shared interest. One rumour that was widespread among Internet café users in Mamobi was that I was not in fact a student and a researcher as I claimed, but rather, a CIA agent. This rather abruptly positioned me as a hostile and duplicitous outsider from the perspective of the group and although I worked very hard to explain myself and act in a reassuring manner I was never able to fully overcome it. Yet this rumour was another way in which young people reframed the way Mamobi was maligned as a 'Zongo,' in order to establish their *effectiveness* in relation to the Internet. It built on the assertion that the Internet was a powerful way of making contact with foreigners. If CIA agents were showing up in Mamobi it meant that local youth had become very effective at using the Internet, so much so that they were actually compelling foreigners to come to Ghana. It has been noted that rumours can have multiple interpretations and that individuals may tell the same rumour for different reasons (White 2000). The CIA agent rumour not only reflected a sense of efficacy, it also reflected the understanding that Mamobi is seen by outsiders as lawless and criminal and that white foreigners and other outsiders who present themselves as allies may actually be adversaries. Although I heard this rumour in other areas of Accra where I did research, it was most pervasive in Mamobi where I was generating so much suspicion amongst the customers at one Internet café that the owner of one Internet café suggested that I should stop coming by so frequently and in fact I felt compelled to stop visiting that café altogether.

The case of the CIA agent rumour reflects how Internet users were preoccupied not only with issues of morality, but also with positioning themselves as <u>effective</u> in relation to the Internet. The efficacy of Internet use was constructed in rumours through 'casting' strategies that amplified the perceived power of those connected in some way to Internet crime. Through the CIA agent rumour, I was being re-cast as someone more powerful than was the case. Pushing characters to extremes this way had a dual benefit.

It affirmed the efficacy of Internet crime by claiming contact made with the most powerful of foreigners, the largest sums of money, and even (by extension) powerful foreign government agencies such as the CIA. At the same time it maintained a sense of moral equilibrium since powerful figures are impervious to harm. Through these stories embellished with hyperbole, the potential for power among local youth through the use of the Internet began to seem not only possible, but limitless. In this way stories about celebrities and other powerful characters as Internet crime victims are useful to establish the Internet user as both 'good' *and* 'effective' in relation to the Internet.

'Good' and 'Effective' as a Contested Duality

However, to be both *'good'* and *'effective'* in relation to the Internet was a duality that was often difficult for Internet users to reconcile when they told stories about Internet crime perpetrators. As described in rumours, the most effective ways to make 'big gains' on the Internet were often also the least good. To get $20,000 from a foreign connection on the Internet likely meant doing something illegal and doing someone harm. Stories about Internet crime perpetrators forced the choice between 'good' (through non-identification) or 'effective' (through identification). Internet users employed a variety of strategies in an attempt to reconcile this tension. Kwadjo, tried to bridge this gap by drawing a comparison between Ghanaian women legitimately finding foreign boyfriends online and the Internet dating scams of people like Gabby. He commented, *"genuine people use the same procedure and it works,"* suggesting that rumours about criminal activities can also serve to affirm the efficacy of the Internet for legitimate uses.

Kwadjo's statement also points to an essential continuity between what young Ghanaians define as scams and what they define as legitimate Internet activities. In this way rumours about Internet crime could serve double duty affirming both legitimate and illegitimate Internet activities as efficacious. In addition to rumours about Internet crime, there were other rumours that circulated about online dating and Internet love. These took on the same structure of foreign link leading to a 'big gain' (in the form of visa invitation) and resulting in a transformation through marriage and moving abroad to join a foreign spouse. For example Ahmed, an Internet café operator, described a friend who

had met an American woman, chatted with her for four years and eventually moved to America to be with her. He noted, "*I know one day I will get the person who will help me.*" And added, "*Internet love…it happens....*" In all cases, rumours about 'big gains' whether obtained legitimately or not held to an assertion of efficacy often stated explicitly in the comments, "it works" or "it happens."

Daniel, is a good example of how this ambivalence can be contradictorily expressed by one person and tentatively incorporated into a single representation of the Internet. In a rumour (as shown above) he claimed, "*in Ghana here we have some people who are having access to Mike Owens account…*" but moments later added, "*and I don't know who did that, but I learned it's from Nigeria not in Ghana…but not in Ghana, not in Ghana actually.*" The first version of the rumour describes a group of *successful* Internet fraudsters to whom Daniel was a member by co-location as he notes when he says *'here in Ghana'* and this membership created a stronger identification between himself and the scammers. He could think of himself as part of an imagined movement of young men in Ghana who are very effective with the Internet despite the fact that he had not yet realized any gains on his own. However, in revising his story to note that Nigerians were the scammers, he renounces this membership suddenly mid-story. Later in the conversation he also asserted repeatedly that he wasn't attempting credit card fraud anymore and wasn't really using the Internet much. In the context of a story about a friend who sought help from supernatural forces to scam money from foreigners he reaffirmed his positioning as 'good' noting, "*I'm a Christian so I don't indulge myself in those things.*" Daniel was also the only person interviewed who identified his Internet crime story explicitly as 'rumour.' By representing himself in a multiplicity of ways Daniel attempted to position himself simultaneously as an authoritative insider to Internet crime activities, a reformed former-fraudster, as well as a savvy and sceptical outsider. His self-awareness reflects the complexity and ambivalence of being both 'effective' and 'good' in relation to the Internet, something he sought to accomplish by actively shifting back and forth in this single conversation between multiple perspectives.

White, a historian, sees rumours as a potentially revealing primary source for historical research noting that rumour, "may reveal an intellectual world of fears and fantasies, ideas and claims that have not been studied before. The contradictory elements

of rumour can be read to reveal the complications of everyday concerns" (White 2000, pp. 86). The way Internet users expressed identification and at other times non-identification with Internet scammers and fraudsters through rumours was one of these contradictory elements reflecting the desire among Internet café users to say both "it was us" and "it was not us" in order to maintain both notions of local mastery and moral rightness. At the same time in these rumours Internet users reflect how they see themselves in relation to their peers, family, neighbourhood, nation, and the rest of the world. They express perceptions about the opportunities that are open to them (or the lack thereof) as they chart a course into adult life. In Mamobi, young people perceive themselves as marginalized and consequently describe a wariness of outsiders and a suspicion that their performance of concern concealed an underlying self-interest. However, rather than portraying themselves merely as unfortunate victims in these positionings, they describe their peers (and by extension themselves) as controllers of a powerful subversive force gained through mastery over new technologies.

How Rumours were put into Practice at the Human-machine Interface

The previous examination of the structure and effect of rumours about Internet crime was primarily an analysis of discourse. The truth claims of Internet users and their rhetorical strategies yielded a socially constructed definition of Internet crime and the relationship of Internet users to this phenomenon. Through these particular performances of speech about Internet crime, they appropriated the technology in a way that was not wholly reliant on personal experience or first-hand observations of the technology in use. Instead through rumours Internet users relied on others, their peers in particular, to define what the Internet is and what it is useful for. Since rumours are told about consequential issues and are treated as true, they can and do (as do all forms of discourse) shape the way users go about their activities online. Both aspiring scammers and fraudsters and Internet users who saw themselves as potential scam victims used the Internet in a way that coherently followed from treating these rumours as belief.

Rumours by identifying the threat of Internet crime gave Internet users a concrete course of action. Kwadjo for example had heard that it was Nigerians who were doing

Internet scams so he refused to interact with Nigerians when he was online. However, the constitutive force of these social definitions of the Internet had a limit. Describing and believing that the Internet is a place where one can get the credit card numbers of wealthy and famous people does not, alas, make it so. Internet users still had to contend with the resistance of the material objects making up the Internet, the people contacted through the Internet, and a variety of other related resources. Rumours related to this other dimension of technology practice by laying out the diversity of objects and people involved and their expected forces. In that sense rumours could be instructive. However rumours served an alternate function to the corresponding arrangements made material. They served to amplify the sense of efficacy and morality of Internet users. The activities of Internet fraud (as opposed to speech about these activities) were intended, of course, to yield monetary gain.

Rumours and other verbal descriptions of Internet scams (sometimes based on direct observation of scam attempts by friends) indicated that Internet scammers and fraudsters recognized the diverse materiality of Internet crime. They were in a classic sense 'heterogeneous engineers' bringing together the forces of humans and non-humans (including, but not limited to the Internet) in an effective arrangement in order to accomplish some desired outcome (Callon and Law 1997). The list of resources required could be quite extensive. Kwaku, a friend of several scammers who himself admitted he had attempted credit card fraud noted (as paraphrased from my fieldnotes):

> *Mostly people on chat only want to talk to the opposite sex. If you want to get money from a person, pose as a woman. Have to get a picture of a female and create a female account in chat. Have to get a girl who will help you. She will receive the [phone] calls. Some use their sister or friend or girlfriend or girlfriend's sister. Get words at loveingyou.com. Give them a time to meet online. Gradually send pictures over time, one by one. Will gradually get to the point where marriage is considered. Then you (scammer) tell them you need visa, passport, etc. need money to get these things. Tell male chat partner abroad that they need to send you money for this. Send by Western Union. Get the picture of the woman on websites (if you don't get a picture of your sister) but doesn't know*

what the websites are. Using picture of your sister is "very risky." Can use a webcam too if you are using your sister or friend. Go to the Internet café together. Otherwise tell the chat partner there is no webcam at the café you use. What happens when the money comes at Western Union since you are using a female name? Knows a guy who can use Corel Draw to design a fake ID card. Put the fake name and a real photo on it.

This is Internet use, but it is also the use of one's sister, Western Union, Corel Draw, forged documents, and a foreign chat partner. However, the real test to the model of successful Internet scamming as it was constituted in rumours was when attempts to scam people or to use stolen credit cards yielded no financial gain, when the people and things involved failed to cooperate as expected. *Describing* the forces exerted by the resources involved did not, in the end, create these forces. The representation of the Internet in speech did not match that particular experience Internet users had with the Internet itself.

When I pushed Internet scammers to explain their failure to make gains on the Internet, they did not call into question the underlying model about Internet use and monetary gains communicated in rumours. Instead, unsuccessful Internet scammers and fraudsters explained their failures as a problem of certain resources lacking adequate force. They described resources not acting as expected or to the presence of hidden forces that they hadn't previously accounted for. The hidden forces they described were wide-ranging. For example, Gabby referred to supernatural forces as preventing his scam victims from cooperating. He believed that his aunt was visiting a fetish priest and that this was serving as a spiritual block that prevented him from succeeding with the people he contacted over the Internet. He was also having some trouble with a girlfriend whom he broke up with shortly after consulting his own fetish priest. In the case of Stephen a non-scammer who was aggressively but unsuccessfully seeking invitations to go abroad from chat partners, he attributed his inability to get invitations and an offer of accommodations to racism. He noted that, "*[chat partners] will tell you that they don't have accommodation for you, they can only receive you and you go to the hotel…they can't allow you to stay with them. And I don't know maybe, there are some white people*

who don't like blacks." In these cases, Internet users pointed to the ill intentions of other people as preventing their success. This negative force reflected the perception that the Internet was embedded within other systems and subject to corresponding social forces.

Internet scammers also recognized problems with the force or agency coming from non-human resources. Kwaku noted that the successful fraudsters are the ones with "powerful credit cards" and that he had only been able to get credit card numbers from a number generating website, and that these numbers were admittedly weak. Similarly Daniel noted that successful scammers use "powerful words" such as love quotes from loveingyou.com that have such an effect that, as Kwaku describes it, "*…the person will fall in love with you…So if they use that words it will change people's mind.*" Success with Internet scams depended on access to these resources and that often (as in the case of working credit card numbers) required money[6]. Internet scammers perceived that even in the 'something for nothing' game of Internet fraud they could potentially be blocked by a lack of adequate capital to invest.

To address their lack of success on the Internet, scammers proposed recruiting additional resources or substituting one resource in for another one that was not working as expected. Gabby, for example, was planning to go back to his fetish priest to break the block his aunt had against him once he had saved up enough money to pay for this assistance with the supernatural. The model of 'big gains' described in rumours was never described as fundamentally inaccurate, merely as imprecise or incomplete. In this sense scammers alluded to the imperfect relationship between how speech represented the material world of Internet crime and how they interacted with and experienced this at the human-machine interface. This incompleteness meant that they were not obliged to make the material world match with how they represented it in speech. Therefore rumours about Internet crime could persist despite the disconfirmation of alternate experiences.

Manipulating Representations of Africa in Virtual Space

In utopian futurist formulations, communication technologies provide a sense of immediacy that inevitably leads to mutual understanding. Robins notes that this

formulation also entails the denial of difference or asymmetry between individuals. Divisiveness and discord are described as stemming from distance and mediation, from not seeing each other transparently (Robins 1995). Contemporary IT marketing messages have also taken up this vision of a unified language leading to mutual understanding that will erase race, age, and infirmity (Nakamura 2002). This techno-utopian proposal of technology as a solution to social problems has been around at least since the invention of the telephone and telegraph (Marvin 1988). This discursive trope has been similarly taken up in conceptualizing the digital divide which is described in its simplest form as a problem whereby some have access to computing technologies and some do not. By gaining access (and the requisite literacies) the implication is that 'have-nots' will enjoy the same advantages (the same access to information and to global markets) as the 'haves.' This is particularly relevant in relation to Ghana, a place typically conceived of as on the 'have-not' side of the digital divide. Therefore Internet users in Accra are former 'have-nots' who are now supposed to be enjoying the benefits of technology access.

However, scammers rejected the formulation of social exclusion proposed by the digital divide. Although they had technology access, they felt that they did not have access to the benefits of the global economy for other reasons. In general, Internet users in Accra held the view that the world was characterized by unequal wealth distribution such that massive accumulations of capital were located primarily in the West. These accumulations could only be accessed by getting past those already advantageously positioned in the global economic system who served as gatekeepers. Scammers believed that greed, ethnocentrism, and/or racial prejudice on the part of these gatekeepers prevented their access to this accumulation of capital by legitimate means. So scammers resorted to illegitimate methods in order to circumvent this barrier.

Despite the political stance of some scammers, their online activities did not constitute a social movement. They were meant primarily as survival strategies. Scammers did not, as in the case of 'social bandits,' speak about redistributing their gains, improving society, or righting wrongs (Hobsbawm 2000[1969]). They did not envision any alteration to the status quo through their activities. The understandings they had about global disparities of wealth and opportunity were simply facts of life that they

had to face with realistic strategies in order to realize personal success. The dynamic scammers criticized placed them as allies with all Africans against foreign exploitation. However, there were questions among Internet users in Accra as to whether the scammers genuinely targeted wealthy foreigners or whether they parasitically scammed their own people as well. Rumours about local victims of Internet crime and the fears many users had about losing money to scammers reflect a local perception of scammers as self-interested, not as community minded. Neither scammers nor the communities they come from think of these scamming activities in a consistent way as political acts. Their activities did not constitute a fully realized social movement and should rather be interpreted as a social commentary.

Few Internet users shared the degree of cynicism expressed by Internet scammers about the impossibility of legitimate access to the global economy via Internet use. Many believed that it *was* possible for them to participate in and gain from socially acceptable forms of online business. However, many Internet users also expressed a sense of persistent disadvantage in their online activities that was consistent with the scammer's perspective. For example, Isaac in his attempts to find a business partner online was repeatedly told that he would need to come up with some capital of his own to invest. Similarly, Sandra had used the Internet to get all the information and clients she needed to start a profitable label-making business, but despite her solid business plan she had several times been denied a bank loan to buy a $15,000 label making machine. Frank spent hours and hours on the Internet trying to sell traditional glass beads to people via e-mail, but struggled with gaining trust from his customers. He talked about his salesmanship work as 'hustling' requiring his wits and social savvy to get by. 'Hustling' is a typical survival strategy of those without other employment, but one that does not usually involve serious crime[7]. It is a strategy that is, in a positive sense, pursued on the terms of the hustler and with the potential for gain and growth (Hall *et al*. 1978). There was general agreement among Internet users that lacking start-up capital and given their position as latecomers from marginalized societies, gaining some form of access to the global economy would not be a straightforward matter. It would require struggle and compromise. It was among Internet scammers that those compromises took on the shape of more extreme forms of deviance and misrepresentation.

Scammers were acutely aware of their need to persuasively perform for and therefore understand the foreign 'gaze.' They developed elaborate online personas that were designed to be appealing and believable to foreigners. They sought to appeal to the altruism, sexual desires and/or greed of foreigners and often drew on Western stereotypes of Africans (as impoverished, as corrupt) to create believability. In order to construct these personas they studied the foreign 'gaze' in media representations and in both online and offline interaction with foreigners to understand how they, as Africans, were perceived by foreigners.

Goffman's theories about how people perform for each other in social situations are applicable in speaking about Internet crime as a drama of persuasion (Goffman 1971). People ordinarily try to control the impression they make on others through verbal and non-verbal cues. Scammers were heavily invested in 'impression management' since their success entirely resets on their ability to dupe foreigners by carrying out a believable self-representation. The Internet provided a rather unique 'front stage' that, through digital mediation, provided opportunities for dramatic manipulations of identity. The non-verbal cues that are usually impossible to control such as race, gender, and geographic location are easier to conceal in mediated online environments than they are in face to face interaction. Scammers recruited a variety of disparate elements to construct these identities, including female friends and family, digital photos of black models, websites with 'love quotes,' fake ID cards, web cams, etc. Scammers stepped out of themselves to imagine the foreigners 'gaze' and sought to meet the expectations of that 'gaze' in a way that gave them a strategic advantage.

In terms of the foreign 'gaze,' just as Mamobians recognized themselves as marginalized within Accra, Ghanaians recognized themselves as marginalized in the world. Ghanaians were aware of the way the foreign media represents Africa as homogenously war-torn, poverty stricken, chaotic, and perhaps even hopeless. This was a source of frustration among Ghanaians who felt these characterizations were in many ways inaccurate in relation to Ghana. The countries status as HIPC[8] was also a source of shame and was sometimes publicly lamented in church services or in the media. To be deemed highly-indebted and poor and therefore in need of special foreign aid and debt relief resulted in a sense of inadequacy amongst many Ghanaians. This sensitivity about

foreign representation meant that friends and strangers alike at times tried to dissuade me when I attempted to take photos of scenes that might suggest poverty. This was one way in which people in Ghana were able to effect control over their representation to the outside world, but beyond this they had few other options for challenging the foreign representations that were imposed on them.

Ghanaians found that many foreigners they met in chat rooms were quite ignorant about Ghana and Africa more generally. Some people refused to talk to them after discovering that they were Ghanaian whereas others expressed fear over visiting Africa, a fear of violence or disease. An offensive statement a number of Ghanaians reported hearing from foreign chat partners was the suggestion that Africans *lived in trees* whether consciously or subconsciously employing the dehumanizing tactic of imagining Africans into identity with animals and out of the human race entirely.

Through exposure to media representations and through interactions with foreigners Ghanaians confronted their construction as the 'other' by Westerners. In the conventional sense the other is the socially-constructed portrait that is built by one group about another. This other serves primarily to affirm the identity of the group constructing the portrait, to reduce the anxiety and threat of difference. This portrait is constructed in terms of what the viewer has that the viewed lacks. The other is defined by absence. It is always a warped portrait emerging as it does out of self-interest and the desire for self-affirmation. Media and online sources have played a role in delivering images of the other in print, broadcast, and digital forms (Morley and Robins 1995; Nakamura 2002). Internet scammers similarly constructed Westerners as other in developing their online personas, but using a form of double consciousness. Westerners are described in terms of what they have that Africans lack. The 'Western other' is therefore an inversion of the African 'other.' As Africans are typified in the West by poverty-stricken famine victims on the television, Westerners are typified by wealthy celebrities. Whereas Africans are needy, Westerners are greedy. This mutually agreed upon asymmetry is exaggerated into mutual misunderstanding.

Young Internet scammers like Gabby believed these foreign perceptions of Africa could be usefully manipulated perhaps even in a way that served as subversive justice. Previous examples in Mamobi have shown how the marginalization brought on by the

perception of outsiders could be reinterpreted into a more positive self-representation, but Internet scammers believed it could also be used against Westerners as a tool for extracting money. As young Ghanaians imagined themselves as 'other', they found a limited set of archetypal identities they could perform that would be treated as believable and sympathetic by foreigners. They believed that their desires for the capital needed to start a legitimate business or to go to an IT school were not persuasive enough to grab the attention of a foreign contact, as Gabby notes "*… if I put my real picture or if I tell you this…my family background, my status, my financial background you will not even want to talk to me.*" Scammers came to understand the foreign 'gaze' as one that expected an asymmetry, expected and responded to them as needy, but not as potential partners. It expected medical bills, not IT schools. In response scammers created alternate identities that catered to the perceived prejudices of their foreign chat partners. They performed as a needy African orphan, as an attractive African woman seeking rescue, as a participant or victim of a corrupt African government regime, or as a God-fearing Christian pastor seeking funds to help improve his impoverished community. The performance of neediness maintains continuity with the history of foreign involvement in Ghana conforming to established relationships of patronage or dependency that have taken on a multitude of forms starting from missionary work through colonialism into the contemporary age of development work.

An example of how Christianity and ideas about poverty were used in the construction of an online personae is found in the following letter written by a young Ghanaian man:

> "DEAR PAUL CROUCH ' I AM SENDING THIS TO YA BEGGING YA TO HELP THIS MAN OF GOD IN GHANA AFRICA ' I FOUND HIM ON THE NET AND HE ADOPTED ME AS HIS MOM BUT W/ TEARS IN MY EYES I AM AN ELDERLY WOMAN ON S SECURITY AND HAVE NO MEANS TO DO WHAT'S NECESSARY FOR HIM …HE DO0ES NOT HAVE FOOD/ SHELTER AMND MONEY AND SLEEPS AT TIMES AT THE BUS STATION AND PARK AS HE IS" BLACK" AND NO ONE GIVES HIM AID AND CANNOT GET A JOB

OF THIS REASON …[I AM A WHITE WOMAN FROM THE SOUTH] GOD BLASS YA !!

[scammers name and address omitted]"

The scammer who wrote the above letter took on the personae of an elderly American woman to appeal on his behalf to an American televangelist. In this strategy of persuasion, he constructs a third-person narrator to be a sympathetic, but unbiased advocate. This narrator, by virtue of being the same religion, nationality, and race as the televangelist was thought to be a more persuasive figure. This reflected the young man's perception that sympathy was difficult to generate across great social differences. Some discordant details in the letter stand out: his comment about not being able to get a job in Ghana because he is "black" and his reference to sleeping in a park. Neither detail is applicable to the situation Ghana where the population is dominantly black and there are no urban parks. In this letter he references Western images of racial minority and poverty illustrating an extensive awareness of not only African media representations, but also representations of the African diaspora.

The manipulation of foreign stereotypes for financial gain is a strategy that precedes the Internet. Gabby started exploiting these stereotypes when he was still in secondary school. Before he used the Internet he tried to send letters to pen pals appealing for money. He noted, "*if I have the contact address of these pen pals I will write to them and if they start corresponding I will start asking money. My parents are dead, please help me, I'm in Africa, you know the situation in Africa. You see Africa is never printed as it is out of the continent Africa. You understand me, or the fact that if you are not in Africa all the pictures you see in Africa are diseases…. These nice, nice places will not be broadcasted...*" In his comments, Gabby explicitly implicates both foreign print and broadcast media. An awareness of this tendency towards misrepresentation in the foreign media has been with him since his childhood.

Yaw who claimed to be in touch with a number of very successful scammers operating out of a large, centrally located Internet café told stories that cast Westerners in a darker light, not as ignorant people susceptible to the influence of their biased media, but as blatantly prejudiced and as actively disadvantaging Ghanaians and other Africans

and therefore deserving of the Internet crimes committed against them. Yaw noted that his friends don't feel bad about scamming because, he ambiguously notes, '*the say the white man is the biggest thief*.[9]' This is yet one more example of the morality of Internet crime being re-imagined in strategies of 'casting.' In this case Internet crime victims are cast as racists or criminals rather than the wealthy celebrities previously described. Victimizing a criminal becomes an expression of vigilante justice rather than crime. Yaw also pointed to resentment over the harsh restrictions on migration that prevent young Ghanaians from seeking better opportunities overseas, noting that '*because they can't go to America they will take money from Americans*.' He added that Westerners perceive Africans as not clever and capable enough to carry out a scam. In a satisfying sense of revenge against this racism, it is precisely by this prejudice that these Westerners are taken advantage of.

Internet scammers felt compelled to work within a set of false perceptions and distorted archetypes that they viewed as alien and even openly resented. In this way they were operating with what de Certeau defines as a tactic. A tactic is the strategic work done by 'the weak' who lack a space of their own from which to relate to what is external. The lack of space is determined when external forces refuse to recognize that position as 'the weak' define it for themselves. This forces 'the weak' to relocate. A tactic, "*insinuates itself into the other's place*" (de Certeau 1984, pp. 18). Internet scammers were doing this in both a material and discursive space. As de Certeau notes, "*the weak must continually turn to their own ends forces alien to them*" (de Certeau 1984, pp. xix) Through 'tactics' Internet fraudsters and scammers sought to subvert and transcend a disadvantageous position within society and the world using the very representations of Africa defined apart from and against them by hegemonic forces.

The implications of the many *failed* Internet scams are detrimental to Ghanaian society. Scammers constructed stereotyped identities in a ploy to subvert foreigners by using their prejudice and ignorance against them. However, in failing to make gains, their subversion was reversed and turned back on them. While pursuing scams and fraud they constructed alien identities that further reinforced stereotypes they resented. The potential gains seemed to justify the sacrifice of time and money, but when these gains went unrealized there was a personal cost as well as a cost to society through the negative

impact on national reputation and the representation of Ghanaians and Africans more generally in cyberspace. In some cases these online representations are being appropriated by Westerners into discourses of black criminality and inferiority.

An example of how scammers' stereotyped performances of self are reappropriated in the West is found the in a practice referred to as 'scambaiting.' This activity taken up by small groups of individuals living primarily in industrialized nations who have received the 419 scam e-mails typically associated with Nigerians serves as a form of vigilante justice against scammers. Their strategies, at their worst, include degrading ridicule where those who attempt scams are tricked into sending photographs where they are shown holding sexually explicit signs reading, for example, 'mi semen stains' or 'I love cocky sucky' or doing foolish things like holding bread or fish on their heads. These photos are displayed on one particular scambaiting site in a "Trophy Room," that includes scammers most of whom identify themselves as Nigerians, as well as some Ghanaians, and people from other West African countries[10]. A separate "Hall of Shame" also ridicules the technical skills of scammers by displaying inexpertly forged documents warning that after viewing these documents, "you may feel the urge to laugh uncontrollably.[11]" The reader is therefore invited to laugh at the technical (and by extension educational or intellectual) inferiority of the scammers.

In an 'ethics of scambaiting' page the author make use of scammers own statements to promote a notion of why scambaiting activities are justified based on, "some very basic facts and concepts" that centre on Nigerian society as a whole being fundamentally pathological. These 'facts' include the puritanical condemnation of work ethic expressed in the statement, "there is a culture in Nigeria that esteems those who can make money without working." Similarly the author seeks to erase the culpability of industrialized nations who have any historical involvement in Nigeria by commenting that, "a huge amount of valuable natural resources" but remains poor because of *their own* corruption, "right through the whole of the society – from the top down." Scamming therefore comes to be represented amongst these vigilante anti-scammers in the West as evidence of the criminality, foolishness, and ineptness of Nigerian (if not West African) societies[12]. This is a perfect example of what Gilroy refers to as the racist discourse of

black criminality where acts of crime committed by blacks are seen as representative of African or Caribbean cultures as a whole (Gilroy 1987).

The effect of scamming activities on representations of Africa and Africans in virtual space is significant. It is an unfortunate reality that Nigerian 419 e-mail scams are likely to be the primary association Westerners have between the Internet and West Africa. Internet users, including scammers, create representations of Africans which they leave as traces in virtual space. These traces are appropriated and reframed by non-Africans, sometimes in disturbing ways. Both scams that are not believed and those that are contribute to this, the former by providing fodder for the black criminality discourse, the latter through the production by scammers and consumption by scam victims of stereotyped online personas. On this issue of representations, it has been proposed that technology may be a platform where members of marginalized societies can represent themselves, make their interests known, and reach a wider public (Schech 2002). However, Internet scammers point out that beyond the technological capabilities of publication, there is the important matter of audience. Scammers felt that they could not get attention without misrepresenting themselves in a stereotyped fashion, that the foreign 'gaze' was deaf to more authentic representations. For this reason they were willingly complicit in the exacerbation of the stereotypes they portrayed.

The potential for large financial gains and the total life transformation they implied seemed to justify playing into these stereotypes, although some young Ghanaians recognized that this came at a cost to their national reputation. Kwaku commented on this in describing the outcome of his attempts to ask for small amounts of money from chat partners, "*I tried it…I think I lost the friendship that I had with the friend…if I write to her she doesn't reply. So I say we should stop doing those things, but if we keep on asking for money people will think maybe we are beggars…It is very bad. Because we are smart people we can use our brains because when Ghanaians go to the U.S. if you go most of the time they are on top. They go to the Universities and schools they are on top of the schools…we should use our intelligence and stop requesting money and people referring to us as… beggars. That's what will help us and it will create a good image for people in the nation too.*" Despite its promise, in the end, for aspiring scammers the

Internet did not yield the subversive and transformative opportunities they sought. This fantasy remained tantalizingly out of reach.

Conclusion

As evidenced by the example of Internet fraud, the introduction of a new technology to society can have a destabilizing effect. Interaction with the technology may be a process of restoration as well as one of development. A new technology begins as an alien object, undefined, and unpredictable. In the early stages, technologies present opportunities as well as threats that are ambiguous and poorly understood. Internet fraud emerged as a particular threat posed by interaction with the Internet, a threat to the morality of perpetrators and to the finances of victims. It is possible to reduce the ambiguity of such a threat so that technology users may continue to use the technology. However in order to do so it is necessary for the technology to be made predictable. Lally, drawing from Giddens, terms this resolution, 'ontological security,' the arrangement that makes a technology and its properties known (Giddens 1991; Lally 2002). Certain practices, in this case sharing rumours, can create a sense of predictability. Kwaku's avoidance of Nigerians in cyberspace based on the rumour that they were the ones doing Internet fraud is an example of how predictability is constructed in speech to manage threat. Ultimately, as I discovered by talking to former Internet users in Accra, if a restoration cannot be realized and the unpredictability introduced by a new technology cannot be reduced users may resort to rejecting the technology and reverting to a state of non-use.

As argued in the introduction to this thesis, speech acts are deployed in the appropriation of a new technology, not in an otherworldly representational role, but much more directly, in the course of everyday practices. Instances of speech create orderings out of representations of technologies, humans, and the multitude of objects making up the material world. These orderings accomplish certain outcomes. In the case of Internet fraud rumours, the outcome was the restoration and development of individual and group identity in relation to the Internet. This outcome was accomplished in rumour through 'casting' strategies where the speaker defined himself, the Internet, victims of fraud, and

perpetrators of fraud by putting these characters into a particular relationship to one another. The effect on identity was to restore the speaker and his co-horts as moral human beings and to simultaneously underscore their effectiveness with new technologies.

Internet users recognized that the modality of rumour did not provide a complete account of the Internet, nor did their particular experiences at the computer interface. Some combination of the two produced the Internet socially. The Internet was constituted by rumour practices when it was used to seek 'big gains' in a way that corresponded with these rumours. However, the frequent non-compliance of the components that make up the Internet to conform to this plan for making 'big gains' is evidence against the notion that the technology is determined by rumour practices alone. The Internet is still *more* than the rumours about it. Rumours have an effect on actions taken at the user interface to the extent that they are believed. Their effect was limited since the Internet itself (including the technological components and foreign chat partners) did not subscribe to these rumours.

Westerners often had a quite different response to Internet scams and the highly self-aware performance of self that scammers constructed for the foreign 'gaze.' The various reactions of Westerners to these scams and more generally to the presence of Ghanaians and other West Africans in certain online forums demonstrates that a sense of cultural understanding and incorporation of the marginal into the mainstream is sometimes far from the outcome of connectivity. There is no obligation among those who already inhabit cyberspace to resolve misunderstandings, to learn from those they encounter, or to tolerate what they may perceive as incoherent or wrong. Instead, as members of marginalized societies emerge in virtual spaces behaving and communicating in unexpected and often unwelcome ways they are, in some circumstances, further vilified and rendered as a threat to Western modernity and order rather than being welcomed as potential members.

This chapter has been centrally concerned with the way the informal media mechanism of rumour circulated meanings among Internet users. As a communication practice it was characterized by a lack of hierarchy, a one-to-one relationship between speaker and listener, and the trust and solidarity that such a communicative act reaffirmed

between the two. It had a chain structure. This practice was one particular configuration of collective appropriation, a mechanism that produced shared understandings and the replication of certain patterns of use. In the next chapter additional configurations, those defined by religious faith and practice will be considered. Through the church service and particularly the church sermon, another mode of collective appropriation is explored. Once again the way Internet users perceive and constitute a relationship with the West is of central concern. However, through religion, particularly Christian faiths, users found an alternate engagement through compatibility and collaboration rather than the adversarial nature of fraud.

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[1] 419 is commonly referred to as the Nigerian police code for fraud. Alternately they are called advance fee fraud referring to the 'fees' that are collected in 'advance' of the big money transfer payoff promised by scammers to their victims.

[2] sample e-mails were gathered from several websites (http://www.scamorama.com/, http://www.419eater.com/) and my own personal collection.

[3] I encountered while in Accra an example of how opposing rumors can circulate with different groups. In the spring an American student on a study abroad at the University of Legon died of cerebral malaria. A friend of mine, another American studying at Legon told me a 'rumor' that the unfortunate student had been rushed critically ill to a hospital by some American friends and that the doctors refused to treat him because the friends had been 'rude' to the staff. He was rushed to another hospital, but by then it was too late and he died. A story which taps into the fears among foreign students about health, safety, and foreigners animosity. I was also told by this friend that some members of the Ghanaian staff who ran the exchange program had been talking quite a bit about the supposed pot smoking habits of the student suggesting that recreational drug use was linked in some way to his death. Weeks later another friend relayed a rumor to me (while on a boat travelling to Timbuktu, Mali of all places) about the same ill-fated student that he had heard from some Ghanaian students from the University. They had heard that the American student died in direct consequence of a pot smoking session with friends where he was so high that he neglected to go to the hospital at all. This example shows two groups divided by race, nationality, and privilege constructing and expressing ideas about drug use, and the neglect, irresponsibility, or incompetence of the other. It indicates opposing ascriptions of blame and reveals latent tensions in relations between foreign and non-foreign, white and black members of the University community.

[4] it is worth noting here that these young Ghanaians thought of credit cards as bank accounts with a certain amount of money already in them. Many didn't have a notion of credit card limits or what a typical limit would be. This is additional evidence of how distant they actually were from those effectively committing Internet fraud.

[5] outsiders might alternately apply the more derogatory term 'vigilante justice'

[6] in 2005 in Accra, a working credit card number reportedly cost around $7.

[7] 'Hustling' can involve the sorts of harmless misrepresentations mentioned previously such as seeking money from a wealthy relative for non-existent health problem. It can sometimes involve small-scale law breaking such as zoning violations or not reporting income gained from under the table work arrangements. It might involve social manipulation or, for example, when taxi drivers in Accra charge much higher prices to foreigners than they do to locals.

[8] A World Bank initiative has identified the poorest and most indebted countries to target for debt relief. 18 countries have been approved for this debt relief and are identified by the acronym HIPC which stands for 'heavily indebted poor countries.' Ghana is one of these 18 countries.

[9] Italicized comments in single quotation marks are paraphrases from my fieldnotes and may vary slightly from the speakers actual words. Comments in double quotes are transcribed from tape recorded interviews.

[10] See http://www.419eater.com/html/trophy_room.htm, accessed April 27, 2006
[11] See http://www.419eater.com/html/hall_of_shame.htm, accessed April 27, 2006
[12] See http://www.419eater.com/html/ethics.htm, accessed April 27, 2006

Chapter 5 Connecting and Configuring Religion

Religious practice and belief provided a central framework shaping the way many Internet users talked about their social relationships, aspirations, as well as their use of technologies like the Internet. In speaking of religion, we are dealing with another domain of meaning-making. The church sermon as well as church member 'testimonials' were additional forms of 'small media' like the rumours examined in the last chapter that contributed to local understandings of new technologies like the Internet. Through these communication practices, technology users (and non-users) collectively appropriated and re-produced technology. However, this set of practices diverged from rumour in certain ways. It communicated believability, in part, through the hierarchical mode of the church sermon where the message is sustained by the preacher's authority. The relationship is one-to-many. The ritual of message dissemination made use of diverse materials such as anointing oils, photographs, and sacred books – most importantly, the Koran and the Bible. Not only in the church service, but through other religious practices, individuals performed an ideal relationship between themselves and technology. This rehearsal of the Internet's function and value reaffirmed (while also narrowing) their expectations about what would or should take place when they sat down at the computer keyboard in the Internet café.

When speaking about their religious affiliations Internet users often described Ghana as a setting of religious diversity and tolerance. Indeed, Ghana has not been marked by the episodes of violence in the name of religion that have afflicted neighbouring Nigeria. At the same time, there was competition between religious groups with a huge variety of Christian denominations represented in Accra. In the course of this research, when asked about their religion, most Ghanaians identified themselves as Christians. This was consistent with the most recently available statistical data that suggests a predominantly Christian population (Pentecostals in particular) in the urban capital (Meyer 2006). In rural areas traditional animist beliefs are more widespread and are practiced more openly while the northern part of the country is home to a large Muslim population. Among the Christian faiths present in Ghana, researchers have noted a primary division between mainline or orthodox churches (Presbyterian, Methodist, and Catholic churches among others) and the more recent rising popularity of Pentecostal,

Charismatic evangelical sects. In the past few decades Pentecostalism has emerged as the "main current" in Ghanaian Christianity (Meyer 2006). The neighbourhoods of Accra that housed significant Muslim populations (namely Nima, Mamobi, and Newtown) were among the poorest in the city and Muslims constituted an often maligned religious and ethnic minority. While religious orientations showed geographical tendencies in Ghana[1], they were not strictly bounded by geography any more than the citizens themselves and particularly in the urban capital, people with various religious affiliations intermingled on a daily basis.

Since the 1980s religion in Ghana has had an increasingly visible and influential role in public spaces. Popular newer strains of Christianity, in particular, pervade broadcast and print media. As Birgit Meyer notes, the liberalization of broadcast media (beginning in 1992) and the transfer of control from state authority to private business yielded an abundance of religious media content (Meyer 2006). This religious media took on a variety of formats including Christian music videos, televangelism, and local movies with religious themes and came from both local and foreign sources. As of 2007 this trend in broadcast programming continues unabated. With the arrival of a new wave of communication technologies including the Internet and mobile phones in Accra religious followers have discovered new possibilities for religious practice, self-education, and evangelism. Notably, Internet users connected the Internet to religion more readily than to notions of secular and information-based development of the kind promulgated by Development institutions. This chapter will examine what it was about various religious orientations in Accra that users recognized as compatible with the Internet. A close evaluation of two cases (one a Christian pastor, the other a young man relying on the quasi-traditional services of a 'Malam') will highlight particular configurations users constructed that welded technology to religious practice.

Islamic practices in conjunction with the Internet were not as readily apparent as Christian practices in Accra and therefore are not covered extensively in this chapter. Since much of the research for this thesis was conducted in Mamobi many Muslims were interviewed. Religious rituals such as Friday prayers and the pilgrimage to Mecca were discussed in these interviews, but in a way completely detached from uses of the Internet cafe. The lack of material relates, in part, to the suppression of these religious followers

by the evangelical Christian majority. Muslims made it clear that there were widespread negative connotations to their religious affiliation in Ghana. They were less eager to speak about their faith in interviews and did not have the same imperative to proselytize and seek converts as many Christians. The lack of material is itself an indication of the place Muslims have in Ghanaian society, one that is marginalized and kept private, but is not overtly under attack by the government or citizenry.

These initial comments on technology in religious practice in Ghana contradict an institutional perspective on Development emerging in the West that sees the diffusion of the Internet and other media technologies as promoting a more democratic and often more secular society (i.e. Ott and Rosser 2000; Ott and Smith 2001). New and old media technologies, according to this view, are crucial to social and economic progress by distributing shared, impersonal information and knowledge and providing open and inclusive opportunities for political debate. But this progress is only possible if the media is freed of government regulation and censorship. On the issue of democratization, researchers who study the Internet as a space of political engagement have frequently turned to Habermas' definition of the public sphere as an heuristic device. Habermas defines the public sphere as a space open to all comers, where participants relate as equals engaging in rational debate apart from the instrumental demands of business and economic survival and free from interference by State authority (Habermas 1991[1962]). Researchers have used this ideal to analyze whether the rapid diffusion of the Internet marks the re-emergence of the public sphere out of an era of political apathy and corporate controlled media and, in some geographies, repression of political speech by the state (Rheingold 1993; Herring 1993; Poster 1995; Ess 1996; Eickelman and Salvatore 2002; Bernal 2005). Habermas addresses religion directly in his argument indicating that in the wake of a functioning public sphere religion will increasingly become marginalized and privatized, since ostensibly it is incompatible with a purely rational mode of discussion. He judges that this process of secularization is a desirable continuation of the Enlightenment project. In accordance with his thesis, so far as the Internet functions as a public sphere and becomes more and more central to the public life of a citizenry, we could expect religion to retreat to private and dedicated spaces - the home as well as churches, mosques, temples, and shrines.

Scholarly criticism of the 'public sphere' is complex and plentiful. Habermas' secularization thesis in particular has been compellingly and convincingly refuted in recent years (Casanova 1994; Asad 2003). Anthropologists have widely observed the highly Eurocentric nature of his argument and its inapplicability in many non-Western geographies (Hackett 2005; Meyer and Moors 2006). Yet, Habermas' secularization thesis marks a (by now) classic modernist argument opposing religion as cultural superstition to a universal rationality. This is echoed in development approaches that treat new technologies as tools for engendering decentralized rational thought and political debate (against autocratic, tradition-based information dissemination) in the developing world. The basic structure of this opposition appears in more recent scholarly work that deals with technology explicitly. A notable example is Manuel Castells' examination of religious fundamentalist movements. Castells describes these collectives of both Muslims and Christians as attempts at, "constructing social and personal identity on the basis of images of the past and projecting them into a utopian future, to overcome unbearable present times" (Castells 1997, pp. 25). He depicts a process of disconnection: from secular society and from global processes. These movements, he argues, constitute a reaction to and wilful rejection of globalisation, a process fundamentally facilitated by new network technologies such as the Internet (Castells 1997). His argument places religious belief and practice in opposition to new technologies, analogous to the opposition between tradition and progress, the past and the future.

Yet Christian and Muslim fundamentalist movements, as Castells himself acknowledges, are not the only trend towards increasing religiosity in contemporary societies. His observations do not generalize to a broader opposition between religion and globalisation. How could the ongoing growth and spread of world religions through migration, mass media, and missionary work be described as other than evidence of globalisation itself? Furthermore, the use of the Internet and other network technologies by fundamentalist groups suggests a readiness to align with and reappropriate (rather than escape from or destroy) the tools that facilitate globalizing processes. Whereas particular fundamentalist movements may indeed involve a turning away from the wider world and its material goods and a reassertion of something defined with great intentionality by

followers as *local*, this provides an incomplete picture of contemporary religion and does not reflect the trends in religious practice that are taking place in Accra in particular.

Quite the opposite of Castells' observations, many Christians in Accra valued the way their faith connected them into a global movement. This was demonstrated by the number of churches I encountered that incorporated the word 'international' into their name, even those that had no foreign branches. Alexander, a young evangelical pastor who spent time ministering to people on the Internet, treated his religious affiliation as an equalizer that allowed him to transcend differences in race, ethnicity, and nationality. This is not to say that Internet users in Accra used their religious affiliations principally for the political benefits and social opportunities. This is the implication of Castells' argument that positions religious fundamentalisms alongside nationalisms, gender, and sexual identity movements as one among many contemporary socio-political strategies. Castells' analysis is a disenchantment of religion. Beyond this worldly existence, bodies of religious belief in Ghana provided theories about the interconnection between visible and invisible forces, between the physical and spiritual realms. Practices to aid believers in operating on and in the world also accompanied these religious ontologies. Religion, like the Internet, was viewed as a system that individuals could operate to realize certain desired outcomes. Social scientists have previously recognized that religion frequently functions as a technology, a theory of forces that can be applied to social relations, the material world, and the self (Malinowski 1935; Gell 1988; Miller and Slater 2000). This is a partial explanation for what Internet users in Accra recognized as a compatibility between religion and technology, separate realms from a modernist perspective. It is the theme of religion as technology (not religion as identity or religion as socio-political strategy) that resonated most with religions many diverse forms in Accra.

A Brief History of Religious Movements and Modernity in Ghana

Anthropological research has highlighted tensions in the religious landscape in Ghana as competing practices and beliefs evolve (through individual and collective efforts) to address contemporary concerns. Three issues in particular were actively contested in churches, the mass media, and other public spaces in Ghana. The first was a

tension between the way emerging strains of religious belief critique and resist, but also *facilitate* processes of modernization and globalization. Secondly, while many Ghanaians consumed diverse religious media (music, sermons, movies) and expressed an openness to alternate religious practices, there was also a vociferous public debate about competing practices (Christian vs. animist for example) and whether they could be effectively and legitimately mixed. A third tension was between the focus on salvation versus prosperity. The first Protestant and Catholic missionary churches in Ghana emphasized modest living and the promise of rewards in the after life. The growing popularity of American Pentecostalism presented a challenge to this perspective touting the 'prosperity gospel' that links religious faith to rewards (spiritual, social, and material) in this lifetime (Gifford 1990; Hackett 1995; Meyer 1998). Certainly, these debates contributed to the notion that religious movements serve as the preserver of all things traditional and as a way to detach from the burdens of worldly existence. At the same time these tensions demonstrate ambivalence. The flip side of this traditionalism was the powerful undertow of religious trends that were progressive, pragmatic, and syncretic adapting to and reframing ongoing social and economic changes in Ghana.

The public role of religion in Ghana was closely tied to popular culture. Religious content (mostly Christian) was pervasive on the radio and television and in video-films, CDs, and cassette tapes. Religious practice was also highly visible and audible in the streets of Accra. This was primarily true of Christian churches that commonly amplified their sermons and music on Sundays as well as on weeknights to capture the attention of anyone nearby[2]. Local music forms frequently conveyed religious messages and gospel music videos were shown daily on network television. Ghanaian and Nigerian video-films, very popular in Accra, dealt primarily with the religio-supernatural cosmologies that fascinated many Ghanaians. These videos were often heavy on spectacle and typically dealt with the machinations of evil forces. Videos supplied information about the workings of the supernatural realm, and inspirational or cautionary tales about the triumph of good over evil and the proper moral path to ensure safety and genuine prosperity (Meyer 2006). Videos as well as popular literature were widely consumed for their entertainment value, but also their educative role on matters of religion and morality (Newell 2000).

The prominence of religious content in the mass media is evidence that modern technologies have not compromised the role of religious faith in Ghana, but rather provided new platforms for its diffusion. A historical example of the role of religious practice in simultaneously resisting and facilitating processes of modernization is the rise of anti-witchcraft cults in West Africa that reached a peak in the 1940s and 50s sparked by rapid wealth accumulation among individuals benefiting from economic transition. This wealth drew suspicion as the work of occult practices when it seemed mysteriously or suddenly acquired and when the traditional obligation to redistribute wealth among kin was ignored (Parish 2003). These cults emerged in the wake of colonialism with its accompanying transformations – the shift to cash crops, a money economy, as well as substantial migration to growing urban areas. Anti-witchcraft rituals emerged as a way of addressing the threats posed by these changes. But these rituals did not simply reject these new economic and political realities, they also served those with entrepreneurial aspirations. Entrepreneurs sought to unburden themselves of any spiritual blocks (put in place by the activities of witches) that were hindering their success in business endeavours (Parish 2002). These cults re-asserted traditional norms of wealth redistribution and kinship obligation (by targeting transgressors) and at the same time aided entrepreneurial activities that spanned traditional social ties and new economic and political structures.

In contemporary times, evolving religious practices have also addressed an increasing reliance on and desire for foreign material goods including electronics, cars, clothing, and household items. Meyer has examined the perception amongst Pentecostal Christians that these foreign imports present a threat. The danger is that if one is not vigilant one's possessions can potentially possess the owner in the most tangible sense: cars can take control from their drivers, underwear can cause unwanted sexual dreams (Meyer 1998; Verrips and Meyer 2001)[3]. Through religious practices among Ghanaian Pentecostals such as prayer over 'enchanted' foreign consumer goods, the threat they pose is eliminated facilitating their unencumbered use (Meyer 1998). Parish describes the acknowledgement of this danger via religious practices as a 'reflexive consumption' that engages with the ambivalence of change and of a constantly expanding and diversifying material culture whose origins are increasingly obscured, a distinctive twist

on Marx's notion of commodity fetishism (Parish 2002). Religious affiliation, with its accompanying code of ethical social conduct, also eased fears about the new possibilities of social ties to strangers through new communication technologies like the Internet. For some Internet users in Accra, religious faith and trust in the fellow Christians they encountered online yielded a sense of protection and safety in virtual space, i.e. that they were being watched over by a divine presence and would not come to harm.

In their competition for members, churches and other religious institutions were under pressure to recognize and address contemporary and worldly concerns. Christians in Accra described a religious consumer culture with churchgoers discussing often subtle preferences and understandings of differing styles of worship, systems linking faithfulness to goal attainment, the appeal of certain charismatic preachers, and pragmatic church programs that promise assistance with job searching and education. The urban setting provided good access to radio, television, and other communication technologies as well as a great variety of churches and other religious institutions. Many of the individuals I encountered in the course of this research made use of these diverse resources to sample and compare religious teachings. Many had already converted from the church of their childhood to another of their choosing. Conversion from Christianity to Islam and vice versa although more rare was not unheard of. Pastors, shrine priests, malams, and others who provided religious services correspondingly recognized the need to appeal to potential clients. Parish described competing advertisements among shrine priests of the particular gods they represent and the unique skills these gods hold and assistance they are able to provide to those who visit their shrines (Parish 2003). Traditional figures like these shrine priests competed alongside the more recently arrived World religions to attract clients.

The diverse religious influences in Ghana and the competition among various denominations created many opportunities to combine the practices of competing religions. There was a tension around whether this was legitimate and moral or whether it was imperative to maintain purity of practice. Mixing traditional animism with Christian practice was particularly controversial. Pentecostal faiths emphasized the birth of a new self that involved the full rejection of traditional animist practices (such as the use of talismans and fetish) as the work of the devil (Meyer 2006). However, while pure

Christian faith was publicly proclaimed, an underground market of traditional treatments and rituals remained active. The pious Christian who secretly seeks the assistance of fetish priests for problems with illness or infertility (portrayed as dangerous, dishonest, or even humorous behaviour) is a locally familiar archetype, one frequently portrayed in Ghanaian and Nigerian films.

Faithful Christians and Muslims did not always recognize that they were transgressing the teachings of a particular faith as old and new beliefs have merged together and become indistinct. Christian denominations that have gained popularity in Ghana have undergone a process of adaptation where in various ways they have been made coherent with a pre-existing ordering of natural and supernatural worlds. The resulting religious syncretism of this adaptive process is common to the emergence of world religions throughout Africa (Horton 1971). Therefore despite the exhortation to reject old ways, what took place in Pentecostal Christian churches (and to a lesser extent the orthodox churches) in Ghana was a syncretic blend of new beliefs with pre-existing worldviews. For example, rather than reject witchcraft and fetish practices as figments of the imagination, these beliefs became incorporated into a Christian worldview as the work of the devil (Meyer 1995). The harmful activities of family members against one another (a key theme in witchcraft narratives in Ghana) and the effective (albeit demonic) use of fetish often featured in stories told by pastors in their sermons and by ordinary church members in their testimonials. Even for pious, loyal Christians in Ghana witchcraft and fetish often remained very real, very dangerous forces and therefore still played a role in their everyday lives and sometimes had a bearing on how they used the Internet.

The way Pentecostal ontologies are able to accommodate aspects of traditional belief is offered as an explanation for their rapid and growing popularity in Ghana (Meyer 1998). Pentecostalism was positioned by followers in Ghana as the most effective tool for battling supernatural adversity in well-known traditional forms. Furthermore, these emerging Pentecostal churches were appealing because, “they claim to have the answers to Ghanaians’ existential problems and especially to their most pressing existential problem, economic survival” (Gifford 2004, pp. ix). Pentecostal churches promoted a distinctly ‘this-worldly’ approach that was not limited to securing a

spot in the afterlife, but was also concerned with achieving material success while still on earth. A tension between the focus on salvation in the afterlife versus prosperity in this life emerged from competing Christian worldviews. Notably, since the 'prosperity gospel' emphasized rewards realized in this lifetime, it could be *tested* since the consequences of religious practice could be observed before death. It was also coherent with a traditional, animist worldview that has always been concerned with ways of operating (via the supernatural) on the natural and social world to realize desired outcomes. The way individuals adopted, combined, and abandoned those religious practices that proved ineffective was, in part, a process of testing. The testability of a 'this-worldly' orientation contributed to the way religion was employed as a technology in Accra.

Sense-Making Through Religious Ritual

Like the sense-making role of rumours (discussed in the last chapter) religious rituals similarly primed users' attitudes towards technology and structured their expectations. Religious rituals served as a space of sense-making that involved particular forms of speech. The church sermon and church member testimonials had much in common with the rumours addressed in the last chapter. Both served as a form of informal media relayed through verbal, in-person communication. Both set expectations and shaped behaviour relying on 'true stories' for their impact.

Technologies (old and new) occasionally made appearances in sermons and testimonials and therefore this space of media production contributed to the way technology was publicly framed. The particular message conveyed depended on the church following from tensions between this-worldly and other-worldly orientations. For example, at a Presbyterian church in Accra, the sermon one week centred on the theme 'God's unchanging word in a changing world.' The pastor grouped new technologies including the Internet together with obscene music and the World Trade Centre bombings as threatening changes that Christians could seek respite from in God's word. This was coherent with the tendency in Orthodox churches to emphasize an alternate spiritual realm as distinct from a 'worldly' (a term used pejoratively) existence. By contrast, at a

Ghanaian charismatic church in the outskirts of London, the pastor, addressing a well-educated and cosmopolitan audience of Ghanaian immigrants, exhorted church members to embrace and learn about new computing technologies. He specifically called out Microsoft PowerPoint and Word in his pragmatic message about the work skills necessary for prospering in the West. At this church a laptop and projector were set up to show song lyrics and church events as a demonstration of the 'new way' the church was advocating (Burrell and Anderson forthcoming). A testimonial given at a very large 'mega church' in Accra provided a similar account of maintaining a hold in the technological domain. The church member stood up to describe a dream he had about the electronics he kept in his room being stolen. He interpreted the dream as a prophetic warning and decided to move his belongings. When he told the landlady about it, she was unworried. One night when he was at a prayer service at the church, someone broke into the house and stole many of the landlady's belongings, but none of his since he had heeded his prophetic dream and moved the items. The landlady, he noted, belonged to a competing church so his testimonial communicated a message about the ineffectiveness of competing faiths and their inability to aid technology consumption. The young man treated the technologies he owned as prized objects (setting them apart from other types of belongings) and his religious faith had a direct impact on his ability to maintain this desirable state of ownership. His dream and the actions he took in response also reflect how the ownership of such goods generated a vulnerability that required extraordinary measures, even supernatural intervention to cope with.

A variety of materials ranging from modern commodities to items from the natural world played a role in the services provided by traditional fetish or shrine priests that incorporated modern commodities and items from the natural world. For example, Parish described how American Express cards "plastered with herbs" by shrine priests were used as talismans to aid those seeking success in business (Parish 2002). Douglas and Isherwood theorized that material objects, distinct from their use in human subsistence, serve as an information system. They indicated that, "goods are…needed for making visible and stable the categories of culture" (Douglas and Isherwood 1979, pp. 59). The visibility and stability of the material world (in opposition to the dynamism and impermanence of living organisms) has been noted as important to sense making

(Douglas and Isherwood 1979), to cognition (Hutchins 1995), and to social order (Law 1994). Most importantly according to these theorists is the way the material world mediates between humans serving to synchronize collectives of individuals. The manipulation of materials (both commodities distributed via local and global markets but also gathered from the natural world) makes memorable and persistent a specified ordering and organization. Therefore fetish objects and talismans embody a particular set of priorities, beliefs, and desired outcomes, reasserted by viewing and manipulating these items and communicated socially where others view and manipulate these items or when they are transferred between individuals.

Along with the stability offered whenever meaning is embedded and expressed in the material world, the use of these materials in the context of religion also involves ritualized practice. Gell argues that religious rituals are often organized as an idealized form of everyday behaviour, a labourless 'something for nothing' routine that is the very definition of magic. Particularly when organized in this idealized form, these rituals serve a cognitive function, a performed rehearsal of not just any ordering, but of *ideal* processes and outcomes (Gell 1988). Rituals by definition are repeated periodically and therefore solidify perceived relations through rehearsal. This rehearsal serves as an insistent reminder, focusing attention on one structure of relations over other possibilities. Individuals or groups who request that these practices be carried out must make explicit what it is that they most desire. Ultimately through these rituals, they also make assertions about what forces and entities prevent or facilitate these desired outcomes. A consideration of sermons and testimonials, as well as the materiality of ritual and rituals cognitive function is a useful starting point and important connection to other ordering processes that have already been considered (i.e. rumours). However, in Accra there was also evidence of a more direct integration of technological objects into broader religious ontologies.

Rituals did not simply sit apart from technology, modelling and socially constructing its meaning and utility. The relationship between religion and technology was not limited to the symbolism of the former imposed on the latter, but was also about the complex interplay between supernatural and material forces and attempts by users to intervene and to delegate between the two. Supernatural forces that did not exist in

Western readings of how technologies operate (or fail to operate) on the world were evoked in appropriations of the Internet in Accra. Therefore to properly understand the technology practices of some Internet users, this spiritual realm had to be accounted for as well. This was particularly true for explaining the relentlessness of certain forms of Internet use (such as seeking financial support and educational opportunities from pen pals) that did not seem to produce the desired results for most users. The Internet was only one component in broader systems constructed by users and often the rigidity of technology practice was explained by adjustments users were actively making in other parts of the system (including adjustments in religious practice). To begin, the combination of Christianity and the Internet for networking to build social contacts will highlight how the two domains reconciled the inadequacies of one another.

Networking Christians and Christendom as a Network

Most mornings before heading into the hot and dusty traffic jam between the home where I was staying in East Legon and the city of Accra itself, I would gather to pray alongside the family of Arthur, the born-again Christian pastor who was my host. His prayer, addressed to Jesus included the ordinary appeals for protection, but included one additional request. The pastor asked Jesus to '*put us into contact with whomever can help us*.' Much like Internet use, religious rituals and practices were perceived as a set of techniques allowing individuals to extend themselves exerting a more powerful force of influence over broader social terrain. In this sense, if one fulfilled all the practices to gain the favour of Jesus (by observing Christian norms of conduct in relation to family and friends, attending church, tithing personal income, etc) he would, in turn, become the ultimate patron, an all-knowing, all-powerful figure networking behind the scenes on one's behalf.

Connections between the social and supernatural (and back again) were possible through proper Christian practice, but even without supernatural intervention Christianity offered a language and moral code that improved one's chances for connecting across cultural and geographic distances. Many Ghanaians explicitly recognized the importance of 'networking' and of knowing the right people and both Christianity and the Internet

served to expand the human social networks of those who appropriated these systems. The realm of Christendom is characterized by a common language, or in Castell's conceptualization, a mutually understood communication code (Castells 1996). A visit to any church service of any Christian denomination in Accra will illuminate these codes in the expression of Christian aphorisms – 'Jesus saves,' 'with God all things are possible.' Christianity supplied a way of speaking with coherence and recognition across cultural boundaries through the common ground of Christian faith, something that Internet users found useful online.

Alexander, a pastor who frequently visited the La Paz Internet café explicitly recognized this formation of Christendom as a network. He was among the few I encountered in Accra who had produced his own website. On the main page of the website Alexander and his wife are pictured in a wedding photo along with some basic information about the church including their weekly schedule. The site was designed not only to advertise the church he had started, but also to offer guidance and inspiration through selections from the Bible and pastoral commentary and advice. Another page, aptly titled 'Let's Network' begins with the story of the Good Samaritan. The text continues with an appeal to Christians of all denominations doted with references to 'common ground,' agreement, and fellowship,

> "*Friend, God gave us Christendom a common ground on which all of us can trod safely, and that is believing in Jesus Christ the only Son of God, through whom salvation has come to the world.*
>
> *The above statement is sufficient for you and I to agree upon no matter our affiliations, so that we can all have fellowship with one another. In that case, we would keep you posted by sending you our prayer request from time to time. You can also be a Financial Supporter to this work.*"

The pastor's approach employs a sense of sameness through religious affiliation (overriding any other memberships) and makes use of insider language to appeal to site visitors' sense of belonging. Through the Good Samaritan story he reminds his fellow

Christians of their obligation to assist. He segues into requests for financial support. Alexander followed this text with a list of desired technologies for the church including electronic music equipment, and a computer, printer, and scanner as well as plots of land for building a church auditorium, chairs and help with finding jobs for church members.

Despite the focus on the material needs of the church, Alexander envisioned what he was inspired to do on the Internet as an exchange. In his role as pastor he had something of value to contribute in his online encounters. He said that he spent most of his time online giving support and praying with foreigners that he met in chat rooms. He described in detail several relationships he had established online talking with people about problems in their romantic relationships or with family and those suffering from illness. In ongoing conversations with an American man, Alexander had advised him on his relationship with a woman from the Philippines, an unexpected pregnancy, and an engagement that was accepted and then broken. He described himself as an educator and counsellor online commenting, "*I'm trying to project that idea to the Internet, to people that look if you learn to walk in the presence of God with God you will not, no matter what you are going through you will not feel rejected, every day you will be experiencing the presence of God.*" Although aligned with the "prosperity gospel," his comments expressed a side of his religious faith that rejected the necessity of material gain for spiritual well-being. Furthermore, through his role as counsellor he positioned himself in a much more egalitarian relationship with the foreigners he encountered than the relationships described by many other Internet users in Accra that were often oriented primarily by patron-client and dependency relations. His Christian affiliation, particularly his status as a pastor, subverted the social hierarchies defined by his nationality, age, and economic status that might otherwise define his online interactions.

Alexander described the benefit of the Internet in collaboration with his Christian faith. Neither the Internet nor Christianity operated as effectively without the other. Both facilitated strong, sustained, social connections, but in different ways. The role for technology was one of *amplification* a way of broadcasting his message more widely to reach more people. He noted that "*I can use the Internet to reach the world… to sell out the ideas to people across the world that, look this is what the lord is using us to do…these are my visions.*" The Internet was not the only technology used to amplify his

message, he also sought support for purchasing (literally) amplifiers. A practice common in many Pentecostal churches in Accra was to use speakers to blast Sunday sermons so that 'the word of God' would reach those nearby who were not yet believers. Alexander's church service was, in fact, the loudest I ever attended while in Ghana amplified at ear-damaging decibel levels on low-quality speakers that desperately needed to be replaced. He described his desire to, *"hold the crusades and in Ghana here when we say crusades we mean mass evangelism. Right, you need powerful instruments, powerful machines that amplifies, which we don't have. Powerful speakers which we don't have to mount them up and preach the truth of Christ. And that is my vision…using the media to touch the world."* The Internet was placed on a continuum with stereo equipment – speakers and amplifiers – as a technology for carrying messages across time and space to reach as many people as possible.

With technology in place for amplifying his message, Alexander's Christian faith played a role in improving the quality of those new connections by relying on the obligation to be connected that was inherent to his Christian ideology. To approach the Internet as a Christian seeking other Christians was seen as a way to resolve the troubles many Internet users faced in finding a foreign chat partner who was "serious" meaning committed to an ongoing relationship that potentially included tangible forms of support. Even Christians in Accra who had not made the church their livelihood pursued similar strategies, using their faith as a filter on Internet content that would steer them towards a more effective, less dangerous, and higher quality communion with foreigners. Several emphasized that they spent time in Christian chat rooms as a way to find compatible chat partners and to avoid the immoral temptations of the Internet.

In describing his efforts to participate in Christian fellowship online Alexander underlined the role the Internet played in bridging vast distances. Christianity had the separate role of eliminating difference by serving as a common bond that superseded all other affiliations and identity markers. As he commented, "*The trust is there* [on the Internet] *to accept one no matter the race, no matter the tribe, no matter the nationality, no matter the continent. You know, it brings you together, it bridges you, you know…it makes you a family and at the end of the day you know that you're not alone even if you don't have anybody else to talk to, you can talk to somebody, Christian brother, far away,*

in Africa or in America. Or somewhere else in the part of the world." His description evoked classic utopian idealizations of cyberspace. He portrayed the Internet as a tool that allowed for the transcendence of an identity undesirably marked by race and nationality. This viewpoint echoed a hopeful and utopian view of new computing technologies also seen in IT marketing messages (Nakamura 2002) as well as some of the early studies of the Internet (Rheingold 1993; Turkle 1996). This vision was not common among the Internet users I interviewed and (demonstrating the range of viewpoints) was directly contradicted by cynical Internet scammers who saw the Internet as a space for manipulating foreigners' prejudice and lack of understanding. Alexander, by contrast, placed his faith in the capacity for human relations to be transformed, for the better, but not by the Internet alone. Like the Internet scammers, he recognized technology's inability to single-handedly correct the indifference of the Western world, and instead saw Christian ideology as the solution. Alexander's vision joined the Internet and Christianity as two complementary components of a larger project of social connectedness.

While Alexander principally described the advantages of his Christian faith on the Internet in social terms, he was also explicit about its supra-human dimensions and it was clearly more to him than an identity or socio-political strategy. Both newer strains of Pentecostal Christianity and traditional beliefs rely on a vast ontology comprised of entities and forces that are ordinarily invisible to human perception and that can be accessed and influenced only through special mediation. For faithful Pentecostal Christians an elaborate demonology that draws from traditional animist beliefs makes up a significant part of this ontology (Meyer 1998). Technologies and other material commodities are also embedded within this ontology and are subject to supernatural forces. Meyer provides an example in her examination of the video production industry in Ghana where she notes that there was a concern over videography equipment being tampered with by evil forces in the course of filming stories with a strong religious message (Meyer 2006). A few Internet users who were interviewed believed these sorts of supernatural forces could be manipulated with beneficial effects and discussed the possibility of using them to make their online interactions more effective. The perception

of this spiritual realm and how its forces relate to technology was an important aspect of the connection drawn between religion and technology in Accra.

Spiritual Entities in the Actor-Network

Alexander's vision of the virtual utopia realized by combining the Internet and Christianity expressed how the Internet, by itself was incomplete. The Internet, alone, could not answer the demand for social and economic transformation. An inability to realize expected gains through Internet use was not necessarily resolved through an adjustment in technical practices and was rarely attributed to a lack of technical proficiency. The reliance on religious practices to correct 'technical' breakdowns indicated that users perceived the Internet as embedded within broader force fields of the material, social, and supernatural. The question of the Internet's relationship to spiritual forces was resolved in idiosyncratic ways by users who had diverse views about how to appropriately delegate their efforts between the material world and the supernatural realm.

Clarence, a student at a local technical school, spoke directly and critically about this matter of delegation seeing Christianity as a force for progress that was often misinterpreted and over-relied on by church-goers. He noted that, "*the church is a nice place to build the economy. Europe and America was built by the missionaries…. Church was used to build, they contributed so much to the civilization of this world.*" Clarence saw the historical role and the future potential of churches as forces for modernization. He expressed admiration for Mensah Otabil, founder of the International Central Gospel Church, whose pragmatic sermons address economic problems and underdevelopment focusing on, what Clarence describes as, "*the real facts of life*." Yet, Clarence was critical of the way church-goers in Accra placed all their energy in church to the neglect of work and school observing that, "*Monday morning you're supposed to be at work or reading something, as early as 8 o'clock somebody is at the church praying that he wants to be rich. It's not magic like that. God doesn't work that way. That's a very big stumbling block. And if examinations are coming, you study, you don't pray. They drop their books, start going to churches, start going to conventions, crusades and*

they come and they fail their exams because they haven't learned. They want God to learn for them…So I'm seeing Christianity as a weapon that is destroying us a little bit cause of the way people are approaching it for money. It's really bad." He argued that church-goers too often rely on supernatural intervention and neglect to invest in the physical realm where Clarence was convinced hard-work would be rewarded. Clearly these church-goers had energy to expend towards their personal development, but were delegating it poorly.

Clarence disputed the efficacy of addressing social and material breakdowns solely with adjustments in religious practice. He argues for the reverse image of Alexander's model of the incompleteness of the Internet. Clarence asserted that religious practice alone was similarly incomplete, but (in keeping with the 'prosperity gospel') that it was connected to worldly prosperity – through its capacity to contribute to civilization. Alexander, perhaps a prime example of the behaviour Clarence critiques, committed much of his time to prayer retreats and fasting rituals and he had gathered a group of individuals he called his 'prayer warriors.' He treated prayer as a force, one operating between humans through the mediation of the divine. He had established many contacts online who were the focus of prayer and his healing ministry. They had prayed for the father of a man he had met online who had cancer and were later told that the father had gone into remission. This notion of prayer as force is reflected in the encouragement he expressed in one sermon to, "*pray until something happens.*" This practice was seen as a way an individual might have an influence on both worldly and otherworldly planes.

Alexander recognized a separate matter of delegation, not between the supernatural and the socio-material realm, but between virtual and physical spaces. Users, like Alexander, who were exploring this intersection between religious and technological practice held conflicting views about whether a distinction ought to be made between forms of human interaction: face to face, mediated by phone, or mediated by chat room. Some distinguished between the impact of synchronous vs. asynchronous communication on the effectiveness of spiritual practice while others did not. Alexander recognized that the effectiveness of prayer had a limited reach, that one can only pray for known individuals with known problems. The Internet greatly expanded his ability to collect known individuals. Alexander also sometimes conducted prayers with chat

partners via keyboard but did not assert that there was an effect of this synchronous prayer between distant individuals beyond providing social support. Yet there was value attached to simultaneity itself and he implicitly attributed an importance to the timing and location of these prayers commonly conducting them late at night and in more sacred places outside of the urban centre. According to Alexander the simultaneity of ritual between the one praying and the one that is being prayed for facilitated shared access to a virtual space – not cyberspace, but rather the 'realm of the spirit.' As he instructed, *"I just say well I'll be praying for you today. Sometimes I do give them directions, pray tonight around eleven o'clock and* ***I'll be meeting you in the realms of the spirit.*** *So by eleven o'clock I will also be praying, so together we will be praying."* Much like other Internet users who hoped to progress from online introductions to phone calls to in-person meetings, for Alexander, the Internet did not serve as an equally sufficient space for spiritual practice, but rather as a launching point for more authentic, effective, and dedicated spiritual practice. His offline activities – giving church sermons, fasting, and prayer rituals – remained a necessary and vital part of his faith and a mechanism for effectively directing spiritual energies.

The practice of addressing pragmatic material and social problems with appeals for supernatural intervention is indicative of an ontological perspective in which the socio-material and spiritual are closely intertwined. Related to this perceived intimacy between the worldly and otherworldly, Piot argues for an African conception of the self as fundamentally relational. Sounding very much like an Actor-Network theorist he describes, "…the person as composed of, or constituted by, relationships, rather than as situated in them. Persons here do not 'have' relations; they 'are' relations" (Piot 1999, pp. 18). Piot adds, "not only is the self in these societies tied to other human beings; it is also diffusely spread into the nonhuman world of spirits and ancestors" (Piot 1999, pp. 19). This closeness between the human and nonhuman was reflected in the way spiritual entities were accounted for by some Internet users in the systems they built to realize economic and social gains such as education, migration or business opportunities. The Internet (or the social networks it facilitated) were subject to the forces of these spiritual entities, good and bad.

One example of the way spiritual entities were accounted for was Gabby's attempt to enrol the help of a 'Malam' from Nima to improve his ability to gain money from chat partners. At the time of our first meeting in late January of 2005 he had already spent several months in chat rooms posing as a woman trying to lure a foreign boyfriend into a relationship. He had made no financial gains with this strategy and was growing frustrated. Gabby noted that many of his friends who were doing Internet scams had been aided by Malams (a role described as a healer or teacher who practices a syncretic blend of Muslim and animist practices) and so he sought this aid himself. He treated the religious options available in Accra as a buffet of choices detached from any moral framework with each option presenting strengths and weaknesses. He commented that he sought the use of fetish to gain money from chat partners because he was in a hurry and, "*God answers prayers slowly*." He compared the Koran and Bible matter-of-factly noting that, "*I don't know why they are able to use the Koran to retrieve monies…because you cannot use the Bible for that.*" He describes these sacred texts in much the same way as one would expect technologies to be depicted; as mechanisms for instrumental gain.

One Malam explained in an interview that he had adapted rituals taught to him by his grandfather to meet the demand for solutions to contemporary concerns such as obtaining travel visas, getting goods shipped from ecommerce sites (ordered with stolen credit cards), and gaining money from Internet chat partners. In Gabby's particular case, the Malam told him that he was suffering from a spiritual block that was preventing him from making money off of his chat partners. Gabby identified his girlfriend (whom he subsequently broke up with) and an aunt as the figures responsible for this spiritual block. Drawing on traditional witchcraft narratives Gabby and the Malam blamed closely connected female individuals for monopolizing a finite supply of 'life force' thereby preventing his success. He noted, suspiciously, that the aunt had travelled abroad twice already despite having only a minimal education suggesting a disproportionate reward for her position in life. Therefore Gabby located his problems with operating the Internet successfully in another part of the broader system of social and spiritual relations. What in a disenchanted world seemed to be a technical or social breakdown ultimately was identified as spiritual.

To address Gabby's ineffectual attempts to gain money from chat partners the Malam provided his services at a cost of 350,000 cedis (approximately $38 or £20). The Malam gave him a talisman that he was instructed to bury under a large stone as well as a potion to drink and bathe with twice a day for seven days. He also instructed Gabby to give 'salaka' (alms) of 60,000 cedis to the poor who line up in front of a local mosque. He was to drink the potion just before he talked to his chat partners. He was warned that the potion would take effect only once he had verbally relayed the request for money to the chat partner by phone. For several months after visiting the Malam, Gabby had no luck in gaining money from chat partners so he sought the assistance of a second Malam also recommended by a friend. This Malam gave him a potion that he was instructed to spray on his hands just before he began chatting so that the effect would operate through his hands and the keyboard.

The two solutions provided by two different Malams indicated a lack of consensus about how to configure an engagement with the supernatural realm where the Internet was involved. One Malam expressed a sceptical view about the capacity for religious practice to be carried out efficaciously via the Internet, although the telephone had become transparent enough as a mediator that it would suffice. There was an implicit understanding in this instruction that the 'realness' of voice conversations took precedence over typed conversations, despite the fact that both conversations were mediated by technology and both were synchronous. The phone had become more transparent while the Internet remained opaque. A second Malam recognized no such precedence assuming that supernatural forces could be mediated effectively through the keyboard. In this alternate practice chat conversations had a similar enough status to phone conversations or face to face conversations for a supernatural force to operate between those conversing. Like these two Malams, religious followers who are already accustomed to considering matters of mediation between the worldly and otherworldly realms are also likely to engage in a more careful and sophisticated consideration of the mediation between real and virtual provided by new technologies (Miller and Slater 2000).

While Gabby was by no means typical of Internet users, his experience with the Malam is an example of the broad range of forces and entities that Internet users account

for in Ghana. It is another example of how culturally situated meaning-making and ordering processes are applied to new challenges. This sometimes includes entities (like spirits and ancestors) that do not exist in Western ontologies. When isolated to the technology itself, the practices of users may look stubborn, when all the while users are actively manipulating other components of what they see as a much broader, interconnected system. This was the case with Gabby's unrelenting chat room scam strategies and failures that he addressed through a series of changes to his local social relations and spiritual affiliations that he believed would improve his interactions with foreign chat partners.

Not only in Accra, but in the broader West Africa region there is evidence that these hybridized material-supernatural systems are expanding their sphere of influence. This expansion was reflected in the way the Malam adapted rituals to the contemporary demand for travel visas and for obtaining products from ecommerce sites. These spiritual systems were perceived as extending far beyond the kinship networks that previously circumscribed their effective force. Alexander, who prayed for his chat partners, envisioned his prayers as having an unlimited operating terrain. He and his prayer warriors could aid anyone in any place around the world. Supporting this extension as a regional trend, Smith noted a change in ritual practice pointed out to him by a Nigerian Presbyterian minister. The minister noted that ritual killings (viewed as both traditional and satanic) were beginning to be used effectively against strangers whereas before they could be committed only against kin (Smith 2001). This expansion of terrain has accompanied a growth in connections with the wider world through migration trends, broadcast media, and technological advances such as the Internet. This was not only true of Islam and Christianity that were already internationally networked religions widely practiced in Ghana, it was also true of traditional practices.

The symbolic significance of places like 'London' and 'America' was such that local gods could no longer be so *local* if they were to address the aspirations and imaginations of their potential clients. Parish in her article on anti-witchcraft cults described fetish priests who advertise the gods who possess them in terms of their contemporary capabilities. She commented:

> “Other priests bragged that their gods knew all about world affairs, and they often competed with each other over how many countries their gods had visited. One priest said, "I am possessed by a god who speaks many languages including French and German. He has been to these countries and flew like a jet,... an army plane.... He flies around the world and has been to London many times.... Ask me questions about London.... he will know the directions to your home.... " According to another, "The god visits many different places.... He is very rarely at home.... he may be in Holland or America. I ring a bell here and he will come to the shrine immediately. he spies things everywhere .... he sees a lot in different countries.... In London he tells me it rains with cats and dogs" (laughter).” (Parish 2003)

Like these fetish priests, the Malam in Mamobi described his influential role in a supernatural system whose efficacy was not circumscribed by kinship networks, location, or nationality. His brother who was living in Spain had requested help in getting a Spanish woman to fall in love with him. To do so the Malam created a diagram in sugar ink on paper divided into 9 sections and containing Arabic references from the Koran. He then mailed the diagram to his brother by Post who upon receiving it washed the ink off with water and drank this watery sugar ink as a love potion. The Malam noted that he had a number of clients living abroad in Spain and the US, a situation made more feasible by new communication technologies. He noted that he was in regular contact with his brother via e-mail.

The Malam made no distinction between the effect of these practices on foreigners vs. locals. A Spanish woman could be won over with a love potion just as a Ghanaian woman could. Furthermore, the love potion would still have its effect even when the ritual was bifurcated considerably in time and space. The expansion of terrain on which supernatural forces operate constitutes a globalisation of animist-syncretic traditions. It can be interpreted as a response to the ever-increasing migration of Ghanaians out of Africa along with the improvement of communication technologies linking those abroad with the homeland facilitating these transnational rituals. As Ghanaians living abroad continue to have problems with work and love there is likely to

be some demand for the services provided by Malams, prophets, and others in similar quasi-traditional roles. This expansion of terrain calls into question interpretations of local religious rituals as immutable carriers of tradition, as opposed to modernity and to globalization. In certain domains, particularly where religious services were embedded in the money economy and transnational networks, religious innovation flourishes.

The embedding of religious ritual in the market in Ghana has therefore involved a religious entrepreneurship. Traditional practitioners rather than sitting by as new forms of Christianity lay claim to their clientele have flexibly redirected and reframed their services to challenge religious interlopers. It is a further example of how, "the practice of mystical arts in postcolonial Africa…is often a mode…of retooling culturally familiar technologies as new means for new ends" (Comaroff and Comaroff 1999, pp. 284). The underground, informal circulation of fetish objects and animist rituals emerges as a new World Religion surreptitiously piggy-backing on diasporic movements rather than arriving front-door style through proselytizing missionaries and televangelists. These practices insinuate themselves in the gaps between reality and aspiration. The supernatural realm is conceived of as a force field impossible for anyone the world over to escape. The travels of these migrant groups thereby effect a re-enchantment of the industrialized world.

Conclusion

Inside and outside of Ghana, growing empirical evidence has shown that religious organizations, religious leaders, and committed followers find that old as well as new media technologies like the Internet offer unique capabilities that help them to better follow religious edicts and to fulfil religious missions (Miller and Slater 2000; Hoover and Clark 2002; de Witte 2003; Gueye 2003; Meyer and Moors 2006; Woodruff *et al*. 2007). But what of these religious edicts and missions? Meyer notes that the tendency in past anthropological research to view religion as 'false consciousness' has proven to be an "inadequate" explanation for the existence of these practices and beliefs. Instead, these ontological views represent, "people's attempts to understand their situation and grapple with changing conditions" (Meyer 1995, pp. 237). Following from this assertion,

she analyzes these rituals and beliefs in terms of the local concerns and priorities they illuminate. This chapter has argued that while religion does indeed serve as an analytical process that shapes behaviour and models technology's efficacy as well as its threat, the two realms are more intimately connected as compatible force fields that have many points of intersection.

In Accra, religious rituals and their accompanying ontologies drew the attention of their practitioners in particular directions and therefore cemented a way of relating to both other people and to material culture. There was an ongoing concern with individuals who may be blocking one's prosperity via witchcraft and with seeking divine assistance to make connections with those who can provide opportunities. This highlighted the local reality that one's wealth was deeply intertwined with one's social network intensifying the drive to make contacts and build social capital, activities that were prevalent in the Internet cafés of Accra. Therefore the functionality of technology and the way it was ultimately used was structured by a religious framing.

The compatibility of religion and technology in Accra was tied to the way both domains helped users work toward some of the same desired outcomes. In a sense, the Internet was merely the newest religion, competing with churches, mosques, and shrines for followers and offering some of the same tangible rewards. These rewards included migration opportunities, healing, monetary wealth, business success as well as the opportunity for fellowship - to make friends, find a spouse, and develop a network of social support. Gabby who sought assistance in scamming chat partners through the traditional services of a Malam represented how far this mechanistic view of religion could be taken. His comparisons - that prayer was slower than the use of fetish objects, that the Koran could be used for getting money while the Bible could not, reflect a totally de-mysticized and profane calculation of forces. While not the norm, Gabby openly admitted to pursuing practices that others felt compelled to conceal. Public discourse in Accra was such that there was great pressure among modern urban Ghanaians to be perceived publicly as a pious Christian. Yet, private behaviour indicated a continuing belief in the efficacy and importance of traditional practices and a widespread interest in employing religious practices for tangible solutions to worldly problems.

The mechanistic view of religious practice was controversial. Ghanaians like Clarence as well as many religious leaders viewed a disproportionate focus on money as a misappropriation of faith. Similarly, where religious leaders focused on money it was sometimes perceived as an irreligious desire for profit with the church serving principally as an entrepreneurial venture. The embedding of religious institutions in the money economy in Ghana was an important influence on the way these institutions operated. The title of pastor was simultaneously considered high status and potentially quite profitable in Accra. The relationship between religious leaders and followers was often one of patron and client with money being paid by the client for services rendered, sometimes even in proportion to how effective these services were[4]. Therefore these religious leaders were always under pressure to deliver results, to meet the requests (often financial) of their followers with the threat that they may turn to other churches, shrines, and rituals if these needs were not met.

Most Internet users were not as actively engaged in religious practices as pastor Alexander or Gabby who was in consultation with a Malam. Yet, these cases demonstrated a rich counter-argument to the notion that technology by its nature produces a break with tradition and thereby religion. What was broadly true of the religious orientation of Internet users in Accra was their shared view that a multitude of connections exist between religion and technology and, more generally, between religion and other aspects of the worldly domain. Religious Internet users found the Internet useful for receiving e-mails from church or for religious education. The particulars of this configuration between the spiritual and technological realms varied between the highly religious and the weakly pious, but within these various configurations was a conviction that the mechanical and physical world alone was incomplete and that the supernatural realm could always undermine or facilitate its operation. Technology alone could not effect genuine social and economic transformation if it was against God's will and moral law or was interfered with by demonic forces.

The discussion of technology and religion caps off three chapters addressing local practices of Internet appropriation in Ghana through narrative detail and analysis. This examination has demonstrated, importantly, that the Internet café cannot be sufficiently understood by studying it as an isolated space. Internet users built connections to relate

new technological forms with established social formations such as the religious rituals addressed in this chapter. The interaction between user and machine was not the only or even the main point where the technology was worked out and rendered functional by users. The circulations that made their way from the café to other institutions like the church and back again were extended spheres of user agency and material constraint. Travelling along with these depictions, we are now far removed from a straight-forward instrumentalist version of the Internet's role in a place like Ghana. Uses of the Internet were guided not simply by efficacy or subsistence needs, but by a complex of motives related to reducing unpredictability and threat, reconciling local social relations, redressing global inequalities, and engaging the imagination. Thus far, this account has challenged many Development truisms as they relate to technology, but not core institutional models of technology's relationship to socio-economic development. This work will be done in the next chapter where institutional accounts of this relationship are considered as they are constituted in the discursive stew of a World Summit. While this chapter and the two preceding chapters focused on the connections made by users where none were expected, the next will focus on surprising disconnections. A key disconnection exists between a UN institutional perspective on technology for development and local conceptualizations of development among Internet users. An analysis of this disconnection provides insights into the origins and evolution of development thinking on new technologies. The formation of this thinking can be attributed to an intra-institutional logic, one that in many ways is unrelated to or even in active conflict with the way technology users perceive themselves, their personal development, and the Internet.

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[1] Coastal communities have a disproportionate number of orthodox church members (Catholic, Presbyterian, Methodist, Anglican) as these denominations arrived with European traders, explorers, and colonists via the coast and mostly remained there. Muslim traders came to Ghana from the north and therefore disproportionately attracted northerners to the faith. Newer Pentecostal faiths have a disproportionate number of followers in Accra and the airplane and mass media (as delivery modes that are most easily accessed in the urban centre) play a role in this.

[2] It is also possible to hear the Muslim call to prayers in particular neighbourhoods and to witness traditional festivals such as the Ga Homowo festival at certain times of year. However, these tend to be more localized than Christian sermons and music that are ubiquitous throughout the city and on television and radio.

[3] Related to the danger of modern possessions is the story of Mami Water that is pervasive along the West Coast of Africa. This goddess who lives at the bottom of the sea is known for her fascination with and accumulation of modern electronics, autos, and jewelry. These material riches can be obtained from her oceanic stash, but only through occult means and at a price. For women, the consequence of attaining material possessions through occult means is infertility (Meyer 1998).

[4] Part of Gabby's agreement with his 'Malam' was that he would share any of the profits he gained from his online scamming.

Chapter 6 Disconnection and Development

An interest in the link between ICTs and socio-economic development has grown rapidly within governments, international organizations, aid agencies, and high-tech corporations since 2000. At the United Nations this issue has found an increasingly central and entrenched position in institutional agendas and recommendations. The creation of a World Summit on the Information Society (WSIS) is evidence of a concerted effort within the UN to elevate this theme to a central position in contemporary development thinking. WSIS places the 'information society' alongside other World Summit themes including 'human rights,' 'gender equality' and 'ecological sustainability' as topics with substantial cachet and widespread public interest both inside and outside of development circles. The summit processes that validate these themes are produced, "in an atmosphere in which international institutions struggle to defend their legitimacy on many fronts" (Riles 2001, pp. 7) and partly serve to publicly demonstrate the institution's reform efforts in response to critics.

In February of 2005 the WSIS regional conference for Africa was held at the Accra International Conference Centre. The summit was a gathering of representatives from participating African states in preparation for the final global WSIS meeting that was held in Tunis, Tunisia in November of 2005. A diverse mixture of politicians, aid workers, NGO representatives, journalists, students, academics, entrepreneurs, and business executives were present at the conference. While the proceedings were marked by calls for inclusiveness and diversity, in various ways these ideals were incompletely and ambivalently expressed by the practices that unfolded over the course of the conference. In this way, the proceedings serve as an allegory for the relationship between development institutions and technology users in Accra and other parts of the developing world. No groups or individuals were explicitly barred from the proceedings and gaining access I found was a simple matter of filling out and faxing a form, although awareness of the conference circulated primarily within certain elite social networks. Furthermore, the setting communicated itself visually as a space for elites. The Accra International Conference Centre is a large, showplace facility complete with air-conditioning and tinted windows. The centre sits regally atop a hill on a sprawling piece of land lined by a tall fence, a view of the building obscured by large trees. Behind the large gates the

driveway circles up to the entrance shaded by a carport. The property is landscaped with a green lawn, quite unusual for dusty Accra, and dotted with carefully pruned, topiary-like foliage. My arrival by local taxi was somehow controversial, the guards at the gate did not want to allow the taxi driver inside and signs barred pick ups and drop offs on the street in front so that I had to make a bit of a trek to pick up a taxi on my way out. The circular driveway and apparent lack of a car park indicates the expectation that visitors will arrive by chauffeured private vehicle.

During the 3 days of the WSIS conference, participants circulated and mingled outside the entrance to the main auditorium which was set up as a space for NGOs, businesses, and UN agencies to display information about their projects and advertise their services. In one hallway a makeshift computer lab had been set up where participants could check e-mail. In the main auditorium each African UN member-state was allocated seating front and centre, while on the right side local chiefs in traditional dress were seated as observers. Behind these seats were sections allocated to civil society, to journalists, and other groups. In the main auditorium high-status speakers including President Paul Kagame, of Rwanda, as well as President J.A. Kuffour of Ghana made appeals for an inclusive information society. Smaller conference rooms held workshops where special topics such as: 'ICT and socio-economic development', and 'access and infrastructure' were debated.

The official line on the World Summit series of conferences is that they have an impact by, "*serving as a forum where new proposals can be debated and consensus sought.*" ('UN Conferences: what have they accomplished?' 1999). But how exactly is consensus-building and debate acted out in this context? One could find an element of conflict (and therefore possibly debate) in relation to the caucuses present at WSIS championing the causes of youth, women, and civil society. These caucuses positioned themselves as minority groups fighting to have their voices heard. For example, on the second day, an organization identifying itself as the 'African Civil Society for the Information Society' issued a statement critical of what they perceived as exclusion employing UN linguistic conventions to state that:

…

Considering the goal of the international community in building an inclusive information society in a multi-stakeholder framework; Government, Private Sector, International Organizations, and the Civil Society.

*We, the **African Civil Society**, deeply regret our exclusion from the opening ceremony. Not only did we find it difficult to gain access to the main hall, we were denied a speech slot, thereby barring us from bringing the grassroots' message to the conference.*

…

Yet it was clear not only from the UN resolution style format of this statement, but the use of certain terminology -- 'information society' and 'multi-stakeholder framework' in particular -- that this debate was taking place on the pre-established discursive grounds of the United Nations. In this sense the '*grassroots message*' of these caucuses and special interest groups did not challenge the orientation of the UN and WSIS organizers towards technology on any fundamental level, but ultimately reinforced its claims. These caucuses confirmed that indeed, the information society was a reality and its importance was reasserted through their demands for inclusion. As a newsletter published by the youth caucus stated, "*sessions after sessions have been passionate about the powerful effect of ICT in addressing our socio-economic challenges, circumstances and aspirations. ICT is inspiring; isn't it? Indeed ICT has come to stay and for our generation or the youth to effectively use and fully participate in the information society, it is imperative to talk back over and over again on the inclusion solution - Access.*" Both the youth newsletter and African Civil Society memo employed language that portrayed the groups role as adversarial to conference organizers and participating governments. And yet the message from these groups was far from controversial. Despite official claims for diversity and debate, these documents demonstrate how participants at WSIS spoke in one voice on certain core subjects regarding the Internet, development, information, and the information society.

A mere ten minute taxi ride from the conference centre to any of Accra's local Internet cafés would put conference participants in touch with a more truly counter-discursive, 'grassroots' message about the Internet. In these spaces Ghanaian Internet users relied on entirely different linguistic conventions and conceptual models to explain the Internet and its significance in their lives. In 76 interviews with Internet café owners, operators and users I have no record of the phrase "information society" ever being uttered. None were aware that a conference was taking place to argue on their behalf for the importance of Internet access and use. None had yet had direct contact with any of the technology for development programmes associated with large development institutions such as the UN. Similarly, at WSIS the pervasive concern with the digital divide and of identifying and aiding 'have-nots' obscured an awareness of an existing culture of technology practice in Ghana or elsewhere on the African continent. These two spheres of thought co-existed, side by side with almost no knowledge of or engagement with one another.

The intent of this chapter is to highlight the processes that produced a disconnect between the participants at WSIS and Internet users in Accra in spite of the shared interests of the two groups. Divergent definitions of the link between technology and socio-economic development are one result of this disconnect. The argument in this chapter will focus, in particular, on similarities in the strategies of consensus building and sense-making in both the formal, expert domain of WSIS and the informal, non-expert domain of the Internet café. By highlighting these parallels, the discursive orderings and material practices in these two domains are placed side by side. These differences reflect alternate perspectives and divergent purposes rather than hierarchies of knowledge or degrees of 'truthfulness'. This equivalence impedes an interpretation of the religious rituals and rumours of Internet users (discussed in chapters 4 and 5) as exotic forms of pre-modern and pre-scientific 'folk' reasoning. With this equivalence established, a 'grassroots' message and its implications for Development practices will be provisionally pieced together later in the chapter drawing on the statements, practices, and experiences of Internet users. The momentum of this emergent technology practice is something development institutions could usefully build upon once it is acknowledged as legitimate.

Ventriloquism and Alliance Building at WSIS

This illustration of the disconnection between elite processes and the everyday lives of citizens in the previous example is contradicted by organizers who claimed that WSIS accomplished distinct progress towards the democratization of UN processes through the greater inclusiveness of its proceedings. This involved a new procedural innovation at WSIS labelled the 'multi-stakeholder approach' that invited members of civil society (as well as other previously absent groups) into the process. The move towards inclusiveness was a component of WSIS from its conception. It was included in the UN Resolution that initiated the Summit which encouraged "NGOs, civil society and the private sector to contribute to, and actively participate in, the intergovernmental preparatory process of the Summit and the Summit itself" (UN General Assembly Resolution 56/183). Yoshio Utsumi, the secretary general of WSIS, highlights this innovation in a preface to the WSIS outcome documents where he asserts: "The Summit has been notable in its adoption of a multi-stakeholder approach, and this is now carried forward in the implementation phase with the direct involvement of civil society and the private sector alongside governments and international organizations" (Utsumi 2005). Utsumi asserts that ordinary citizens were themselves present at the proceedings roaming the conference halls, no longer reliant on representatives to speak on their behalf.

What explains this disjuncture between the observed exclusivity of the WSIS process and WSIS organizers claims for inclusiveness? What prevented this inclusiveness from being fully realized? Why were the claims of inclusiveness made at all? As Riles notes while participants gain from inclusion in UN summits, so do UN institutions whose legitimacy is broadened in scope as the number and diversity of participants grows (Riles 2001). Yet, the individuals and groups that identified themselves as 'civil society' at the WSIS regional conference used linguistic conventions and terminology that clearly identified them as speaking from within a development discourse on technology. Their 'grassroots' message was therefore limited, framed as it was by this institutional discourse. This linguistic performance was the price of their participation. Riles also notes that NGOs treat their inclusion in UN summits as validation of their organizations and causes (Riles 2001). Therefore, these groups must always balance the sense that their role is to challenge authority with the desire to

maintain access and inclusion. A formal WSIS accreditation process put this at stake for 'civil society' groups as well as NGOs. This process was not required for attendance, but illustrated that there were varying degrees of inclusion at the conference. Accreditation involved an evaluation of "the relevance of the work of the applicants on the basis of their background and involvement in information society issues," ("Accreditation of NGOs, Civil Society and Business Sector", 2003) demonstrating formal pressure to conform to an institutional framing of the issues.

Beyond linguistic conventions, the individuals that were grouped under the term civil society in practice turned out to be an unwieldy and diverse collective. I myself was brought under this label at WSIS regional conference in Accra. Which segments of civil society were present and which were not remains in question. Certain seemingly important 'stakeholders' such as the Internet café users in Accra were not in attendance. Efforts were made to distinguish organized NGOs from the informal masses of the civil society, but in practice these groups were indistinct. Those who employed the personal pronoun 'we' in speaking as the civil society often turned out to be savvy and experienced activists familiar with the inner workings of such institutional processes[1]. This is not to suggest that their participation was invalid, but to indicate that rather than 'direct involvement,' civil society was still working through representatives, ones who were well acquainted with institutional rules and strategies.

This form of speaking whereby ordinary citizens, beneficiaries of development efforts are invited to speak, but do so in the voice of the development expert can best be described as *ventriloquism*. It served the aim of reinforcing the significance of an 'information society' and of ICTs for development in a voice that seemed to emanate from the potential beneficiaries themselves. Therefore this new, yet more sophisticated rhetorical form that was part of the 'multi-stakeholder approach' while perhaps a *rhetorical* innovation, did not provoke any profound institutional change in the processes of setting development priorities, building consensus, and identifying solutions at WSIS, it offered no space for counter-discursive debate.

That WSIS participants (including the 'civil society') on the one hand and Internet users at a grassroots level on the other literally speak a different language about technology reflects Castells' argument for the existence of multiple networks that are

distinguished from one another via their "communication codes." He notes how the logic of the network is such that a failure to conform to these codes results in an immediate exclusion from the network. Therefore, it is a logical effort on the part of groups such as the 'African Civil Society for the Information Society' to perform these codes in order to maintain membership, be relevant, and have an impact, however limited, on the proceedings. However, Castells warns that the "presence or absence in the network and the dynamics of each network vis-à-vis others are critical sources of domination and change in our society" (Castells 1996, pp. 500). Therefore the disconnect between WSIS participants and Internet users in Accra amounts not just to wastefulness and missed opportunities for collaboration, but has the potential to be realized as a competition in which one network (likely the one composed by powerful development institutions and the state) undermines, in various ways, the other. This conflict between modernist institutions and the populations they hope to impact is illustrated by a conversation I had with an official at the Ghana High Commission in London. He described Internet cafés as "a very important development" in Ghana, but qualified this statement by expressing concerns about the shoddy service some provided and mentioned a desire to bring them into the domain of the state by forcing equipment upgrades and installing an accreditation process. These cafés therefore represented a disorderly and possibly threatening trend in Ghana from the perspective of the state. The solution was regulation - a way of creating a connection between the state and emergent technology trends, but an adversarial rather than collaborative connection.

New institutional practices at WSIS such as the 'multi-stakeholder approach' can be viewed as a response to critics of the UN and of development processes in the 'high modernist' tradition (Scott 1998) more generally. Among the most damning arguments is that development processes are elitist and exclusionary, that they perpetuate gender inequality and prize Western knowledge and norms above all else and have consequently done more harm than good[2]. The 'multi-stakeholder approach' is one response to this particular type of condemnation and concomitant calls for a more participatory process. However, this particular strategy ought to be examined with scepticism. Responses to criticism should be acknowledged as varying in terms of how soft or hard they are. Soft responses seek to dispel criticism while maintaining the status quo by constructing a

superficial performance of change. Hard responses take on more substantive actions. The ventriloquism of 'civil society' and other groups at WSIS is, so far, a very soft response. The participatory approach that emerged during WSIS employed the voices of seemingly 'ordinary citizens' themselves making it that much harder to criticise institutional elitism. Critics who argue against the institutional discourse on behalf of marginalized groups now appear to also argue against the groups they mean to champion. This is potentially a set back rather than progress on efforts to push for more truly bottom-up processes for development innovation.

The 'multi-stakeholder approach' was meant to bring civil society into the WSIS process as an ally in efforts to promote the 'information society' as a key development theme. During the WSIS process, the practice of referencing allies served as a way of underlining the facticity and importance of claims made about technology and its link to development. This is a point of parallel with the practices Internet users employed when telling rumours about Internet fraud and scams (see chapter 4) which were often prefixed by references to allies such as, "a friend told me…" or "I heard it on the radio." At WSIS, allies were often created out of authority figures (a traditional *ethos* form of rhetoric) or in lieu of the powerful by pointing to large numbers of allies with specific numbers or more abstractly using phrases such as 'universally acknowledged' or 'widely recognized'.

Several documents produced in conjunction with the WSIS process benefited from a preface written by UN secretary-general Kofi Annan himself (Stauffacher *et al*. 2005; Stauffacher and Kleinwächter 2005). This was done as a lead-in placing the powerful alliance at the front of the document where it is difficult for readers to miss. Conferences like WSIS use the same approach putting powerful leaders (presidents, ambassadors, etc.) on stage in the main auditorium, the most visible location possible. Combining strategies, using both references to authority and to large numbers of allies multiplies the rhetorical effect as in the statement from the WSIS website that, "*Nearly 50 Heads of state/government and Vice-Presidents and 197 Ministers, Vice Ministers and Deputy Ministers from 174 countries as well as high-level representatives from international organizations, private sector, and civil society attended the Tunis Phase of WSIS and gave political support to the Tunis Commitment and Tunis Agenda for the*

Information Society that were adopted on 18 November 2005. ***More than 19,000 participants from 174 countries*** *attended the Summit and related events* [*original emphasis*]" ('About WSIS: overview' 2006). In the same way that the persuasive power of rumours relies on a reference to sources (i.e. a friend told me), these alliances produce a powerful argument for the factuality of documents/conditions/claims that is difficult for a witness to counter (Latour 1987). To challenge them means countering each of these alliances, in the case of WSIS this involves the daunting task of challenging 50 heads of state and vice-presidents, 197 ministers, and 19,000 participants.

As Latour observes and as is also evident in these examples from WSIS, non-personified references can be made and alliances built with texts as is the case with any document that has footnotes and a bibliography. As the above quote notes 50 heads of state and vice-presidents, etc. put their weight behind a document – the 'Tunis Commitment and Tunis Agenda for the Information Society.' Texts themselves were also sometimes described as acting, as in the statement that, "The UN General Assembly Resolution 56/183 (21 December 2001) **endorsed** the holding of the World Summit on the Information Society (WSIS) [*added emphasis*]" ('About WSIS: overview' 2006). A common textual reference in WSIS documents links ICTs and/or the Information Society to the Millennium Development Goals (MDGs) as in the statement about, "…the role of ICTs, not only as a medium of communication, but also as a development enabler, and as a tool for the achievement of the internationally agreed development goals and objectives, including the Millennium Development Goals." ('Tunis Agenda for the Information Society' 2005). These documents were heavily intra-referential, justifying priorities through an alignment with other institutional documents rather than referencing entities outside of the institution. Besides the MDGs, there are also references frequently made to the Universal Declaration of Human Rights, the Charter of the United Nations, the Vienna Declaration, and the Monterrey Consensus. This was a common trait of the linguistic practices that related ICTs to development in the WSIS process.

Alliances built with individuals and documents internal to the institution had the effect of reinforcing the institution itself asserting the legitimacy and relevance of various entities (from the Charter of the UN to Kofi Annan) and borrowing legitimacy already

accumulated by these entities through association. Furthermore these links tie distinct pieces of the institution together – events, documents, people - creating a sense of wholeness and coherence (Riles 2001). These various documents form a tight web that one can traverse following chains of textual references from resolution to resolution. Yet it was precisely through these efforts to maintain the institution that a disconnect was produced between the institution and the populations it serves by building up internal connections while neglecting external ones. A disconnect is further reinforced by the ubiquitous use of acronyms in documents, also elements of the UN's distinctive communication code. The obfuscation introduced by acronyms requires a greater investment on the part of outsiders to realize inclusion. While references to other UN documents and the use of acronyms were part of the communication code, a resource that participants could employ to perform membership, at the same time they put what is not of the network into high relief. The WSIS process lacked connections that traversed the border from the inside out and furthermore erected barriers that made it difficult for connections to be established from the outside in. Ultimately participation required a conversion process realized as participants moved across the institutional border thereby making them suitable for linking. This conversion was enacted for the sake of coherence of the event and to accomplish some semblance of consensus.

Despite claims that the WSIS process was a space where "*new proposals"* could be "*debated"* the diversity of participants and the drive to reach consensus necessarily muted efforts to bring anything fundamentally new to light. Two unenviable and arguably incompatible tasks were set for WSIS as for all UN summits – to be as broadly inclusive as possible while at the same time reaching a unified consensus at the end. As Riles notes, these tasks accomplish two important aims, broadening the legitimacy of UN institutions as well as creating a high impact discourse that while not legally binding will achieve an unquestioned veracity powerful enough to shape future policy and practice worldwide (Riles 2001). In this context it is quite an accomplishment that the WSIS outcome documents run to only 97 pages. The reality of an event involving 19,000 participants from 174 countries is that much of what goes on within the event is intra-institutional maintenance and negotiation; linking and alliance building. This leaves little room for convoluting matters by introducing too many new, *non sequitur* concerns from

the external world. Civil society groups in their self-defined role as adversaries to government and institutional power focused on more manageable goals, such as getting the phrase "human rights" (a term already well known to the institution and the subject of its own world summit) incorporated into outcome documents (Bloem 2005, pp. 101). Given these conditions, the structure of WSIS prevented the airing of radically counter-discursive grassroots messages about technology and development such as, for example, challenging the relevance of the 'information society' concept to development concerns. A truly bottom-up process, without an overarching framework for organizing the concerns of participants simply would not function at an event of this size and scope. In the drive towards consensus the institution must disconnect.

An Alternate Grassroots Message

The disconnection between development institutional processes at WSIS and emergent technology trends in Accra meant that knowledge, people, ideas, structures, and meanings were in limited circulation between the two bodies. It is notable in light of claims about the inclusiveness and ubiquity[3] of the UN that Internet users and other inhabitants of Accra had experienced so little exposure to the institution and its programmes. The separate conversations taking place at WSIS and at the Internet cafés in Accra resulted in two distinct definitions of development and of technology's role in bringing about development outcomes. In this section, these divergent definitions are clarified in order to piece together a sense of what would constitute the 'grassroots message' of Internet users in Accra and to draw some conclusions about potential new directions for development efforts. This message fundamentally questions the relevance of the 'information society' concept as a way of framing technology and development issues.

Many Internet users in Accra clearly and explicitly identified the Internet as conducive to an improvement in quality of life in economic and social terms and therefore (in a general sense) to development. A sense of improved prospects and new life opportunities was a prominent theme that framed even the playful, non-instrumental activities of youth (discussed in chapter 3) in the Internet café. To this extent Internet

users and WSIS participants were in agreement. However, the question of what is responsible for a lack of development in Ghana and other developing nations was answered quite differently by the two groups. The message from WSIS was that underdevelopment was due to a lack of information. This information could increase the productivity and efficiency of business, government, and agricultural processes. It could contribute to processes of democratization by improving transparency and thereby reducing corruption. From this perspective once a technological infrastructure was in place, information could create capital without any additional input. And furthermore information could improve quality of life on matters of health, education, and government. Yet, rarely was it clear that the problems Ghanaians faced could be resolved by information and they certainly did not frame their problems in this way. Instead Internet users often argued that they suffered from a lack of capital – financial, educational, and social and a consequent narrowing of opportunities. Health problems stemmed from not being able to pay the doctor, not from a lack of health information or a shortage of doctors. A lack of education stemmed from not being able to pay for schooling. Internet users recognized an unequal distribution of wealth around the world with massive accumulations located primarily in the North. Their development strategies therefore were oriented towards gaining access to these accumulations.

Internet users typically described development in personal or kinship terms whereas at WSIS the subject of development was the larger society. Internet users identified the individual or the family as the subject of development and focused on fairly immediate returns. This made sense for those who faced daily concerns about getting by and paying for basic necessities. Therefore importing Western goods such as clothing or shoes and selling them in local markets was suggested as a good business opportunity by several young Ghanaians in interviews since it would generate a certain amount of daily revenue. Yet its impact on Ghanaian society would likely be negative or negligible. The diagram below illustrates different perceptions of technology's role in development between Internet users and development institutions according to the *subject* or target of development, the *theory* of how development occurs, the technology *practice* that follows from this theory, the *scope* of activities/spheres where development is considered relevant, and the particular Internet *technologies* favored following from this model.

	Internet users model of ICT for development	Institutional model of ICT for development at WSIS
Subject	Individual/family (survival mode)	Society (long-term planning)
Theory	Wealth redistribution – getting access to massive capital accumulation in the North	Generation of wealth internally through greater efficiency or e-commerce access to global markets
Practice	Communication: making contacts, building social capital	Information: make local processes work better, improving quality of life – gov, agriculture, health
Scope	Narrow: capital acquisition expanding into diverse opportunities	Broad: socio-economic, health, gov, edu, etc.
Technologies	e-mail, chat clients, matchmaking websites, webcams, mobile phones	World wide web, databases, e-commerce services

Table 3 - conflicting models of development

Overall, emerging ICT for development efforts are diverse and cannot be easily encapsulated in a table. The above table represents one segment of this movement. Drawing from my participation in the World Summit on the Information Society process, the comparison of development models in this chapter focuses on what is taking place in the UN through processes such as WSIS. It is not the whole of the institution that is being evaluated, but rather several distinct trajectories of thought on the relationship between technology and development drawing on observations and documents produced through WSIS. On a general level there are some common themes that can be ascertained. The relentless attention to technologies as distributors of 'information' and information (or alternately 'knowledge') as a solution for development problems is asserted again and again in the speeches and documents coming from these sources. It is centrally positioned even in the very name given to the World Summit.

A set of grassroots responses to current Development trajectories can be extrapolated from the local logic of development represented in the above table and the variety of stories of personal success and failure told by Ghanaian Internet users and others. The particular trajectories examined in this section include, first, the central emphasis in an institutional perspective on neutral, depersonalized *information* by contrast to Internet users focus on *representations* and the complexity of online cross-cultural social interactions. Second, mobility and migration as a trajectory that is largely disconnected from technology for development movements will be highlighted. Internet users alternately interpreted matters of mobility as intimately tied to the use of ICTs. A third development trajectory can be considered a continuation of the appropriate technologies movement begun in the 1970s. This movement focused on building localized technologies for settings with limited supporting infrastructure and for populations that lacked certain skills and literacies. The open source software movement and MIT's $100 PC/one laptop per child programme are representative of new efforts in the recent revival of this movement. The issue of localization first discussed in chapter 3 will be returned to underlining Internet users' efforts to participate in global processes and the desirability of what is foreign apart from questions of appropriateness and efficacy. This raises questions about how notions of 'appropriateness' are variably constructed by foreign developers versus Third World users.

It is useful to begin with some examples of very 'successful' Ghanaians and how they depicted their pathways of personal development (sometimes out of extreme poverty). Successful lives in Ghana generally stemmed from savvy sociability rather than heroic individualism. The focus among Internet users in Accra on using the Internet to build social capital followed from the theory that one gains access to resources and prosperity through social links and that foreigners, particularly Americans, were far better resourced and prosperous than most Ghanaians. This stemmed from the situation within the country where wealth is commonly distributed (through gifts, investments, and opportunities) through prosperous members of society via their personal social networks. I encountered many success stories in Ghana that reflected a lived reality to this logic. For example, Arthur, a young man whose family I lived with for several weeks had started out learning body fabrication for trucks, cars, and buses as his trade. He found

that this work that he was formally trained for was not at all lucrative. Luckily he made a fortuitous connection at his church. He was invited by this church friend to join a multi-level marketing[4] programme selling Chinese herbal remedies. This friend was the first in Ghana to join the programme and so, as early joiners for their region they were able to build an extensive network of buyers and re-sellers and became extraordinarily wealthy from the profits trickling up to them through this network. That their wealth arrived from the bottom up was an inversion of the local template of wealth redistribution from above, but similarly relied on making connections, knowing people, and skills of persuasion for their success.

Another example of paths to personal development was the story of an affluent neighbour whose journey started with an invitation to stay in London at the home of a wealthy family friend. This opportunity led to a stay of 20 years in the country where she acquired training in interior design, married, and had two children (who have the privilege of access to the British education system). On her return to Ghana she had been financially and culturally transformed, benefiting from a better standard of living than the average inhabitant of Accra and circulating within a privileged social network of highly mobile Ghanaians, return migrants, and Western expatriates who served as the customer base for her interior design business. Her custom designs drew from both African and European aesthetic influences. Through her families social capital she was able to acquire a complex of additional resources.

Perhaps the most dramatic of transformations related to me in an interview was that of Kelvin, a Liberian refugee who, as a child, ended up alone in a refugee camp in Ghana. Seeking money to pay school fees he joined the Seventh Day Adventist church in order to get involved in a programme selling books on health topics through the church[5]. He sought out managing directors and other executives at area businesses as his clientele for these pricey books. With time, he developed a sense of rapport and affinity with his repeat buyers. He recalled an instance where, "*…[the customer] invited me to his house. Now I'm going to his house. Now he is offering me beer, now we are clashing glasses. Now I know him, I have different kinds of contacts. Shipping line managers, presidents of this and that and all of that.*" After finishing school, he went back to one of these 'Big Men' to request a loan to open a computer school. He was granted the loan and some

advice on business. Eventually the profits of his computer school allowed him to purchase a car and establish a stable income and good lifestyle. After several years he was able to migrate to the U.S. with the help of family ties and his refugee status. Nowadays he returns to Ghana to check in on his business and he has also gone into importing computers purchased second hand from computer labs at community colleges and other facilities in the U.S.

The success stories described here are examples of total life transformations realized via personal social networks and catalyzed through the assistance of a single key contact. In all cases, success was realized with little or no upfront financial investment. With widespread awareness of such cases, it is no surprise that Internet users directed their energies towards similar strategies, seeking to make contacts and build rapport online. In this model, information (as something apart from social relations) had no clear role and provides no added benefit. These examples underline the significance of rapport, trust, even sympathy, forces that energize informal economies and business transactions throughout the Third World (Geertz 1978; Fafchamps 1996; Humphrey and Schmitz 1998; DeSoto 2000; Lyon 2000; Molony 2007). In a study of how mobile phone use impacted the livelihoods of market traders in Accra and Tema, Overa similarly observed that these traders could not, "operate according to an individualistic 'market logic.'" Partly to reduce economic risk, they formed deep, often lifelong friendships with colleagues. Mobile phone use enhanced the traders' capacity to negotiate prices, transport goods, and cope with contingencies, but furthermore the frequent contact facilitated by the mobile phone also improved trust with partners (Overa 2005). In that study as well as the success stories described above, the key contacts were fellow Ghanaians. Yet, Internet users in Accra often made the assumption that the same principles were in operation in their mediated interactions with non-Ghanaians via the Internet, an assumption that often did not play out in experience. The translation of this local idiom of success into a universal model applicable to cross-cultural interactions was not itself successful.

A model of technology for development focused centrally on 'information' typically focuses on problems of connectivity and access, data provisioning and circulation. It does not, however, address the problematic nature of the cross-cultural

interactions that are facilitated by global connectivity. The problems experienced by Ghanaian Internet users faced in relating to their foreign chat partners were issues of communication that went well beyond the technical problems of bandwidth and equipment access. Many users were operating with a different set of expectations about the intent of these interactions and with different norms of behaviour than their chat partners sometimes resulting in strained exchanges and avoidance. Stephen, a young man who used the Internet primarily to seek invitations from foreign chat partners to help him get a travel visa, described a typical scenario, "*sometimes when you go online…and you say hi…you tell them that 'I was the one who chat with you last' they will tell you 'I don't know you' and they will go offline. For sometime, like 30 minutes they will come back to check if you are online. When they see that you are online, they will go back offline.*" Internet users also expressed concern about racial prejudice and related this to the skewed and homogenous representations of Africa and Africans they encountered online and in various other media formats. Internet users sometimes interpreted their failure to acquire reliable contacts, capital, or opportunities to the inherent prejudice of Western contacts. A young software developer working for a U.S. based off-shoring company asserted that his success was dependent upon the fact that his employer concealed his ethnicity and location from customers noting, "*[the customers] just don't even believe we [Africans] should be able to do anything of that sort…if we had gone there to tell them 'oh this is what we've done' they will just take it and flip it over the wall without even taking a look at it.*" Experiences of misrepresentation and prejudice online were described in chapter 4 in the way that Internet scammers simultaneously manipulated and exacerbated Western stereotypes of Africa and Africans. They sought ways of turning these misrepresentations against their Western adversaries, but ultimately struggled and usually failed to best their scam targets. This perspective on communication and its difficulties, was entirely absent from the WSIS process, but would likely be part of the message Internet café users in Accra would hope to deliver to the WSIS collective. In support of this claim, a formal study of foreign investment in Africa demonstrated that negative and exaggerated perceptions of the continent play a role in the lack of interest amongst investors described as a, "vicious circle of poor information, low expectations, and low

investment" (Bhinda *et al* 1999, pp. 49). Internet users astutely observed such a connection between issues of representation and barriers to material gain.

Internet café users would almost certainly devote a great deal of attention to the desire and difficulty of migration in their grassroots message about technology and development. Much of the use of the Internet in Accra was focused on the maintenance of diasporic connections and on cultivating migration opportunities. Less privileged Ghanaians often viewed the Internet as a tool for routing around the formal political and economic infrastructure that kept them from realizing their migratory aspirations. Yet, even the most dedicated efforts to realize this outcome rarely seemed to succeed. University students at the prestigious University of Ghana at Legon were the exception to this rule. In light of cross-cultural communication troubles, Internet users in Accra whose uses of the Internet centred on building or maintaining diasporic ties (rather than seeking foreign contacts) seemed to fare better in terms of building social capital, realizing 'serious' long-lasting relationships, and gaining opportunities for migration, education, or marriage. Two young women, Regina and Gladys, had both met well-employed Ghanaian men living abroad on the Internet who later returned to meet these women, their families, and in both cases resulted in an engagement. New networking technologies, the mobile phone in particular, have proven useful for maintaining diasporic ties and negotiating remittances in a number of other developing countries (Miller *et al* 2005). In interviews with Ghanaians living in London I found that many expatriates felt the impact of the growing availability of new information and communication technologies in Ghana. These technologies played a role in holding those living abroad accountable to their families and friends. ICTs cemented social ties sometimes even against the will of those who migrated.

The barriers to migration faced by young Ghanaians were a policy issue frequently brought up in interviews. Many young Ghanaians had stories about applying for and being denied a travel visa or of obtaining a visa but lacking the funds for an airplane ticket. Visa denials were based not on any actual misbehaviour, but on the presumption that the applicant was likely to break the law. This presumption generated great resentment among young people who aspired to migrate. Many Ghanaians have been able to find ways to leave the country and their migration abroad is one of the most

significant grassroots 'development' movements currently impacting the country. It is one arising largely through the impetus of citizens rather than through high level planning. The impact of this process extends beyond the lives of those who migrate affecting those they leave behind and Ghanaian society as a whole. An analysis by an economist at the Bank of Ghana found that $1 billion in remittances were channelled into the country in 2003 and that the rate of remitting had been increasing substantially every year for the past few years. He observed that this was a larger and more stable source of funds than either foreign direct investment (FDI) or overseas development assistance (ODA) (Addison 2004). In relation to an institutional model of development, the impact of migration (in terms of an internal improvement of the functioning of society and governing bodies) is unclear. Remitted monies may go largely towards base level subsistence rather than investment and internal capacity building although this research uncovered examples of both. However, from the alternate local model of development, the possibility for raising the standard of living for an individual and family is in many cases realized. Migration and remittances follow logically from the theory that development is about gaining access to accumulations of capital outside of the African continent. Migrants open new channels, funnelling money and other resources from host countries to their homeland.

The channels migrants open up provide more than unidirectional flows of money. Those who migrate build up many forms of capital: social, educational, and cultural in addition to financial. Return migrants often make use of these forms of capital to do some of the internal capacity building work that an institutional model defines as 'true' development. This was particularly true of the nascent high-tech sector in Ghana. Dr. Nii Quaynor, who was educated at prestigious schools in the U.S. and had professional experience as a software engineer and manager, returned to Ghana to start the first Internet Service Provider – Network Computer Systems (NCS). In a short survey project of computing sector companies on Ring Road, a central business district in Accra, my collaborators and I heard several stories of migrants who had returned around 1992, the time when the government transferred to a more democratic regime. The services provided by the businesses of these return migrants included technology training, computer sales, and Internet cafés. Additionally, most of the Internet café owners I

interviewed mentioned stints abroad[6] or were partnered with someone who had spent time abroad. One cannot definitively conclude from this information that migration is responsible for the development of the high-tech sector in Ghana. Migrants may gain resources while abroad, or their ability to migrate may simply indicate their already privileged backgrounds, a distinction that could be parsed out through further research. What can be stated is that return migrants seem better positioned to start businesses providing technology equipment and services in Ghana and sometimes point to specific resources acquired while abroad for this advantageous position.

Alongside the migrant success stories (real and mythic) and the stories of failed or thwarted migration, were also stories of disillusionment told by those who had migrated and returned. A taxi driver once told me the tale of how he had lived for a time in London. Before leaving, he had already been fairly successful in Ghana. He owned two taxis and some land. He cashed in his assets and paid £4500 to a 'connection man' to obtain visa papers and a plane ticket to get to London thinking that it was the next step for him to further improve his financial situation. This investment secured his entry into the country, but did not provide him with papers for legally remaining there. As soon as he arrived he realized that it was a bad idea. The lucrative opportunities he expected to find did not materialize. He spent three years stuck in London doing manual-labour work, positions he described as 'donkey jobs.' For a time, he held an exhausting job washing 48 double-decker buses a night at Stamford Hill station. He also worked in a warehouse loading and unloading freight for Morrisons supermarkets. Eventually he and his roommate were discovered and arrested by the police and sent back to Ghana. Being caught by immigration was a great relief to him. Although his bank account in London was seized, he had managed to send some money to his grandmother in Ghana totalling £3000. After 3 years in London he had realized a net loss of £1500 from his initial investment. Now living in Ghana he is slightly worse off than when he left. He owns only one taxi and no land. He commented that life is much easier for him in his homeland than it ever was for him in the U.K. Certainly what this indicates is that migration experiences are highly variable and depend upon the destination country, the conditions of migration, and the skills and resources (social and financial) migrants bring with them or have access to in the host country.

The issue of migration has come to the attention of development institutions involving a discussion of both negative and positive impacts. This discussion has progressed beyond simplistic notions of 'brain drain' acknowledging that migration has a multi-faceted impact and involves both problems with labour and skill shortages in developing nations as well as new flows of resources into the country (Adams 2003; OECD 2005; Page and Plaza 2006). However, debates around this issue are occurring wholly outside of UN efforts to realize an 'information society' and promote ICT use in the developing world. At WSIS, participants carried on an already established argument for the circulation of information and goods (particularly technology goods) without regulatory restraints in the global market. A focus on telecommunications liberalization and on more favourable import taxation regimes are dimensions of this argument. However, labour was not treated similarly. The experiences of Ghanaians who have migrated or aspire to migrate highlight how individuals worldwide are granted vastly different privileges of mobility in relation to their citizenship. Ghanaians are typically kept in a particularly immobile position relative to the developed world.

That the worldwide network of expatriates is a valuable resource that could be better enrolled in national development efforts is something the Ghanaian government has already recognized. In 2001 a 'homecoming summit' was organized to bring migrants back to Ghana encouraging them to pursue investment opportunities in the country. There are many services that could be built to make use of this interest: easier and cheaper online money transfers, forums for discussing investment opportunities or organizing philanthropic projects, Ghanaian matchmaking services, and e-commerce sites for remitting gifts to loved ones in the homeland. As developing nations work to transform their economies, governments, and social services the impact of migration will be a component in this process, one whose positive effects could be amplified through ICTs. New thought on the matter depicts migration as an intermediate phase in transitioning economies. In the aftermath of the spectacular failure of 'all at once' structural adjustment programmes (Escobar 1995; Easterly 2001; Ferguson 2006), particularly in Africa, this concern with the process of integration is an improvement over arguments such as Castells depiction of 'switched-on' and 'switched-off' regions evoking the inapt metaphor of a light switch (Castells 2001). Migration is a process of

information and labour circulation. Acts of migration are embodied in human migrants and thereby serve as an alternate method for addressing geographic marginality than that suggested by a bodiless and ephemeral 'information society.'

Another trajectory of technology for development thinking problematized by on-the-ground technology practice in Accra is the recent re-visitation of 'appropriate technology' ideals. This trajectory has re-emerged not only in institutional discourse, but also in academic work and NGO efforts. 'Appropriate' technologies are those that better match their settings of use and the pragmatic needs and existing capabilities of users in the developing world. Yet, the interest among Internet users in migration and the idealization of abroad also says something less explicitly instrumental about the ethos of Internet café users in Accra. Ferguson observes that many appropriations of Western commodities serve as a way that citizens of African nations make, "claims to membership within modern society, and negotiations of the rights proper to such membership" (Ferguson 2006, pp. 164). The declining prosperity and upheaval within many African nations after independence was experienced as a painful disconnection from global economic and political processes (Ferguson 2006). Through their current technology adoption efforts, citizens seek to remedy this disconnection. Mercer relates this directly to Internet café use in Tanzania finding that users are drawn to these technologies as a way to demonstrate affinity with the outside world and to distinguish themselves as more 'developed' than peers who do not use technology (Mercer 2005). These interests provide an alternate commentary on the 'appropriate technologies' movement that emerged in the 1970s (Schumacher 1973) and is carried forward in projects such as MIT's $100 PC programme[7] and open source software movements directed at developing nations. While theoretically sound and in many ways sensible, the drive towards this form of localization is divorced from the technology's appeal as a symbol of the foreign in places like Ghana. The same is true of the call for local content development to distribute agricultural or market information for farmers or provide customers for craft makers. These efforts seek to respect and facilitate the continuation of the existing livelihoods of Third World citizens. At the same time they do not serve the technological needs of that segment of society in developing nations that desires the transformative

potential of technology and that craves inclusion and partnership on an equal footing in global cultural processes.

Along these lines, while almost none of the Internet users I interviewed had sought formal training in Internet use, it was common for young people to pay for courses on how to use Microsoft Office, a skill that was desired due to the worldwide pervasiveness of Microsoft products. Those who pursued this training reasoned that the skill would be applicable if they ever got the opportunity to go abroad. This is an interesting challenge to the open source software development that received significant attention at WSIS as a 'grassroots' movement. Open source proponents frequently place themselves in opposition to Microsoft as a too powerful corporate monopoly and as an undesirable model of software development and distribution. Arguments for open source at WSIS were about the importance of customized local solutions that could be created and maintained by and for groups (such as speakers of an obscure language) that are too small or too poor to be considered a promising market for mainstream proprietary software. This was apparent in the statement from the WSIS Tunis Agenda for the Information Society that asserts the need for, "development of software that renders itself easily to localization, and enables users to choose appropriate solutions from different software models including open-source, free and proprietary software" (Tunis Agenda 2005, pp. 77). Yet, as a model for developing appropriate technology solutions, the open source process relies on the untenable assumption that openness in participation means that there is no significant distinction between developers and users eschewing the need for formal user feedback and usability testing processes (i.e. Raymond 1998). This assumption explains why successful open source projects have typically been designed by and for the technologically proficient (software developers and network administrators) often resulting in extraordinarily powerful systems with inaccessible user interfaces. Yet, an encouraging sign of possible things to come are more recent open source projects, such as the Ubuntu Linux-based operating system that have been able to successfully prioritize and incorporate the needs of ordinary users.

Open source software development is promoted as a good model for building better, more appropriate software solutions at reasonable expense. They are also considered to be a possible mechanism for cultivating technical talent locally in

developing nations. That this process could produce local software developers is certainly desirable, but to assume that those who pursue this route will be able to design for the needs and capabilities of their less privileged compatriots is debatable and negates the heterogeneity, hierarchy, and conflict amongst different segments of society in developing nations. The exclusionary practices and territorial claims of young men in Internet cafés (see chapter 3) is an example of how new technologies attracted young people in Ghana as a tool for social differentiation and displays of status. Furthermore, open source development processes are centrally concerned with quality control and therefore with recognizing and rewarding technical talent and skill sometimes resulting in exclusionary and elitist social practices among participants (Bergquist and Ljungberg 2001; Nafus *et al*. 2006). It is therefore limited in what it offers to the general population in terms of technical education. The drive towards custom software and hardware solutions for developing nations must walk a fine line. Open source movements often seem to reach only a very narrow segment of society, those individuals determined to become virtuoso techie-programmers. Alternately, technologies homogeneously designed for the lowest common denominator of society will likely be received by literate, multi-lingual citizens and their governments in the developing world as further evidence of low expectations and, ironically, exclusion of these societies from global trends.

Purifying Technology

The definition of technology emerging at WSIS served to mediate a relationship between development programmes, donors, and recipients of development aid. Technology as a tool for delivering information, primarily from north to south, for improving the efficiency of business, governmental, and social processes in the developing world was a product of 'casting.' As argued in the introduction, the perceived boundaries of technological objects are constructed socially to serve purposes of cognitive order and to negotiate social relations. Arguments made in WSIS documents attributed processes and effects as generated by the technology itself or alternately to external sources. This was work done to police the boundaries of the technological

object, to maintain it as harmless and helpful and also to maintain a role for development interventions. There is a parallel here to the efforts among Internet scammers and their peers to neutralize the relationship between technology and user through rumours that cast the user as effective and moral in relation to the Internet (see chapter 4). Similarly, casting practices at WSIS *purified* technology as part of an argument for its unquestionable and inevitable benefit to developing nations and the role of the UN and related agencies in bringing about this important technology transfer.

The purification of technology followed from a dynamic of absorption and displacement, absorption of successes into the development sphere where they were attributed to development initiatives and displacement of failures and problems away from development institutions and the new technologies themselves. Absorption is evident in credit-taking comments by development aid providers such as, "*initiatives within the continent point the way to a different future. North Africa is the most advanced of all regions in Africa because universities in these countries have just recently become members of the EU MED Connect project, which links them to high-speed undersea fibre networks*" (Steiner *et al*. 2005, pp. 34). An example of the displacement is illustrated in the assertion, "*Throughout discussions at Mozambique and elsewhere, there was a (near) universal consensus that the challenges in bringing data connectivity to Africa have less to do with technology than with market and regulatory structure* [added emphasis]" (Tongia 2005, pp. 17). This claim shifts the blame for difficulties in provisioning technology access to inadequacies in national government. It draws the focus away from potential problems adapting the technology itself to various African settings. The technology is consequently characterized as universally beneficial.

Technology as an innocent and beneficial force is particularly apparent in the way risk is treated in WSIS documents. For example travel on bad roads is described as a risk but that, "*with the use of information and communication technologies (ICT) this risk can be diminished substantially*" (Dufborg 2005, pp. iii). There is also the acknowledged financial risk on the part of donors and a risk on entering anti-competitive telecomm markets of being subject to unpredictable Third World governments. Risk is primarily characterized as a consequence of *not having access* to new technologies thus exacerbating and widening the gap between 'haves' and 'have-nots.' ICTs therefore are

cast as tools for reducing risk by the argument that there is, 'no harm trying.' Exposure to new ICTs is never defined as posing new risks or vulnerabilities for citizens of developing nations. By contrast, Internet users expressed an understanding that the Internet can indeed pose a threat to one's morality (through access to pornography or the temptation of fraud for example) and to one's finances through the loss of money to scammers.

Cyber-crime was handled in a particular way during the WSIS process in relation to the issue of risk. Sections 40-42 of the WSIS Tunis Agenda deal specifically with the issue[8]. While it is quite common for technology to be described as a determinist force that causes positive development effects, by contrast, on the issue of cyber-crime this problem is displaced away from the technology attributed instead to human fallibility. Cyber-crime is defined as a perversion of the technology's more natural tendencies. For example, the Geneva Declaration references a United Nations General Assembly resolution 55/63 titled, "combating the criminal **misuse** of information technologies [added emphasis]." The answer is defined as legislation and cooperation among law-enforcement authorities, but never by managing technology access or providing education on the joys as well as the dangers of these technologies. Technology was cast in WSIS documents to alleviate suspicion that it might pose a threat to the societies it was intended to aid thereby paving the way for unencumbered technological interventions.

Where Africa was considered in documents connected to WSIS it was portrayed as a continent with severe infrastructure problems that made existing Internet access essentially useless, negating the value of what Internet users in Accra were already managing to do with the technology. For example, in relation to a specific survey on Internet access at Universities in Africa the authors argue that, "*Internet connectivity in tertiary education institutions in Africa is in general too expensive, **poorly managed** and **inadequate to meet even basic requirements**… the average African university has bandwidth capacity equivalent to a broadband residential connection available in Europe, pays 50 times more for their bandwidth than their educational counterparts in the rest of the world, and fails to monitor, let alone manage, the existing bandwidth (ATICS 2005). As a result, **what little bandwidth that is available becomes even less useful for research and education***

purposes [added emphasis]" (Steiner *et al*. 2005, pp. 34). This statement not only argues that what exists is lacking, but also that local management of the resource is incapable, implying a need for external intervention. It is yet another example of 'casting' practices that preserve a role for development interventions.

By contrast, an opposing narrative was produced among Internet users at one such African University, the University of Ghana at Legon. While not stunningly fast, this group certainly perceived Internet access to be adequate emphasizing what they were newly able to accomplish rather than the limitations to connectivity that they faced. It is notable that contradictory conclusions emerged from these two perspectives. Even among Internet café owners (who were closely tied into issues of bandwidth provisioning and cost) the problems they identified did not reflect dominant Development priorities. Complaints about infrastructure were typically targeted at ISPs identifying cost and unreliability of service as problems, but never bandwidth. The depiction of inadequate and poorly managed bandwidth is ultimately about defining problem/solution pairings where existing 'conditions' are presented as a set-up for arguments about particular development intervention that are put forward as solutions.

The formation of a particular institutional model of technology for development at WSIS involved the occasional depiction of 'on-the-ground' conditions, but these rarely resembled and sometimes directly contradicted the experiences of Internet users in Accra. Instead these conditions were props supporting arguments about solutions. This form of argumentation is an example of what Ferguson defines as 'development-think' where premises are defined in relation to the necessary conclusions (Ferguson 1990). In the case of technology and development, the conclusion is that external development interventions and high-level policy-making are necessary to bring about technology access in Africa and other parts of the developing world. This illustrates how practices of institutional self-perpetuation, while certainly a necessary part of the life of any institution, can create blind spots that obscure the discursive spaces where citizens of developing nations express their priorities and concerns.

Socio-Technological Momentum

The model of development held by Internet users and consequent technology practices emerging in Internet cafés constitute a socio-technological momentum with its own distinctive characteristics and orientation in Accra. Internet café use, as well as mobile phone adoption, independent radio and newspapers, local video-film production, videography services, and music production and dissemination are all interconnected technology trends that contribute to this momentum. The need for policy-makers, entrepreneurs, and institutional agents to contend with the force of technology in practice has been examined before in the concepts of path dependency and Hughes' systems theory of "technological momentum" (Hughes 1994). Both focus on increasingly locked in technology processes anchored in everyday life through their inter-linkages with diverse entities. The focus on technology in practice rather than technology's 'promise' is key to both theories. Similarly, both address technology adoption and diffusion as a matter of pragmatism, that is, the inarguable reality of what technology actors believe and do, rather than utopianism, or what technology actors should ideally do. Path dependency is primarily an economic concept used to explain how technological development is limited by the entrenchment of certain inferior technologies (such as the inefficient QWERTY keyboard) in light of the availability of improved versions of the technology (David 2001). In a similar concept, Hughes locates momentum in imposing, physical structures such as dams, in organizational bureaucracies that deal with technologies, but also in the mastery and development of complex skills and knowledge (Hughes 1994). In both concepts something consequential is constituted through the practices that employ technologies, something greater than the material properties of the technology alone.

The Internet café scene in Accra, while lacking the type of formality and complexity documented by Hughes, had a consequential momentum in a populist sense through the sheer aggregate number of individuals who shared a similar interpretation of the technology. This momentum was composed of business models, facilities, as well as the informally developed knowledge and meaning that came to be associated with the Internet. There is not yet clear evidence that this momentum exhibits the attribute of

irreversibility that characterizes path-dependent processes. In Accra, Internet cafés seemed to rapidly come and go. What it does mirror from the concept of path-dependency was a consequential and distinctive existence realized not just through the materiality of technology, but through technology practice and through the interdependence of the Internet, other commodities, and social processes. This momentum can be treated for development purposes as a useful resource to cultivate and build upon. It is a pre-existing local engagement with new technologies that can inform development ideas and programmes.

There are three ways that the socio-technological momentum of emergent technology practice in developing nations like Ghana could become useful to development interests. The first is by highlighting on the ground realities and concerns that receive little attention in the hegemonic ICT and development discourse. One of these issues in Accra was the interest in making contacts abroad and the use of the Internet and other technologies to build or maintain diasporic links. An example of a technological implementation that engages this issue is the website thamel.com, an ecommerce site for Nepalese expatriates built by an entrepreneurial Nepalese man currently living in the U.S. The site allows expatriates to purchase goods as gifts for family and friends in Nepal. A sensible verification method is built into the process. Upon delivery a photo is taken of the recipient receiving the gift and is sent by e-mail to the sender. While senders may purchase Western imported goods such as mobile phones as gifts, they can also purchase food, flowers, and other perishable goods that are provisioned from local businesses thereby supporting these small enterprises in Nepal. An infrastructure for e-commerce is set up within Nepal that effectively puts many local businesses ‘online’ by employing runners as intermediaries to handle monetary transactions between the web site and these businesses. This is an example of how projects can have a greater effect by amplifying and improving specific practices (such as remittances), rather than putting money into generic technology access initiatives with unclear and overly broad presumed benefit to recipient communities.

A second way development efforts could engage with existing socio-technological momentum is by supporting and collaborating with technology-based small businesses, such as the Internet cafés in Accra, in order to aid their effectiveness and

impact. The multipurpose community centre programme in Ghana is an example of an intervention that makes almost no use of existing socio-technological momentum (beyond general local interest in technology) and even worse, has the potential to conflict with and undermine local entrepreneurial efforts. These stand-alone information centres, funded by government and donor sources, function much like Internet cafés. While many are located in rural areas that lack any form of Internet access, some are also located in Accra in the vicinity of existing Internet cafés and will potentially compete with these local businesses for customers. Why aren't these services being provided through the existing Internet cafés instead of stand-alone centres[9]? Development agencies could work in partnership with Internet cafés to improve the quality of information and education about technology provided in these spaces. This could be as simple and inexpensive as producing informational posters about 'how to use a search engine' and providing these to existing Internet cafés. This notion of collaboration through public-private partnership would avoid undermining existing businesses and at the same time would be a much more efficient use of funds.

It is appropriate here to highlight the conditions in Accra that make a collaborative public-private model appealing and why private Internet cafés did not alone solve the problem of technology access and use in this particular case. Over the course of my research I encountered a number of Internet users who had difficulties in using the technology effectively in accordance with their own plans and projects due to inaccurate models of how the technologies work. These difficulties highlight the need to support technology access with training and demonstrate limits to explorative self-education as a learning model. This issue is not about the alternate models of the Internet that derive from differences in values and world-views, but about mental models of how technology works that were fundamentally inaccurate. For example, in chapter 2 I described the efforts of a young man named Frank to find customers for locally produced glass beads. His ineffectiveness with this strategy stemmed from a misunderstanding about search engines. Firstly, he presumed that a search engine functioned as a vetted business directory and that businesses applied to be included. Secondly, he presumed that all search results were accurate, and therefore never bothered to read and evaluate the text on web pages, but simply extracted any e-mail addresses these pages contained.

Consequently he sent a huge number of e-mails one-by-one to unpromising addresses. A misunderstanding of how Internet technologies work also left some Internet users more vulnerable to scams. For example, Gabby, a young marginally employed man in his twenties received an e-mail notifying him that he had won a lottery in Amsterdam. In order to gain access to his winnings he was instructed to send several hundred dollars to a regional office in Nigeria. Gabby was suspicious, but when he contacted someone about the e-mail he was given a web address. The existence of a web page suggested to him that the lottery was legitimate. He did not understand that web sites could be set up for free and that the Internet functioned as a largely unregulated system without a process for scrutinizing information posted online or organizations with a web presence for legitimacy.

Ultimately, collaboration between development agencies and private small technology businesses makes sense in Accra for several reasons. First because the customers at these cafés were not the wealthy elite and were often members of communities, such as the impoverished neighbourhood of Mamobi, that were the target of development aid. Secondly, because many Internet users in Accra needed assistance in understanding how these technologies work in order to use them more effectively and with less risk. And many needed assistance in learning ways of using the technology more broadly beyond the narrow confines of e-mail and chat. Finally, Internet cafés were not visited by all segments of society equally and efforts to encourage underrepresented groups, women, middle-aged, and elderly people could be a cause taken up by development initiatives by funding special training courses and Internet café vouchers for these groups, or, for example, by sponsoring women-only cafés or women-only nights at existing Internet cafés. These issues altogether are a problem of the *underutilization* of the Internet in Accra - a worthy topic for development initiatives concerned ideologically with equality and with promoting the widespread diffusion of technology access and skills to marginalized groups.

A third and final use of the existing socio-technological momentum in Accra is as a source of information and insight for known development programme implementation problems. Internet café owners have been coming up with solutions to the same questions that have troubled development agencies pursuing technology access initiatives

(Roman and Colle 2002). These include concerns over the economic sustainability of technology services, the acquisition of necessary equipment, and of promoting local interest and engagement. Development projects are frequently unsustainable due to donor dependency and, in relation to technology specifically, often assume that it is necessary or preferable to acquire new state-of-the-art equipment and provide a completely free service. Local entrepreneurs in Accra employ a different model charging a reasonable hourly rate that even young people without incomes in underprivileged areas of the city can manage to pull together. They purchase older, second-hand computers from local resellers at cut-rate prices and these machines adequately serve the needs of their clientele for text-based communication that requires little bandwidth or computing power. While development efforts will identify areas where this business model does not work (i.e. to provide access to rural communities), the base line information about what does work and under what conditions is a useful resource.

Conclusion

The processes that produced a disconnect between institutional actors at WSIS and Internet café users in Accra resulted in the failure of ideas, concerns, priorities, and practices to circulate between the two groups. These two spheres represented distinct networks with very few points of interconnectivity and without a commonly shared language. As a consequence, distinct technological trajectories (of thought and practice) have developed in these spaces that often contradict or neglect one another rather than building upon a shared momentum. The resulting conceptualizations of technology and its link to development produced from the perspective of the development institution vs. that of technology users in a developing nation were widely divergent. However, the processes that produced these conceptualizations, as this chapter has demonstrated, were in many ways the same. Parallel practices of sense-making and ordering existed amongst Internet users in Accra as well as among WSIS participants. In both cases representations of technology (in formal documents and casual conversation) served not only to clarify functionality and utility, but also as *a way to maintain the integrity (morality, legitimacy, effectiveness, coherence) of the self in relation to technology*

whether that self was institutional, collective, or individual. This meant that technology was defined in a way that justified the values and practices of the group, practices ranging from Internet scams to donor-funded development interventions. In both settings computing and networking technologies were defined away from the computer interface itself through collective processes of speech and embodied performance: through rumours in the street, sermons in church, in workshops with development experts, and on the stage of an auditorium among many other locales.

While the institutional perspective exhibited at WSIS argued for a model of development through information, Internet users in Accra suggested a model of development via social connections. These differences in definition did not fall along the standard binary of modern developmentalists vs. traditional locals. Many Internet users, in their dreams of migration and desired forms of material consumption, clearly aspired (while often with a degree of ambivalence) to modern, cosmopolitan lifestyles and involvement in global processes. In the mean time, the UN has begun to place more credence in calls for cultural preservation. The result is an apparent reversal where citizens argue for modernization and to a certain degree 'mimicry' of the prosperous West (Ferguson 2006) while institutions at times suggest that new technologies have the potential to facilitate village life, by reducing the need for rural-urban or international migration and by making traditional pursuits (such as craft-making) more lucrative. It is becoming increasingly clear that the binary of traditional and modern is inadequate in understanding the lives of citizens in the developing world. Escobar argues that, the Third World should not be seen as a "reservoir of traditions" and that, "Third World…selves are illegible to any idiom of modernity" (Escobar 1995). Addressing local perspectives on development issues does not mean simply insulating societies from global forces in order to preserve local traditions. Citizens of developing nations are engaging in some of the major modern debates, whether or not anyone is listening, about the causes of underdevelopment, the impact of technology, and pathways out of poverty.

As the UN institutional discourse evolves in response to external criticism it has become unacceptable, in an official sense, to point to local cultures as something that needs to be overcome, merely as barriers to development processes (Crewe and Harrison 1998). Local inadequacies are instead termed as a lack of education, lack of knowledge,

or lack of skills still preserving room for the external interventions of development institutions. Yet, attempts to embrace culture in the WSIS process were two-dimensional following the old binary of modern developmentalists and traditional locals. In the official outcome documents produced at WSIS, culture is equated with local languages focusing on the need to develop language support on all new technologies. Technology is also referred to as a tool for documenting culture by capturing it in databases, museum-like, for the enrichment of future generations[10]. Culture is thereby treated as an external thing, a novelty, something apart from global debates and the essential practices of knowledge management, information distribution, and communication. It is instead costumes and food and exotic rituals. A more fully integrated engagement with issues of localization and culture would recognize the contributions those truly external to institutional debates have to discussions of modernization, globalization, and migration. A number of scholarly fields – anthropology, cultural studies, information studies, or organizational behaviour – all provide models for a more central and all encompassing notion of culture as constituting unique and potentially insightful and innovative information and communication practices. To address the technology cultures emerging in developing nations as well as the pre-existing information and communication practices in these contexts would make culture part of the ICT debate on a more fundamental level.

Perhaps the fact that the doors have been opened to 'civil society' groups will with time provide this opportunity. Observers, scholars, and other participants should take note of the presence of these groups of 'ordinary citizens' at future World Summit events and other development institutional gatherings focusing on technology issues. Who are these individuals and groups who use the collective, first-person 'we' to identify themselves as outsiders to the development industry? Are there occasions where the debate is successfully reframed to bring some of the previously invisible perspectives and priorities of 'civil society' to the attention of those gathered? Outside the walls of the Accra conference centre, Internet users raised a number of issues that were not aired in the WSIS process. Issues of central import to many Ghanaian Internet users included the politically-charged matters of international migration especially by non-elite Africans,

access to universally adopted technologies, inclusion in global processes, and problems with skewed representations of Africa and more blatantly racist behaviour online.

Development experts, often trapped in the vestiges of a modernist paradigm may recognize shortcomings to past approaches, but still lack established alternatives. The unidirectional nature of technology transfer projects in the modernist tradition sometimes renders proponents deaf to local interests instead making assertions about the need for, "local 'champions'…who can mobilize others…to accept the vision of an ICT telecentre program" (Roman and Colle 2002, pp. 6) without seeking to understand why interest might be lacking in targeted populations. Substantial energy has already been expended by Internet users in Accra to transform the technology into something of local relevance. To make use of this energy development institutions must gain a greater awareness of the existence of technology practices in the developing world, they must acknowledge technology's unpredictable impact on new societies and even its potential to facilitate harm, and they must consider the legitimacy of alternate trajectories of use that do not readily conform to development categories.

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[1] see the articles by Bloem (2005) and Banks (2005) and the WSIS document WSIS/CSCG/5 titled "Civil Society Statement to Prepcom 2" for a list of agencies and individuals identifying themselves as civil society. The distinction between NGOs and Civil Society in particular was unclear.

[2] this criticism is expressed from several directions by external individuals and groups – activist organizations, NGOs, and national governments. It is also represented in scholarly debate – see Crewe and Harrison 1998, Easterly 2001, Easterly 2006, Escobar 1995, Ferguson 1990, and Scott 1998 on the inadequacies of development planning and top-down institutional social engineering more generally. Government actions, such as the rejection of UN decision-making processes by the U.S. government on international matters are also serious and public indictments on the legitimacy of the UN as a governing body. Activist events that touch on development issues such as the WTO protests in Seattle in 1999 and several waves of protests after have received substantial media coverage making them difficult to ignore.

[3] For example, former UN secretary-general Boutros Boutros-Ghali depicts the UNs ubiquity in an article where he asserts that, "*Nothing can match the United Nations' global network of information-gathering and constructive activity, which reaches from modern world centers of power down to the villages and families where people carry out the irreducible responsibilities of their lives*" (Boutros-Ghali 1992). He defends the role for UN involvement in matters requiring international cooperation by arguing that the UN is already everywhere.

[4] Multi-level marketing is a business model where products are sold through a hierarchical network and sellers make money both through the products they sell and through the people they enroll as sellers. It is a legal business model. However a multi-level marketing system becomes a pyramid scheme when money is made primarily by enrolling new sellers rather than from the sale of goods.

[5] Kelvin's decision to join a church whose teachings he has no interest in is an example of strategic, disingenuous business practices often described as hustling (Chernoff 2003, Hall 1978). When a friend told him, "*You have to join the church and be baptized with the church before you will have this kind of privilege,*" he responded, "*well, we are on the hustle.*" Similarly, his persuasive sales pitch involved references to his foreign ties. When asked about his non-Ghanaian accent he noted he had an "America, Liberia connection."

[6] In two cases I was unable to interview the owner of an Internet café because they lived more or less permanently abroad. One was in New York the other in Arizona.

[7] The $100 PC programme seeks to distribute custom-designed laptop computers to children in developing nations. These devices are sold in large quantities to the government who is responsible for distributing them to young people. The hope is that these devices will teach young people to adopt an 'explorers model' of learning suited to developing technical knowledge and problem solving skills.

[8] Sections 40-42 of the WSIS Tunis Agenda state:

> *40.* We underline the importance of the prosecution of cybercrime, including cybercrime committed in one jurisdiction, but having effects in another. We further underline the necessity of effective and efficient tools and actions, at national and international levels, to promote international cooperation among, *inter alia*, law enforcement agencies on cybercrime. We call upon governments in cooperation with other stakeholders to develop necessary legislation for the investigation and prosecution of cybercrime, noting existing frameworks, for example, UNGA *Resolutions 55/63* and *56/121* on *Combating the criminal misuse of information technologies* and regional initiatives including, but not limited to, the Council of Europe's *Convention on Cybercrime*.
>
> *41.* We resolve to deal effectively with the significant and growing problem posed by spam. We take note of current multilateral, multi-stakeholder frameworks for regional and international cooperation on spam, for example, the *APEC Anti-Spam Strategy*, the *London Action Plan*, the *Seoul-Melbourne Anti-Spam Memorandum of Understanding* and the relevant activities of OECD and ITU. We call upon all stakeholders, to adopt a multi pronged approach to counter spam that includes, *inter alia*, consumer and business education; appropriate legislation, law-enforcement authorities and tools; the continued development of technical and self-regulatory measures; best practices; and international cooperation.
>
> *42.* We reaffirm our commitment to the freedom to seek, receive, impart and use information, in particular, for the creation, accumulation and dissemination of knowledge. We affi rm that measures undertaken to ensure Internet stability and security, to fi ght cybercrime and to counter spam, must protect and respect the provisions for privacy and freedom of expression as contained in the relevant parts of the *Universal Declaration of Human Rights* and the *Geneva Declaration of Principles*.

[9] A lack of collaboration between the state and Internet cafés is not due simply to ignorance. Scott (1998) illustrates the compulsive need of state actors to account for and make legible their activities to higher ups and to their constituency. A stand-alone facility that can be photographed, located on a map, etc. goes further towards this goal, than passing out informational posters.

[10] In the WSIS declaration of principles, 'culture' is listed alongside agriculture, employment, and education as entities that ICT applications can benefit in the statement: "*ICT applications are potentially important in government operations and services, health care and health information, education and training, employment, job creation, business, agriculture, transport, protection of environment and management of natural resources, disaster prevention, and culture, and to promote eradication of poverty and other agreed development goals…*" Number 52-54 of these principles address the issue of 'culture' highlighting culture as a form of 'content' that needs to be digitized and valued as heritage. These principles are listed below in full:

> "52. Cultural diversity is the common heritage of humankind. The Information Society should be founded on and stimulate respect for cultural identity, cultural and linguistic diversity, traditions and religions, and foster dialogue among cultures and civilizations. The promotion, affirmation and preservation of diverse cultural identities and languages as reflected in relevant agreed United Nations documents including UNESCO's Universal Declaration on Cultural Diversity, will further enrich the Information Society.
>
> 53. The creation, dissemination and preservation of content in diverse languages and formats must be accorded high priority in building an inclusive Information Society, paying particular attention to the diversity of supply of creative work and due recognition of the rights of authors and artists. It is essential to promote the production of and accessibility to all content—educational, scientific, cultural or recreational—in diverse languages and formats. The

development of local content suited to domestic or regional needs will encourage social and economic development and will stimulate participation of all stakeholders, including people living in rural, remote and marginal areas

54. The preservation of cultural heritage is a crucial component of identity and self understanding of individuals that links a community to its past. The Information Society should harness and preserve cultural heritage for the future by all appropriate methods, including digitisation."

Citizens of a Developing Nation as Agents of Technological Change

In the introduction, I worked towards a broader definition of technological change that permitted a wide range of activities to be considered forms of user agency. Technology, I argued, is fundamentally realized in use. The capabilities provided in the design of the technology were some, but not all of what defines the technological object. These capabilities are engaged with and understood by users selectively and extended through their practices of use as would follow from Sahlins assertion that, "the nature of material effects depends upon their cultural encompassment" (Sahlins pg. 206). These effects can go in many directions or nowhere at all. A technology that people refuse to use is a non-entity. It is relevant to bring up the iconic figure of the rusting tractor, an image that looms large in development circles. The rusting tractor is employed as an example of failed technology transfer, an object provided without the necessary supporting structure to ensure that it continued to be operational. The tractor does not exist in any consequential sense, except perhaps as a reminder of failed development programmes. Expanding out from this notion that technologies are not self-sustaining, that they require infrastructure, technologies also do not have self-evident utility. Lack of interest is as likely to kill some technology-based aid interventions as mechanical breakdowns that go unrepaired.

The agency of Internet café users has consequently been depicted in two primary forms in this thesis. First, in terms of the programmes users devised and carried out directly with the keyboard and mouse. These activities left traces in virtual space that are part of their construction of the Internet. Such was the case with Internet scam e-mails as well as the preponderance of Ghanaian Internet users in Yahoo chat rooms that altered the conversational dynamics of those spaces. Second, user agency was demonstrated in the way users talked about technology in the course of various social rituals thereby informing and directing their own actions at the computer interface as well as inspiring certain patterns of use in the actions of others. This work away from the human-machine interface ultimately had consequences for the way users manipulated that interface

directly. Agency was explored through themes and examples in each chapter to demonstrate how the technology was brought into being in Accra. Users changed the technology by creating it anew drawing from local structures of understanding such as rumours and religious rituals. Consequently it did not emerge as the same Internet that users are familiar with in the U.S., Europe, and other parts of the world.

It should be clear by now, however, that this emphasis on user agency does not indicate a 'heroic' agency whereby users are able to constitute any desired reality at will. In fact, one primary finding was that there was a great distance between users' expectations about the Internet and what they were able to realize through an engagement with the technology. An inability to close this distance was a source of frustration for some users. Previous chapters demonstrated that, in certain ways, the Internet in Accra was fundamentally misunderstood and patterns of use often became narrowly entrenched in practices that were easily analogous to familiar tasks such as making a phone call or corresponding with a foreign pen pal. The transformative potential of a technology like the Internet is called into question by users' ability to arrive at a satisfying appropriation of the Internet without acknowledging or utilizing some of its core capabilities and tools, such as search engines. Answering a question posed in the introduction, what the technology became through the efforts of users was, in certain ways, much less than it might have. For many users, despite their best efforts, it fell far short of the transformative tool for self-improvement that a, 'technology for development' rhetoric holds up as the ideal.

The point of considering the agency of these users in defining and changing the technology was not to argue for a native engineering instinct that renders development interventions unnecessary. The purpose of conceiving of users activities as constructive, as capable of technological change in a very broad sense was so that we might come up against the very hard limits of this agency. The activities of users at the Internet café were no more empirically-grounded or effective than most human behaviour and were similarly subject to misinformation and convenient logic. Perhaps most significantly, users simply did not know that there was more they could or should know. In many cases users were hindered by a lack of literacies (in the plural) and little training. English language skills varied widely among Internet users. However, issues getting less

attention in the debate about a 'Digital Divide' that were at play included a lack of media literacy that would promote scepticism about sources and data accuracy and a lack of technical literacy to understand underlying mechanisms in a way that would guide more effective use of these systems.

A sense of 'self' (individual and collective) is altered by the arrival of a new technology. To address another question posed in the introduction, what the 'user' became in the process of appropriating the Internet in Accra was partly a restoration and partly an extension of a pre-Internet self. This sense of self, as narrated by Internet users, was understood in particular racially embodied ways and shaped via postcolonial relations with the West. The models about how the Internet 'works' that were developed collectively by users helped them to filter the capabilities of the technology and arrive at their own selective understanding of functionality. These models were not sustained because they effectively predicted the outcome of human-machine interactions. They were sustained, in part, by the role they played in restoring a morally sound sense of self and society, particularly in relation to the confronting and threatening images of Internet fraud and other transgressive activities. Therefore the demands of keeping the self intact shaped how functionality was understood and the practices carried out at the human-machine interface. A sense of self was not only restored but also changed and expanded in the ways users engaged with the Internet that helped these young, aspirational Internet users richly imagine and act out a more connected and cosmopolitan self. Particularly among Internet users in very poor areas such as Mamobi, for whom opportunities of any sort were extremely limited and actual travel experiences unlikely, the Internet filled a need for a kind of self-realization. It was this dimension of the appropriation of the Internet that was possibly the most successful outcome for young Internet users.

One of the limitations that users struggled with had to do with forming relationships online with foreigners, relationships they often expected to yield opportunities such as foreign travel, help with education, and/or material gifts. The delay in the diffusion of the Internet to Ghana meant that Internet café users in Accra who were going online for the first time were meeting a well-established communicative environment set upon norms that they did not yet know and did not have the opportunity to participate in defining. Ghanaian Internet users' efforts to engage with foreign chat

partners were shaped by locally understood social norms (about gender relations in particular), a sometimes exaggerated understanding about the financial capabilities of foreigners, as well as financial constraints that motivated them to not waste time in their online conversations. In the best case their interaction style might be read as social ineptness (by Western standards of online interaction). In the worst, they could be read as attempted criminal activity. Warnings circulating in the media about Nigerian Internet fraud have created suspicion in online forums such as chat rooms and in dating sites against those who identify themselves as citizens of an African nation. While the proliferation of multiple cyberspaces for widely dispersed communities who seek intra-group sociability and solidarity has been the subject of recent accounts (i.e. Miller and Slater 2000), this problem of cross-cultural interaction online indicates that there should still be some concern over a 'hegemonic' Cyberspace. Members of marginalized societies sometimes seek inclusion in what they perceive as The Cyberspace, but are for many reasons excluded by majority members. This exclusion can be the result of nothing more than non-normative social behaviour and giving off the wrong identity cues (such as accurately identifying one's nationality as Ghanaian or Nigerian). This social exclusion is not one of technology access as in the classic notion of the 'Digital Divide,' but is taking place within new connections established by the Internet.

The limits to the agency of these Internet café users suggest opportunities for careful and well-informed intervention. First and foremost, they provide convincing evidence of the significant role that could be played by technical education. They suggest a degree of scepticism would be warranted about the notion that young people have an inherent capacity to understand technologies through only free exploration and without guidance. A balance between the two is likely to have a greater effect. In chapter 6, I described established patterns of technology appropriation in Accra, Ghana as a socio-technical momentum that could be used by development practitioners. The practices, effective or not, of Internet users provide insights into motivation suggesting how programmes might be designed to appeal to them. One way to address this issue is to look at the issue of efficacy noting the distance between the technological aspirations of users and what they are able to accomplish with the technology. Are there ways to close this gap?

Helping existing technology users to accomplish the outcomes they define themselves through training and resource-building is an easy and appealing target. A more tricky problem is where the aspirations and on-the-ground technology practices appear counterproductive or ethically unsound. The distance between Internet scammers aspirations and realizations is not a gap that development interventions ought to resolve, at least not in the way that the scammers would resolve it. At the same time, where external bodies determine priorities and institute practices to meet these priorities there is an inherent inequality in the process. There are emerging methodologies meant to effect such a reconciliation between organizers of aid and those who are meant to benefit (i.e. Tacchi *et al*. 2003). Additional efforts at developing and testing such tools are needed.

Another direction for approaching an existing technology momentum, is to look at the 'negative space' to see when, where, and why *non-use* endures. How is a 'lack of access' socially produced? Patterns of exclusion can be acted out by participants through processes of technology appropriation that impose a shared understanding of the type of person who uses a particular technology and how it is to be used. A momentum of technology practice can build unevenly where interest maps differently across demographic groups or where the relations between groups is such that one group (i.e. the rowdy young men in the cafés) can claim ownership and exert power over others inserting themselves as gatekeepers to a desirable resource. It is significant to note that in Accra, this exclusion was enacted by young, often disadvantaged men seizing upon and guarding one of the few new and compelling resources that they had access to. By understanding the processes that result in uneven access, ways to restore a balance can be determined.

A close evaluation of the proceedings and publications of the World Summit on the Information Society in the previous chapter highlighted a process of institutional self-perpetuation that was, by necessity, disconnected from the disorderly reality of on-the-ground technology practices. For the sake of symmetry, a principle guiding the analysis throughout this thesis, development institutional processes ought to be put under the microscope alongside the citizens of developing societies. The analysis of WSIS indicated that global institutions may not be in the best position to do the work of reconciling development ideas with the specific momentum of on the ground technology

practice. Small-scale organizations, NGOs, and/or small businesses may be better configured to realize a compatible alignment of resources and motives between benefactors and beneficiaries. Ultimately, it is not only the technology practices and information and communication processes in the developing world that need to be better understood. The way organizations that seek to promote technology for development solutions must be better understood as well.

Collectives, Communities, and Social Movements

The approach to addressing user agency carried out in this thesis was meant to avoid an idiosyncratic individualism and to, instead, explore the capacity for humans alone or in groups to act in a way that employs and reorganizes existing socio-material orderings. However, many past studies have centred narrowly on human-machine manipulations creating a privileged role for the individual. It is the personal ownership of computers in private residences or office spaces that has been studied most often in the West (i.e. Bakardjieva 2001; Lally 2002; Wellman and Haythornthwaite 2002). The individualistic perspective of technology possession was much less prominent at Internet cafés where a shared model of technology use could not be defined by conventional notions of ownership. In Accra, when individuals entered an Internet café for the first time, the interaction that initially defined the technology was not only with the keyboard, mouse and screen. A social interaction with a more experienced peer or an Internet café attendant structured their formative understanding of the technology. Many made their first visit to an Internet café with a group. When users were asked about this first visit, they often reported that they were told they could use the Internet to find foreign pen-pals. In many cases, a café attendant walked them through the process of setting up an e-mail account or getting started with chat rooms. While many users spent time independently exploring the computer interface, these explorations often stayed within the initial description they had been given of the Internet's utility.

The interpretation of the Internet in Accra was shaped by collective processes. The specificity of their interpretations of the technology did not derive solely from the individual. They also followed from the structures of meaning shared and instantiated by

groups. This analysis of the practices that defined the Internet away from the computer interface also suggests another way of looking at the relationship between social groups and communication technologies. A question was raised in the introduction asking 'through what processes the Internet was 'realized' in Accra?' To give a partial answer, it was through collective activities that included Internet users and non-users, but the nature of these collectives can be further explicated. These social groups were not defined as a 'community' made possible by technology and existing primarily inside its virtual boundaries. It was also not defined as a 'social movement' outside of the technology presenting an organized, populist challenge to certain trajectories of technological development. Both 'communities' and 'social movements' are key formations studied by researchers in the past to understand how collectives relate to technologies. Studies of virtual communities often emphasize the affective benefits, the role of these communities in providing social support, belonging and identity definition. Studies of social movements – from open source proponents and bloggers to anti-WTO activists and refugees – are currently popular with social scientists who study the Internet and other new technologies. Early theories of technological change also highlighted, for example, community groups that challenged the safety of the bicycle through newspaper editorials (Bijker 1995). Yet, there are other forms of resistance and reinterpretation, as evidenced in Ghana, that are less conscious and intentional. In the context of Internet café use in Ghana, users' activities were guided by an agency that was in part automatic, dispositional, and did not emerge entirely at the level of conscious effort. It was an expression of agency rather than activism. Nonetheless it had a transformative effect on the realization of the technology in Accra. When juxtaposed to the more dominant Western narratives about the coming technological revolution these alternate interpretations can also serve as a 'grassroots' critique without being explicitly politicized.

In this thesis collectives have been understood alternately as mechanisms for information sharing and sense-making that are culturally embedded and not explicitly linked to political movements. The evidence on Internet café use in Accra demonstrates that technology can be appropriated away from the imaginings of its developers without this being a movement that seeks to undermine or redirect the technology's established

purposes. Overt resistance requires awareness of a dominant or intended interpretation of a technology. However, Internet appropriation in Accra took place at a great social and geographic distance from those who masterminded the Internet's architecture. The alternate interpretations of Internet users in Accra emerged out of a perspective that was disconnected from many of the dominant discourses of meaning about the Internet that circulate in the West.

Technology Cultures

A particular concept of culture has been employed throughout this thesis drawing from evolving theory in anthropology and sociology. This 'culture' was not something belonging to the original tribes and societies who happened to live within Ghana's national borders at independence. It was not a distinct factor apart from economic, political, natural and material forces. It was neither local nor global. What made it singular was the particular intersection of global and local influences and the sequence of historical and contemporary events in the region. Therefore it was not bounded by geography, ideology, or history. It was shaped by traditional norms of reciprocity, witchcraft narratives, Pentecostal church practices, colonial era bureaucratic procedures, British and American migration policy, and American hip-hop all intermingling within one spectacularly distinctive, heterogeneous, and unbounded society. These intersections framed the way individuals engaged with the Internet. A new technology culture emerged out of this material engagement.

Previous research has established how as technology diffuses in new societies it can be appropriated in novel ways (Hughes 1987; Howes 1996; Wilhite *et al*. 1996; Miller and Slater 2000). Positivist approaches to the social study of technology sometimes refer to 'cultural factors' to explain this difference. This is particularly evident within user-interface design research traditions (i.e. Honold 2000; Choi *et al*. 2005). Yet, this is an approach that treats culture as something external to the process taking place. It also fails to explain differences in use among people who ostensibly share the same culture. Technology users, like the rest of humanity, exist in overlapping and entangled cultures of nation, race, class, gender, religion, etc. to which unitary

'factors' can be isolated and assigned at great risk of arbitrariness and for no great gain. Furthermore the unique attitudes of individuals, their subjective culture (Simmel 1997) generates variations in use that should be acknowledged.

With caution, I proceed with the use of the term 'culture' maintaining an awareness of some of these bad tendencies in the way it is often deployed, but with a belief in the immense utility of the term, especially for research on technology adoption and use. On the down side, references to 'culture' have a way of homogenizing members of a group, silencing unsettled and conflicting dimensions. It can also be used to sideline a certain set of responses to technology as a separate, inexplicable (possibly unnecessary) elaboration apart from the pragmatic directions of human activity. Appadurai critiques the way 'culture' comes to seem as a substance, a "biologism" such as race. Yet academics continue to find value in the term in increasingly diverse fieldsites. Appadurai attempts to revitalize the term by limiting its use to that of an, "heuristic device that we can use to talk about difference….especially difference in the realm of group identity" (Appadurai 1991, pp. 13). In Epistemic Cultures, Knorr-Cetina attempts to extend the term 'culture' towards understanding knowledge-production and the development of expertise in the sciences. In a study of knowledge production in two fields of science describes the way *culture* may refer to "different technologies of knowing" (Knorr-Cetina 1999, pp. 10). Her choice of subject matter is the groups of scientists in disciplines that form through professional affiliation and educational processes. These affiliations are a matter of choice, much like the expert culture of the WSIS event discussed in Chapter 6, and in this way evade accusations of promoting a naturalized difference through the concept of culture.

Rumours, religious rituals, youth clubs and other social phenomena seemingly on the periphery of the Internet café scene were among the many sense-making structures that Internet users relied on in their engagements with the technology. These structures of meaning were articulated with the new technological forms of the Internet to generate a distinctive technology culture. Some of this work was representational; technology was manipulated and connected to other ideas and objects in speech. Much of this work happened collectively; in church sermons and in schoolyards among other spaces. This ethnography looked at two technology cultures – the planful, expert culture of the UN

sponsored World Summit on the Information Society and the aspirational culture of Internet users in Accra that was simultaneously animistic and cosmopolitan, mystical and modern. The divergent views of the Internet in these settings demonstrated how societies and institutions can arrive at different interpretations and practices from some of the same material prompts.

This account of Internet use in Accra documented some of the processes that generate technology cultures. Generally speaking, *technology cultures are produced when existing structures of meaning intersect with the novel material properties of a new technology***.** These intersections may happen accidentally or purposefully, consciously or unconsciously. The technology cultures that rise up around a particular technological artefact promote particular beliefs about who can and should use the technology, what it is useful for, what processes are involved in using it effectively, and what desirable or undesirable outcomes it can be expected to produce. This is not a simple equation of 'culture' + 'technology' = 'technology culture.' The existing structures of meaning users relied on were not ephemeral abstractions of belief and value. They were held in place by established socio-material orderings predating the Internet. These structures were instantiated and made durable through ongoing and sometimes ritualistic practices such as the regular meetings of youth clubs and the prescriptions of a traditional healer.

Belief in a particular rumour marks out a group of insiders from outsiders. It exists and has material consequences to all who enroll in its status as truth. The unifying notion of a 'technology culture' aggregates several practices depicted in previous chapters including rumours. The conceptualization of 'technology cultures' is a way of answering the question raised in the introduction about the 'scope' of technological change effected by users. A change to technology effected by users was never considered to be universal. A 'technology culture' reflects the alterations made to a technological artefact as it is situated in society, alterations effected through use. The changes made by users may go no further than the extent of their persuasive power in rumour and other forms. Nonetheless through this persuasion, an understanding of functionality and consequently practice is formed.

By drawing on existing structures of meaning, users were able to accommodate a novel technology through reconfigurations and recombinations rather than through a

response to pure material prompts. These framings, however, brought forward finite possibilities while cropping out alternatives. Therefore, the assistance provided by understanding a technology relationally (i.e. through metaphor) meant losses to interpretive flexibility. Many interviewees described the Internet through analogies to other technologies. The Internet was like a telephone that allowed users to make international calls but at much lower cost. The Internet was like mail, but much faster. These analogies suggested ways of incorporating the Internet into old communication practices but did not shed light on information searching and other functions that did not map to these older technologies. Through these structures – metaphors, rumours, and the like – users made a much smaller shift in their perspective than advocates of a digital revolution might have expected or hoped. A complete transformation in worldview is extremely unsettling and presents the possibility of obliterating an established sense of self. Users approached the Internet through rehearsed and internalized responses that required fewer cognitive demands than a totally disordered response purely to material prompts. This act of 'recycling' meanings to accommodate new realities served the process of making new material forms less alien and more familiar, meaningful and useful.

The same process of accommodation applied to the role of ICTs in institutional self-preservation at the UN through events like WSIS. New technologies like the Internet were employed in a 'retooling' of the institution. These technologies were accommodated through a process of change that muted and restructured their revolutionary possibilities to be compatible with the institution's established operating procedures. As much of this thesis has demonstrated, when a technology arrives in a new setting, it is appropriated and changed relying on the resources at hand. Similarly within the UN these new technologies have been accommodated to a version of the 'Information Society[1]' that fits neatly into a spot once filled by modernization and industrialization that defined the development industry at its founding (Escobar 1995). Around this former teleology the United Nations and related development institutions built a quite massive bureaucracy and set of practices and values. The notion of an Information Society allows these global institutions to repurpose their practices using the same

metaphors, the same system of expert intervention, high-level planning, and technology transfer, but with new (ostensibly improved) tools.

The accommodation of new technologies into old processes of communication and information distribution, while perhaps less than revolutionary is not a refutation of the Internet's consequential materiality. There is no doubt that the Internet combines an array of distinctive properties in an entirely novel way and on a global scale. The Internet enables anonymous and disembodied interactions and both synchronous and asynchronous communication. It is much more interactive and customizable than older media forms like television. It facilitates limitless reproduction and the organization of data into unique hypertext structures. It offers inexpensive and easy authoring and distribution. Yet, while theorists often address the expansive possibilities, often they have not considered the cultural frameworks that make these properties meaningful, desirable and useful. Past studies have focused disproportionately on just one side of the process of socio-material articulation. The studies in this vein do not go so far as to invoke a simplistic technological determinism to explain this process, but they have neglected to study much of the framing work that was taking place offline and away from the computer interface. Often, research focusing on intensive, individual engagements with technology artefacts has attributed the primary force shaping styles of use to individual personality and life situation (i.e. Turkle 1984; 1996; Bakardjieva 2001). Technology practice has been frequently depicted as the result of an individual process of direct experimentation and online social interactions. Methodological choices in early research also played a role as virtual fieldsites were observed detached from offline contexts. Furthermore, in the very early years of Internet diffusion when many foundational studies were conducted, users had a similar profile. Most were Americans, well-educated, technically-inclined, and male (Wellman and Haythornthwaite 2002) and it is perhaps no surprise that they had a common view of the technology. These early users had access, time, money, and the inclination to explore this unclear, complex, and sometimes unreliable new technology. Researchers shared a similar cultural positioning and many of the presumptions framing the use of the Internet were difficult to recognize from this embedded position.

Beyond considering the processes that generate technology cultures, the relationships that connect divergent technology cultures have political, social, and economic implications. Mobile individuals and ideas circulate between them. How members of a technology culture perceive and relate to outsiders is a major issue addressed in this thesis. Many treat their vision of technology as a mission that ought to be expanded to encompass outsiders. The efforts of development agencies to bring technology for development programmes into Third World locales is a concerted effort not just to transfer technologies, but to expand an institutional culture about technology's value and purpose. By relying on the notion of a 'digital divide' to justify Third World technology interventions, these agencies put themselves in a position to determine proper technology appropriation. This is guided by the assumption that they are targeting societies that lack technologies and an interpretation of their purposes. This study provides evidence that at least in Ghana (a heavily aid-targeted country) this assumption is simply not accurate.

Whether insiders see themselves as representing situated or universal truths about technology also has implications. Part of belonging to a culture is absorbing a shared response to what is common-sense, that which is self-evident and require no further justification. Common-sense is a component of culture that is not recognized as such. Any sufficiently insular community that is not subject to constant intrusion from external challengers develops a degree of blindness to certain shared assumptions and to the possible alternatives. Chapter 6 documented the way language conventions and referencing patterns in speech and text at the World Summit on the Information Society accomplished this insularity. These strategies were used to both lend and borrow legitimacy from other parts of the institution. Procedures that regulated access to WSIS converted outside organizations such as NGOs into champions of the institution. Both WSIS participants and Internet café users in Accra inevitably were guided by common-sense views. Their aspirations and expectations about technology shaped interactions with outsiders. For Internet café users these included the people they were connected to through the Internet. Network technologies like the Internet facilitated an unprecedented degree of intercultural contact, between different national cultures, technology cultures, and transnational subcultures.

While UN events like WSIS include participants from every continent, its ideologically roots are in the Western Enlightenment project founded upon modernist ideals (Escobar 1995). The hegemony of such global institutions over the governments and citizens of developing nations and their self reinforcement strategies make it possible for the claim to universality to be maintained. Denial of culture is a charge levelled at Western society in general, not just the elite communities of powerful scientists, diplomats, and decision-makers. The concept of culture circulates in the public discourse as shorthand for otherness and a situated perspective. In popular thinking, culture is in the realm of opinion and value rather than irrefutable truth. Successful denial of culture indicates an absence of scrutiny and an absence of effective challengers. It follows that the culture of the UN will be acknowledged by insiders when under pressure to address external critics (i.e. Boutros-Ghali 1992). Ghanaians were constantly reminded of their non-normative positioning in relation to the rest of the world through the media, aid programs, and diasporic communication. The perceived absence of culture in the West is shared by both those inside and outside of Western society. In a recent interview with a well-educated, middle-upper class family in Accra, their perception of themselves as *situated* was clear. The eldest son noted that, "*for Africa, for this part of the world, our culture is centred on…a certain pattern of living….If you think on the world platform, you can see that our culture doesn't necessarily mean anything to somebody else.*" He expressed a clear sense that what counts for truth and meaning in his society does not extend to outsiders, that his positioning is relative. After a short debate between the young man and his mother, his aunt turned to me and asked, "*So the Europeans, do they have a culture?*" Anthropologists and sociologists have considered this very question over the years. The elaborate exoticism of societies throughout the southern hemisphere is contrasted with the seemingly plain, utilitarian, and disenchanted West. One convincing argument that is also particularly applicable to technology use is Marshall Sahlins critique of materialist interpretations of culture and his assertions about the constitution of Western culture.

Sahlins asserts that Western culture does not "escape symbolic determination" and that the economy itself is "the main site of symbolic production" (Sahlins 1976, pp. 211). He describes what makes Western culture distinctive as the shared illusion that it is

guided pragmatically by material laws alone. He critiques earlier theorists who treated culture as though it were merely, "nature expressed in another form" (209) entirely reducible to the logic of subsistence and survival. He notes how this approach historically has had explanatory power for only certain domains of cultural practice and failed to generate insights into those practices (such as witchcraft and magic) that do not map coherently to some natural imperative. His claim is supported by an analysis of Western styles of eating and dressing as the symbolic demarcation of economic and non-economic practice such as Sunday dinner, 'Happy hour,' and gendered, casual, and work styles of dress. He takes this argument further by observing that culture does not arise from utilitarian needs, but neither are these needs a separate domain. Sahlins argues for a fundamental connection between utility and the symbolic orderings of culture. It is through a cultural framing, through the patterns and priorities of everyday life defined by culture, that it is possible to perceive the utility of an object in a way that inspires and guides instrumental action.

Following from Sahlins insights, one aim of this ethnography was to challenge the tendency to treat the functionality of a technology as separate from symbolic work that is about or makes use of the artefact. Where the two are treated as distinct, function is the realization of consequences that derive from material properties and direct interaction alone. Symbolism, by contrast, is primarily the domain of aesthetics and identity display. Symbolism is the way a mobile phone is made visible to signify class, gender, and style (Monteiro 2004). Through this division function escapes from culture and becomes something entirely defined by a universal rationality and unimpeachable physical laws. In technology studies, notions of symbolic display have been used to demonstrate a richer, more affective, more aesthetic, and more social role for technology in society, but this has had the perhaps unintended consequence of reinforcing the division between utility and symbolism.

At the root of the developmentalist interpretation of technology at WSIS exists just such a separation between utility/functionality and the cultural dimension. It is a way of thinking about processes as composed of layers and compartments. Utilitarian universals are at the base level and the cultural/symbolic consists of destabilizing contingencies that must be contended with in the instrumental drive towards socio-

economic progress. The symbolic is irrelevant to material forces, it is an add-on that may be either helpful or destructive. Alternately, culture is treated as a matter of heritage that can be encompassed and preserved by technology, but has no bearing at all on the machine itself. A utilitarian relationship to tools is presumed to be applicable in all settings. What this fails to recognize is that utility itself is discerned through a cultural frame that foregrounds certain material possibilities while obscuring or neglecting others.

This account of Internet café use in Ghana has looked at symbolic work in relation to technology beyond notions of symbolic *display*. The separation of function from symbolism treats function as if it were self-evident and beyond human control. However, Gell makes the important point that technology is defined, in part, by its inscrutability. A technology is something that accomplishes a desired outcome in a roundabout and indirect way requiring some specialized instruction and consequent skill to make use of it (Gell 1988). By this definition, technological function is never self-evident and a social and symbolic process of sense-making is involved in employing it materially and effectively. This is particularly applicable in the case of an extraordinarily complex technology like the Internet that builds on a set of discoveries stretching back to the invention of the integrated circuit. As Sahlins argues, "no functional explanation is ever sufficient by itself; for functional value is always relative to the given cultural scheme" (Sahlins 1976, pp. 206). This means that no function that can be discerned from the Internet without involving symbolic work. Sahlins argument acknowledges but does not theorize in any way the role of materiality. However, importantly he establishes a connection between material function and symbolic understanding that is often missing from the way technology appropriation is understood.

As for the materiality of the Internet, certainly the obduracy of the technology was something users had to contend with. The reality of seeing an American chat room partner on a webcam reinforced certain understandings of the Internet through a tactile and multi-sensory experience. Latour, Law and others argue for the durability of social order across time and space as dependent upon material objects whose particular physical qualities shape the particularities of an ordering (Latour 1991; Law 1994). Drawing on this theory of social order I argue that the structures of meaning that users brought to bear on the Internet obtained this structure through a socio-material realization and were

instantiated through rehearsed and embodied practice. The materials that make up the Internet and the materials involved in making sense of the Internet were not ciphers that any meaning could be projected onto. These artefacts exerted an agency of their own.

What made the Internet different from the other commodities and technologies that came before it in a steady stream from the Western world was the way that it facilitated feedback and direct contact with people outside of the African continent. This technology created a profound sense of co-presence by enabling frequent, synchronous and multi-sensory communication through text conversations and the use of webcams. Unlike the telephone, chat rooms and matchmaking services on the Internet were designed to facilitate connections between strangers. Unlike the airplane and air travel infrastructure, access to the Internet was not restricted by the international infrastructure of immigration policy. This co-presence allowed Internet users to recreate themselves legitimately as more cosmopolitan and connected. Unlike the ongoing process of importation through which foreign commodities confronted Ghanaians who could only respond to these material prompts locally, the Internet provided a link back to its source. Through this newly affordable connectivity, the Internet provided opportunities to challenge for a more central positioning in the global order.

It was not just the Internet, but the unique way that the technology was situated within the space of the Internet café that was seized upon by Internet users. Young people with less than a University education who made up the majority of Internet café users in Accra faced an additional sense of marginalization in a society still largely ordered on gerontocratic principles. The Internet café served as a space outside the surveillance of their elders since they were predominantly visited and staffed by young people. Some used this opportunity for transgressive behaviour such as porn viewing. The café became a territory young people claimed as their own. At BusyInternet, the territorial claims of youth were so insistent and disruptive that actions to regulate café behaviour were instated to maintain the openness of this space to diverse segments of society.

Internet users believed the Internet would allow them to develop an expanded social network. This proved true in their online encounters. They believed that this would lead to improved access to financial, educational, and employment resources. This

second level of belief was transported by other structures like rumours and church sermons and was not directly experienced by most Internet users. The Internet was a source for desirable contacts, ones that by virtue of living outside of the African continent had more resources at their disposal. Their expectation was that establishing these contacts would unlock the flows of resources within privileged social networks so that they would begin to flow from the West to Ghana. Through their strategies to meet patrons, father-figures, philanthropists, boyfriends, girlfriends, and spouses on the Internet they expressed the conviction that above all else they lacked the money and connections required to succeed in life. Based on their own experiences and the experiences of certain peers and family members this was indeed how getting ahead happened.

The Internet users I interviewed and observed rarely made any reference to 'information'. There is limited research into the social concept of information, how it is culturally specified, and how different cultures manage and distribute it. Notably, in Accra there was a striking difference in the way university-educated Internet users in Accra approached the Internet. For these users the notion of 'information' was much more central. They saw problems as having solutions that were perhaps detached from human sources. What this suggests is that ways of thinking about 'information' may be produced by a certain style of education. An education that stresses scepticism and self-reliance rather than embodied knowledge imparted by authority figures. The analysis of these observations are speculative at this point, but suggest a promising research direction into a cross-cultural analysis of the concept of information in education processes.

Cross-Cultural Comparisons

The purpose of talking about 'technology cultures' was to highlight how multiple possibilities are present in technological forms and are activated differently by each new set of users. Early research on the Internet's social impact suggested that the anonymity and synchronicity of Internet mediated communication facilitated experiments with gender and other aspects of identity for self-development (Rheingold 1993; Turkle 1996; Markoff 2005; Turner 2006). By contrast, the same capabilities of anonymity and

synchronous communication have been employed in Ghanaian Internet cafés to open up new, lucrative possibilities for favourable (if illegal) economic transactions, such as chat room scams. Technological properties were certainly consequential, both activities depended upon unique features of the Internet for their realization. Yet neither possibility could be extrapolated from the material properties of the Internet alone.

The Internet along with mobile phones are remarkable for their rapid diffusion from the U.S. to the rest of the world, much more rapid than any of the technologies that have come before including television, telephone, and radio. Less than two decades after Internet service became available to consumers in the U.S., Africa is now identified as the continent where adoption of the Internet is happening most rapidly. With widespread global diffusion underway, researchers are in a better position to look critically and comparatively at technology cultures and cybercultures.

Comparative research can also be used reflexively to re-examine technology appropriation in the West and to ask questions about the structures of meaning that technology users rely on to make sense of the Internet. As in Ghana, this includes informal conversations and story-telling, and various other activities conducted away from the computer interface that inform technological practice. The moral panics surrounding paedophilia on the Internet are a good example of beliefs about technology practice that exist apart from direct experience. Few experience this phenomenon first hand, but the circulation of stories informally and in the media has a material effect on the relationship between young people, their guardians, and the technology itself. By examining Western convictions about technology, both popular and academic, and finding the disconnects between these convictions and direct experience researchers can develop a better understanding of their role beyond mere explanation of the phenomenon at hand. It is not the direct experience with a technology that is the final word on how the materiality of the technology is operated and interpreted.

There is a future in research on technology cultures documenting the various ways that the Internet is appropriated around the world. A cross-cultural perspective can shed light on widespread presumptions about technology's destiny in developing and other non-Western societies. There is a weird and wonderful reality to what happens to new technologies as they become situated in different societies. The alternative

interpretations of technology emerging in many parts of the world provide a commentary on the way these societies confront modernity and globalization. Users and their adoption or rejection of technologies along with the particular configurations of technology that they create are a crucial component of the way technology's 'promise' is realized.

[1] There is no single agreed-upon definition of the 'Information Society' in scholarly work. For a summary of the different kinds of evidence scholars point to support the reality of this new social world order see Webster 2002.

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Appendix

Figure 1 - a small Internet café in the La Paz neighborhood

Figure 2 - BusyInternet, the largest Internet café in Ghana

Figure 3 - the café at BusyInternet

Figure 4 - Isaac's political campaign website

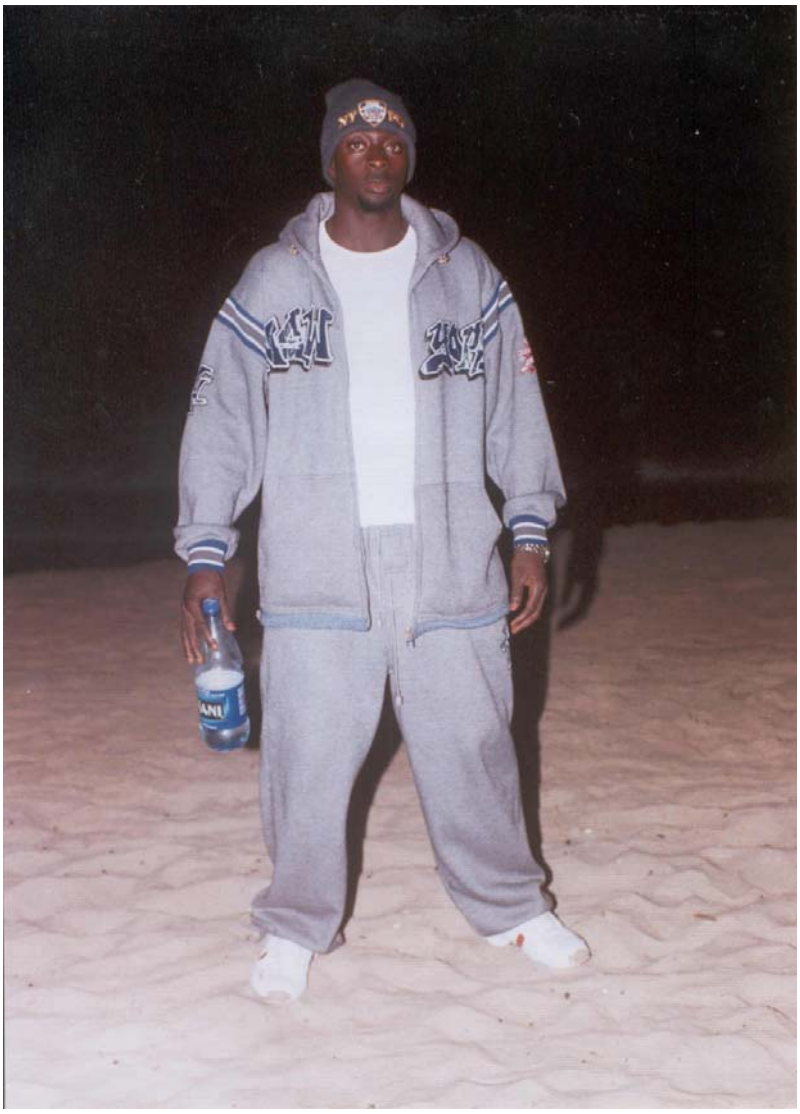

Figure 5 - Charles constructs a cosmopolitan identity