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Developing Mediators: An Analysis of the Changing Associations of Ghanaian Internet Cafe Users between 2003 and 2014

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DEVELOPING MEDIATORS: AN ANALYSIS OF THE CHANGING
ASSOCIATIONS OF GHANAIAN INTERNET CAFÉ USERS BETWEEN 2003
AND 2014

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Sociology

by

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August 2016

To Maria Archer LeBlanc. I once believed this to be my most impressive work, then you came along.

Acknowledgements

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Preface

It was Sunday approaching noon when I met David at the southern edge of Adabraka. I had been wandering south down Kojo Thompson Avenue in hopes of finding the Tudu region and an Internet café called the Mujahid. However, the fruitless wanderings over the last two hours in the oppressive Ghanaian sun were only adding to my mounting concern that this project was unsustainable. Two days earlier I had met with some limited success. Our collaborator, Dan-Bright, had warned that Internet cafés were losing popularity and a study focusing on how they had changed over the last 10 years was unfeasible to say the least. He specifically warned us that trying to find the ones where interviews were conducted almost a decade ago would be a waste of time. But that Friday I had located three cafés, each within a 10 minute walk from our hotel. Granted, these were not the original 2003 cafés, but if three cafés were able to stay open within such close proximity to each other, surely I would be able to find some of the original study's cafés.

That Saturday, however, could only be described as an utter failure. It started out hopefully enough. There were two cafés from the 2003 project that should have been within walking distance of the hotel. The first, Laws Internet café, was located somewhere within the Adabraka region, the same region that housed our hotel. However, two hours of walking up and down the main thoroughfares and asking shop keeps and stall owners had yielded no results. So, I moved on to Kwame Nkrumah circle, a market and Trotro¹ park at the north end of Adabraka, in search of Bell Africa Internet café. Again, after two hours of questioning every local entrepreneur I could find, I came up empty handed. The shop keeps that were willing to discuss

¹Trotros are large vans or small buses that are privately owned and operated. These vehicles are the primary means of public transportation for the average Ghanaian citizen.

the project must have thought they were being helpful when they told me: "Nothing in Ghana lasts for 10 years."

When I set out on Sunday I was feeling equal parts determined and disheartened. I was determined because I knew that if I could just find the Mujahid then I could justify spending the time and resources necessary for traveling around the different regions of Accra's Greater Metropolitan area in search of the other cafés. I was disheartened, however, not only because of the failure of the previous day but also because 10 minutes into my trek I remembered that the whole city shuts down on Sunday as most of the people attend church services. Evangelical sermons could be heard from blocks away as most of the shops-turned-impromptu-churches had huge loudspeakers blasting the sermons to the masses. All of the other stalls and stores were closed. I knew this would be problematic because, without shop keeps and stall owners, I had no idea how I was going to get directions to my much-needed café.

That was where I was. An hour into the journey with the sun pummeling me from above and the word of God assaulting me from all sides, I just so happened to stumble across David. At that time I was certain I was going to be unsuccessful in my search, but I refused to let the day be a waste. I was on the lookout for the words "Internet café" adorning the different signboards littering the vacant buildings. I had found a number of them and marked them on my map in hopes that I could return on Monday and begin my search anew. It was following an arrow on one of these signs that led me to the shady alcove where David was resting.

He was sitting beside a cooler filled with 20oz bottles of water and soda. In his hands was the unmistakable basket with eight cup holders that was the primary tool of the traffic beverage vendors. Traffic vendors were a feature of every intersection with a stop light. When the light was red they would walk amongst the stopped cars selling their wares. The most

prolific of these vendors were the drink vendors selling either bags of water or 20oz bottles of refreshing beverages to thirsty commuters. However, in the current ghost town that was Sunday afternoon Accra, all David could do was sit in the shade of the alcove and wait for afternoon traffic to begin.

When he spied me wandering around with my notebook and printed Google map, he asked me what I was doing. I explained that a decade ago University of Ghana students had conducted interviews at Internet cafés all over Accra. I told him that I wanted to find these cafés so I could conduct follow up interviews to see how things had changed over the last 10 years. But, I was having trouble justifying conducting the study because I could not even find the cafés that were supposed to be close to the hotel. He asked what café I was looking for and I told him it was the Mujahid in the Tudu region. At that he got up and put down his basket. He told me very plainly that he would show me where Tudu was and we would find the café. He said his shift did not really begin until 1pm so he had about an hour to kill.

I was taken aback. I was not unaccustomed to the kindness and helpfulness of the average Ghanaian. I was also not unaccustomed to the request for a modest financial remuneration, colloquially referred to as a "dash," that often accompanied Ghanaian helpfulness. Even so, having a perfect stranger offer to take me on a tour of the surrounding neighborhood, in search of a decade old business that may or may not be there, on a day when almost all businesses are closed, without asking me for anything in return, was surprising, to say the least. But here we were, without any further negotiation, walking down the street toward what David assured me was the Tudu region.

As we walked I got to know David a little better. He was in his late 20s and he had been working as a traffic vendor to pay for schooling. He knew he needed an education to get better

employment, but he also told me that if he wanted the opportunity to make real money he would have to leave Ghana. So, while working and going to school, he was also saving his money in hopes of being able to travel to the United Kingdom or Canada. He was half Ghanaian and half Nigerian. He had moved to Ghana when he was very young. He made it clear, however, that he never planned on going back to Nigeria or anywhere else in Africa because Ghana was the nicest and safest country around. He was currently unmarried and without children and he planned on staying that way until he could get a real job that paid a wage that would allow him to support a family.

As we talked I found out that he was even more informed about world news and current events than I was. He told me about a mass shooting that happened in a movie theater in Aurora, Colorado during the premier of the new Batman movie. He wanted to know if violence such as this was common in the United States and why someone would be motivated to do such a thing. I had to explain that the USA is a more dangerous place than Ghana, but that mass shootings are not a common thing and are still viewed as abhorrent. I also explained that I had no idea what the shooter was thinking nor do I ever want to understand the thought process of a man like that.

As we traveled we met and asked a number of people for the location of the Mujahid Internet café. It seemed to me that we were being sent in circles, but David was confident that we were getting closer. Sure enough, after a while we found where the Mujahid Internet café had been located. It was in the heart of the Tudu area across the street from Accra Polytechnic. This area was a very dirty and poor section of Ghana. The roads were more like dirt alley ways. The area was a ghetto in the truest sense of the word, occupied mainly by Muslims and Nigerians. These poor neighborhoods were locally known as zongos. As we walked around the zongo, I was shown where the black market money changers operated.

We found out from a neighbor that the Internet café had been closed since 2008. The neighbor called the director of the building to come and talk with us. Both the neighbor and the director were very nice older Muslim gentlemen who were trying to stay as inactive as possible because they were fasting for Ramadan. The director said the Mujahid Internet café closed because of mismanagement of funds; however, a new Internet café was being opened where the old one was located, and the new one was named the Jr. Walaga Internet café. I thanked the men for their time and information and I marked the location on my map with a newly found sense of success.

We returned to David's cooler and basket. As thanks for his help I offered to buy a water bottle from him, but he just gave me one instead. I tried offering him a "dash" but he just waved the money away insisting that he "finds joy in meeting and helping good people." As elated as I was at finding the café I was also ashamed at myself for harboring preconceived notions that I did not even know I had. During our travels I was sure David would ask for a "dash" when we got back, whether we found the café or not. Instead, however, he gave me 45 minutes of his time and a free bottle of water; and asked for nothing in return other than a little conversation.

A year before, when I had been offered the chance by my mentor to accompany him to Ghana and assist with his research, I knew I was in for an adventure. However, I also knew that before I set out on this adventure I would have to leave any preconceived notions I had about Africa at home. I would need to tackle this adventure with eyes wide open. However, here I was a year later with a whole new set of assumptions developed during my current and previous trips. These biases were not holding up to reality at this very moment.

David knew who he was; he knew where he had come from and where he currently stood in both his current community but also in a globalized world. He knew what he had to do to

further himself, but he also knew that he could not reach his full potential in his current location and he would eventually have to embark on an adventure of his own. On a practical note, David knew the neighborhood, the people and the language necessary for finding one of the cafés from the 2003 study. On top of all of this he was more aware of what was happening in my own country than I was. Meeting David not only jump-started this project, it also taught me two important lessons.

First, and probably most important for finding the old cafés, was that local knowledge was going to be invaluable to my search. Locals knew the area. Locals knew what changes had happened and were happening in the neighborhood. If I was going to find the cafés I would need to abandon my assumptions about local assistance and "dashing" and take help where I could get it. In fact, one of the most crucial aspects of the method I ended up developing for finding the 2003 cafés was enlisting the help of the Internet café and technology store owners and operators in a given region to pinpoint the old café. Although I encountered a number of locals while conducting my search that wanted a "dash," more often than not my experiences would end up mirroring the events of that afternoon.

The second lesson manifested itself when I was researching the theories that would end up guiding my data analysis. As I was learning about theories of technological diffusion and global development, I came across post-colonial studies. As with any other theory, there are many different perspectives associated with post-colonial studies, but the one aspect that accompanies all variations is that lived experiences and local ways of knowing need to be the primary focus of data analysis. This brought me back to that afternoon with David. I had already confronted the cultural ignorance that accompanies living in a developed nation when discussing my trips to Ghana with people back home. But now I could not stop thinking about

what David had said when we were discussing his life in Ghana versus his time in Nigeria or his questions about the theater shooting and violence in America. I realized that David's lived experiences and ways of knowing had an importance all their own.

It was this realization that confirmed my choice to use Actor-Network Theory to shape my data analysis. That is not to say that I was going to discount other theories such as the Social Construction of Technology, Network Theory, theories of Social Capital, or theories of Development and Globalization. I just made the decision to give primary weight to the narratives of my subjects and let their knowledge lead the way. If their narratives fit with already established theoretical paradigms, all the better, but if they did not I was not going to “shoehorn” them. It was with these lessons in mind and my decision to follow my subjects’ narratives that I began analyzing the data and writing this dissertation.

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Abstract

This study examines interview data gathered a decade apart, in 2003 and in 2014. The analysis answers the questions: "How were café patrons using the Internet in 2003 and how do the 2003 findings of this study compare to the findings of other studies conducted around the same time?" "How has Internet usage changed between 2003 and 2014?" "How has the Internet café business changed over the last decade?" This study starts by reviewing the theory and literature which informs studies of the Internet and Internet cafés in developing countries. Two years were spent discovering the fate of the 2003 locations. The data that were used for analysis were gathered at these locations, or their "walking distance equivalents," using ethnographic interviews. An argument is made that the Internet can either be a Black-box or a Quasi-actant in an Actor-network account, depending on how the subject frames its influence. The study then compares the findings from 2003 to the findings presented in Invisible Users, another study of Ghana's Internet cafés conducted in 2005 (Burrell 2011). This study makes the argument that "Invisible Users" were only one of many different types of café users. It is also argued that pornography played a multi-faceted role in the narratives of café patrons. Differences and similarities in both patron usage and the café business itself, between 2003 and 2014 are discussed. Finally, this study concludes by presenting an actor-network description of the flow of action for both the café business and café patrons by using the first three "uncertainties" identified in Reassembling the Social (Latour 2007).

Chapter 1: Introduction

The story presented in the preface offers the reader a number of insights into the data collection process for this project. It also offers a glimpse into the daily life of Accra's citizens. There are many things the reader can take away from that narrative; however, one thing that is referenced over and over is the importance of local knowledge. The reason local knowledge is so important is that Internet cafés have been, until recently, the primary method by which the average Ghanaian citizen got online. For years now scholars have been studying the importance of Internet cafés for communities all over the world. All this time Internet cafés have played a powerful mediating role. However, time does not stand still.

Over the last decade technology has changed. Portable devices and wireless Internet connections have become faster and more affordable. What was the best, and in many cases only, option for Internet access is now competing with a number of new challengers. The introduction of these new technologies and the changing habits of the Ghanaian users bring to the fore a number of questions. How were café patrons using the Internet in 2003 and how do the 2003 findings of this study compare to the findings of other studies conducted around the same time? How has Internet usage changed between 2003 and 2014? How has the Internet café business changed over the last decade?

These research questions are important for a number of reasons. First and foremost, by answering these questions this study adds to incomplete pre-existing knowledge about Internet cafés and the people who use them. Second, these research questions can inform policy for international development by illuminating the role Internet cafés play in closing the Digital Divide. Third, by answering these questions using an Actor-Network Theory (ANT) approach this study contributes to the growing body of ANT research. Last, but in no way least, the

qualitative way this study answers these research questions offers a glimpse into the lives of subjects, about which, most western readers would know nothing.

This study seeks to address these questions by analyzing the associations that are present in the narratives of the two sets of interviews. By following the flow of action surrounding these associations, this study seeks to paint a broad yet descriptive picture that depicts the interaction among users, cafés, and the technology itself. This description unfolds over the next seven chapters.

Chapter 2 lays the theoretical and literary foundation for the rest of the study. Each section in the chapter examines different established theories. It starts by focusing on the dissemination and adoption of technology by examining the theories of Social Construction of Technology and Technological Determinism. Next, it transitions to the theories of networks, and social capital. The chapter ends by addressing post-colonial studies and makes the argument that Actor-Network Theory (ANT) is the best option for analyzing data from the perspective of the subjects, and ethnography is the best method for conducting an ANT study. This perspective is supported by an analysis of Internet café studies conducted using ANT. As each theoretical perspective is examined, the sections continue by analyzing the literature that has been written about the Internet, the Digital Divide, and the dissemination of information communication technologies (ICT) to developing nations.

Chapter 3 focuses on the methods used to gather the data for this study. It begins by examining the ethnographic method, and its various sub-methods. The next section of this chapter examines in detail the interview method for both customers and café attendants. The final section of chapter three identifies problems that were encountered during the search method development and the interview process.

Chapter 4 addresses the research question: "How were café patrons using the Internet in 2003 and how do the 2003 findings of this study compare to the findings of other studies conducted around the same time?" The chapter examines the discoveries made in 2005 by Jenna Burrell in her study of Ghanaian Internet café users entitled Invisible Users. As the narratives of the 2003 subjects are examined, they are compared to the findings presented in Invisible Users to identify the similarities and differences. The argument is made that Burrell's Invisible Users are actually just one type of café patron amongst many. These new typologies are then grouped under the label "Internet Explorers."

Chapter 5 addresses the research question: "How has Internet usage changed between 2003 and 2014?" The chapter examines the changes that have happened in the Internet cafés and among Ghanaian Internet users over the past decade. The first part of the chapter examines what had changed in the last 10 years based on the given answers of the two sample groups. Specifically, this section discusses the change in technology and its accessibility; the shift in the conceptualization of the Internet from black box to quasi-actant; and the increasingly important role of Facebook. The second section of the chapter examines the things that have stayed the same. This section discusses the continued importance of the other typologies of Internet Explorers as well as the continued existence of Invisible Users.

Chapter 6 addresses the research question: "How has the Internet café business changed over the last decade?" This chapter focuses on the data gathered from the questionnaire targeted at café owners and operators. No such questionnaire existed in 2003 and this one was developed to tap that previously unexplored vein of knowledge. The main impetus for this area of investigation was the rumors that the café industry was going out of business. Examination of

these narratives shows that recent technological development has indeed affected the business, but has in no way killed it.

The final chapter concludes this study by combining the other chapters into one cohesive narrative. Following the guidance of Bruno Latour, the narrative takes the Actor-Network Theory approach of following the flow of action and describing its mediations. This is done by examining and addressing the first three of Latour's "uncertainties" presented in Reassembling the Social (Latour 2007). This description then transitions to describe the Ghanaian Internet cafe patron in a larger network of associations. Chapter 7 closes with suggestions for future studies regarding how we can continue following these developing mediations.

Chapter 2: Theory & Literature

This project addresses three research questions: How were café patrons using the Internet in 2003 and how do the 2003 findings of this study compare to the findings of other studies conducted around the same time? How has Internet usage changed in 2014? How has the Internet café business changed over the last decade? However, before these questions can be answered, readers need to understand why the Internet is important, and, therefore, why the study of Internet cafés is relevant. Readers also need to understand that the way people conceptualize communities has changed over the last century and how this conceptualization has led to the problem of the digital divide. Finally, it is important that the nuances of Actor-Network Theory (ANT) are explained so the reader understands why it is being used to address the research questions. To provide the reader with the necessary foundation for understanding the rest of this project, this chapter examines the specific theoretical views that have been used to study the Internet, online communities, and the digital divide. This investigation also explores the theory method of ANT, and how ANT has been used in other studies of Internet cafés. The overall analysis will be divided into three sections, each with its own sub-sections.

The first section will examine the theoretical paradigm, known as the Social Construction of Technology, and its antithesis, Technological Determinism. This section starts by giving an overview of the main theoretical topics. Next, it explores the evolution of studies of Internet use, showing how the theoretical focus shifted from determinism to constructivist as time has passed. It ends with an examination of technology in the developing world, illustrating how the social construction of the technology paradigm is not limited to the developed world.

The second section will analyze contemporary theories of networks, and social capital. These theories are utilized in explaining the concept known as the digital divide. After clarifying

these theories, this section will follow the evolution of the digital divide as a Western phenomenon to an issue of global development policy. This section ends by examining the limitations contemporary theories of knowledge creation in the developing world.

The final section discusses Actor-Network Theory (ANT), as well as some of the critiques levied against ANT in recent years. Here, ANT is offered as an alternative material-semiotic method for studying Internet cafés in the developing world. This alternative is supported by a number of previous projects that used ANT to study Internet cafés in different countries.

2.1: The Social Construction of Technology vs. Technological Determinism

2.1.1: Overview

The Social Construction of Technology (SCOT) is a theoretical perspective that states that “technology and society are both human constructs”(Bijker 1997:3); technology is shaped by societal structures and power relations as well as by inventive individuals. This perspective sees the construction of new technology, the introduction and dissemination to a consumer base, and the adoption (or failure of adoption) of a new technology as being the product of countless social interactions. Theorists, who subscribe to the SCOT model, condemn a linear model of technological development as being an over-simplified, rational model for what is really a complex, social process.

Technological studies that take the SCOT approach examine a number of social controversies whose results lead to the success or failure of a given technology. One of the first controversies happens before a technological artifact is even created. At this early stage, different scientists and engineers clash over the form and function of a new technology. What will this new artifact look like? What are its functions and limitations? Who is the intended user?

At this point, factions evolve around the answers to these and other questions, and each side attempts to create an artifact superior to that of its competitors. Some sides are able to garner enough support and resources to develop their technology, while others are not.

The next controversy takes place in the socio-political arena. In this arena, political, financial, and corporate structures and entities, as well as the factions introducing the new technology, engage each other in an attempt to position this new technology in harmony with their interests. Political structures oversee the policy and regulation of the new artifact. Corporate structures attempt to leverage the new artifact, either by gaining rights of production and distribution, or by impeding its production and distribution to minimize its danger as a competitor. The factions introducing the new artifact utilize the power at their disposal to gain political and financial backing while minimizing the support their competing factions' gain. During this controversial stage, some technological artifacts successfully get into production and distribution, while others do not. Success at this point is contingent on enrolling all the other entities toward the goal of dissemination of the artifact. Failure to enroll one or more of these powerful structures could mean failure for the artifact.

The final area of controversy is the realm of the consumer. At this point the artifact exists, in many cases in a number of different forms. At this time the artifact is also being produced and distributed to targeted consumers, both individuals and groups. It is here that the controversy centers on the ability of the different development and distribution factions to convince consumers that the artifact being offered to them is something that is useful. If, through marketing, corporate licensing contracts, and popularity, the producers of an artifact can gain enough of a consumer base, the artifact is said to have reached a point of

“take-off”, and it will rapidly disseminate (Bijker 1997). However, if it is not adopted by enough of a consumer base, it is considered a failure and may fall into obscurity.

One important concept stressed by SCOT theorists is the importance of symmetry when discussing the success or failure of an artifact. For this theoretical model “The ‘working’ of an artifact should be explanandum not explanans...the functioning of a technology is the result of sociotechnical development, not its cause” (Bijker 1997:13). On the same note, failure of an artifact is also a result of sociotechnical development. Here success and failure are gauged using the same methods and measures.

More recent writings on technological relationships have faulted the earlier SCOT writings for not giving a loud enough voice to consumers and users of technology (Oudshoorn and Pinch 2008). Here the argument is that users can be as much the agents of technological change as the original scientists and engineers who created the artifact in the first place. There are a number of reasons for this. First and foremost, the original creators are often also consumers and users. Second, the main unit of analysis for SCOT theorists is the social group, but this ignores key innovators within the user group as important agents. Finally, it is within user groups that new, unintended ways of engaging with the technology are discovered.

Although the Social Construction paradigm is the currently accepted theoretical model, it is not without its antithesis, which is Technological Determinism. The Social Sciences and Science and Technology Studies largely regard Technological Determinism as a flawed, and in many cases failed, theoretical model. However, Technological Determinism is by no means dead (Wyatt 2008). The longevity of this perspective can be attributed to the rhetoric of social structures that have large audiences and great influence, such as politics and the media. In these cases the problem lies with the fears of these individuals regarding unexpected social changes.

These changes often coincide with the rise in popularity of new technologies. When the inevitable growing pains associated with these social changes occur, it is the technology that is often identified as the impetus of the change and, therefore, the cause of the problem.

There are also scientists (social and otherwise) that, in an attempt to identify contributing factors of social change, give causal powers to technological artifacts. In many of these studies, progress and technological change are seen as one and the same (Wyatt 2008). In essence, the argument here is the exact opposite of the SCOT argument. In other words, because of the successful function of a technological artifact, society is forced to change. The next sub-section will illustrate a number of studies that gave determinist power to computers and the Internet when studying changes in social networks and socializing practices. It should be noted that most of these studies occurred early in the dissemination process of the new communication technology. However, what is important is how these studies shaped early studies of the Internet, and how their findings were later used to change how studies of the Internet were conducted.

Before moving to the next section of this chapter, the evolution of the SCOT paradigm must be addressed. Here the original SCOT and Technological Determinism are dialectically synthesized. Most of the principals of the original SCOT are maintained; however, the process of technological construction and change is extended to account for the impacts the artifacts make on social groups and, in turn, how these social groups elicit changes in the next generation of the artifact. In this new paradigm, innovators, producers, social structures, and user groups, as well as the technological artifacts, work together as facilitators of sociotechnical change (Boczkowski and Lievrouw 2008). This theoretical evolution comes about in part as a way to reconcile the numerous different findings from multiple disciplines regarding the interplay

between changes in technology and changes in society. The next sub-sections examine a number of these previous studies.

2.1.2: Determinist Studies of the Internet

Early social studies of the Internet focused on two dichotomous narratives. The first, which we will call the “utopian narrative,” saw the Internet as a tool of freedom. This view saw the Internet as a digital activist that would break down the concepts of normative gender, race, sexuality, and socioeconomic status by giving the masses the option of embodying differing personas safely protected behind an anonymizing screen. The second narrative, which we will call the “dystopian narrative,” saw the Internet as a tool of seclusion. This view identified the Internet as a digital wall enclosing people into homogeneous communities, shutting them away from diverse social groups as well as “real” social contact. As time changed, both narratives became less concrete, adapting to the findings of different studies. This section will highlight a few of these articles and their findings to show the shift from a dichotomous determinist narrative to a more constructivist conceptualization of the Internet.

One of the earliest studies that ended up supporting the utopian narrative was conducted by James Katz and Philip Aspden(1997). They found that, although the complete narrative was not supported, people were using the Internet to maintain personal contacts with family and friends, while at the same time making new friends. Partially in response to these findings, psychologist Robert Kraut and associates conducted their own study of Internet use and concluded that greater use of the Internet was associated with declines in communication with family and greater incidences of depression (1998). The difference in these two findings led other researchers to question Katz’s and Kraut’s methods and to approach the dichotomous narratives from different prospects. Both Franzen and Nie approached Internet use as a question

of time management (Franzen 2000, Nie, Hillygus and Erbring 2002). However, where Nie found that time spent online was time away from real world interaction, Franzen found no negative effects on people's social networks. One influential paper addressed the five domains of contemporary Internet research: inequality, social capital, political participation, organizations, and cultural participation. The findings were game changing: Internet use was complementing people's social interaction in all arenas. It was the malleability of the technology that allowed people to incorporate it into their life as they saw fit (DiMaggio et al. 2001).

It was around this time that the whole dichotomous narrative changed. The narrative shifted from being about how the Internet changed people in regard to the whole of society, and became more about how the Internet changed people's interactions within their personal networks. It was also around this time that support started to shift from the negative narrative toward the positive narrative. Over and over again, findings showed that people were not losing touch with their flesh and blood associates. On the contrary, these relationships were getting stronger (Coget, Yamauchi and Suman 2002, Goulding 2002). People were not hiding or constructing identities on the Internet; they were projecting accurate representations of their physical self (Neustadl and Robinson 2002). Any previous findings of a decrease in social participation were attributed to faulty methodology or the newness of the technology, not an inherent isolating aspect of the Internet (Goulding 2002, Kiesler et al. 2002, Neustadl and Robinson 2002).

Although most researchers have dropped the negative determinist narrative of the influence of the Internet, not everyone has. One of the most cited and influential holdouts is Sherry Turkle (Turkle 2011). Her most recent work takes the stance that people are currently engaging with machines as if they were other people, while at the same time treating other

people as if they were objects. Her argument is we are devolving into a society that is constantly tethered to one online device or another and that the relationships we entertain through these mediums are shadows of what relationships used to be. There are two main problems with her analysis. First and foremost, she uses ethnographic findings to make generalizations about all digital technology users. Ethnographic findings are only applicable to the people or groups being observed. Second, she uses some technological examples that would not be considered popular or mainstream. Although her findings regarding Facebook usage might have some merit, her analysis of Chatroulette users should not be extended to Internet users as a whole. To be fair, she did acknowledge the legitimacy of the SCOT perspective, reminding her readers that they are the ones who choose to use technology and how to use it. However, this statement is made at the same time she admonishes her readers for allowing digital technology to take over their lives and social interactions to the point of losing control. Even in this primarily determinist text the importance placed on network relationships is easy to see.

The next section examines in depth the rise of a digital network perspective and a shift towards an acceptance of the SCOT theory.

2.1.3: Constructionist Studies of the Internet

The previous sub-section highlighted a shift in how Internet use was conceptualized. This sub-section focuses on how that shift in perspective is currently manifesting in contemporary literature. One of the most profound shifts is the change in the conceptualization of the community and how people engage with their communities. This shift coincides with understandings of how culture and technology engage with each other. Culture usually stays the same, although it is very situational and capable of rapid change. When the introduction of a new technology coincides with cultural change, engagement with the technology becomes a crucial

form of cultural capital. Whether individuals, organizations, or even whole structures adopt the new technology or experience technological lag is important for understanding cultural shifts in power (Peterson and Anand 2004). The perception of the necessity of the Internet is owed in part to the perspective that it is the perfect tool for giving voice to marginalized individuals and groups (Lara-de Leon 2007). It not only allows users to engage with their personal networks, it also affords them the opportunity to reach beyond the limitations of these networks (Bakardjieva and Smith 2001).

The notion of community has shifted from being the people that share our physical space, to being the people that share our way of thinking and acting. Community building is a process engaged in by individuals acting as agents of their own networks. The Internet as a tool allows for people to engage with a wider audience while remaining physically in one place, a phenomenon known as glocalization (Fernback 2007). One major argument regarding the change in our society is that our current state is actually the product of generations of changing attitudes regarding community. Place based communities, networks based around a physical location, have given way to people based communities, networks based around a diversity of people and what they can contribute to any given situation (Rainie and Wellman 2012).

The rise in popularity of technologies has coincided with these community shifts. Steam engines, trains and railroads, ocean liners, automobiles, radio, television, phones, and now computers and the Internet have all been adopted because people have desired new and more efficient ways to reach beyond their physical location and connect with a multiplicity of others that normally would be inaccessible. This has given rise to the concept of “Networked Individualism”, the idea that an individual has at his or her disposal a variety of people that can be utilized at any given moment for any given social need (Rainie and Wellman 2012, Wellman

2001). This concept goes hand in hand with the concept of glocalization because the reach of the networked individual can be global even if the person is physically embedded locally (Fernback 2007, Rainie and Wellman 2012). In one particular case study of a wired suburban neighborhood, it was found that access to the Internet led to greater community solidarity for the homes that engaged each other with the online tools (Wellman, Boase and Chen 2002, Wellman and Hampton 1999).

However, the meaning of glocalization changes when wireless capabilities are introduced. Wireless Internet offers people the option of moving about freely and maintaining digital contact. This freedom has been utilized in various ways by different types of people. Some use it as a means of meeting other people face-to-face, and others use it as a way of insulating themselves from physical interactions (Hampton and Gupta 2008, Hampton, Livio and Goulet 2010). People are using Internet technologies to reinforce participation in existing relationships; this in turn increases access to social capital (Hampton, Lee and Her 2011). Network size is greater for people who use Internet technologies, and there is no indication that it is lacking in diversity. However, core networks may be shrinking because of the new locations for support available to Internet users (Hampton, Sessions and Her 2011).

The importance of the Internet as a way to access knowledge has taken center stage in many discourses. However, there is also an element of cultural lag that accompanies these discourses. This lag is embodied by the notions that the Internet is only useful for the younger generations, and that it is also a dangerous place where these youths are vulnerable to unseen danger. This fear can lead parents to restrict access to the Internet for only educational purposes. However, lack of access, in and of itself, can be harmful to the younger generation's exposure to social capital (Tripp 2011). This idea that the Internet is an important tool for accessing

knowledge and social capital is the foundation for studies of the phenomenon known as the digital divide. The next major section of this analysis will thoroughly examine digital divide literature as it has changed over the years. However, before we move on there is one more subsection that will be examined that links the topics that have been discussed (Social Construction of Technology) with what will be discussed (Development and the Digital Divide).

2.1.4: The Social Construction of Technology and Development

This section ties the SCOT to studies of technology conducted in the developing world. Two important studies revolve around the impact of mobile phone use on core networks. They were conducted under the same grant, and they both used the same questionnaire. However, one was conducted in the Indian state of Kerala, and the other was done in the African country of Kenya. What was surprising is how different the findings were for each study. In Kerala, core network size shrank, which coincided with a bounded solidarity theory of mobile phone usage (Palackal et al. 2011). However, in Kenya core networks expanded, which fit with an instrumental access theory of mobile usage (Shrum et al. 2011).

The point here is that, given the similarity of these studies, one would assume that if it was the technology that caused change; the changes would be similar in both countries. However, the differences in the findings lend support to the SCOT model; it is the culture and normative practices of the technological adopters within each country that dictate how the technology will be used and what effect this use will have on the society. Further support is found in a study that measures scientific collaboration and productivity in the previously mentioned countries (Duque et al. 2005).

Our general findings at the level of the regional scientific community show that scientists from Kerala are the most productive, have the best access to email and report the fewest problems in their research--they are also the least collaborative. At the other extreme, Kenyan scientists are the least productive, have difficulty

with email access and report the most research problems, but they manage to collaborate a great deal(Duque et al. 2005:30).

If one took the determinist approach, we would expect email to cause high levels of collaboration, which would equate to high levels of productivity. But this is not the case. However, this is a supportive case for reagency, the theory that resources sent as development aid will be used in the way the recipient sees best, even though this was not the intended use of the resources. This concept will be discussed more in the next major part of this analysis.

Finally, this section ends by acknowledging the importance of public, private, and individual support of a technology if it is to make any kind of difference. As was previously stated, technology is created and deployed as part of a social process. However, whether or not the technology is adopted and utilized is also a social process. If the structures of a society, both public and private, as well as the individuals and local communities of the population do not all work toward the same goal of adopting a technology and using it for the purposes of progress, then the effect of the technology alone is inconsequential (Daly 2000). The role of the state should not be understated. Policies regarding use and access to technology can have serious impacts on where a country is located within a globalized digital economy (Selwyn 2002).

2.2: Digital Divide

2.2.1: Overview of Network, and Social Capital Theories

The last section of this analysis discusses how studies of the Internet have recently begun to focus on how people use the Internet to supplement their networks and enhance their social capital. This section examines what is meant by networks and social capital by examining contemporary theories dealing with these topics.

Studies of networks are based on the idea that people have always been tied to each other through their relationships, whether these relationships are familial, occupational, congenial, or

otherwise, and these relationships bring with them different types and levels of dependence. “A network is simply a set of relationships between objects, which could be people, organizations, or nations...” (Kadushin 2012:1). The power of networks lies not in who an individual knows, but instead in the multitude of individuals and groups known to the relationships of the individual. In general, people congregate with others who share likeminded ideas, and time spent with likeminded individuals reinforces shared ideas. This concept is known as homophily; birds of a feather flock together. Homophilis relationships are often attributed to a desire for safety, or maintenance of securely established ideas and behaviors (Kadushin 2012). However, no two people are exactly alike, and it is through these differences that people are exposed to new and different relationships. Effectance, or the desire to reach beyond one’s situation and comfort zone, can be attributed to either the desire to experience something new or the need to access resources not currently available within one’s personal network. It is at this point that network theories intersect with theories of social capital (Kadushin 2012).

Capital is defined as resources that can be invested into a marketplace for an expected return. This is an economic conceptualization of capital where capital is access to raw materials and the means of producing goods from these materials. However, capital can also be seen from another perspective as the knowledge and skill-sets that make a person a marketable commodity; this is known as human capital (Lin 2003). Although, it stands to reason that no one individual can have access to all knowledge, nor every skill-set. Hence, when people need access to information or skills that they do not possess, it behooves them to have a large network from which to draw these resources. Social capital is the resources a person does not own, but instead has access to through a network of friends and acquaintances (Kadushin 2012, Lin 2003). Social capital takes many forms, such as information, influence, and status. “Social capital may be

defined operationally as the resources embedded in social networks accessed and used by actors for action. Thus the concept has two important components: (1) it represents resources embedded in social relations rather than individuals; and (2) access and use of such resources resides with actors” (Lin 2003:24). This is the basic premise behind the digital divide. People with access to the Internet have access to networks, and, therefore, social capital, that cannot be utilized by people without Internet access. The next sub-section examines three components of the digital divide: early studies of the divide in developed nations; the changing nature of the divide from a problem of access to a problem of skill-sets; and, finally, the current state of the divide as a problem of international development.

2.2.2: The Divide in Developed Nations

The digital divide was originally conceptualized as a problem of developed nations. The reason for this was because the Internet was originally a product of the United States, and until recently was only used by developed countries. The original premise of the divide is very simple: people with access to the Internet have greater access to social capital than people who do not have the Internet (Levy et al. 2000). The fear of policy makers was that rural communities, racial minorities, women, the elderly, and the impoverished would continually fall behind their more affluent young white male urban counterparts regarding access to economic and political knowledge and community aid (Levy et al. 2000).

In response to the perceived threat of the divide, local and national political entities, in different developed nations, engaged in campaigns to provide Internet access to marginalized individuals. These programs took the form of community computer centers in poor neighborhoods, increased Internet access in libraries, grant funding and tax breaks to startup Internet cafés, and Internet kiosks dispersed around some urban centers (Clark 2003, Wakeford

2003). As time went on these programs were viewed as successful. More and more of the vulnerable populations originally identified as victims of the divide were gaining access to the Internet, and using the Internet with more frequency. Although there was still a small percentage of rural and elderly citizens who were not benefiting from Internet use, they were viewed as the exception, not the rule (Levy et al. 2000).

However, even as more citizens were using the Internet, some academics and policy makers started asking questions about how people were using their newfound access. Studies did show that marginalized communities who utilized the Internet to enhance civic efficacy were benefiting from levels of social cohesion usually only identified in affluent neighborhoods (Hampton 2010). Other studies began showing that access alone was not enough. What people were doing when they were online, and the online skill-sets they were building and enhancing were starting to be identified as equally important as access if social inequality was to be lessened (Bucy 2000). In other words, the conceptualized nature of the digital divide was changing.

2.2.3: The Changing Nature of the Divide

In the last decade, the nature and conceptualization of the digital divide has changed in three very important ways. First, as mentioned in the last section, it expanded to encompass a lack of technological literacy when using the Internet (Drori 2005, Halford and Savage 2010, Jung, Qiu and Kim 2001). Second, it expanded to include Internet access through devices other than computers, such as mobile phones (Pearce and Rice 2013, Rice and Katz 2003). Third, it shifted from being a problem of the developed world to a social justice problem associated with international development (Drori 2010, Drori 2005). This section addresses each of these changes.

The first change coincided with the “closing” of the access divide. As computing technology became more affordable, more people were able to access the Internet. However, access in and of itself was not causing a decrease in socioeconomic inequalities. So, researchers started examining how people were using the Internet. They found that different people conceptualized the Internet differently. People who saw the Internet as a tool for supporting and gaining social capital would use it in such a way as to benefit their social position (Halford and Savage 2010, Jung, Qiu and Kim 2001, Katz, Rice and Aspden 2001). However, when people conceptualized the Internet as just another communication tool, or an entertainment technology, the impact was much less profound (Halford and Savage 2010, Jung, Qiu and Kim 2001, Katz, Rice and Aspden 2001).

The second change in the nature of the divide coincided with the arrival and dissemination of new online digital devices. People were using phones and tablets to access the Internet. This also led to shrinkage in the access divide. However, researchers were discovering that different devices lent themselves unequally to different uses of the Internet, and access to mobile devices was not indicative of access to computers, or vice versa (Pearce and Rice 2013; Rice and Katz 2003). It was also found that some users who had dropped out of using computers to access the Internet had used mobile devices for that purpose instead (Rice and Katz 2003). However, mobile access to the Internet was found to be utilized in ways that were not as effective at enhancing social capital and gaining Internet literacy (Pearce and Rice 2013).

Finally, and most importantly, the digital divide was redefined as an international social justice problem. Since the Internet was not only a means to enhance one’s social capital, it was also a tool that could enhance one’s quality of life; not having access to the Internet was presented as a social injustice (Drori 2005). However, there was a second aspect to this change.

Computers, the Internet, and mobile technology originated from developed countries. If developing nations were going to compete in a globalized economy, their citizens would need access to Information Communication Technology (ICT), as well as technological literacy, so they could use ICT effectively. Yet, they would also need to start becoming the innovators of new software and hardware and not merely consumers. Most importantly, the governments of developing nations would need to institute policies to aid and promote these changes (Drori 2010). The next sub-section examines the multifaceted aspects of the digital divide in relation to international development.

2.2.4: The Divide in Developing Nations

This section primarily deals with the international digital divide as it relates to countries in Africa, with the exception being a few studies conducted in Asia. This is not meant to indicate that no other countries are impacted by the divide; on the contrary, all countries have to deal with the different aspects of the divide in one way or another. However, Africa is the main focus of this section for two reasons. First, sub-Saharan African countries have some of the worst Internet penetration statistics among all developing nations (De Roy 1997, Drori and Jang 2003, Hamelink 1999, Roycroft and Anantho 2003, Wilson and Wong 2003). Second, this entire analysis provides the narrative basis for a study of Internet cafés in Ghana. It is important to this project to focus on studies of the digital divide in relation to Africa.

One problem with the digital divide in regard to international development was the difference between the potential impact of the Internet, and the actual impact of the Internet (Adam and Wood 1999, Hamelink 1999). The difference between potential impact and actual impact ties in directly with both the access aspect of the divide, and the technological literacy and use aspect of the divide (Hamelink 1999, Oyelaran-Oyeyinka and Lal 2005). Many

developing nations do not have policies in place to provide access to their populace (Drori and Jang 2003, Hamelink 1999, Roycroft and Anantho 2003). In line with the policy problem, many countries do not have an infrastructure capable of providing reliable Internet access to the majority of the population (De Roy 1997, Hamelink 1999, Roycroft and Anantho 2003). When the Internet is available, usually only a handful of social elites have reliable access to it at home or work (Guillen and Suarez 2005). If, however, there are policy, infrastructure, and reliable access in place, the ability to use the Internet to effectively progress in the global economy is still in question (Adam and Wood 1999).

Despite all the problems mentioned above, Internet penetration has made some headway. With the increasing penetrations of mobile and wireless technology, infrastructure problems are slowly being circumvented (Fosu 2011). Due to pressure by the international community, African nations are slowly updating their policies to lower tariffs and privatize their communications sectors, allowing more telecommunications businesses access to their populations (Drori and Jang 2003, Guillen and Suarez 2005, Roycroft and Anantho 2003). Some African nations are also employing a strategy similar to their developed counterparts, and promoting the creation and use of Internet cafés and telecenters, as well as increased Internet accessibility in universities. However, studies of these locations show that there is still use divide since patrons are not utilizing the full potential of these locations (Alao and Folorunsho 2008, Ehikhamenor 2003, Mercer 2006, Mutula 2003).

Studies of the international divide have also uncovered a number of interesting, previously unaccounted for, facets of the divide. The access divide originally was conceptualized as a dichotomous split between those who have access to the Internet and those who do not. However, a third category, the “have-less” was identified in a study of Chinese

Internet users (Cartier, Castells and Qiu 2005). The information have-less were individuals whose livelihoods were dependent on migrant work and, therefore, information about where the next job would be available. However, these individuals were without a stable home, so they had almost no continuous access to Internet. They would use mobile phones, Internet cafés and kiosks to gain information about a new job, but then they would move to the location without guarantee that there would be available Internet at the new site informing them of the next occupational opportunity.

Another study, conducted in South Korea, identified geographical location as being a key component in determining divide status (Hwang 2004). While it is well know that rural locations have less Internet access due to infrastructure limitations, this study went a step further and demonstrated that urban size and cosmopolitan status also correlate with differing levels of Internet access. Finally, a study conducted in India identified previously unexplored variations of technological literacy (Arora 2010). Students being observed in the study would use Internet cafés to complete homework assignments. However, the way they completed these assignments was by dictating their needs to the café attendants and directing their actions. In this way the students were engaging the technology, through a mediated interaction. This raises the question: “Is knowing how to access online information the same as knowing how to use the technology?”

In the next sub-section, we will address the contemporary frameworks of the digital divide and international development and the obvious limitations that have arisen when we examine the potential impacts of Internet penetration and the actual impacts of the Internet penetration. A major aspect of these limitations will coincide with the themes of the last part of the analysis, mainly technological determinism and the social construction of technology. However, before we move on, we will briefly revisit a concept we touched upon in the last

section, reagency. As stated before, reagency is the theory that once aid leaves the hands of donors, it may be utilized by its recipients in ways not envisioned by the donors, while still keeping within the intent of the aid project.

Reagency describes, better than development, what happens when organizational representatives from afar enter countries with agendas and initiatives. Discourse and resources are mobilized to receive initiatives, transmuted on location and repackaged for evaluative, reporting, and ‘participatory’ requirements (Shrum 2005:726).

Here, the Internet itself can be conceptualized as a reagentive product. It is an artifact presented to developing nations as a necessity for integration into a globalized economic market. These nations mobilize to accommodate this outside demand. This mobilization takes the form of policy change, requests for aid loans to modify the out-of-date infrastructure, as well as other actions undertaken to make the nation ready to support and disseminate the technology. When the technology does become available, its use is presented to the public as a necessity for progress. However, when people do begin interacting with the technology, there is no guarantee that it will be utilized in the way envisioned by the development community. When it is utilized for economic means, there is no guarantee that it will be used to its fullest potential, or that its uses will benefit the nation, the state, and its people.

2.2.5: Limitations of Contemporary Frameworks

It should be evident by now that there are flaws with the model of international development in general. Globalization stresses the importance of international entities taking an active role in their placement within a global economy. However, this concept still hinges on the idea that Western technology and knowledge are necessary for progress and beneficial changes to quality of life. There is a body of research called post-colonial studies that questions this way of thinking.

The basic premise of post-colonial studies is that it is a critique of contemporary studies of undeveloped nations and cultures. Current sociological and economic studies of development and globalization (Anderson 2002, Go 2013); anthropological and historical studies of native cultures (Anderson 2002, Go 2013); and science and technology studies of knowledge production (Cozzens et al. 2008, Worthington 1993) in underdeveloped nations inherently end up comparing the people, cultures, and nations of the global south to the global north. This is because sociology, economics, and accepted scientific methods of knowledge creation are products of the developed world (Anderson 2002, Anderson and Adams 2008, Cozzens et al. 2008, Go 2013). The argument of post-colonial theorists is similar to that of the critical race and gender theorists of sociology: situated knowledge, the experiences of indigenous peoples of non-western nations, need to be given greater weight when studying these people, cultures and nations. One suggestion for doing this involves using Actor-Network Theory (ANT) as a model for knowledge discovery (Go 2013). In the next part of this analysis we will examine ANT, and its various components in detail, and explore why it would be a preferred theory for conducting studies of Internet café patronage and Internet use in a developing nation.

2.3: Actor-Network Theory

2.3.1: Overview

In the previous section of this chapter, this analysis examined some of the flaws associated with frameworks of development and globalization. One suggestion for circumventing these flaws, and giving primary importance to the narratives of research subjects, is to use an Actor-Network Theory (ANT) approach. However, to do this we must first understand what ANT is and what conducting an ANT study entails. This section will focus on understanding the different components of ANT and how they can be utilized when conducting

research. The following sub-sections will analyze a few of the critiques that have been levied at ANT over the years, as well as examining a number of Internet café studies that have been conducted using an ANT approach.

Actor-Network Theory is a material-semiotic method created by Bruno Latour that attempts to re-imagine the sociological process by challenging the reified concept of the social. According to Latour, sociologists have been doing sociology incorrectly for the past two centuries. In the past, what has been considered good sociology was to examine a phenomenon and attempt to place said phenomenon within a social context or framework. He calls this the “Sociology of the Social” (Latour 2007). Instead of “Sociology of the Social,” Latour argues for a “Sociology of Associations”, where the actions of actors within a phenomenon are observed and described. The descriptions then form a sociological understanding of what is occurring without the intrusion of a social context or framework.

Latour makes the argument that current sociologists attach the adjective “social” to a phenomenon to designate it as an already assembled state of affairs. He argues that this becomes a problem when social begins to designate some real entity that comes before, and influences a particular phenomenon. The author makes the claim that he would like to challenge “social explanations” as the norm, and instead redefine social as being traceable connections between actors (Latour 2007). He challenges the idea that there exists some specific domain of reality known as the social in which every interaction fits; instead, the social should be what is constructed once all associations are observed and for which all are accounted. In essence, ANT is “redefining sociology not as the ‘science of the social’, but as the *tracing of associations*” (Latour 2007:5). Latour then offers an overview of previous ANT literature, giving a checklist of what is required to write an ANT manuscript. 1) Non-humans must be granted the role of

actors. 2) The social must be constructed by the explanation of events, not used to explain the events. 3) The social must be reassembled by the accounts of actors, not an influencing agent (Latour 2007).

Latour makes the argument that sociologists should not place their subjects within groups; instead sociologists should allow their subjects' actions to define the formation of a group. The reason for this is, according to Latour, is that "there is no relevant group that can be said to make up social aggregates...that can be used as an incontrovertible starting point" (Latour 2007:28). Instead, Latour makes the point that researchers should allow their subjects to define the group by indicating the traces left behind by group formation. Latour argues that action should be examined as a node at the center of a multiplicity of agencies, and the job of the sociologist is to carefully untangle this knot. Again, the key here is to listen to the accounts offered by the subjects and to take them at face value without substituting social explanations in place of individual accounts, no matter how odd those accounts may be.

"The mistake we must learn to avoid is listening distractedly to these convoluted productions and to *ignore* the queerest, baroque, and most idiosyncratic terms offered by the actors, following *only* those that have currency in the rear-world of the social. Alas, this mistake is made so often that it passes for good scientific method, producing most of the artifacts of social explanations" (Latour 2007:47).

Latour takes the stance that non-human objects should be considered actors that offer their own agency. He does clarify, however, that "ANT is not the empty claim that objects do things instead of human actors: it simply says that no science of the social can even begin if the question of who and what participates in the action is not first of all thoroughly explored, even though it might mean letting elements in which, for lack of a better term, we call *non-humans*" (Latour 2007:71). Latour makes the point that objects are often not part of an analysis because, when they do their job correctly, they drop into the background as invisible intermediaries.

Latour identifies the difference between matters of fact and matters of concern. Every time “social” is used as an explanation for a phenomenon, tautologies and contradictions begin appearing. Instead of challenging the reality of facts when studying their “social” construction, the sociologist should focus on the controversies that occur during the construction of facts, as well as the roles different actors play during these controversies (Latour 2007).

According to Latour, a good textual account is the best laboratory a sociologist can have. He explains that a "net work" in ANT is not necessarily the same as a network in Network Studies. Instead, a net work is a “string of actions where each participant is a full blown mediator...all the actors *do something* and don't just sit there” (Latour 2007:128). It is here we see that traditional accounts, where a few global causes produce a multitude of effects, are considered weak accounts by ANT because most of the individuals are intermediaries faithfully moving a global social force without actually doing anything. By itself, ANT does not teach us anything about the world; it is just useful in teaching us how to go about studying the world and how not to study the world. Follow the actors. Report their accounts. Ignore frameworks and contexts. Write descriptive accounts. If your description needs explanation it is not a very good description. You are never going to be able to describe everything, so fine-tune the writing until your account offers an adequate description within your page limit.

Latour also makes the claim that traditional social studies, which take the dichotomous global versus local approach to studying phenomena, are inherently flawed. The flaw lies in the fact that both global and local are socially constructed concepts; however, in traditional sociological accounts they are treated as agents influencing the actions of actors (Latour 2007). Instead of positioning an account within global or local contexts, Latour argues, we should instead follow the action of actors. If actions are followed far enough, we will be left with a

description that encompasses both the global and the local. Latour has also made the claim that the Internet, specifically its online profiles, is a magnificent tool for breaking down the global/local or micro/macro divide in research (Latour 2011). Profiles identify who and what individuals are connected to and the nature of the connecting relationships. The nature of these relationships: consumer, education, occupation, family, romantic interests, can identify strings of action that can be traced and described. However, Latour does acknowledge that, with the current level of technology, studying the databases and spreadsheets that contain all these associations would be a tedious and unpleasant task, and studying these units of analysis might not become a feasible methodology until our current level of technology progresses.

2.3.2: Critiques of ANT

Critiques of ANT can fall into two broad categories. The first broad category deals with critiques of the theoretical aspects of ANT in relation to other Science and Technology theories. The second broad category critiques the perceived radical nature of ANT. One theoretical critique of ANT focuses on its lack of cultural identification. Because both humans and non-humans are treated equally under ANT, and because it purposefully ignores grand theoretical concepts, such as society, ANT ends up ignoring the impact culture has on actors. (Sismondo 2009) Latour might argue that allowing actors to narrate their own experience reveals the culture within their action; however, researchers are still left with a chicken versus egg debate.

Another theoretical critique involves the question of agency. While ANT treats humans and non-humans as actors within a network, humans and non-humans are inherently different in that humans have agency over their actions whereas non-human actors do not (Sismondo 2009). Latour would argue that researchers only need to know how an object is supposed to act within a given network for specific events. If an object, or a human actor for that matter, behaves in the

way it is expected to, then it is an intermediary. If it does not act as it should, then it is a mediator, and at this point the question of motivation becomes irrelevant.

A theoretical third critique examines the inherent realism of ANT. In some ways ANT takes a very relativist outlook on knowledge creation; “everything is an outcome of network building.” (Sismondo 2009:90) However, by incorporating objects into the analysis, ANT “assumes a reality that is prior to the work of scientists, engineers, and other actors.” (Sismondo 2009:91) Science and Technology scholars are still debating if ANT “is a step backwards for relativism, or a success in how it integrates the social and natural world” (Sismondo 2009:91).

The next theoretical critique addresses Latour’s black boxes. In the article "Unfolding the social: quasi-actants, virtual theory, and the new empiricism of Bruno Latour" Troels Krarup and Anders Blok define a new typology which can be found in a Latourian Actor-Network, which they call quasi-actants(2011). Quasi-actants are, in the view of these authors, the solution to the problem of Latour’s subjective "black-boxes." The Latourian black-box is a complex actant whose multitude of associations has been "folded" in on themselves for the purposes of simplifying their existence in an ANT description. Some examples of black-boxes include The IBM Corporation, The Global Development Project, and France. None of these black-boxes exist solely in the empirical sense, but they do exist in the form of empirical associations; people, buildings, roads, technology...etc., which when viewed as a whole are identified as the aforementioned actants.

Krarup and Blok have no problem with these objective black-boxes. The authors argue that there is a need for a new typology, the quasi-actant, when Latour would have us make black-boxes of subjective actants: moral concerns, group identity, desires...etc. There are two issues with giving these ethereal concepts the same weight as other actants. The first problem is that

giving ethereal concepts the same strength as empirically observable actants comes dangerously close to resembling the Sociology of the social. The reason Latour argues for a Sociology of Associations is because he believes we should not give casual power to ethereal concepts such as Society or culture. The second problem, which ties into the first, is that if need be, an ANT scholar could unpack objective black-boxes to trace the associations, but he or she cannot unpack subjective black-boxes.

However, the reason quasi-actants are given the same treatment as black-boxes and actants is because they do affect and influence the actions of actors when the actors describe their influence in a narrative; so it behooves an ANT scholar to include them in an ANT analysis. According to Krarup and Blok, quasi-actants allow ANT researchers to develop a virtual theory.

The function of virtual theory would thus be to provide just enough conceptual mobility for the sociologist to 'go on describing', in the face of inerasable empirical obscurity in the social landscape...In other words, when invoking theory, the ideal should be to explicate the grid of uncertain possibilities - not to act as a synthetic surrogate for silencing the multiplicity of empirical voices (2011:17).

Quasi-actants should be accepted as actants within a larger network without needing to be unpackaged and analyzed so as to continue to trace associations without getting bogged down in philosophical and metaphysical arguments (Krarup and Blok 2011). Chapter five examines the Internet, as it is used by the subjects of this project, as a potential black box or quasi-actant.

The first critique of the revolutionary aspect of ANT addresses how it treats non-human actors and humans the same in analysis of actions within a network. However, there is an argument that non-humans having power within social situations is nothing new. The example used by this critique is that much of Erving Goffman's work identified objects as being important for defining roles, and signifying areas as being front stage and back stage. In other words, there is nothing new about using non-humans in social analysis (Pinch 2010).

Another critique is that the tenants of ANT are akin to the tenants of pragmatism and practice theory. “The common concerns shared by pragmatism, practice theory, and ANT are a shift away from dualisms, an interest in the creative processes involved in producing and sustaining phenomena, and the importance of performativity” (Bueger 2013:339).

Despite the structural critiques of ANT, as well as the claim that ANT is not as revolutionary as is popularly believed, ANT is still useful. The sub-section identifies a number of studies that used ANT to study Internet cafés and highlights a number of key findings.

2.3.3: Actor-Network Theory and Internet Cafés

The first study was conducted in the Internet cafés of Ghana’s capital city Accra. The author, Jenna Burrell, uses ANT to trace the actions of café patrons and owners; the cafés and the computers within them; evangelical ministers; different Internet organizations; overseas pen pals and scam victims; scrap collectors; heads of civic societies; the United Nations, and Western websites; and Internet service providers (Burrell 2011). She found that the combined actions and interactions of all these actors positioned the youth of Accra in different lights: as villains of Internet cons, victims of international power plays, or something else entirely. The differences were multifaceted and often depended on personal perspective, and the flow of action from either the top down or the bottom up (Burrell 2011).

The second researcher this study examines is Anne Laegran (Laegran 2002, Laegran and Stewart 2003, Liff and Laegran 2003). She is associated with three related Internet café studies that took place in the Norway. She found that Internet cafés as a place was an important factor in identity formation for young subjects (Laegran 2002). The place where the youths chose to spend their free time became a marker of group identity. Places also brought with them reputations based on their decor, amenities, and the overall function of these locations. Internet

cafés were categorized as nerdy, trendy or healthy depending on the type of computers available; how people were using the café; the decoration; ambiance; average age of the clientele; and the intended use; and image projection of the owners and staff (Laegran and Stewart 2003).

However, supplying Internet access alone was not found to be a successful business model; there had to be an alternative business model associated with a location (Liff and Laegran 2003).

Following this same trend, a study of Internet cafés, telecenters, and libraries in developing countries showed that reputation is an important factor for determining the usefulness of as location as a source of Internet access. The “cool factor” that attracted young patrons to a location was determined by a number of variables including: safety and security; privacy; the age of the machines; the knowledge ability of the staff; the permissiveness of the environment; the capabilities of the machines; as well as the rules and restrictions of the locations (Gomez and Gould 2010). Again location, staff, and technology were network actors in determining popularity and usability of a location.

Finally, a study conducted in China had similar findings to the Laegran and Gomez articles. However, one unique finding was how Internet cafés affected the reputations of their users. It was discovered that there is a well-known negative stigma associated with Internet cafés and café patrons in urban China (Liu 2009). Cafés, or wangbas as they were known locally, had the reputation as being dens of iniquity where students went to smoke and play videogames and shirk personal responsibilities. These reputations were well earned because, according to patrons, that was exactly what wangbas were used for. In fact cafés that did not cater to the young clientele, by offering gaming machines and relaxed attitudes on truancy, were not as successful (Liu 2009).

Although all these studies had different findings, there were similarities as well regarding the age and sex of the average patron, and the use of cafés for primarily entertainment purposes. There was also a similarity in how each of these studies was conducted; specifically they all used an ethnographic methodology. Although they each differed in the amount of time spent with their subjects as well as the primary research locations, they each followed the similar model of observing the actions of their subjects and supporting their observations with interviews. The reason behind this is that ethnography is possibly the most productive methodology when conducting an ANT study because the foundation of both ethnography and ANT is extensive description. According to the tenants of ANT and ethnography, the more descriptive the analysis the more accurate the study. The next section of this analysis will focus on the ethnographic method and its various forms.

Chapter 3: Methods

This chapter examines the ethnographic method and discusses the process used for gathering the data for this study. The rationale for using ethnography is twofold. First, the students from the University of Ghana used a structured ethnographic questionnaire when gathering data in 2003. It makes logical sense that the follow-up study should use ethnography as well. Second, ANT is interested in developing the "social" by examining the flow of action among actants within a social setting. It has been argued that one of the best ways to provide the description necessary for conducting an ANT study is by utilizing ethnography. The subject narratives gathered by using semi-structured ethnographic interviews have been instrumental in answering the research questions, while at the same time uncovering the flow of action amongst the multitude of actants at play within Internet cafés.

This chapter is divided into four different sections. The first section explores the form and function of ethnography as a qualitative method. The next section focuses on the process of finding the 2003 interview locations for the 2014 follow-up study. The third section examines the interview methods for the 2003 study and the 2014 follow-up. The final section examines the data analysis process used for developing the answers to the research questions, and examining the flow of action necessary for an ANT study.

3.1 Qualitative Ethnographic Interviews

Ethnography is a qualitative method, which is also known as participant observation. The basic premise of the ethnographic method is to surround oneself with research subjects and attempt to understand and describe the world from their vantage point. This task is not without difficulty, and it does have its limitations. The most prominent critique of the ethnographic method is that it has the potential to be too subjective to be scientifically relevant. The way

ethnographers address this critique is reflexivity. For social scientists, reflexivity is the understanding of how the perspective of the researcher affects what is observed, and how the presence of the researcher is affecting the behavior of the subjects (Emerson, Fretz and Shaw 2011). Good field notes help the researcher identify personal bias, while at the same time identifying changes in the normative behavior of the subjects that may be a result of the presence of the ethnographer.

In their book Writing Ethnographic Fieldnotes, Robert Emerson, Rachel Fretz and Linda Shaw offer a how-to guide for conducting traditional ethnography (2011). The most important part of conducting an ethnographic study is, of course, extensive description. In this ethnographers share ANT's philosophy that extensive description is the only way to provide a level of objectivity to what would otherwise be a completely subjective qualitative method.

In ethnographic studies of the Internet, studies covered in previous parts of this analysis as well as this current section, identify three major themes: sites, communities and identities. Sites of study present a unique problem when the Internet is involved. In a traditional ethnography, the site of the study is generally determined by the physical location of the researcher and the subjects. However, in studies of the Internet, subjects can be both physically present and consciously absent. (Green 1999) An ethnographer can witness one or more subjects interacting with others, in real time, either in a virtual location, such as a video game world, or communicating with people at another location. What can muddy the waters even further is that the subjects can be engaging with others at their current physical location while at the same time engaging with others not at that physical location. Researchers have argued for the importance of being able to follow the narratives of individuals as they shift from one site to the next; even as the subject stays physically at one location.

Part of following these narratives involves understanding the different facets of the subject's identity. Although previously mentioned studies showed that people do not present a radically different self online than they present offline, researchers still need to recognize that online encounters are like any other social encounter, where individuals will present only parts of themselves at any one time(Lyman and Wakeford 1999). One vital way researchers can come to this understanding is by abandoning the dichotomous belief that online interactions are different from real interactions. Online interactions involve two or more real people. Once researchers come to this understanding, they then see that online interactions are not less real than face-to-face interaction; they are only mediated.

Once researchers recognize that all interactions online are real interactions, they can start redefining prior understandings of community. As has been discussed in previous parts, the meaning of community has shifted from a place-based concept to an idea-based concept. When the Internet is introduced as an integral aspect of a study, then the meaning of community shifts to encompass people who share similar ideas as well as cultural backgrounds beliefs and ideals (Miller and Slater 2000). What is extremely interesting is that when subjects begin defining their community as both made up of people physically present and people online, the Internet itself becomes a defining characteristic of the subjects' community(Miller and Slater 2000).

Over the years the ethnographic method has branched out into a number of sub-methods including global ethnography (Gille and O Riain 2002:288); Critical ethnography (Gulati et al. 2011, Wacquant 2002); Collaborative ethnography (May and Pattillo-McCoy 2000, Rappaort 2008); and Video Ethnography(MacDougall 2006, Pink and Mackley 2012, Pink and Mackley 2013, Pink 2006). Since the data gathered in the 2014 interviews was done using a microphone and video camera, the rest of this section will examine video ethnography in greater detail.

Audio visual technology can be used to provide a rich, detailed narrative. However, only what is captured by the lens or microphone will go into the narrative; everything happening off screen is lost. Proponents of video ethnography make the claim that this is not entirely true.

Video may also be seen as a reflexive research tool and understood in relation to the recording position of the researcher. In the sense video generates what the ethnographic filmmaker MacDougall calls 'corporeal images' in that images 'are not just the images of other bodies; there are also the images of the body behind the camera and its relations with the world (MacDougall 2006, Pink and Mackley 2012:4.3).

The importance of reflexivity was already addressed as that which makes an ethnographic account scientifically objective. By positioning the camera and microphone, the researcher is establishing what is relevant to the researcher's proposed theory and discipline by personal conscious actions.

A fundamental assumption of visual ethnography is that it is concerned with the production of knowledge and ways of knowing rather than with the collection of data...visual ethnography...should aim to offer versions of the ethnographers' experiences of reality that are as loyal as possible to the context, the embodied, sensory and affective experiences and the negotiations and inter subjectivities through which the knowledge was produced (Pink 2006:34).

However, recorded video and audio captured by an ethnographer is not inherently ethnographic.

The ethnographicness of any image or representation is contingent on how it is situated, interpreted and used to invoke meanings, imaginings and knowledge that are of ethnographic interest (Pink 2006:35).

In this sense it can be argued that it is the understanding of the audience that makes a video ethnographic. This is done by capturing the attention and the imagination of the audience in such a way as to produce an empathic connection with the experience of the subjects; as well as a connection with the researcher's fieldwork experiences (Pink and Mackley 2012, Pink 2006).

An ANT study must construct the social using the experiences and accounts of actors, and objects must be afforded the role of actor alongside humans. While traditional ethnographic methods are capable of capturing the accounts of actors within a study, video ethnography can capture a thicker description of experiences that allows a greater empathic connection between the audience and the subjects. When dealing with the interaction of people, computers, and the Internet:

People 'know' how their lives are inextricable from media but their ways of knowing are often embodied and sensory rather than always linguistic. We learned how media are part of everyday routines, precisely because participants could tell or show us how. We argue that the relevance of understanding media from this perspective is two-fold: it enables us to comprehend the situatedness of media in everyday life in ways that acknowledge but go beyond the focus on its content; and, by showing us how media are part of the ways that the routines of everyday life emerge and change (Pink and Mackley 2013:682).

In this way, video ethnography offers the audience a chance to make a connection with subjects, with whom they would normally have nothing in common. Though this dissertation offers the responses of the subjects in a textual format; the video and audio data of the respondents and the café s can and should be used for other video ethnographic projects.

The ethnographicness of this process came from a number of different angles. At each interview location the researcher spent hours sitting and observing the customer and staff interaction. This time spent observing allowed the researcher to gain an understanding of the socioeconomic status of the café customers, and how they were utilizing café above and beyond what was revealed during the interviews. When subjects would consent to the interview, these observations aided in guiding the researcher's questions, as well as leading to prompts about interactions the researcher had witnessed. When conducting interviews for this project the researcher also made sure to film the inside of the cafés and the neighborhood surrounding the cafés, with the permission of the café management.

In this way the researcher was not just aiming his camera randomly and interviewing whoever he came across. Instead, the author was able to observe the multifaceted interactions that occur in different Internet cafés, in different neighborhoods around the city, and offer an accurate sample of users from all different walks of life. To this end the data presented in coming chapters, as well as data presented in future projects, reveal not only the lived experiences of the interview subjects, but they are also colored with the place based experiences that emanate from the location itself.

3.2 Interview Locations

Data for this study were collected in two separate waves of qualitative ethnographic interviews, as well as two months of exploratory work in July of 2012 and 2013. For the first wave in 2003, patrons were interviewed at Internet cafés throughout the Accra metropolitan area. These were qualitative, structured interviews exploring the uses of Internet cafés by Ghanaians. Internet cafés at that time were relatively new. As with other studies in the early 2000s, researchers were interested in the use and impact of an institution that was considerably different from the ones Ghanaians had typically used for distance communication and information retrieval.

The 2003 team identified 24 Internet cafés for fieldwork in the Accra metropolitan area. Cafés were not randomly selected owing to the absence of any pre-existing list that could characterize this population of businesses and the fact that some were located within other businesses. Students from the University of Ghana were employed as interviewers. Each sought to identify locations near their accommodation in the greater Accra area, while including locations possible to visit at reasonable expense. Of course, some students lived in poorer areas of the city, while some lived in areas such as Legon, near the university. The final sample

yielded a diverse group of 24 cafés that were identified by area or intersection and name, rather than a street address. At these 24cafés, 58 people were interviewed.

The original interviews only offered the name of the Internet café and the name of the region in Accra where the café was located. These regions are huge, spanning multiple square miles in some cases. Before follow-up interviews could be conducted, the researcher would first need to conduct an exploration to discover if a study about Internet cafés was feasible, and then develop a comprehensive systematic method for finding ten-year-old Internet cafés. This method was developed over two years, 2012 and 2011, during the month of July.

In the end, the method for finding the 2003 cafés involved traveling to the neighborhood where one of the 2003 cafés had been located. This was done either on foot or by taxi, depending on how far the neighborhood was from the hotel. After arriving at the neighborhood, the researcher would walk down the “main road” and find an Internet café or technology shop. In some instances the taxi would stop at an Internet café, but most times a café needed to be found on foot.

After locating an Internet café or technology shop, the researcher would ask owners and managers about the 2003 sites. If they knew the location, the researcher would mark the current café on the map and then the 2003 café, after it was found. If they did not know the location of the 2003 café, then the researcher asked for the location of the nearest café that was not yet visited. The researcher would then go to the nearest new café and mark the location on the map. This process continued until the 2003 café was located or three cafés, if possible, in the area were visited and none knew of the 2003 café. If the 2003 café was the first café, then the researcher would find and map two other cafés, if possible. If the 2003 café was found at the second existing café, then the researcher would find and map a third café, if possible. If the 2003

café could not be found (because the staff of other cafés did not recognize the name) the researcher would return to one of the other cafés (the one that seemed most responsive to the study) and conduct interviews there. If the 2003 café was found, but closed, the researcher would interview at the nearest café receptive to the study. If the 2003 café was open, then the researcher would conduct the interview at the 2003 café.

Using this process, all of the regions from 2003 were visited in July of 2012 and 2013. When possible, the original café was located, or at very least its fate was discovered. Regardless of the presence of a 2003 café; however, additional cafés were found and their locations recorded so that interviews could be conducted during a return visit in 2014. By the end of July 2013, a café in each region, except for Atomic Junction, had been chosen to be an interview site, and arrangements for a return visit in 2014 had been made with each owner or manager. (Table 3.1)

3.3 The Interviews

The 2003 interviews, collected by students from the University of Ghana in Legon, were provided to the researcher in 58 transcribed word documents. Since the data were received by the researcher as secondary data, little is known about the data collection process. It is unknown what criteria were used to select each location and the subjects within. It is evident that the students were using a structured questionnaire, since the questions are the same regardless of which student was interviewing. It is also evident that the students made use of audio recording equipment and since the interviews were transcribed verbatim and included non-verbal audio, such as coughs and laughs.

The second wave of interviews began in earnest in June of 2014. The method for establishing and conducting these interviews followed a revolving pattern. First, the researcher would go to the café that would serve as the field site. There he would reintroduce himself to the

owner and hand out a letter that described the study, as well as give a verbal description of the study and how it would be conducted. In most cases the owners remembered the author and were eager to be part of the study. Others asked a number of questions about the study. However, once their curiosity was satisfied they were also happy to be part of the study. After introductions were made, the researcher would establish a date and time in the following week to come back and conduct interviews. Each week followed this pattern. On days when no interviews were scheduled, the researcher would go to other regions, reintroduce himself to the café owners, and schedule an interview date for the following week.

The data collection for each location followed a semi-structured interview process. The researcher first established with the owner that he would be filming his interviews. However, he also reassured them that he would not film anyone without getting written permission. He also established that he would be as unobtrusive as possible so as to not disrupt the business. Next the researcher would show the management staff the consent form, explain it to them and have them sign it. He would also give them a letter detailing the rationale behind the project and offering them a way to get in touch with the researcher and the University Institutional Review Board (IRB). The author would then interview the owner and/or manager. Almost always, this interview would take place in a private location within the café, usually the manager and/or owner's office. Sometimes, when a café was too small for there to be a second room, the interview would be conducted at the front desk or pay counter. The interview itself started with a structured set of questions; however, the interviewer would deviate from the set questions if he felt either a question had been answered by a previous response or if a narrative could be expanded upon. In this way, all the staff interviews were similar but none were exactly alike.

After interviewing the staff, the researcher established a location either within the café or directly outside the front door. The location had to offer the researcher a way to visually identify customers so he could see when they were done using the café. The location also had to be out of the way enough so as not to disrupt the business of the café. Once the location had been established and the recording equipment set up, the researcher began recruiting subjects. In the rarest, but best cases, the staff would ask their customers to do the interviews. In most cases; however, the researcher would have to find his own subjects. Subjects were always drawn from customers who had finished their café business. Since customers had to pay for the time they were on the computer, it was not a good idea to "waste" this time by asking them to be part of an interview while they were still working. However, once customers were done using the computer, they would have more time to answer questions in greater detail.

This recruitment method worked well for the most part. At most of the research sites this method could net between three to four interviews. A successful day of interviews was understood to be five interviews in total: one management interview and four customer interviews. However, in some situations this quota was unobtainable. Sometimes the café itself just did not have the customer traffic to generate four customer interviews, and other times most of the customers would refuse to be part of the study, thereby generating only one or two customer interviews.

When interviewing customers the researcher followed similar steps to those he took with the management, with slight variations. The researcher would establish that he would be filming the interview. Next the author would present the subject with a letter outlining and detailing the rationale behind the project and offering the subject a way to get in touch with the researcher and the University IRB. The author would explain the letter and then have the subject sign a consent

form. If the subject did not wish to be filmed, the researcher would leave the lens cap on the camera and only record the audio of the responses. The interview itself started with a structured set of questions; although, as described with staff interviews above, the interviewer would deviate from the set questions if he felt either a question had been answered by a previous response or if a narrative could be expanded upon. However, the questions for the customer interviews were different from the staff interview questions.

Finally, since Burrell's Invisible Users is the study which the 2003 data will be compared to, it is important to acknowledge her data collection methods. However, she does not give thorough detail about these methods. The closest she comes is the opening of chapter 2: "A small number of Internet Café s served as the starting point of my observations but this quickly expanded into various other sites and the broader urban environment the cafés were situated within" (Burrell 2011:29). Burrell does not directly specify the number of subjects interviewed or cafés visited but an astute reader may infer, based on the areas visited and specific people mentioned, that she followed her subjects in at least seven regions within Accra, visited at least eight different cafés, and had at least 11 different subjects.

3.4 Data Analysis

It should be noted that the data collection methods for the two years of this study and for Burrell's study are not the same. Although this had the potential to cause problems during data analysis, it did not. There are a number of reasons for this. First, the 2014 questions were based on the 2003 questions with only a few slight changes. These changes updated the questions to make them more accurate to the times, and also added questions that addressed Burrell's findings. The 2003 questions already addressed how the respondents were using the Internet and how the Internet was impacting their lives. This meant that even though it is unclear just what

questions Burrell asked in 2005, the responses her subjects gave, and the data she presents, are easily comparable to the responses found in the 2003 interview transcripts

The 2003 interviews were analyzed by placing the questions and answers in an excel spread sheet. Each column is dedicated to a question asked in 2003. Each row is dedicated to an individual subject's response. This format allows the researcher to examine each question and compare the respondents' answers back to back. In this way, similar themes as well as anomalous or contradictory responses become immediately evident.

The 2014 interviews were analyzed in a similar manner. However, since the 2014 data were gathered using video graphic equipment, Macintosh's Final Cut Pro was utilized for organizing and reviewing the data. A sequence was dedicated to each question. The answers to these questions were then spliced into the sequence. This format allows the researcher to play each sequence and hear and watch the back to back responses of each subject. Again, this allows the researcher to identify similar themes as well as anomalous or contradictory responses.

This form of data analysis works in tandem with ANT. Instead of looking for themes that fit with a preordained theoretical perspective, this form of analysis allows the themes to coalesce into the narrative description of the flow of action. In this way the development of groups, the identifications of associations, the flow of action become evident and allow both the researcher and audience to understand what was happening in cafés in 2003 and how things have developed over the last 10 years.

The similarity in the way the 2003 and 2014 data were collected and analyzed allows for the researcher to report his findings with confidence about the validity of the answers and the reliability of the questions themselves. However, this does mean that any contradictory findings between the 2003 interviews and those presented by Burrell in Invisible Users could be attributed

to the difference in the way the data was gathered. On the other hand, any similar findings are that much stronger since two different approaches found the same information. In the next chapter, when the 2003 data is compared to the findings in "Invisible Users" the possible reasons for different findings are acknowledged.

Chapter 4: Invisible Users or Internet Explorers

This chapter focuses on the research question: How were café patrons using the Internet in 2003 and how do the 2003 findings of this study compare to the findings of other studies conducted around the same time? This chapter compares the data that were gathered for this study in 2003 to the findings of Jenna Burrell's Invisible Users. Between the years 2004 and 2005, author Jenna Burrell followed Ghanaian Internet café users whom she named Invisible Users. The rationale for this name is because of a twofold experience of marginality. First, "their invisibility follows from this noncentrality as defined by a lack of accommodation by those in power (ranging from distant technology designers and network administrators to local politicians and other authorities." (Burrell 2011:8). Second, "invisibility may be conceived of as its own form of power allowing for forms of transgressive behavior to go unchecked"(Burrell 2011:8). Burrell examines the first experience of marginality as it applies to all users of Ghana's Internet cafés, specifically how patrons use the cafés to circumvent their powerless positions. Her findings regarding the second experience of marginality focus primarily on the now infamous Internet scammers (419 scammers, *Sakawa* boys).

This chapter examines the main findings of each of Burrell's chapters and explores the similarities and differences between the two studies. Many of the characteristics of Internet café users identified by Dr. Burrell are applicable to the subjects of this study. However, there are a number of variations and inconsistencies between the two studies that have been identified during analysis. The rest of this section will examine each of these similarities, variations, and inconsistencies; then this chapter will make the argument that not all Ghanaian Internet café users are Invisible Users. Instead, this study will make the claim that Invisible Users are just one type of café users amongst a multiple typology of "Internet Explorers."

4.1 Age and Agency

The Invisible Users identified by Dr. Burrell are young, non-elite and marginalized. Her definition of young is between the ages of 16 to 30. The definition of marginalized consists of characteristics of menial employment (if any), lacking in the higher levels of education, and those who were struggling to use what education they did have to its greatest potential. One of the most telling identifiers of this group was their inability to escape their current location through global travel, while still possessing a great desire to travel abroad. Many of the subjects interviewed by this study in 2003 shared many of these characteristics; however, the differences are telling.

The age of the 2003 respondents ranged from 15 to 38. The mean age of the subjects was 25 and the median age was 24. As far as age is concerned, the non-random sample interviewed by our study is very similar in age to the subjects of Dr. Burrell's research. However, Invisible Users does not have a thorough demographic breakdown of its respondents, so there is no way of knowing just how similar and/or different our two samples are in regard to age. There were a few outliers in this study, both under 16 and over 30. It is possible that these outliers have some effect on the differences observed between the two studies. (Table 4.1)

However, when educational attainment is examined, the differences between the 2003 study and Dr. Burrell's become very evident. As mentioned earlier, the Invisible Users of Burrell's work found their lives in a state of limbo. Even though many of them were technically adults due to their age, culturally speaking they had not achieved high enough status in the realms of education or occupation to be eligible for marriage or to start a family. This lack of status was one of the reasons for their invisibility. This study, on the other hand, found that

almost three quarters (70.7%) of the respondents were either working on or had already completed some form of tertiary education. (Table 4.2)

This is not to say that the individuals described by Burrell do not exist. On the contrary, over a quarter (25.85%) of the subjects were currently in secondary school, or had finished and were waiting on testing results to progress to university, or lacked the opportunity to progress further. In fact, some of the respondents very much resembled Burrell's Invisible Users

03R051: Ah... okay, I'm eh... this thing SS leaver, I completed in 19 eh... 2001. Ah... but then I didn't do well, I didn't do well, but I wanted, I just want to go and do eh... remedial to better up my grades and then enter, maybe enter into a Nursing Training and then further my education.

03R068: Okay I started it from the, from the nursery and I ended it in the secondary school.

R069: Well my last educational background was St Augustine Secondary School, where I completed my 'O' levels in 1988. Since then, I have not been able to go to school again. This is because my passes at the 'O' levels was not very good.

These respondents, like the Invisible Users were stuck in limbo. Without passing test scores they had little hope of entering University or attaining a Higher National Diploma (Trade School); this in turn limited their occupational prospects. One respondent had progressed but couldn't maintain his tertiary educational standing.

03R011: I attended my primary, secondary and tertiary institution before dropping out anyway.

Some users had finished their Secondary School exams and were waiting on grades to determine their next step.

03R021: I would say am a student because I just completed Senior Secondary School at Ghana National College at Cape Coast and am waiting for my results to continue my education.

03R055: I had my secondary education at Tema Secondary School and hope to enter the University pretty soon.

03R066: "Well I've completed senior secondary school, the SSS yes, I'm now planning to enter the University.

Though in the next year, some of these subjects would be attending some higher education institution, some would inevitably be in the same limbo situation as the previous respondents and the "Invisible Users."

Most of the respondents cannot be considered "Invisible Users." Many of them are currently in University or Trade School.

03R008: I attended eh... Achimota Business College after that I had my, eh... my computer training at J-prompt Services Centre.

R017: I was about to enter the University over there when things took a dramatic turn. When I arrived into this country, things didn't go smoothly with me academically and so I decided to go back to the secondary level to acquire the Senior Secondary School certificate Examination SSSCE). By His grace I came out with flying colours and I'm now a final year Administration student at the University of Ghana.

R045: Well, well, well I completed Senior Secondary School in the year 2000 and I'm currently pursuing a professional qualification in Accounting with ACCA.

R048: ...pursuing my first degree at the University of Cape Coast. I'm reading Sociology and I'm in my second year.

R067: Okay I schooled oh... all right, my primary education was in Baptist, eh... Faith Community Baptist School in Zongo Junction and I went to Wass (West African Secondary School) completed and now I'm in Legon University offering Agric Science.

R075: Okay, ehmmm... I'm currently doing CIM, with one of the ... (giggles) that is an institution I wouldn't like to mention, yeah I'm also working at National Theatre as a programmes coordinator.

Others have graduated with some form of degree, and others still are using that degree for some form of employment.

R006: What else? Well by way of qualifications, I'm holding HND Marketing from the Accra Polytechnic and currently working as a Marketing Executive with VED Educational and Business Consult. It's an educational and business consulting firm with branches in five different African countries.

R015: I am a degree holder from the only University in Ghana, I mean University of Ghana. I graduated in 1998 and ever since I completed my national service, I've been working as a Researcher with the Encyclopedia Africana Project, a government subvented organization under the National Council for Tertiary Education (NCTE).

R018: I am a product of Holy Trinity Cathedral Secondary School. I had my 'O' Level and I had a qualification in Computer Engineering in 2002. I came to this Café last August last year. I started with them on probation for a week after which they took me on and I have been here since then.

R063: I graduated from the University of Ghana a couple of years ago, and while there I read Marketing. Upon graduation I enrolled for a six-month intensive course in Sales management after which I got this particular job.

R074: I hold a diploma in computer hardware and engineering. I graduated from West Africa computer school in 1999. But I work at the moment I work as a freelance computer technician.

The diverse academic and occupational backgrounds identified by this study illustrate that Internet cafés are home to not only Invisible Users (at very least potential Invisible Users) but also a wide variety of other user typologies not identified by Dr. Burrell. The next sections will examine other major findings by Dr. Burrell regarding Invisible Users and compare them to the findings of this study. The next section will encompass travel abroad and the collection of foreign contacts.

4.2 World Travel & International Pen Pals

One aspect of Burrell's Invisibility is the inescapability of the café patron's situation. Not only are the Invisible Users unable to climb the socioeconomic ladder due to a lack of education and gainful employment; they are also unable to escape the geographical boundaries of Ghana and, to a greater extent, Africa. One of the key ways they utilized the Internet was to make contact with international strangers in hopes of fostering a relationship that could eventually lead to international travel. In some cases these contacts were intended to be romantic. In other cases

they were meant to establish an occupational relationship or lead to an education abroad.

Regardless of the nature of the online relationships or their rate of success, the ability to maintain global contacts was one of, if not the primary use of the Internet for the "Invisible Users."

The subjects of this study shared a striking number of similarities with the Invisible Users of Burrell's study when it came to maintaining contacts. Though Burrell's study does not make mention of local contacts, this study showed that a number of the subjects kept contact with local relations through the use of email. It was often cheaper than using the phone.

03R007: Yes I think there has been an advancement in my life after using the Internet. And this before I started using the Internet I usually communicate with my brother once in a month and it was quite expensive with the phone but now every day I chat with him online share our problems and discuss family problems. I am also more delighted now because through the Internet I have learnt a lot and I've met a lot of people, share ideas and learn from them.

03R017: Sure, I now have friends scattered all over Ghana, and because I don't have readily access to phone, the email has become the most convenient way of reaching one another. They are mostly secondary school and University mates.

03R073: You know as I said before, it's time for an occasion like exams, Valentine or whatever and you have to get in touch with so many people, it's not that easy, financially but then with the Internet, you could easily get in touch with all these people so you would have solved your problem and then the issue of using so much money to make phone calls and communicating with your loved ones. So with the same amount you are able to get with people so it solves problems.

It was less time consuming then using the postal system.

03R019: When we take it from the angle of importance, I see it as very important in my life because when I was in the basic school I use to write letters, go to the post office to buy stamps and post them. This alone cost me some amount of money. Also it takes a longer time for the letter to get to where it is going. When we come back to replying it, it also takes a much longer time to get to me. So in short the Internet is much faster than the ordinary posting of letters.

03R046: Great difference! I'm now liberated from the shackle and hassle of picking pen and paper to write a letter whenever I feel or need to reach someone somewhere, without a phone. I read newspapers, newsletters and listen to great music and what have you! Any information I desire I only need to click a button

and it would be made available to me. I'm happy to be alive to enjoy the Internet and its massive benefits to mankind.

Respondents also explained that they maintained contacts with people in other African countries, as well as countries outside of Africa. Sometimes these contacts were family members who had traveled abroad.

03R017: Well, I certainly communicate with friends and family members that I've left behind back home in Liberia. I also have friends in Nigeria and Mali.

03R054: Yes, I do, I have a cousin in the United States and London so I do send them mails.

Other times they were current or prospective business partners.

03R006: Surely, the interactive nature of my job doesn't limit my communication to Ghana alone. As I've already indicated my organization has branches in Togo, Nigeria, La Cote D'voire, Burkina Faso and Senegal. I do also have some personal friends in Benin and Mali.

03R056: Well, we are currently trying to establish an office in Lagos, Nigeria and as a result of that have befriended a number of people with whom I do discuss business issues on regular basis.

Many times they were strangers the respondents had met while visiting chat rooms.

03R007: Yes every day I meet someone new online. And one that fascinated me most was one lady who emailed me and started telling me everything about myself, my background, my full name, my family, my siblings where I say what I do and everything you could think of. So I wrote back asking who she was and how she got all that information about me but later that day when I was chatting with my brother that afternoon I mention it to him and he told me she was his friend and they are neighbors and he told her about me and we became friends and now anytime she is online she puts her messenger on and if I am also online we chat. We've exchanged photos, addresses, etc. I also contacted a guy who's name I was at pen pal.com who bears the same surname like myself so to satisfy my curiosity I contacted him and realized he was even a white guy from Austria not even a black guy like myself. And he hasn't even been to Africa before and that the name was his family name that he is bearing. We became friends and we communicate often online.

03R045: Once, I went to the café to mail my friends and after doing it, I realized I had nothing doing at home so I decided to visit the chat-room. There I met this white guy an American by name Jeffery. We conversed for a while and afterwards

exchange phone numbers. Our friendship has grown from strength to strength and plans are far advanced for me to pay him a visit during one of the long vacations.

Romantic contacts and the arrangement of romantic meetings was by and large a major theme uncovered in this study. However, this should not be a surprise. The introduction of Invisible Users starts with an interview of a couple that had met online and gotten married. They were in the process of making travel arrangements so the Ghanaian woman could move to Canada. This study uncovered a number of examples of Ghanaian Internet café users making and maintaining romantic relationships through the Internet.

03R015: Really, I got my fiancée through the Internet, even though it was somebody who gave her my address. I've also made a lot of friends through the net.

03R016: A lot! The latest being a lady I've befriended on the net for a possible romantic relationship. She is sweet on the surface and oh! God if that is anything to go by then trust me I'll go for the kill. I'll do just anything to have her by my side for good!

03R017: Sure, Sure!...Well, if I'm to talk about the most recent one, then I will say I got into contact with this friend as a result of introduction. I saw her photograph in a friend's photo album and got so much attracted to it and made this known to my friend. Apparently they are still college mates in the US and so when my friend got back to the US she was given my email address with the information that I want to know her further and that is it...I don't know whether I got the second part of your question correctly for even though I did the initial enquiry when I saw her photograph, she sent the first mail...Talking about how we communicated I will say it basically started with email, but of late we do phone each other and she intends coming down to see me physically in the course of the year.

03R018: All right, yes, I met someone new on-line. First a lady called Marian from USA. Also, a gentleman called Alphonzy of Germany and so many other people. The most important one is my wife Joyce. It turned to face-to-face relationship and became romantic. We got intimate with each other. It was to rekindle what we talked about on line. November 14 last year was the day she came. The meeting was amazing, loving, you name them. We were figuring out who would visit first. Those I told are Dan my boss, Eli and Divine my co-workers and my parents. With my friends, it was okay with them and they encouraged me. But my parents were not sure of what I said. They thought I was not serious with what I was saying. My boss gave me two weeks holidays to

attend to her. My parents could not believe I could meet anybody on-line as I told them but later when they saw her face-to-face they were surprised.

03R020: Yes romantic but we have never met face to face....We came into contact with each other through chatting...Ah! Ooh! How do I remember that? I think she contacted me first. Yes photos, addresses and phone numbers were exchanged....Oh no! There has been no travels at all....Yes I told friends who think one would be mad to date someone they haven't met face to face...Yes we still communicate with each other.

For all the examples of people who had made romantic connections; however, there were even more subjects who had heard of this type of connection happening to someone else. This seems to fit with Burrell's findings regarding rumors; however, it does bring into question just exactly what the definition of a rumor is according to Burrell, and what should be the definition of a rumor.

4.3 Rumors as Accounts or Secondhand Accounts

In Jenna Burrell's analysis of the Invisible Users she found that rumors played a large role in how the users interacted with the Internet. One of the primary purposes of relaying rumors was to justify Internet scamming; to this end rumors played two roles. The first role of rumors was accounts of successful scams. "Through the retelling of rumors, Internet users collectively re-envisioned the technology as a tool for making 'big gains'" (Burrell 2011:82). Although in actuality scammers might end up spending more time and money than they earned through their illicit behavior, rumors motivated these users to keep trying because the big score was just around the corner. The second role of rumors was to justify the scammers' behavior. "...rumors functioned to create a more morally sound relationship between young Internet café users in Accra and foreign victims of Internet crime" (Burrell 2011:92). This role justified the use of scams to make money because the scammers were poor and the victims were rich; therefore, any

illicit gains made by the scammers were needed more by them and would not be missed by the victims.

However, rumors were not just used in regard to scamming. Success story rumors were also used to relay the acquisition of "big gains" in legitimate activities as well. One of these legitimate activities was starting romantic relationships with foreign contacts.

"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.' He added, 'Internet love, it happens.' In all cases, rumors about big gains, whether obtained legitimately or not, held to an assertion of efficacy was stated explicitly in the comments, it works' or 'it happens'"(Burrell 2011:95).

However, when the rumors the café patrons reiterate are examined closer, questions about what defines a rumor arise. According to Burrell, "Although popular understanding of rumor often emphasize their questionable veracity, they are more aptly defined, I assert, as secondhand accounts" (Burrell 2011:82). However, this definition is so broad as to be almost useless. Any anecdote or news not originating from the narrator can then be considered a rumor. To her credit, Burrell does expand on her definition by including "...the way rumors reference a source (the news, a friend, or more ambiguously 'I heard') indicating a separate place and time where the rumor was received" (Burrell 2011:86). Burrell's revised definition of rumors is "accounts claimed to originate in real-world events but that have not been witnessed directly by the teller" (Burrell 2011:87). However, even this more refined definition of what a rumor is can be problematic, especially when dealing with gains achieved through Internet use.

The major problem with Burrell's definition is that, even though the events of the account might not have been directly witnessed by the teller, the aftermath of the events are still verifiable. It is one thing to hear about a guy who made big gains; it is another thing to know a guy who made big gains. In the first instance we are dealing with nothing more than hearsay. In

the second instance, however, it is entirely possible to see the consequences of the big gains even though the original event was not witnessed. To this end a degree of separation must be taken into account. When a respondent knows the person to whom an account happened, it is possible for him or her to witness the aftermath of the account. In this instance, we are dealing with a secondhand account. However, when the respondent does not know the person to whom an account happened, then it is impossible to witness the aftermath of the account. In this instance we are dealing with Burrell's "Rumors as Accounts" (Burrell 2011:85).

This study encountered a number of respondents that reiterated secondhand accounts or "Rumors as Accounts." Secondhand accounts originated from someone the respondent knew personally. Their intimate acquaintance afforded the unique position of being able to witness the aftermath of the original connection.

03R009: Yes, this friend of mine he has eh... been chatting online, so one day he met this lady. The result eh... at the end of the day ... they became eh... very good friends the lady decided to pay him a visit and it continued.

03R031: Yes...she is a cousin of mine...eh... I think now they are almost courting on line....she also uses the net and through that they had the contact and ever since they've been courting.

03R047: Yes I know one, he is married to the white lady, yeah...yeah, it is just through the Internet they got, they started chatting, the lady was from Germany, they started chatting and the lady came down she said she want to see his country so she came down and they go more closer and she decided to marry the guy.

03R069: Yes. My friend who is now married to a Japanese lady and now in Japan. My friend met this lady on line, introduced himself to her and they started communicating with each other. Just last year precisely October 2002 the lady came down and they organized the wedding here. It is this my friend who introduced my Japanese to me. So I am also hoping that as time goes on my friend would come here one day.

However, Burrell's "Rumors as Accounts" follow her identification perfectly. The accounts originated from a source not directly familiar to the respondent. However, despite the

lack of familiarity with the original person, the account still supports the idea that "Internet love, it happens" (Burrell 2011:95).

03R013: Oh, you know what? A lot of people do have relationship with people at the flip side. I also have been hearing about some travelling outside due to this kind of relationship. These people I count them very lucky because they have laid hands on wealthy people whom can sponsor their trip. So yes they go.

03R028: Personally I don't know but someone has told me about it...it was like... this chat thing so he just got a friend on line and they were like chatting with each other every day so later on I think they expressed interest even though they've not seen each other but they've talked for so long. I think they thought maybe, maybe they could start from somewhere so they just decided to like getting eh... go on with a relationship even though none of them had seen the other and later on I heard that the lady was outside decided to come back and then marry the man, she came down, they did everything and she married the man and she took him away.

03R051: Yes I... I heard one, I heard of one...okay, that one is like marriage...ah...ha, the one came on the net and through that they got married and the man came for her and the [sic] are now in abroad.

4.4 Pornography in 2003

In Invisible users pornography only makes a limited appearance in two different forms. In Burrell's analysis pornography is either nothing more than mischievous behavior engaged in by youthful café patrons as a way to defy authority and escape responsibility, or a problem that concerns authority figures in regards to the behavior of children in Internet café s (Burrell 2011:43-47). During analysis of the 2003 interviews; however, it became apparent that pornography was an issue on many of the subjects' minds. The theme of pornography appears 36 times throughout the 58 interviews and takes a number of different narrative forms. In the broadest sense, the theme of pornography appears as the answer to five of the following interview questions:

1. What are your feelings about this café?
2. What are one or two of the most interesting things you have done on the Internet?

3. Do you think the Internet leads to personal problems, or is a way to solve your problems?
4. What is your most negative experience with the Internet?
5. What are the biggest problems you have encountered using the Internet?

4.4.1: What are your feelings about this café?

The theme of pornography appears only once under the question regarding the respondents' feelings about the café:

03R40: I think it is good because they ehmm... allow us, they allow us, I think there is discipline here. You don't go about doing anything you like, especially they give laws like children under the age of 18 should not go to pornographic sites.

What is notable here is that the respondent is happy with the discipline of the café because it does not allow underage children to surf pornographic sites; however, the inverse of that observation is that people over the age of 18 are able to watch pornography without sanction. Aspects of this observation appear in other respondent narratives where they complain about the atmosphere of cafés, with pornography being easily observable on other people's screens. There is also a running sub-theme regarding the danger of how easily children can access pornography in Internet cafés. This finding mirrors Burrell's findings that people in authority worry about youths spending all their time surfing pornographic websites

4.4.2: What are one or two of the most interesting things you have done on the Internet?

The theme of pornography appears only once under the question regarding the most interesting things the respondent has done using the Internet:

03R51: Interesting things, I always like to be honest in my life. The first few days I go used to the Internet, the most interesting things were of course I can say two, one was the obscenities, pornographic material you can eeh sometimes find on the Internet, though you might not go in looking for them purposely, some people use the Internet those who are, they know the Internet very well, they can search

home pages, they browse some pornographic sites and they use that to search as home pages so when you go there you are using that same PC all of a sudden these obscene pictures eeh, they shoot on the screen and so for some in the past, it was fun looking, yeeh.

Here the respondent admits to looking at pornography, even going so far to admit that “it was fun looking yeeh.” However, the respondent also explains that sometimes pornography is just present and available without even looking for it. This idea that pornography can just appear as some obscene artifact left behind by a previous user is a sub-theme that appears multiple times under other questions. What is interesting with this respondent’s narrative is he claims it is the previous users’ ability to “know the Internet very well” that allows them to set pornographic websites as home pages. In a way, this supports other respondent’s claims that it is too easy for children to access pornography. This is either because the children are the previous users who “know the Internet very well” because they are technological natives; or because a previous user set a pornographic website as a homepage, and children just need to log on to access the obscene material. Since this respondent was a 20 year old woman, she most definitely does not fit the Invisible User model identified by Burrell.

4.4.3: Do you think the Internet leads to personal problems or is a way to solve your problems?

The theme of pornography appears six times as an answer to how the Internet can lead to personal problems. Unlike the previous two themes; however, these responses can be categorized under a number of sub-themes. The first sub-theme is the problem of children watching pornography and the potential financial cost that could accrue:

03R45: I’m, I would buy that idea but there are some people they are much committed or they waste much time or they spend much time at the Internet café in that sense I can say you are wasting your money or so but it all depends on the person but if you are working and you come to the Internet café and you know where you have to, the website you have to go to or visit that one I will say your money, even if you spend about, even if you spend about 50 hours in the Internet café. I mean you come out, you have something positive at the end of it. But

there are some kind of thing that happen in the Internet café, I mean when you come to the Internet café and you find all sorts of persons and that is what I'm much worried about it, I mean in Ghana when we talk of an adult, you start from 18 or so, 18 or so but when you come to the Internet café you see boys about 11 and 12 years I mean they will be browsing and where they will be browsing you, you the adult will be looking at time as if, you the adult will even think may be this person does not have parents in the house because they visit websites that have pornographic pictures and other things, so if you waste your money on such things I don't think it is beneficial. But as someone coming in as a business man, I mean interacting with people outside as to how his business will grow, that, that I think, I mean it is very positive and even if it wastes about 50 hours on it I mean you will come out with something great, yeah.

There are a number of interesting aspects to this response. First and foremost is the idea that time equals money. Every minute spent browsing is equivalent to money being spent. The respondent's assumption is that adults will be more responsible than children in how they spend their time. The second aspect of this response is that pornographic websites are dangerous because a person can spend a lot of time/money watching pornography. This ties into the assumption that some children do not have parents at home because they are at the café watching pornography.

However, the assumptions of the respondent contradict the findings of Jenna Burrell. Jenna found that underage café visitors had plenty of adult supervision outside the café environment. Cafés were specifically areas where the youth could come to escape authority. Following this observation, the youth were also the most financially savvy because they are the ones who have to split their "chop" money between eating and browsing. It would also follow that the employed patrons have more expendable income to spend on "wasting" time. In fact, the majority of respondents expressed that they used the Internet for entertainment purposes, chatting, watching movies, listening to music, or playing video games. The next two sub-themes are the problems of practicing what is observed in pornography; and closely tied to this the home-wreaking power of pornography:

03R50: Hmm we have the advantage and disadvantages. Yes sometimes you meet something in the Internet and you need not to So you have to get access to what you want. But sometimes it can lead to personal problems because that will depend on the sites you browse. But also if you are bored or under stressed [sic] I don't know if you can call them personal problems but you can sit behind the Internet and start playing games and that will help you solve your problems... Yes say you go and browse pornographic and you see all that people do and you don't have a girlfriend you will be forced to get a girlfriend to do those things to her and this can lead to personal problems... Mmm I will say it helps. You know because I am not working, I don't always feel like being at home. Is I even don't have the money, I come to the café and meet other friends and we chat. And if I have money, I browse. So it helps me especially when I am feeling bored at home.

03R49: Yes, the Internet can be a dangerous thing if you do not handle it well. If you go to the Internet and you start to browse sites like pornographic sites it can lead to personal problems especially if you try to practice what you see on these sites. I have heard of a couple who now have strained relations because the husband insists that he puts the penis into the wife's mouth. And the woman swore that, such a thing would never happen... Because the gentleman is my friend and I have been seeing him visiting these pornographic sites. Then one day he told me that his wife is a local woman who does not understand how to make the husband happy on bed, and when I asked him more questions, he said that, common acts like putting the penis into her mouth she cannot understand [sic], less do it. And that he is angry with her.

03R56: Well like I said with eh... what some say about its effects on relationships, I think it, it is more positive than negative, if anything it enhances friendships and relationships, I don't think, I don't see it as something that can destroy eh... relationship, eh... if it will destroy relationship, let's say eh... marital relationship, I think I have heard and I'm beginning to hear or get the information that sometimes, certain married people and certainly the men tend to spend a lot of time on the net, you know browsing a whole lot of things, some view pornographic films and it keeps them away from their wives and at the end of the day sometimes it affects, it negatively affects the relationship so that it the negative side I'm beginning to come to you know the knowledge of, yeah.

Although these narratives are similar, there is a difference. The narrative of the practice what is observed in pornography sub-theme focuses on the personal problems, most importantly the damages to the romantic relationships, that can and do occur when men bring new sexual ideas home with them or try and start a sexual relationship and expect reality to mirror fiction.

Another interesting aspect of this sub-theme is that it is the only time where sexual deviance referenced as a byproduct of Internet pornography.

What is even more unique about these narratives is how children are not the focus of the sexually corrupting influence or pornography, only adults are considered in danger from this form of corruption. The narrative of the home-wreaking power of pornography focuses on the financial costs levied on families when husbands spend too much time at Internet cafés watching pornography. The narrative of pornography being correlated with financial troubles is present in multiple themes. It should also be noted that these responses take the form of second hand accounts and rumors.

4.4.5: What is your most negative experience with the Internet?

Fifteen of the respondents listed encountering pornography while patronizing Internet cafés as the most negative experience they have had on the Internet. However, these responses form a number of different sub-themes. The most prevalent sub-theme is the accidental encounter with pornography. The primary emotion attached to this sub-theme is embarrassment. In fact, many of the narratives describe how the embarrassment is so extreme the respondent left the café and never returned. The format of all the narratives is similar; however, there are two main themes these narratives take. The first form focuses on a previous user's account that was left open so pornography was already present when the respondent's session started.:

03R19: Ehh...my most negative experience was one day when I entered the café and got to the system, somebody left his account unclosed and it was showing a pornographic film on the screen. In fact I was so much embarrassed because there were people sitting at my two sides also watching my screen. I felt too bad and could not concentrate on my work since then, till I have to close my account and leave the café.

The second narrative form involves either the respondents' traveling to the pornographic website by mistake, or being surprised by a pornographic website opening without his or her intent:

03R03: Ah... oh... I was, I was browsing the net and all of a sudden, a porn, a porn picture just flashed on...(giggles) and I just closed it off and because of that I just stopped using the Internet and I went away. Yeah.

03R05: Well....Hum, it was right across this street there is a café on that story building over there, up there I sat behind the machine it was the first one so anyone who enters the café sees what is on your screen. I typed...ehm by then I was going to a ...ehh there was website for the text messages sms[sic]I didn't type it well or something and wham when the whole thing came it was pornographic scene and people were there and saw the whole thing. I felt so embarrassed I closed the whole thing and left and since then I have never been there again.

One respondent even drew a parallel between these inadvertent pop-ups and viruses:

03R50: It is this pornographic sites[sic]. Last time when I opened it I was trying to browse and I opened the page and I saw this pornographic pictures, those kind of things would never help me. Even sometimes you will be sending a mail and all of a sudden the pictures will come, different pictures of porno. Pornography is new like a virus and every time you can see the sites on your screen even if you did not open them.

These narratives rely heavily on the impression that either the respondents have made some mistake which has led them to a pornographic website, or that the computer possesses some form of agency and has brought them to the site without their consent. Where previously other users are identified as mediators, in the Actor-Network sense, disrupting the flow of events; these sub-themes focus on how the computer itself can be the mediator.

The next most prevalent negative experience with pornography falls under the sub-theme of the Internet café atmosphere. The narrative of this theme focuses on the respondents' experiences of witnessing other café patrons surfing pornographic sites. Where the main

emotional experience of the previous sub-theme is embarrassment, the emotional focus of this sub-theme is anger or upset:

03R13: Eh.... My negative experience is the cost to start with. It is very expensive we can't pay. Also you go there you see people watching pornographic films, this is too bad.

03R27: Watching other people browsing pornographic sites which made me felt uneasy.

Often anger or upset expressed in this narrative is compounded by introducing children into the equation:

03R55:...most negative, hmmm... when I talk about the Internet it is the café that is where I go to so my only problem, hmmm... negative I see it, it how people you know, you see young kids being exposed to pornography, you know and it, it is very bad, there is nothing you can do about it because the person tells you I've paid for it. And you see people shopping on the net with people's credit card numbers. That one, it, it, it, it is highly criminal but it hurts me, but then I have nothing to do about it but it is very bad. People work elsewhere and you are here just shopping, big clothes which people even there cannot even buy because you are using someone's credit card, just shopping, I mean you see them, I don't know it is bad. You see them, the only negative experience I have had with the Internet.

03R37: It promotes fraud, immorality where youth use the Internet to watch pornographic pictures without any restrictions.

What is unique about these responses, the ones involving children watching pornography, is that only when children become involved does the issue of morality come into play. This is the case not only for these themes and sub-themes, but for the ones mentioned previously as well. For these narratives, pornography is only an awkward embarrassment until children get involved; then it becomes an active agent of corruption. The influence is considered so corrupting that it could lead to other forms of moral decay, such as theft.

Only once is pornography viewed as a negative experience when the respondent consciously chose to watch it:

03R06: I believe it's the pornographic site I browsed once upon a time. I was told of what goes on in that web-site by colleagues, something I spoke vehemently against and even swore never to visit before them. Mm! As fate will have it I was at a café secretly 'enjoying' myself on that site when one of my colleague lady I respect and shy burst onto the scene and caught me red-handed. You can simply imagine the embarrassment and the feeling of guilt that followed afterwards.

In this instance it is not the website itself that causes the negative experience but instead it is the respondent getting caught watching pornography, by his co-worker, after publicly speaking out against it to his co-workers.

4.4.6: What are the biggest problems you have encountered using the Internet?

The final main theme regarding pornography involves pornographic websites being one of biggest problems the respondents have encountered while using the Internet. Many of these responses fall into the atmosphere of the café sub-theme:

03R09-"Hmmm...sometimes, you know when you go to the café and you find this thing eh...porno something on the screen, it is something that worries me a lot personally."

Though this sounds similar to the negative experience question, it is different in that it was meant to elicit responses about logistical problems encountered while using the Internet. However, the nature of open ended question allows respondents to answer in unanticipated ways. For some respondents, having to use an Internet café where other patrons are watching pornography is the biggest problem they have encountered while using the Internet. The "biggest problem" question is followed by a number of specific follow up questions regarding things such as junk mail, security and useless websites:

03R21(Junk Mail): I receive about 50 junk mails a week and I open those that attract my attention but most of them I realize are porn materials and some too are just for the people in the USA so I delete them.

03R32(Security): I don't think there is so much security because if there was that I think the pornographic thing will not be there. So I don't think there is that much security on the net.

03R22(Useless sites): ... it is true...I think I have said something about that this pornographic things and all these things but there are some cafés if eh... they make sure that nobody opens such sites so such cafés when you go there you will not be having this problem.

Also, the corrupting influence of pornography on children is again present as a sub-theme. As with the previous sub-themes regarding children, pornographic websites are ascribed agency and mediator status in so far as how they corrupt children:

03R49: Let me again say that, you see these small children here, most of them browse the pornographic sites. And I won't be surprised if they end up stealing their parents' monies to come and browse these sites. You remember those days when cinema was emerging, and we use to steal our parents' monies to go to the cinema halls (laughter). Again watching those sites by such young innocent children (boys and girls) can push them into acts that can have serious consequences on their lives. I personally think there should be something like a control system to check who uses what sites, more specifically, the pornographic sites.

One final thing to note is that when respondents discuss the corrupting influence of pornography on children; the worry is not only that children will become sexual deviants (which we saw previously is a problem adults face). Additionally, the worry is that pornography will turn children into frauds and/or thieves. Although the logical progression of this descent into depravity is weak and/or non-existent; it is none-the-less present in multiple narratives.

All in all it looks like Burrell was partially right regarding pornography. Adults do worry about children spending time and money visiting pornographic websites, when their time could be better spent elsewhere. However, youths are not the only people visiting pornographic sites, nor are they the only ones affected by a general atmosphere of prevalent pornography within Internet cafés.

4.5 Internet Explorers

After analyzing the responses of the 2003 subjects it should be clear that there are a plethora of user types that visit the Internet cafés around the Accra metropolitan area. All of these users share similar characteristics. Much of the time they spend on the Internet is for the purposes of sending and receiving email. All of them enjoy browsing, though what sites they are visiting differs from person to person. Almost all of them at some point in time have met strangers online and attempted to either strike up a conversation or establish a relationship of some sort. However, most of these are general uses of the Internet that filled the space between the subjects' primary uses of the Internet. All of the subjects interviewed in 2003 had a specific reason for using the Internet. Other than the general reasons mentioned above, respondents were at the café for one of three reasons: Business, Education, or Entertainment.

It should be noted that the specific reasons for using the Internet identified in Invisible Users did not make it onto the list mentioned above; the reason for this is twofold. First, most the interviews conducted in 2003 did not produce any responses that indicated respondents were specifically using the Internet as an instrumental tool to elevate them from the bottom level of the social strata. To be fair, the interviewers did not specifically go out with the intention of finding out how the marginalized youth of Accra were using the Internet. However, Dr. Burrell did go to Internet cafés for the specific purpose of finding "Invisible Users," which leads to the second reason: Dr. Burrell has already done a thorough job of identifying the primary reasons why Invisible Users use the Internet. It would be redundant to list those reasons with this project's findings.

The primary uses of the Internet, however, coalesce into three types of Internet café patrons; four, if Burrell's Invisible Users are included. All four of these typologies can be

considered "Internet Explorers." The rationale for this nomenclature is simple. At this time in the history of the Internet, users in less developed countries were exploring the opportunities made possible by accessing the virtual landscape of the Internet. However, the not-so-subtle reference to colonialism associated with this title is no coincidence. Like the colonial explorers centuries ago, the explorers identified by this project find themselves in virtual territories already occupied by firmly entrenched natives with their own knowledge and normative behaviors. Each explorer's interaction experience with the natives is different. Some are met with friendly open arms, while others are met with skepticism and distrust. Regardless of individual experience; however, each typology of Internet Explorer has its own shared set of behaviors and practices. The next section offers explanations and examples of the four typologies of "Internet Explorers": Invisible Users, Merchants, Scholars, and Voyagers.

4.6 Typologies

4.6.1: Invisible Users

Invisible Users are covered in great detail in Jenna Burrell's book by the same name (2011). Since they are covered so thoroughly elsewhere, this chapter will not devote much more attention to them. However, a quick overview of those subjects shows that their ranks are made up of scammers, romance seekers, & religious devotees. These café patrons are marginal in social status, age, education and occupation. They utilize the Internet as their last and/or only tool for upward mobility, as well as its potential for international travel. Whether their motives may be sincere or malicious, their actions are clouded by a fog of desperation and urgency.

4.6.2: Merchants

Merchants are café patrons using the Internet as an important tool in furthering their business. Unlike Invisible Users, Merchants are educated and employed. Although advanced

age is not a prerequisite of this typology, the ones encountered in this study were in their late twenties or early thirties; old enough to earn an education and become established in their given profession. Merchants use the Internet to establish business contacts, learn about their competitors' maneuverings, or learn about updated information or practices that could benefit them in their chosen professions. Merchants may have other areas of Internet access, such as an office connection, but they utilize Internet cafés for faster machines and connections as well as the personal freedom to engage in recreational activities that might be frowned upon if engaged in at the office.

03R06: Believe me over the years, my experiences are quite wide and varied, somehow making it difficult for me to remember one off-hand. However I guess in recent times the most thrilling experience was how through the Internet I was able to easily fish out serious information on our competitors, thereby, unraveling their mode of operations, strength and weaknesses. These [sic] information have in no small way helped us to map out effective strategies to compete and even taken [sic] over their positions on the market.

03R07: Yes I once collaborated with a guy in India. I saw the guy's name at penpal.com, so I contacted him and we became friends and we communicated a lot and (he) told me that the father owns the biggest mobile phone company in India and he would like us to collaborate and do a business which he would be supplying me with mobile phones for me to sell in Ghana. But he was demanding an amount of \$3000 for the first consignment of goods, which I had to pay \$1500 upfront before the goods are sent and pay the rest after receiving the goods. So I became a bit skeptical and at the moment I could not afford that amount so the business didn't go through, but I still have him as a friend on my messenger. But I think collaborating online the major problem is trust. This is a guy, I have never seen before and I have to give him all this money what shows that he is saying the truth or is not 419[sic], I might even lose my money, so I decided to let it go.

03R13: I have come to check my mail and reply those I think necessary. Also, to find out some business contacts.

03R14: Yes my greatest experience or what I have done and have so much hope and joy in it is that I have been able to make a business contact with...eh...the insight computer in America, who are directly in contact with me and through the Internet they came here to verify the validity of what I was saying and we are in business. We are in contact and the ...ehh... is an experience for me because

these days you have to write, not easy to have business contact just like that, it is a great experience.

4.6.3: Scholars

Scholars are patrons using the Internet as an instrumental tool in furthering their education. Unlike Invisible Users, Scholars are educated in some fashion. In some cases the Scholar's current level of education only consists of primary and secondary school; however, many are currently in some form of higher education program. This may be either a University program or some form of trade school. Some Scholars already received a higher education degree, and were using the Internet in an attempt to pursue a graduate level degree. Unlike Merchants, the primary reason for Scholars using the Internet was to acquire knowledge and pursue higher levels of education. This is not to say all Scholars are unemployed, only that education and not occupation is their primary focus and reason for accessing the Internet. In some cases Scholars have access to other Internet connections, such as University computer labs. However, as with the Merchant typology, Scholars enjoy going to Internet cafés because of the freedom they are afforded. Interspersed between their academic searches and readings, Scholars engage in recreational Internet surfing and personal emailing.

03R16: Well, I'm not sure whether what I'm doing currently can qualify as an online project, but all the same I'm a registered student with the ACCA (London) and they constantly sends [sic] me learning materials.

03R28: Influence, influence hmmm... well I think it has helped me improve my knowledge because when I visit those sites, that I was talking about, those educational sites, there are some things that when you go to school or you go to classes you will not be taught but when you visit the sites there are some things that you get to know that they are under your field of study which you will never... eh... you will not be taught at school but when you come here and visit such sites you will get to know more about such eh... so many things, explanation to some problems you didn't even know so it has really done an improvement.

03R45: The Internet has had a positive impact on my studies and sharpened my career. Am learning to become a Chartered Accountant and through tuition[sic]

from the Internet I can now prepare bank statements, payrolls and other needed documents. It has also directed me as to which course of action to take to facilitate the achievement of my main aim. So all in all I will say the Internet is more of an asset than liability and must be embraced by all people and businesses.

03R62: A great deal, I even take advantage of my department accessibility to the Internet to learn more, by virtue of the long distance education programme we get from selected French schools in Paris, France.

03R74: The use of Internet has been helpful because, after using the Internet I have acquired a lot of knowledge and softwares[sic], which I use in my daily work. Also, I don't have to spend money to buy books to learn. I can get as much materials as possible from the net and I am even furthering my education online.

4.6.4: Voyagers

Voyagers are patrons using the Internet as a means of entertainment. Voyagers come closest to the three previously mentioned typologies because, more likely than not, Invisible Users, Merchants, and Scholars were at one point Voyagers. Voyagers in many cases are young and/or new to using the Internet. Voyagers are, for lack of a better phrase, testing the waters. For Voyagers the main thing keeping them coming back to the café, and spending money to use the Internet, is its recreational capabilities. Writing emails to friends and family, making online contacts, watching movies and music videos, playing video games and surfing the web are the only reasons Voyagers come to the café. In most cases cafés are the only places where Voyagers have Internet access. Voyagers might be the most transitory typology because the more contact they have with the Internet and other café patrons the more uses of the Internet they uncover. In time they may discover how to use the Internet to further their business, education, or they may learn about the less ethical uses of the Internet. In some cases; however, they are content with using the Internet only for recreation.

03R21: Spend around 20 to 30 minutes on the email and the remaining one and a half hours browsing and listening to music.

03R56: Basically I go to the café to chat with my boyfriend, and when I'm satisfied I then read newspapers, listens [sic] to music and at times watch movies!

03R54: The most interesting thing that I've done is, eh... I play games on the Internet, yeah, playing games and watching certain interesting movies I like on the Internet.

03R58: I primarily come here to release stress by visiting the entertainment sites of the Internet, listen to music, and watch films.

03R67: Yeah, playing computer games.

4.7 Conclusion

Invisible Users are a type of Internet café patrons first identified by Dr. Jenna Burrell. These patrons are considered invisible because of their marginalized status in both Ghana and the world at large. They are often young, and lacking in basic education. If they have a job, it is a low-skill, low-paying, and lacking in room for upward mobility. They come to Internet cafés with the hopes of engaging with a global society that they would otherwise never be able to access. Some engage in 419 Internet scams in hopes of making a "big score" and escaping their current station. Others are making International contacts in hopes of finding a "love" that will rescue them. Finally, some are attempting to engage with a global religious community; again with hopes that international contacts, and in this case, prayers that can free them from their marginalized position.

Dr. Burrell's findings are ground breaking in that they are the first and, up until now, only information available on this unseen population. However, this study, which was conducted around the same time, offers new information regarding the Internet café patrons living in Ghana's capital city of Accra. This study has found that many of the subjects interviewed share a number of characteristics with the Invisible Users. However, there are enough differences between the Invisible Users and this study's subjects to support the idea that Invisible Users are

just one type of café patron. This study has identified four types of café patrons, including Invisible Users, which make up a typology known as Internet Explorers. Accompanying Burrell's Invisible Users, the other three types of Internet Explorers identified in this study are: Merchants, Scholars, and Voyagers.

These typologies are Ideal Types, meant to be mutually exclusive and exhaustive. However, that which is ideal is almost never what is real. Some of the patrons were pursuing knowledge as a form of continuing education to further them in their career; this muddies the water separating Merchants and Scholars. Some of the subjects were pursuing a higher education but only utilizing Internet cafés for recreational purposes, blurring the lines between Scholars and Voyagers. Since this study did not specifically ask questions regarding Internet scamming it is possible that some of the Merchants who were talking about business were in fact Invisible Users referencing their scams. Every subject interviewed used email for recreational purposes, and almost everyone interviewed enjoyed collecting online contacts; this makes distinguishing Voyagers from the other three types a very difficult process. All that being said, the key to understanding the difference between the four types centers on the "intent" of the user when patronizing the café, and how they view their interactions with the Internet. If patrons intend to use the café, and the Internet, to strengthen and further their business they are Merchants. If the patrons intend to further their education, those patron are Scholars. If the patrons view the Internet as an entertainment medium, then they are Voyagers. Finally, if the patron views the Internet as his or her only means of escaping an almost inescapable social position, this patron is an Invisible User.

Although this study is able to build on Burrell's findings and extend them, it is limited due to the constraints of time. Computer technology is constantly progressing and improving.

Technologically speaking, what was the case in 2003 has certainly changed. When Burrell returned to Ghana in 2010 she found that two of the cafés where her informants practiced their scams had closed. She also witnessed how changes in computing technology offered Ghanaians more options for accessing the Internet. Finally, she also found that the scamming lifestyle, which was not very lucrative during her first visit, was now a viable way of making money (Burrell 2011:187). The next chapter examines the data gathered in 2014 with the intent of answering the next research question: How has Internet usage changed between 2003 and 2014?

Chapter 5: What has changed in 10 years?

In Chapter 4, the analysis showed that Invisible Users were not the only patrons of the Internet cafés in Ghana. In fact Invisible Users were just one typology of user that we dubbed Internet Explorers. Internet Explorers took the form of Merchants, who were using cafés and the Internet primarily for business; Scholars, who were primarily perusing education; and Voyagers, who primarily used the café and the Internet for recreation and entertainment. The analysis also showed that pornography was a major theme that appeared in a number of the narratives of the subjects. Now, however, this study is examining interview data collected in 2014. The primary focus of this chapter is to address the research question: How has Internet usage changed between 2003 and 2014?

5.1 The more things change...

The most significant change observed between the two sets of data was the change in how café patrons were able to access the Internet. In 2003, only 19 of the 58 respondents could get access to the Internet outside of the café. Some had their own PCs, or access to a friend who had a PC, but most of these 19 could only access it at a place of work. The other 39 could only get online at an Internet café. In 2014, however, all respondents except one could access the Internet at locations other than the café. The reason for this is the affordability of Internet capable smart phones or USB modems that could connect to wireless phone networks. Many people were also able to access the Internet at school and work. This is such a drastic and important change over the last decade that we will use Chapter 6 to examine it in greater detail.

14R10: Actually, Um I have my laptop at home and I also subscribe from Tigo...yeah and Vodafone, MTN, you understand I have these networks. I have the modem so it depends on how buoyant I am sometimes you have to recharge it and use it in my home...you understand and if I am not buoyant I have to be outside and walk because outside doesn't cost much.

14R13: I have a phone with the Internet on it so most of the times if I cannot go to the Internet café I will use my phone.

Arguably, the second most important change observed in 2014 was the shift in the patrons' narratives when discussing the Internet. The concept of the "quasi-actant" was identified in Chapter 2, within the critique of Latour's "black-boxes". When an ANT account includes the Internet as one of the actants, it may be difficult to determine whether the Internet should be categorized as a black-box or a quasi-actant. The reason for this difficulty is that the Internet can be either. As a black-box, the Internet can be unfolded into a multitude of actants: computers, modems, telephone and/or cable wires, fiber optic wires, servers, wireless towers, satellites, web pages, programming languages, as well as the multiple components that make up these objects. However, when subjects begin to discuss the Internet as a community; a collection of virtual worlds; a gathering of ideologies; the genesis of activist movements; or any other ethereal influencing factor, the Internet takes shape as a quasi-actant.

Actor-Network Theorists can spend a lot of time trying to identify the Internet as either black-box or quasi-actant; ANT scholars can waste even more time arguing amongst each other about whether one scholar's typological categorization was correct or not. However, these arguments are red herrings that detract from the important description that should be the foundation of an ANT narrative. The solution for avoiding these problems actually comes from Latour himself. The second uncertainty in Latour's Reassembling the Social: An Introduction to Actor-Network-Theory regards the nature of action. Latour argues that action should be examined as a node at the center of a multiplicity of agencies, and the job of the sociologist is to carefully untangle this knot. The key here is to listen to the accounts offered by the subjects and take them at face value without substituting social explanations in place of individual accounts no matter how odd those accounts may be (Latour 2007:47-50).

If a subject unfolds the Internet in his or her account by attributing action to one the components of the Internet, or to the Internet itself, without delving further into some metaphysical concept or ethereal state of being, then in that account the Internet is a black-box whose folds may be revealed by the narrative of the subject. If, however, the subject attributes action to a new found state of being or other ethereal concept, being attributed and/or compared to the Internet, then the Internet is a quasi-actant. In either case, the purpose of these typologies is successful. Symmetry is achieved by homogenizing the traceable actions of human actors, actants within a black-box, and quasi-actants.

5.1.1: Black-Boxes and their folds

In most cases the Internet as an actant is already presented by the subject in its black-box form. The Internet changes the way subjects communicate. The Internet solves or causes personal problems. The Internet causes changes in a profession. Most of the time these responses can be directly attributed to the wording of the questions on the survey: "Do you notice any difference in your life before and after you started using the Internet?"; "Some people say the Internet leads to personal problems; others say it is a way to solve your problems; what do you think?"; "All in all, how would you assess the influence of the Internet on your professional activities?"

However, there are a number of instances where respondents "unpack" the Internet black-box to show exactly which unfolded actant is responsible for the action. Below are some examples of unfolded actants of the Internet black-box; italics have been added to emphasize the actant:

03R19: Yeah, I have notice some difference in my life, I have been about to make use of the *keyboard* which I usually think is only for the Secretary at the office. I also send *mails* at least 3 or 4 to friends and relations in a week. I think is helping

me to contact this[sic] people regularly than if I should write letters. Also the reading of other people's *mails* is also improving my English.

03R20: Yes I have noticed a difference in my life. Well I have realized that I have become an ardent user of *the Computer*--more of an addiction.

03R21: The only difference is that anytime I am bored at home I just go to *the café* to do away with the boredom, okay now with *the email* am constantly in touch with my former classmates although we don't live in the same town.

These examples show how actants can be: the components of the computer(i.e., keyboard), email, the computer itself, and the Internet café. These actants perform the role of mediator for the respondents by increasing the skill of the user (in both typing and English comprehension), maintaining distant communications for the user, monopolizing the users time, and alleviating the users' boredom. These actants are the folds of the Internet black-box that illustrate a difference in the subjects' lives since they began using the Internet.

03R02: From my point of view I think it depends on the person but I think...eh... sometimes I work during the week to the weekend and things and I hardly get time to see people so ehmm... maybe through *the email* and things I get into contact with them and we chat on line and things like that so, I really think actually if you can't see me we can chat, so yeah it is good.

03R53: I think it strengthens relationships, because I for one have these cousins who traveled out of the country and it's not being easy getting in touch on the phone and this system of post office is so cumbersome, so usually when they go they have free access to the mail so they are able to communicate with me every other day, they send me *mails* every other day so at least we have been in touch.

Again email is presented as an unfolded actant. However, this time email is the mediator that strengthens relationships. In the first account, email allows the maintenance of relationships even when the respondent works every day. In the second account, email allows the subject to maintain contact with out of town relatives.

03R03: Eh... let me see, in a way it solves, it solves some problems...because when you get to know how to use *the Internet* and things, yah... your act of *typing*

increases. You type fast and ah... ah... you know more about the Internet. Not only the Internet but things about *programs* on the Internet and so on and so forth.

This response is unique in both its cyclical nature and how the respondent presents the Internet black-box and two of its folds as actants. The respondent is making the claim that the Internet solves problem. How these problems are solved is attributed to the skill of using the keyboard. However, the skill in using the keyboard not only improves the subject's skill of navigating the Internet, it also increases the subject's skill with using online programs. The mediating actants are the Internet, the keyboard, and online programs.

03R17: Em! eee, let me see! Well, there has been a number of times when 'acclaimed' *website pages* are either no longer there or containing less scientific information, but then I still have to pay for the time spent

03R21: I can recollect a number of cases or events which I was not happy about. After typing a real lengthy message, spending much time translating high user fee for *the system* to go down due to power outage, I think is too bad.

03R34: Eh... the negative experience is eh... at times when you go to the *web site* the page cannot be displayed and at times the *system* is slow and it is so frustrating at time and that is some of the problems that we face, yeah.

03R38: The *network* is at time very slow.

03R54: My most negative experience using the Internet was a day when I went to a café to download software and in the middle of the process all *the lines* in the café went down. I realized they were using the *dial up modem* instead of the radio and for that matter if the telephone lines go down the whole system goes off I got too pissed off and since then I have never been to that café.

In these responses the most negative experiences the subjects have had while using the Internet are attributed to mediating components of the Internet. These unfolded mediators are missing web pages; the system going down or being too slow; slow networks and malfunctioning phone lines; and an outdated dial-up modem. In these situations, the actants failure to act as they are intended impeded the respondents' ability to use the Internet in the way they desired.

Additionally in a number of cases this ended up costing the subjects more money than they intended to spend.

03R54: My biggest problem with the Internet is that most of the *sites* are not well-protected; people can have access to your address and mail easily. Also sometimes, you would be working on a particular site your [sic] want to go to the next just to realize that that *page* has been disconnected. Sometimes too you spend too much time for a page to appear and because they charge according to the minutes you stay online you end up paying more.

As with previous examples, the respondent below identifies web sites as the biggest problem while using the Internet. In this case the sites are either insecure and the respondent's personal information is in danger of being accessed by someone else, or the web page crashes causing the respondent to spend more time and pay more money to access the information being sought. The web page is the mediating actant.

03R45: Yeah I told you I wanted to be a general practice surveyor, I want to be a general practice surveyor but I mean my dream is becoming let me say a professional associate at the Ghana Institute of Surveyors. Yeah and I've been visiting *Internet café* searching for information about real estate evaluation, real estate rating, I mean rating and evaluation, I mean property management has really helped me in a great way because now I normally find information that I didn't even have in schools . I means[sic]most of the lecturers even depend on the *Internet cafés* for some of the information. The [sic] is this school at UK, College of Estate management, they, they have been helpful, when I come around at time I even *print* their hand out, I mean they have this reading materials and other things and you have the opportunity of, I mean reading them yourself only if you have money to print it out yeah.

Here the subject attributes changes in his life to the Internet café and the ability to print documents at the café. In this case the mediating actants are the printer and the café because they further his education as a General Practice Surveyor.

03R22: Influence, influence hmmm... well I think it has helped me improve my knowledge because when I visit those sites, that I was talking about, those *educational sites*, there are some things that when you go to school or you go to classes you will not be taught but when you visit the sites there are some things that you get to know that they are under your field of study which you will never eh... you will not be taught at school but when you come here and visit such sites

you will get to know more about such eh... so many things, explanation to some problems you didn't even know, so it has really done an improvement.

Similar to the previous respondent, this subject identifies educational websites as being the primary mediating actant influencing his professional activities.

Although the exact actions each of the identified actants is responsible for may be different from each other, in many cases the identified actants are the same. However, one similarity that should stand out immediately is how each actant could be transposed with the black-box of the Internet without changing the action-network of the narrative. The next section, however, does not show that similarity.

5.1.2: Quasi-actants

The quasi-actants in this section may exist in a narrative that does not contain the Internet. However, in these next narratives the quasi-actants are presented by the respondents as being analogous to the Internet or states of being created by the Internet. Italics have been added to emphasize the actant:

03R06: A huge difference! I now basically depend on postal system for hard copies of materials that for instance I can't download or have access to on the net. I'm now *a global man* even though I'm virtually always in Ghana.

03R09: Yes, yes...my study life...in terms of *Christianity*, it has been helpful, because I always get in touch with a lot of Christians outside and I learn a lot.

03R14: Eh... the Internet has made me *a reserved person* now. It takes most of my time instead of going to seat [sic] somewhere have fun or do some other unnecessary things, I mostly read on the Internet and watch picture at least so many other things that take my time. It has given me some *discipline*.

03R23: Mm! very dramatic indeed. You know most of my friends tend to say initially that I'm boring when it comes to working to sustain a relationship because I don't visit them neither do I reply to letters I receive from them. However, ever since I got introduced to the Internet things have really improved and those who knows [sic] me see me differently. They see *I'm lively and very interesting*.

03R36: Why not! I'm very *transformed* and quite *polished* as a result of my level of exposure onto the net. I communicate with all manner of people, trying to get them interested in our organization. I've come to appreciate the fact that we have a diversity of cultures, hence we got to be tolerant of one another, something I lacked all these while [sic]!

These respondents are identifying how their lives are different now that they use the Internet. In all cases the respondent is attributing new found states of being with Internet use. The respondents are now global men, better Christians, more reserved and disciplined, more lively and interesting, and more transformed and polished. Although, in another narrative, these states would not necessarily be attributed to Internet use; in this narrative these states go hand in hand with the Internet. Although these states of being are not empirically observable, in these narratives they act as mediators that are life changes according to the subjects.

03R33: Ah... me, I, what I will say is that it does strengthen relationships because ehmmm... right now that we are in *the computer world* you can send the person something and instead of writing which will take a long time before postage and, by the time the letter or this thing will get to the destination, let me say it will take time but with the net, immediately you send it, it will go and with the net you can send cards, cards to say so many things...

Although the computer world is an ethereal concept, this respondent gives this quasi-actant the power to strengthen relationships. In this narrative, living in the computer world makes communication instantaneous. The computer world is a mediator that strengthens relationships.

03R51: In fact, it is very true, Internet usage can most probably also lead to personal problems. With the *digital communication system* that has popped into society today its pinning a lot of people down to their chairs and in front of their screens, so there is a *virtual community* been [sic] created on the website, or in the Internet, socialization becomes more difficult, people remain glued to their seats and the kind of *Internet community* is virtual you see the people you are chatting with but then you feel the sense of nearness which can create the interpersonal problems like *social alienation* or solution if should use that word. Yes.

In this narrative digital communication systems, and virtual communities are mediators that cause personal problems. The subject is differentiating between time spent online and time spent offline. According to the respondent online interactions are distractions that detract from real interactions.

03R10: Yes, more changes, eh... knowing the Internet, knowing the Internet, the eh... the, being abreast with the Internet is just like eh... you, you are eh... a *big man* that is, that is people's perception about the Internet like when you visit the café or you like visiting the café, for you, you are a *big man*, you are oh... you are *advanced* you are *civilized*, I mean I think there is more *civilization* in it. That is the perception of some people. Yeah.

03R36: Oh! Yes, all the wonderful things I'm capable of doing today, was largely thought of as a mirage a couple of years back. I'm now well updated and feel *connected to the world*. I guess my generation is indeed blessed!

In these narratives being on the Internet is analogous to being a big man (important), advanced, civilized, and connected to the world. These states of being are mediators that cause changes in the respondent's occupational field.

Although these quasi-actants are not empirically observable they are still responsible for action within the narratives of the subjects, according to the respondents. Actor-Network researchers are not attributing causal power to these narratives; however, the subjects are defining them as mediators in the flow of action, allowing for the creation of a virtual-theory. This conceptual exercise allows the researcher to "go on describing" instead of being bogged down in the mire of attempting to reify and unfold ethereal actants. The analysis of the 2014 data, however, indicates that the patrons of Internet cafés now describe the Internet almost entirely as a Black-box. The awe and mystical attributes ascribed to the Internet by the 2003 patrons has all but disappeared.

When asked the same questions in 2014: "Do you notice any difference in your life before and after you started using the Internet?"; "Some people say the Internet leads to personal

problems; others say it is a way to solve your problems what do you think?"; the answers often placed the Internet in role of a tool used by the subject. Again, the subjects' narratives include the un-boxing process. Italics have been added to emphasize the actant:

14R04: Oh yes absolutely I mean you can't do anything without the Internet these days, you cannot, *online bookings for reservations*, I mean it's revolutionized the way we interact with one another. It's gotten really bad now cuz people are not as hands on as they used to be before. You go out and you meet up with people and instead of them to be talking to you most of them are fiddling with their *iphones and their tablets* I think out of courtesy and respect the use of those gadgets should be limited if you are interacting. Personally I think it is rude if you are trying to meet up with someone or talking yeah it's not nice.

14R25: Internet actually doesn't change normal people lives in here based on what you do, yeah. I think it has helped me much because when you have to go to a recording studio you must pay before you record. But because of the Internet you can record anything you want to record. By the *PC-DJ*, yeah. You download your *PC-DJ* software and do your demos and play it anyway you want it. I think with that I've been saving a lot of money on me. That is the level of change I can say, but for my personal normal life I can't say it's something for my normal life.

14R29: Tremendous. I have access to a lot of information. I read a lot. I have access to a lot of *books*, a lot of *information*, you know, a lot of *commentary*, *dictionaries*, a lot of information than before. And I think the knowledge that I have acquired through the Internet maybe would have taken me fifteen years to acquire such knowledge if I had been going to the library, ok to get those information, I think fifteen years. But through the Internet I have a lot of information.

14R36: A lot a lot, I cannot say my academic life has increased due to the introduction of the Internet because I am not a fan of reading so much, my eyes capture more than they do with videos than the written text so when any time I go on *YouTube* like this teach me something on YouTube but I read it in a book it gets missed somewhere.

14R54: yeah because um the Internet helped me a lot. The Internet helped me to know the things that is happening in abroad, in Ghana, everywhere everywhere, and more over the Internet helped me; the time I was not browsing I was not going to the café I did not know much about what is going on in this life. The time I started going to the Internet, learning somethings [sic], you know, going to the *Google*, and stuff, searching for things. So to me, for now, the Internet has helped me.

It is evident by these responses that some customers understand the different aspects of the Internet that have made a difference in their lives since it was introduced. During the narrative un-boxing the subjects illustrate the importance of websites (YouTube, Google, and reservation booking sites), software (PC-DJ), data (books, information, commentary, and dictionaries), and of course the hardware (iphones, and tablets). When asked about the Internet causing or solving personal problems, the narratives are similar.

14R18: I think it solves personal problems more than anything else, um because if you have a rash on your skin or anything you can *Google* it. You know, if you had a real medical condition, you took something, you reacted to it, you can *Google* it, you know. You can *Google* about everything. So I think it really solves personal problems. But sometimes I think people are over reliant on the Internet, and because what is posted there is not always correct it may misled one or two people. But if you apply common sense to it is more good than bad.

14R30: Yeah it solves problems...yeah because it is very hard to buy phone card, so if you use the Internet to talk to them it is not expensive. Or sometimes maybe the person will be overseas and if you want to talk to the person, to buy a phone card here is very costly, so you can use it to talk to them on *Skype*.

14R41: It depends on how you use it. For instances if you just surf without any *protections*, some kind of *security measures*, I mean you are just exposing yourself to all of these hackers and intruders. But if you do that with protection you should be sure of being safe. Not putting too much of personal information and all that, if you go by all those guidelines I'm sure you will be safe.

In these narratives problems can be solved by proper utilization of websites. Google is useful for finding the answer to any question, but it is imperfect and people need to use their own common sense when accessing online information. Skype can save the user money when a phone card would be too expensive for an international call. However, people can run into problems if they do not use proper online security measures.

14R18: Well there are *standards* out there that I can get online quite easily, so you don't have to reinvent the wheel. If you are writing the proposal you can just go and check it out and see how it's done in your specific field, or domain, so at least you adhere to those *standards*. And so stuff like that really helped me, so I don't

just have to crack my head and do things my way, but of course the content will come from me, but the structure I pick from the Internet.

In this final narrative the subject identifies the standards (proposal templates...etc) which have been created and uploaded to the Internet as influencing his professional activities. Even when subjects do not un-pack the black box in the narrative, they still frame the Internet as a tool in the way they talk about it. It is a tool that's effects depend on how you use it. This should not be interpreted as the quasi-actant narrative disappearing completely. Some subjects still give metaphysical, transformative power to the Internet by saying that it makes them: sharp, smart, think fast, updated (information wise), or experienced. All in all, however, that way of conceptualizing the Internet is in the minority.

Due to the 10-year gap between the two sets of interviews, it is impossible to say why the role of the Internet changed in the patrons' narratives. However, two directions of discussion may shed some light on this phenomenon. First, café patrons have been using the Internet to make themselves more visible to a global online community. In both the 2003 interviews and Jenna Burrell's Invisible Users, patrons have narrated the process of using the Internet to develop a cosmopolitan identity. By gaining access to Internet users in other countries they have been taught normative online behaviors and attitudes. In doing so, this may have shifted their perception of the role the Internet plays in their online actor-network. If this is true, it is actually quite phenomenal, because it means the respondents needed to view the Internet as a quasi-actant (a metaphysical place which could imbue a cosmopolitan identity on the user), before they could learn how to view it as a black-box.

The second line of reasoning takes the form of the age of the respondent when that individual first started using, and the individual's reason for getting online the first time. This is also the third big change between the 2003 patrons and the 2014 café patrons.

In the 2003 study, the youngest age of a patron who tried the Internet for the 1st time was 13, and the oldest was 33. The first time in history that somebody accessed the Internet was 1995, and the most recent had been that year: 2003. However, 16 of the 2003 study's 51 respondents (who had given their age and the year they first accessed the Internet) had done so in 1999, four years prior. Most of these patrons were in their late teens or early 20s. In 2014, the youngest age of a patron who first used the Internet was 9, and the oldest was 33. The earliest year a patron first accessed the Internet was 1995 and the most recent was that year, 2014. However this time the modal year of first access was 2010, also four years earlier.

All this being said, the most interesting difference between first time user narratives in 2003 and 2014 is their reason for first trying the Internet. In 2003 most people had tried the Internet for the first time because a friend encouraged them to. Although there were a number of respondents in 2014 who had also tried the Internet because of the insistence of a friend, there were also many who used the Internet for the first time in school; a phenomenon that did not occur in 2003. This means that sometime between 2003 and 2010 schools began requiring their students to develop computer literacy skills. This means that it is possible that the demystification of the Internet, and its Actor-Network role shift from quasi-actant to black-box in the narratives of café patrons, could be attributed to the routinization of Internet usage within schools.

14R02: Back then um we used to take computer classes in school...I was in junior high then...and you only get access to the Internet when you go to the computer lab.

14R14: Um with my first experience I really didn't know how to use it...it was the first time being taught in school so it was quite difficult.

14R30: I remember when I was in class one...yeah I was in junior school in class one.

In the 2003 interviews, as well as in Burrell's Invisible Users, it was revealed that Ghanaian café patrons enjoyed collecting foreign contacts. The 2003 interviews revealed that almost all café patrons had some number of contacts in countries outside of Ghana. By 2014, the vast majority of respondents acknowledged using Facebook to make outside contacts. Burrell made the point that collecting foreign contacts, in the form of email contacts or chat partners, was a past time that almost all Invisible Users engaged in. A decade later, they are embodied by Facebook friends. The numbers varied among patrons; it could be as few as 50 Facebook friends or as many as 5000! This is not to say that café patrons did not also have email contacts, only that, for the purposes of accumulating foreign contacts, Facebook has become the primary user interface.

14R12: I use Facebook...Um I think 180 or 160 [friends]...I know them but not too much because I get to know them on the Internet. Some of them I have never seen them before, some of them I know them, and some of them are my classmates.

14R18: Yes I'm on Facebook...I meant to check the last time but I think I have quite a lot of friends because I accept everybody who requests to be my friend...As I said I accept everybody so only a few I actually know.

14R45: Yes I do use Facebook once and a while...Oh the last time I checked I have about 5000 and more [friends]...I think only 100 of them [know in person].

14R54: A lot, a lot, a lot, I can't guess that number...a lot, a lot, a lot, but the ones I do not know in person are out of, in abroad.

In the 2003 interviews, pornography had come to light as a theme in the narratives of the respondents. In many of these responses, café users were fearful of the corrupting influence that pornography had on Internet users. It was believed that pornography had the power to ruin relationships, cause embarrassment and shame, or turn children into thieves. In 2014; however, pornography was not a significant theme, though it was mentioned in a few cases. It has not

entirely disappeared as a social problem but most of the times it was mentioned, it was just offered nonchalantly as something the respondent enjoyed viewing from time to time.

It is possible that along with the routinization of Internet use came the normative perception that pornography is just part of the online experience. Even interviews with café owners and staff reveal that, even though some administrations try to stop the open viewing of pornography in their establishments, others take the position that once you pay your money your time is yours to do with as you please.

14R10: And sometimes too I watch the pornos...but not like I'm addicted to it, I don't really like it. But sometimes I see a sex style that is really interesting and I want to watch it.

14R18: Not really. [encounter sites that require registration] Those were my days of porn ha hahaha.

14R44: Once and a while some of these things happen [customers watching porn]...This is what I am saying once in a while you see the young ones and sometimes average age twenty-something and this is what I'm saying you can't guess, some of these things are private. And you can see how our machines are arranged. It is difficult unless you are sitting next to the person, then you can see exactly what the person is doing. And our main focus is just give you the Internet access and whatever you want to use it for that is your business.

Interestingly, Facebook has now taken the role of the corrupting boogeyman in the fearful narratives of a few of the subjects. However, the fears narrated by the patrons are slightly different from the fears in 2003. In 2003, the fear was that pornography would turn children into criminals. The fear in 2014 is that Facebook would turn children into slackers. The logic here is that Facebook users are developing a subculture where the majority of one's time is spent surfing Facebook. This time spent on Facebook means that users are not using their online time for educational purposes or to pursue occupational opportunities.

14R07: And I hate this idea of going to an Internet café and finding 14 of the 15 computers and everybody is on Facebook. It annoys me a lot...But here the culture of Internet use, even among University students is Facebook, Sports...YouTube; I

use YouTube a lot but for different reasons, eh eh pornography there's a lot of that and then of course the Internet fraud which is another issue altogether.

14R18: I'll tell you, if I can just explain something to you. There is a café culture among a certain group of people who just go on Facebook online and play games and meet friends. Um I'm not one of those.

Facebook, however, is not the only new program to make an appearance in the 2014 narratives. Skype is also referenced in the 2014 narratives as important uses for the respondents. In 2003, only about half of the 58 respondents had even heard of web telephoning and only 8 had tried it. By 2014, however, all but 9 of the 29 respondents were using Skype. The rationale was often the same; it was cheaper to use Skype for long distance communication.

14R04: Yes I Skype...I Skype with friends, classmates, and family. Because I have family scattered all over. In the US, the UK, in parts of Europe, Asia, and even Australia, so it's the cheapest way to do it.

14R25: We were once having one manager who used to manage us in our records and he traveled nationally, let's say he traveled to UK...when we want to get in touch with him we have to call him by phone sometimes and it's a waste of credit. So what he told me is we should find a nearby Internet café and then we just registered for Skype. Anything we want we just video call him and he gives us instructions on how to do it.

The 2014 interviews also indicate that there are a number of uses of the Internet that very few people utilized in 2003 that are now more routine. Topping the list is the access of online maps. Even though Accra is still lacking street signs and addresses, many of the patrons utilized online mapping software to get a rough idea of where they were going when visiting new locations. This happened not only in Accra, but also when the patrons would have to travel out of the region, or even the country.

14R18: Yes, um I use Google Maps usually just out of curiosity, especially the ones that give you actual pictures...But when I went to Nigeria, where I worked for a year I noticed that Google Maps and GPS really helped me practically get around town.

14R36: Like sometimes you get lost so you need to find your way to the main street or something or someplace where you know you are safe.

In 2003, no questions were asked about watching videos online, but in 2014 all but three of the respondents watched YouTube videos on a regular basis. Although using the Internet for information searches and research has largely gone unchanged since 2003; by 2014 Google, and YouTube had become the go-to solution for any question the respondents needed answered. Google's accuracy and YouTube's visual instruction capability meant many respondents felt informed, just as the Internet usage in 2003 contributed to a sense of informational efficacy.

14R18: When I Google stuff and there is video content I go to YouTube to watch. Or football, not soccer, American Football actually, or funny clips, Obama's speeches, or any interesting thing that was video content. Instead of Googling it I will YouTube it. If I suspect the content will be video I just use YouTube as my Google.

14R35: My help which I will brag about is YouTube. I have been a big fan of YouTube cuz[sic] it has given me all the help I need. If I don't know anything I just go on the search and I get a couple of guys to teach me and it's very good.

Patrons had also begun downloading more software. In 2003 most patrons had admitted to downloading anti-virus software, and a few had downloaded other free programs. However, in 2014 many patrons discussed downloading all sorts of software. Interestingly, a number of patrons discussed using the café's wireless signal to download Apps for their smart phones.

14R04: I even prefer the Wi-Fi connections because it is much faster and it is better for updating your apps and software and stuff like that.

14R19: Today I came to install my WhatsApp...I've already installed it but I came to install the latest version.

More subjects discussed getting their news from online sources. These sources were both local and international. Local news sources consisted of the local radio stations: MyJoy FM, Peace FM, City FM. International news sites included CNN, BBC, and Al Jazeera. These sites

were listed as primary news sources by multiple respondents. Only a few sites, specifically sports and religious news sites, were listed by only one or two respondents.

14R10: I visit the news websites because sometimes I cannot afford to buy the papers. When I'm on the net I go to the site and read the news, CNN, etc.

14R35: We're mostly on GhanaWeb, yeah we use GhanaWeb, and then I'm on GhanaEntertainment also. And then mostly I use BBC.uk also for the business stuff and other stuff, so I'm all over.

When asked about security in 2003, respondents had not had any troubles. That is not to say that the respondents had not heard rumors of security problems, they just had not experienced them first hand. In 2014, however, security had become a more salient issue with the interview subjects: specifically Facebook and email security. What is interesting is that their narratives are directly tied to the café community. The security problems they had encountered were attributed to not properly logging out of their accounts after they were done using a public computer.

14R04: I think there was one time I think my Facebook account was compromised. I don't know maybe I got sloppy and didn't sign out when I was in a cyber cafe or something, so I just changed it. And that taught me a lesson, even on my cell phone I don't automatically sign in. If I have to log on, I log on, and when I am finished I sign out.

The next two phenomena were responses to questions that were added to the 2014 interview. The questions that were added were: "Websites that won't allow access because you reside in Ghana?" and "Have you ever been the target of a 419 scam?" In 2003 these particular problems were unknown to the interviewers, but in 2005 Jenna Burrell discovered through her ethnography that these were problems that her subjects were encountering. Our 2014 interviews corroborate Burrell's findings. Multiple subjects encountered websites that deny access to computers located in Ghana. All of the subjects had either been the target of an online scam or knew someone who had been targeted.

It would appear that over the last decade numerous changes have taken place, which have, in turn, changed how café patrons interact with the Internet. However, not everything has changed. The next section of this chapter focuses on what has stayed the same, or what has not changed significantly.

5.2 ...The more they stay the same

In Chapter 5 we identified typologies of Internet café users and named the whole group Internet Explorers. Over the past 10 years the name Internet Explorer has lost relevance as more and more Ghanaians are born into, and grow up in, a world where Information Communication Technologies, such as computers and smart phones, are a universal commonality in their everyday lives. However, even though the Internet Explorer title has given way to the Digital Native; the way the previous explorers have used the Internet has gone unchanged. Café patrons were and are using the Internet for work, education, and entertainment.

Though this might not seem unique, it is. First, consider the other methods by which Ghanaians access the Internet: smart phones, personal laptops, tablets, office computers, school computer labs, and libraries. Each one of these other means of access lends itself more easily to one particular use: smart phones for entertainment, office PCs for work, school computer labs for education...etc. It would then be safe to assume that over the last decade the Internet café would have found itself utilized more heavily for one purpose or another; however, it is still utilized for all three purposes.

Another thing that had not changed much in 10 years was the utilization of online job searching tools. In both 2003 and 2014 there were equal amounts of respondents who had heard of online job searching tools and those who were ignorant of such tools. Also unchanged was

the number of respondents who had tried to get a job through online avenues, but had been unsuccessful.

One online activity that has gone unchanged is the construction of a personal web page. When asked the question "Have you ever created a Webpage?" in 2003, only a few had even considered it, and only three people had actually done it. When asked the same question in 2014, no one answered positively. This finding alone might bear further analysis in another project because it speaks directly to the concern of development theorists that proper utilization of online skills is not enough to promote economic independence; ICT users must also be developers of content.

One very surprising response was regarding the cost of using the Internet. When asked if the cost is too much there is a relatively equal split among respondents who think it is versus respondents who think it is not. This response is the same in 2014 as was in 2003. The reason this split answer is shocking is twofold. First, in 2003 the only viable option for online access was the Internet café. With no other options, one would expect the café's pricing to be less than competitive. Second, after a decade of technological change and the increase in affordable hardware, one would expect the price of Internet access to become exceedingly reasonable. Instead, we found that roughly half the subjects found the prices to be reasonable in 2003 and 2014, and roughly half found the prices to be excessive and continue to find the prices to be excessive.

The next two problems that the respondents reported in both 2003 and 2014 can be attributed to the communication infrastructure of Ghana. Respondents during both time periods found that the time necessary to connect to the Internet was too much. During both time periods

subjects also identified problems with unexpected disconnections. It should be surprising that after 10 years the communication and power infrastructure of Accra is still extremely flawed.

Finally, subjects still receive junk email on a continuing basis. This is probably the least surprising of all the findings considering how junk mail seems to have become a staple of participation in online communication. In fact, the response to the question about receiving junk mail is indicative of just such an observation. In 2003, subjects reported receiving junk mail but just moving it to the trash without even opening it. In 2014, however, subjects report not even worrying about moving the mail to the trash because all email services now come standard with a spam filter that will do the task for the user.

It is clear that Internet use in Accra has changed more than it has stayed the same. However, this finding is not surprising since it has come to be expected that technology continually changes at a steady pace and users of technology will adapt along with the changing technology. However, with the extent of a decade's worth of changes, especially the introduction of affordable alternatives for online access, one would expect drastic changes within the Internet café business. Chapter 6 examines in greater detail the rise of these new technologies and their effect on the café business model.

Chapter 6: The Café Business in 2014

All I can say is it's easy, and it's not easy at all... we don't make profit. If you ask and I say we don't make money I'm lying. We get money, but the money we get we use it for paying bills and that is not our plan (Internet Café Manager, Accra, Ghana).

This chapter addresses the research question: How has the Internet café business changed over the last decade?" In the Prelude, Introduction, and Chapter 4, the reader was made aware of the popular opinion of many Ghanaians that the Internet café business was on its last legs. This opinion has been mirrored in numerous periodicals (Bakare et al. 2014, Bivan 2015, Rohatgi 2014, Tajuba and Ndagire 2015, Wardad 2015, Yellapantula 2014, Zachariah and K. V. 2014). News stories assert that the online revolution, which began in the local Internet cafés over a decade ago, has now been taken over by smart phones and personal laptops. Journalists such as Bivan express some version of the view that "while most gadget enthusiasts glory in the advancement in this area of technology, the business that has filled the vacuum in years past suffers" (Bivan 2015). These writers make the case that the progressive nature of technology is inevitable and businesses that rely on technology that has been superseded will inevitably suffer.

Back in the 90s, having a pager was considered very fancy and luxurious. Most youngsters today don't even know what a pager is. Part of technological advancement is that things go out of fashion and new devices are discovered. Cyber cafés enjoyed for over a decade, but sadly, their time is up(Yellapantula 2014).

Many periodicals also cite public opinion that the café business is fading. Alternative positions, including the notion that cafés are thriving or changing, are not often considered. Paul Tajuba and Betty Ndagire, writing in the Kampala *Daily Monitor*, suggest one might wonder "whether the eminent death of Internet cafés was long written on the wall or a sudden happening that many in the industry never saw coming" (Tajuba and Ndagire 2015).Our overview of

reporting on Internet cafés in the past three years indicates four main themes, often supported by statistics gathered from the national communications commissions.²

(1) More people are connected to the Internet now than ever before. In a typical statement, "Internet penetration has in the last two decades exhibited tremendous growth. As of June 2014...more than 5.2 million people had access to the Internet compared to about 1.5 million in 2012" (Tajuba and Ndagire 2015).

(2) More people are using phones to access the Internet. "An official at the Bangladesh Telecommunication Regulatory Commission (BTRC) told the FE that mobile phone users in the country totaled 114 million in 2014 and Internet subscribers 42.76 million in number. Of the total, 41.30 million are now connected through mobile handsets," he said (Wardad 2015).

(3) The Internet café business is losing a majority of its customers to personal access technologies. "In 2013, a measly 5% visited cyber cafés to browse as against 46% in 2009. During the period, Internet use from home rose from 58% to 78% and access via cell phones rose from 12% to 18%, says a Tata Consultancy Services study" (Zachariah and K. V. 2014).

(4) Finally, loss of customers is forcing Internet cafés out of business. "According to the figures released by the Cyber Café Association of India (CCOAI), there were 27,444 cyber cafés in the state in 2008, which dropped to 21,695 in 2011. The numbers are still declining and the latest figures show that there are only 14,000 cyber cafés left in the state"(Rohatgi 2014).

An analysis of data gathered by the International Telecommunications Union (ITU) seems to lend support to this claim. Though ITU does not collect information on the number of Internet cafés, there are data regarding the number of mobile broadband subscriptions, households with a computer, and households connected to the Internet. In 2013 Ghana had the

² These sources were located using LexisNexis Academic and searching for periodical articles referencing "Internet cafés" over the past three years.

highest number of people with mobile broadband subscriptions, home computers, and home Internet access than that of Africa and other developing nations (Table 6.1) (Union 2013, Union 2015a, Union 2015b, Union 2015c).

Despite these rumors, however, and the findings from ITU, some scholars have made the claim that new ICTs have not harmed the Internet café business. Gomez and colleagues conducted the most extensive recent study of public access to the Internet, with surveys in 25 developing countries. His project used mixed-methods. First, surveys of over 20,000 Personal Access Computing (PAC) users and more than 250 PAC operators were employed. Second, the country that best represented the typical characteristics found in the larger survey was selected for follow-up. Gomez concludes the café business has not been affected by the increase of smart phones within the population: "Mobile phone use, despite its incredible growth in the past few years, tends to be rarely used as a tool to access the Internet among underserved population, who tend to use mobiles mostly for traditional phone calls" (Gomez 2014:274).

Jenna Burrell conducted an in-depth analysis of Ghanaian Internet café patrons in 2005 (2011). Burrell's method, in contrast to Gomez, involved immersing herself in the lives of her informants, and engaging them within their social context. Burrell does not directly specify the number of subjects interviewed or cafés visited, but an astute reader may infer, based on the areas visited and specific people mentioned, that she followed her subjects in at least seven regions within Accra; visited at least eight different cafés; and had at least 11 different subjects. Five years after completing her fieldwork, she revisited her informants as well as the earlier Internet café locations: "All but one of the Internet cafés that were key sites for my research remained open and operational suggesting that this trend was not a fleeting or financially unsustainable one" (Burrell 2011:186).

It was with these two conflicting narratives that this study decided to examine the responses given in 2014 by the owners and operators of Internet cafés as well as the customers.

6.1: The Customers

One benefit of using the systematic search method was that, in the cases where the original café could not be located, new cafés were discovered and in some cases many cafés were located in close proximity to each other. However, this was not always the case. Cafés within close proximity of each other were observed more often in Zongos (poor Muslim neighborhoods) than in other regions. There is a strong possibility that the low socioeconomic status (SES) of the patrons of these cafés was a strong factor in the viability of Internet cafés as a successful business in these regions.

Respondents often pointed out that they did have smart phones, and personal computers, but the cost for data for these devices was based on the pricing structure of the mobile carriers. The different mobile carriers often changed their pricing structure due to fluctuations in the economy and customer use. To save money the respondents would choose to browse in the cheapest way. One Ghana Cedi could buy an hour of Internet use in many of the cafés where interviews were conducted. That same Cedi, however, might not buy an hour's worth of data if it were invested in mobile data for a smart phone or USB modem. In some cases the quality of the connections to the mobile networks was also an issue when determining how to access the Internet.

14R04: I normally come in here to get on the Internet because I have a modem at home but the network can be patchy but in the café it's a lot faster. It's a lot more convenient and obviously there is air conditioning so it's much cooler as well.

14R10: Actually I have my laptop at home and I also subscribe from Tigo, Vodafone, MTN; you understand I have these networks and I have the modem so it depends on how buoyant I am you know sometimes you have to you know recharge it but I use it in my home. You understand? And sometimes I have to, if

I am not buoyant you know I have to be outside and walk because outside doesn't cost much.

14R17: Phone, yeah laptop yeah. So I sometimes use my modem. Sometimes using the modem the networks they not always be good so we come to the café.

14R29: At work yeah. At home, I have at home, yeah I have at home. I use the modem, but where I live on top of the hill the reception is very...it's not sound, yeah so it can be very slow. But when I come down here it is a bit faster. So I prefer to leave my home and move down here to access this one.

14R37: Yeah I have it at home, I have it at work, I have it yes at home and at work. Normally I use an iPad ok, but unfortunately my iPad does not have a chip within, so I normally if the, the Wi-Fi you know when the credit is exhausted then I have to buy some and put it on, but if I am not if I don't have that is how come I come to the café. Because if I have credit on it I don't think I would have.

14R48: I don't normally visit the café, because I have a phone I can browse on. So most of the time I don't visit cafés.

Many of the customers that were interviewed were at the café to scan or print documents. These are activities that average Ghanaians cannot do on their own, because they do not have access to a personal printer or scanner. Many of the customers also had email access at work, and in some cases printing and/or scanning capabilities. However, these customers made it clear that the technology available at their office was for work, while the printing and scanning they were doing in the café was personal. These customers made sure to take time either before work, after work, or during their lunch break to visit the café and attend to personal business.

14R14: I came to the café today because I wanted to print something from the net. It was an admission form for my sister.

14R29: When I'm at work during break times, that's between 12 and 1 in the afternoon. Because on break I am free. But when I'm at the office I sometimes do some research for what I am doing, so I have to go to the net. In those cases it is strictly for what I am doing. Maybe, because I am a pastor we do research into Pentecostal studies. So I have to go to some churches some information and other so I use the Internet during those times. But that is not for personal that is for business. But for personal it is between the break.

14R18: On the average I usually buy the hour ticket, which is not too expensive, and work within that. Because it's just as I said, it's [the café] is just a support unit for me. I don't sit and browse all day at the café. I come for specific services like printing, scanning and all that.

14R45: Oh yes, I have a smart phone which help me to, I mean to receive mails ah ha but I cannot print it on the phone. I actually have to come to the café and go out of here.

Finally, a number of the customers discussed using cafés to watch videos on YouTube and to Skype with friends and family living abroad. These respondents explained that these are activities that use a large amount of data, compared to viewing static websites and sending emails. To do these things on their mobile devices would consume a lot of their phone credit; however, using these services at an Internet café cost them only one or two Cedi per hour of usage. Skyping, in particular, was viewed as a much more economical alternative to using phone credit to make international phone calls.

14R30: Oh actually I usually come here to talk with my family, my relatives, my daddy. My father is living in Switzerland, and sometimes it is very costly to buy phone cards to call them. Yeah sometimes I talk with them on Skype.

14R33: Most of the time I do come here to download lectures on YouTube. Yeah, so apart from that I just read the news. I do read the news online. That is the main reasons I come.

14R35: Mostly downloading stuff. Yeah, I like downloading stuff from the Internet yeah. I think a couple of them are videos, and softwares mostly, yeah.

14R47: Well you know nowadays it's very expensive to buy credit cards for calling abroad and doing those things I cannot afford so the best way is to come here and spend about three hours it's cool that is why I come here, that is my main reason.

These responses offered some indication of why people were still using cafés. They also indicated that smart phones and USB modems were competing with Internet cafés to some degree for customer attention. However, interviews with café staff were necessary for gaining an

understanding of just how volatile the market had become, and what successful cafés were doing to remain in business.

6.2: The Cafés

When asking the owners and attendants of Internet cafés the question "How is business?" one response that appeared a few times was "By the grace of God." When pressed to explain that response, the staff said that they are making enough to stay open but not enough to make a profit. Other responses ran the spectrum for business being great to business being horrible. As these responses were further explored a number of themes appeared. These themes showed both the threats the café business faces as well as the mechanisms for succeeding in an unstable market.

The first threats, that by now should be obvious, were smart phones and personal laptops with wireless USB modems. Although there were a few customers that did not have these devices, most had one if not both. The café staff also lamented the amount of business they had lost to these devices. Internet cafés are no longer a necessity for people only interested in corresponding through email, surfing the web, or visiting Facebook. These are activities that the clientele could do anywhere, at any time. This did not stop customers from coming to cafés to do these activities; it just offered customers other options that had been unavailable to them in years past.

14R06: For some time now, it used to be ok it used to be ok, but um roughly a year to two, you see now everybody buys phone with the Internet facilities, and some also buy their own laptops and all those things. So I can say, for the Internet business for now it's not all that good that it used to be, yes. But when they come to the printing, of course for the printing of documents, it's not everybody who has a printer at home, so they will come here for their printing. Yes, for the printing and the photo copy, it helps a lot.

14R15: Most of the people, especially the youth, they are not coming in anymore like they used to because they can do a lot of things on their smart phones. And the only time they come here is when they don't have credit, they only come to check, especially when they do the bets, they have the EuroBets where they bet

the football and they want to check whether they've won or which team is playing, then they rush in here. I've tried several times to do a promotion of mobile phone wireless but the response is isis[sic] not all that good. People are not coming for that one they are still using their smart phones so they are not coming.

The next threat to the Internet café business was the electrical infrastructure of Accra itself. Citywide blackouts, or 'light off' as the locals called it, sometimes seemed like an almost daily occurrence. Every café visited indicated that its business had been disrupted to some degree by the power situation. The most obvious way power outages affected business was by shutting off the computers. When the computers were down, business was closed until further notice. The other way power outages affected business was by damaging the computers. Electrical surges caused could burn out the power supply on one or more computers necessitating expensive repairs, or in some cases replacement of the whole computer.

14R01: That is really a big problem that we are facing here. But we are trying as much as possible to get a stand-by generator. So that whenever it goes off we can power the place....A lot, a lot, most of times.[power surges damaging the computers] Like I said, we have only twelve working now. The other there it was broke, it got broken down because of the power situation, yes. It came and it went off and then the power pack of the system units went off. Then we have to go and buy and replace before we can use it.

14R11: Nope, Yep...hahaha. We do have a power problem but that is from the government. Like this one and off thing. Sometimes it takes like two days and it will be cut off just for like I think...uh six hours. Yeah but then light is on.

14R28: Of course. Sometimes people will be working here, the place is full, and then the light will go off. Everyone will go out, yeah. So it sometimes affect the business.

The final threat to cafés was the Vodafone network. In 2008 Vodafone bought out Ghana Telecommunications Company Limited, the official government telephone company(Vodafone 2008).At that time Vodafone became the only landline, and high-speed Internet provider in Ghana. All Internet cafés have Vodafone as their Internet service provider. However, due to Vodafone's monopoly, café owners are at the mercy of Vodafone's pricing increases. It is also a

problem when Vodafone has problems with its infrastructure, as all of its customers experience the network problems. Finally, it is also a common perception that Vodafone will intentionally slow down its service to the other cafés, so that it can offer faster service at the newly built Vodafone cafés around the city.

14R01: Apart from Vodafone, because you know there is no competition, they do whatever they like. Before you see the lights, I mean their line goes off. This morning like this, we've been facing this problem since yesterday; it's been on and off, on and off. You call and they will tell you we are having a problem somewhere, they are working on it. Since there is no other network, I mean you move to, you have to wait until they work on it, you get a line back and it start working. I think that is the challenges that we are having here. Apart from that is the power situation we are having here and the on and off, on and off. Apart from that I think everything is ok.

14R09: Yeah that is a problem that normally we used to face. Sometimes when it is raining like this we don't bother putting the DSTV on. We are praying that they will get something through, that when it is raining we can still be working. Sometimes when it is raining the network can even go off, and what's happening is sometimes that I don't know if it is the machine or if it is how the network works, that some of the machine will not be working or some will not be able to open the browser, but some of them do too do open it. Yeah that is how it works.

14R15: Not well, not well. In the beginning it was good but now not well. There are so many problems to it. Sometimes it is the Internet, sometimes it is power, and sometimes the customers some of them will complain. Looking at the people that will come in, most of them are children, so they complain the cost. And the reason of all that is not making the business work is now the provider himself is also doing cafés. Vodafone. So he is also doing café, and his is more faster than ours. So you can just imagine that many of the people like to go there and do their work and we are the ones suffering.

With all these problems constantly assailing the café business it seems almost impossible for any café to succeed. However, a number of cafés appeared to be very successful, and the staff were able to support this observation. Other cafés, though not as visibly successful, were financially stable according to the staff. In many cases it appeared that the method for maintaining financial stability was to implement solutions that addressed the aforementioned problems.

One of the most common and probably most important way to stay open in the Internet café business is to diversify the available services. Not one of the cafés that were visited offered only Internet access. At the very least every café offered printing services. Many cafés also offered scanning and copying services. Printing, scanning, and copying were services most of the customers did not have access to at home because they did not own the required hardware. However, other cafés offered all manner of goods and services including secretarial services, computer repair, standardized testing, mobile money sales, phone credit sales, computer peripheral sales, and travel booking. Interestingly, only one of the cafés offered the sale of beverages.

To deal with the constant power outages, many of the cafés would invest in gasoline generators to power the business when "light off" occurred. However, this could also become a problematic expenditure if the price of gasoline rose too high. Some cafés also invested in industrial strength surge protectors to stop their computers from being damaged when the power fluctuated. Many of the cafés would also operate with their lights and air conditioners off for most of the day to save on electrical bills. When computers were damaged beyond repair, café staff would sell the broken computers to the scrap buyers for a little extra money.

14R06: Actually, here we have a stand-by generator. And here we have a central UPS, so all the PCs here are connected to the central UPS so when the light even goes off it does not affect them. Unless the stand-by generator is not switched on. Otherwise we always have power here.

Although it was almost impossible to circumvent the problems created by the Vodafone network, one café owner did come up with a way to mitigate their increasing network costs. When Vodafone increased their data rates, this café owner blocked access to YouTube. He said that the majority of his data was used by customers watching videos. He would lift the block for individuals who needed to stream videos for educational purposes, but other than that it was

generally blocked for everyone. This meant he could get more use out of his monthly data plan without significantly increasing rates.

14R44: Once and a while we allow YouTubing, because the data we buy is not unlimited. You understand, it's limited, and these kind[sic] of downloads of music and these things most of the time drain data away. So we try to minimize, some people use it to learn, and of course if you are adult and you want to use it to learn why not. You want to listen, sometimes we will give you the access. But it is not like before where it is open and every one can hook onto it now.

Finally, one attendant offered a unique insight about a factor for business success that was not discussed by other cafés' staff. He attributed a café's ability to succeed or fail to the café's location. According to this attendant, a profitable café needed to be located in a centralized area that was also physically close to one or more schools. The centralized location brings in steady foot traffic of random people that need to print or scan, but don't necessarily need to use the Internet. Schools, however, bring in regular clientele that need to complete homework, projects, and take standardized tests.

14R51: Actually the business, first of all I can say the location is no good for us. Because the people we target for this business are not the people that come here. We target students, they will come here, maybe they will come here to do research. You see, maybe some will come and browse. Maybe some will come and do printing and other stuff after visiting...So we plan to change the location...We want to go to Accra central near Post Office, Accra General Post Office. Cuz I've surveyed the area, and I've talked to several people there.

The responses of both the customers, and the café staff show that the nature of the café business is both fluid and dynamic. Most of the time the decisions by the customers to use a café, and the decisions by the staff to implement a rule or policy are instrumental. Customers use cafés when they are the cheaper alternative or a necessity, and café owners implement new policies to mitigate exterior threats to their profits. The next section discusses the current state of the café business in Accra, and ends by speculating on how the market may change over the course of the next decade.

6.3: Conclusion

The Internet café business in Ghana is not dead. However, it is also not a stable industry. A number of factors play important roles in determining the level of success or failure an individual Internet café will experience. For the most part these factors create a fluid exchange between the customer and the café. Customers will seek to maximize their Internet access while minimizing their costs; cafés seek to maximize profits while mitigating unavoidable expenses. However, this unstable market can still be profitable and a resource for the overall community; owners just need to be resourceful.

Over the last decade, and continuing on to the present, customers use Internet cafés to make contact with the international community; conduct business at home and abroad; and further their education. Whether these individual improvements have a positive impact on their developing nations is a matter to be addressed in another study. However, the inclusion of smart phones and personal computers has only served to increase access to the Internet for these people. Now the triumvirate of Internet cafés, smart phones, and personal computers are giving these people the option of maintaining a continuous online presence while maintaining a fixed budget. Will there come a day, however, when the option of using an Internet café is no longer cost effective?

As technology becomes cheaper and different ISP networks enter new markets, there may very well come a day where the current Ghanaian Internet café business model ceases to be profitable. However, even then there is no guarantee that the café business will become extinct. The café owners and staff that were interviewed are a perfect example of the adaptability and resourcefulness of the Ghanaian business owners. It is possible that the Internet café business may evolve into some other form of Information Communication Technology (ICT) related

business such as gaming centers, conference call centers, or even traditional business centers. It is also possible that the promises of international development may not come to pass, and Ghana may still have an overabundance of impoverished citizens needing the Internet café industry in its current incarnation for the purpose of maintaining an online presence. In 10 years another follow-up study would be warranted to assess the changes another decade has made on the Internet café business of Ghana.

Chapter 7: Conclusion

The previous chapters offered a foundation for this study as well as evidence of the findings. Chapter 2 examined literature regarding online community formation; Internet use in developing nations; the digital divide; and Internet cafés; as well as the theories which have informed these writings. This study made the argument that ethnography and ANT were the best methods for addressing postcolonial concerns when conducting studies in developing nations. Chapter 4 provided the argument that Jenna Burrell's work on the Invisible Users, while extensive, only identified one of the many different types of users of Internet cafés in 2003. Chapter 5 illustrated the different ways that café patrons use of the Internet had changed between 2003 and 2014, as well as identified what had stayed the same over the last decade. Finally, Chapter 6 examined the changing nature of the Internet café business, where it is argued that cafés are changing their business model in an effort to compete with newly affordable wireless communication technology.

Though these arguments lay the foundation for an ANT narrative, they are not in and of themselves an ANT description. An ANT description is more extensive. Latour himself mentioned numerous times in Reassembling the Social that developing and presenting an ANT account is a very difficult and complex task. Luckily for this author, however, Reassembling the Social is also a How-to-Guide for describing the flow of action within an ANT narrative. The majority of the text is dedicated to five "uncertainties" that need to be addressed so as to develop a complete ANT narrative. The five uncertainties are: 1) No Groups, Only Group Formation; 2) Action is Overtaken; 3) Objects too Have Agency; 4) Matters of Fact versus Matters of Concern; and 5) Writing Down Risky Accounts(Latour 2007).

The remainder of this chapter will use the directives of uncertainties one through three to transform the findings of the previous chapters into a more complete descriptive ANT narrative. Uncertainty four, Matters of Fact versus Matters of Concern, is extremely important for studying the creation of scientific knowledge. This uncertainty would be important for studies that follow Ghanaian scientists like the ones conducted by Duque and Shrum; however, since this study follows laypersons uses of the Internet in Internet cafés it is not necessary, and will not be addressed (Duque et al. 2005, Shrum 2005). Uncertainty five focuses on the research mechanics an ANT sociologist should use when conducting their study. However, these mechanics are so similar to the methods for conducting an ethnographic study outlined by Emerson Fritz and Shaw that we have already used them. The one aspect of uncertainty five that we will utilize is the advice that an ANT description is complete when it no longer has to be explained. Since this study's description is limited to the data at hand, it will address any holes in the overall narrative with an outline for potential future studies.

7.1: "No Groups, Only Group Formation"

The first source of uncertainty one should learn from is that there is no relevant group that can be said to make up social aggregates, no established component that can be used as an incontrovertible starting point (Latour 2007:29).

To this end Latour requires that researchers identify groups based off of the flow of action. This does not necessarily mean that the group the researcher first identifies will be the only noteworthy group. In fact Latour makes the point that as researchers follow the flow of action, new and different groups will come into focus, and it is the responsibility of the researcher to describe this genesis.

Although Chapter 4 identifies a number of types of Internet users, these do not constitute a group in and of themselves. Instead, Invisible Users, Merchants, Scholars, and Voyagers are

categories used to describe individuals and their primary intent for engaging with the Internet. Pre-formed groups do exist in Internet cafés. Arora did an amazing job of documenting groups of Indian students taking over an entire Internet cafés to complete class assignments(Arora 2010). Liu's study of Chinese wangbas identify groups of friends who visit cafés together to play games and shirk responsibility(Liu 2009). Even the respondents of this study in both 2003 and 2014 claimed to sometimes come with friends to the café; and café attendants have remarked that they sometimes have problems with groups of people coming into the café and trying to crowd around one computer. That being said, most group formation is an active event that begins when the customer purchases a time code and sits at an empty computer.

First, to delineate a group, no matter if it is to be created from scratch or simply refreshed, you have to have spokespersons which 'speak for' the group existence (Latour 2007:31).

In the case of this study every respondent ended up being the spokesperson of a group. In most situations the groups was no more than a dyad loosely formed between human and computer, for the set period of time of roughly one hour. In that time the group would expand to include more members, most of which were not physically present, but had to be contacted by the human through the machinations of a computer and an Internet connection. The size of the group varies based on how the human is engaging with the Internet. Emails create, for the most part, static temporal triad groupings; though group enrollment can be larger if there are multiple recipients. What is meant by static temporal groupings is that once the user sends the email, the group exists frozen in time between the sender, the sender's computer, and the recipient's email server (usually locally stored on the recipient's computer but sometimes on another device.) When the recipient reads and replies to the email, the group enrollment stays the same, though

the roles change, and the flow of action again becomes frozen in time until the message is read and replied to.

When customers use web services like Facebook or Twitter the flow of action and group enrollment changes drastically. Now group enrollment expands and shrinks almost continuously to include not only the respondent and the computer but also all of the respondents: Friends and Followers that are currently online as well as their devices that are allowing the online connections. The flow of action is dynamic and continuous, allowing for real-time communication in multiple formats (visual-text, visual-image, audio, audio-image).

When customers play videogames, the groups can be dyads on up, depending on the number of players. Single player games involve the customer playing against the computer while multi-player games are similar to the Facebook/Twitter interactions where the group's size is only limited by the constraints of the game server. When multiple players are involved, the flow of action is dynamic and continuous, happening in real time. Other solitary activities such as watching a YouTube video or visiting a news website follow the single player gaming model where the group is a simple dyad made up of the patron and the computer.

Finally, when customers patronize the café for some service other than Internet use, then small four or five actant groups spring to life for a short period of time. The group members usually take the form of the customer, the attendant, the service machine (printer, copier, scanner...etc), the original document, and sometimes one or more computers. The group exists long enough for the flow of action to come to a satisfactory conclusion (i.e., a legible copy of an original document is created or scanned).

Second, whenever some work has to be done to trace or retrace the boundary of a group, other groupings are designated as being empty, archaic, dangerous, obsolete, and so on (Latour 2007:31).

Over the last decade Internet activities that initiate group formation have changed slightly. Though the process of group formation and the makeup of the group resemble those that have already been discussed, the groups themselves have been obsolete.

The first obsolete group is the one formed when the patrons would visit chat rooms. Chat room groupings were very popular in 2003. These groups resembled Facebook groups in that the flow of action was dynamic and continuous. The group's enrollment consisted of the subject, the subject's computer, and all the other people in the chat room and their computers. This grouping was utilized primarily for building a catalog of international pen-pals. In both Invisible Users and the analysis of the 2003 interviews collecting large numbers of international pen-pals was an important activity for Ghanaian Internet café users. Currently, however, café patrons are ignoring chat rooms and instead accessing Facebook for the purposes of collecting a large repertoire of international acquaintances.

One archaic grouping that almost every respondent was at one point enrolled in was the triad of user, attendant, and computer that made up almost all users first experience with the café. When asked if they needed the attendant to help them use the Internet, or in the description of their first time using the Internet, every respondent explained that the first time using the Internet was difficult or confusing and they needed the attendant to teach them how to get online and make an email account, and also to show them how to perform a web search. However, this group is no longer necessary because the subjects can now do these things on their own without the help of the attendant.

Third, when groups are formed or redistributed, their spokesperson looks rather frantically for ways to de-fine them(Latour 2007:32).

The most prevalent way this identification of group formation occurs is when the respondents engage in our-grouping. This occurred in 2003 very often when respondents would

condemn the usage of the Internet to watch pornography while at the same time legitimize their own personal use for the Internet. However, the 2014 interviews reveal that there are a number of respondents who critique other patrons who use the Internet for Facebook and/or game playing, while at the same time arguing that their use of the Internet is somehow more authentic. Finally, there are respondents who make a point of showing that they only use Internet cafés for their ancillary services (printing, scanning...etc.). Their argument is that there is a "café culture," of which they are not a part because they get their Internet from some other source, and they only use the cafés for services they could not get at home.

Fourth, among the many spokespersons that make possible the durable definition of groups, one must include social scientists, social sciences, social statistics, and social journalism (Latour 2007:33).

Of course, all of these observations and findings come from the analysis of the author. None of the groups mentioned above were ever laid out and/or labeled by the subjects. That being said, the subjects did describe how they patronized the cafés and how they used the Internet. In doing so they became spokespersons for their own group; however, it required the author to identify them as spokespersons for the purposes of an academic ANT description.

7.2: "Action is Overtaken"

Action is not done under the full control of consciousness; action should rather be felt as a node, a knot, and a conglomerate of many surprising sets of agencies that have to be slowly disentangled. It is this venerable source of uncertainty that we wish to render vivid again in the odd expression of actor-network (Latour 2007:44).

In a Latourian Actor-Network account, this is where the researcher must examine the different impetuses for subjects' actions. Specifically for this study it is necessary to identify what makes using the Internet, and in conjunction Internet cafés, desirable and/or necessary.

An "actor" in the hyphenated expression actor-network is not the source of an action but the moving target of a vast array of entities swarming toward it(Latour 2007:45).

Every interview, in both 2003 and 2014, asked the respondents to describe their first time using the Internet and explain why they did it. In both samples there were wide arrays of answers regarding the subject's first motivator. When asked why they were currently using the Internet there was also a wide variability of motivating factors. In both years of the study, most of the respondents started using the Internet because of some form of curiosity instigated by peer pressure from their friends. However, there were a few people in 2014 that started using the Internet because it was required learning by their school. The number one reason, in both years, why people were currently using the café was to send emails. The number two reason why people were currently using the Internet in 2014 was to access Facebook. Both email and Facebook are communication tools, which means that the respondents were motivated to use them so they could contact someone or multiple someones. The motivation for using these tools has been described as the only way to reach these others, and/or the cheapest means of reaching these others.

First, agencies are always presented in an account as doing something, that is, making some difference to a state of affairs, transforming some As into Bs through trials with Cs (Latour 2007:52).

The first major change identified in Chapter 5, and expanded on in Chapter 6, was the introduction of new ICT technology. Specifically, smart phones and mobile wireless routers have become cheaper and, therefore, affordable to people within Ghana. This should not come as a surprise to any students of technological evolution as there are a number of laws (Moore's law, Nishimura's Law, Kryder's Law...etc) that dictate as time passes ICTs will become smaller, faster, capable of storing more memory and, of course, cheaper (Rainie and Wellman 2012:276-

78). Therefore, one of the obvious mediators influencing whether or not a Ghanaian will patronize an Internet café is the ICT that they own. However, one of the invisible actants that has probably more influence on how a patron will access the Internet is money.

Even though alternative ICTs have gotten cheaper over the last 10 years, the price for an hour of Internet café time has remained roughly the same: between fifty Peswa and two Cedi. It needs to be remembered that a strong influential factor on the early adoption of mobile phones by people in developing nations was their ability to buy phone credit as needed. With the introduction of mobile Internet by wireless phone networks, Ghanaians could use data they were normally using for calls and texts to surf the web and use their apps. However, the amount of data used for a phone call is significantly less than the amount of data used to view a web page or download a song. So, while following the flow of action, it is important to identify just how much money must be spent to get online on a phone, not to mention the initial buy-in cost of purchasing a smart phone. As one respondent put it, when he was "buoyant" he had no trouble using his phone to surf the web.

Personal "buoyancy" (financial solvency) then becomes an important factor in determining whether or not a person is utilizing café services. This study can take a page from stratification scholars and network scholars and realize that personal "buoyancy" is related to the job a subject has, and the level of education the subject possesses. Of course, it does not take an ANT scholar to figure out that these qualities can be affected by mediating actants, such as parents, friends and teachers. Hence, it follows that subjects from well off families, who went to good schools, and got good jobs have less need for Internet cafés. However, poorer subjects without good familial support, education or jobs with upward mobility will have greater need of café services. This fits Burrell's "Invisible User" model perfectly(Burrell 2011).

In the end, however, this study observes all variety of socioeconomic statuses amongst the subjects. This means that money, as significant as it may be, is not the only mediator influencing patrons. When asked why they came to the café today, many of the subjects referenced scanning or printing. Therefore, the different machines that influence café services become very important mediators in an actor-network flow of action. A corollary to this, however, is that all these machines require electricity, so the power infrastructure of Accra has a strong mediating influence on café patronage. Although, if it was just business services that brought customers in the door, there would not be many people spending large amounts of free time in the cafés.

One subject attempted to explain that there was a "café culture," a type of people who come to cafés to spend hours either Facebooking, watching YouTube videos, or playing video games. The web pages and software that allow for these activities are, therefore, other mediators that attract customers. In fact, these leisure activities and the actants that provide them have been the focus of some debate recently. One side of the argument claims that the Internet should be used for productive means that will raise a user' human capital and make the user a useful member of a global community. When many individuals in a developing country enhance their human capital, they can then pool their efforts and leverage their newfound skill sets to improve their positions and the position of their country within the global economy. Scholars and workers who have a vested interest in International Development or Globalization argue that the aforementioned frivolous activities are a detriment to the people engaging in them. This opinion has even been mirrored by a handful of subjects in this study.

However, the other side of the argument takes the position that "play" is one of the most powerful tools learning animals have at their disposal (Sey 2011, Sey 2014, Sey 2015). Playing

with new technologies and their software inherently increases the users' human capital by forcing them to familiarize themselves with the ins and outs of the technology. This project has two bits of evidence that support this argument. First, is the shift over the last 10 years by the patrons to viewing the Internet as a black box and the shift away from viewing it as a quasi-actant. The less mysterious the Internet has become, the less mystical it has appeared. Second, in both the 2003 (after their initial orientation) and 2014 interview subjects, when asked if they needed the help of café attendants, almost all of them said they only need help when things stop working as they were supposed to. This has two implications. First, when things are functioning as normal, café patrons are skilled users of computers and the Internet. Second, when computers or the network become mediating actants, disrupting the flow of action; a skilled attendant becomes a mediating actant returning the flow of action to normal. It would also follow that an unskilled attendant only exacerbates the problem and can be a detriment to the profitability of the café.

Second, if agency is one thing, its formation is another. What is doing the action is always provided in the account with some flesh and features that make them have some form or shape no matter how vague(Latour 2007:53).

In the 2003 narratives, respondents often give agency to the Internet as a quasi-actant that has the power to transform the user. Users have attributed their transformation into "polished" "individuals", "big men", and "worldly" to the Internet. In more recent narratives, the Internet is still attributed with having transformative power, only this time it takes the form of a black-box tool that when utilized properly can provide the user with knowledge, skill sets, and contacts.

Third, actors also engage in criticizing other agencies accused of being fake, archaic, absurd irrational, artificial, or illusory(Latour 2007:56).

Pornography, Facebook, YouTube, video games, and many other online activities have been criticized in the narratives of a number of subjects in both 2003 and 2014 interviews as

being wastes of time or negative influences that have problematic impacts on café patrons who are influenced by them. What is interesting is that this form of in-grouping/out-grouping can be reversed when subjects who enjoy these activities are interviewed. In these narratives, subjects who enjoy the aforementioned activities not only claim them but also make the argument that these activities are the primary motivators for coming to Internet cafés. Though not always stated, the understood claim is that there is a legitimate reason to be in the café and there are illegitimate reasons, and users are either in one camp or another.

Fourth, actors are also able to propose their own theories of action to explain how agencies effects are carried over(Latour 2007:57).

As was illustrated in the last section, each subject is a spokesperson for his or her group. For each group formation there is an accompanying rationale as to why the subject needed to engage in the action of forming that group. Emails need to be sent because that is the only way to talk with an aunt in Germany. A Skype account needed to be made so the subject could talk with his band manager. Facebook is the only way to keep in touch with friends from primary school. YouTube is a better way to learn information than Google because it teaches via video. There is no printer at home so the subject needed to come to the café to print. Not only can each subject provide an agency narrative for why he or she started using the Internet, the individual can also provide an agency narrative for continued use of the Internet, and why he or she is currently at the café.

7.3: "Objects too Have Agency"

The first solution is to study innovations in the artisan's workshop, the engineer's design department, the scientist's laboratory, the marketer's trial panels, the user's home, and the many socio-technical controversies (Latour 2007:80).

The current state of the Internet café business, as discussed in Chapter 6, is an interesting phenomenon when viewed with a synthesized SCOT/ANT lens. This is especially true when

attention is given to the café itself as the socio-technical artifact. Since the current iteration of the Internet café has already reached "take off" one can make the argument that the café business is in a second phase of technological construction. However, just which controversy this phase is dealing with is up for debate.

With hindsight the reader can clearly map the different controversies during the first phase of production. The first SCOT controversy is the development stage where the form and function of the artifact is decided. The different studies conducted by Anne Laegran (Laegran 2002, Laegran and Stewart 2003, Liff and Laegran 2003) illustrate the important mediators during this controversy. A successful Internet café was one that provided computers with Internet access, working peripherals such as headphones for privacy and webcams and microphones for video chatting, and operators who knew how to assist customers.

The second controversy took place in political and corporate arenas. Here, Internet cafés competed with libraries and telecenters, schools and offices. In the 2003 interviews a few of the subjects could access the Internet at other locations, but most of the other subjects had to go to an Internet café to log on. Though no further study was done at the time, it is very possible that one could have followed a network of actors to identify the different players influencing the local government and corporate investors in an effort to promote privatized Public Access Computing. Hearing about the closure of a local library by one of the 2014 respondents, and following the articles by Gomez, indicates that Internet cafés and their proponents were the major victors of the second controversy (Gomez 2014, Gomez and Gould 2010).

Finally, the third controversy is whether or not the artifact can be successfully disseminated to the masses. Here the important mediators were the owners as they decided on price, geographical location, hours of operation and policies that were either harsh or lenient on

419 scamming and pornography viewing. We know that the cafés achieved take off because, after 10 years, the café industry is still in operation. However, as we learned in Chapter 6, cafés are evolving in an effort to face new challenges.

One interesting realization brought about by the 2014 café operator interviews is that the three controversies outlined by the SCOT paradigm happen concurrently not consecutively. During this second phase of production, cafés are simultaneously dealing with problems of development, regulation and dissemination. Cafés can no longer survive by only offering Internet access because they now have competition in the form of smart phones and wireless modems (which invites another SCOT study in and of itself). When faced with the possibility of going under, café owners are forced to reinvent themselves; this is the new first controversy. The bare minimum now takes the form of Internet access, and printing capabilities; printers being important mediators in a new actor-network flow of action. At the same time, the company Vodafone has a monopoly over the wired broadband services and has also entered the Internet café market. Wireless phone providers are making competition by offering wireless Internet service. The electricity infrastructure of Accra is not only old but also faulty enough to cause almost daily blackouts during the dry season. This is the new second controversy. Finally, the new third controversy is the same as the old third controversy; café owners are again dealing with the problem of getting customers through the door.

Second, even the most routine, traditional, and silent, implements stop being taken for granted when they are approached by users rendered ignorant and clumsy by distance--distance in time as in archaeology, distance in space as in ethnology, distance is skills as in learning(Latour 2007:80).

All of the subjects provided a personal narrative of their first time using the Internet. In many of these narratives, the subjects identified a person, either a friend or a café attendant who acted as a key mediator when translating the semiotic language of the computer interface.

However, once the skill was developed the group quickly broke down into a dyad consisting of the subject and the computer (at this point an almost invisible intermediary). The most intriguing narrative in this vein came from a subject who had only used a computer for the first time one day prior to the interview. Prompted by friends to learn how to use a computer so he could join Facebook, he had enrolled the café attendant into his group to illustrate how to go about making a Facebook account. After a day's worth of tutelage the subject claimed to have mastered how to navigate Facebook, and as such no longer needed the help of the attendant.

The third type of occasion is that offered by accidents, breakdowns, and strikes: all of a sudden completely silent intermediaries become full-blown mediators; even objects which a minute before appeared fully automatic, autonomous, and devoid of human agents, are now made of frantically moving humans with heavy equipment(Latour 2007:80).

This transition from invisible intermediary to full-blown mediator occurs on an almost daily basis in Accra during the dry season. During this time of the year it is easy to follow mediating actants through flows of action that can extend for miles. This is where the second half of Reassembling the Social, in which Latour argues that global and local are both invented concepts, really stands out (Latour 2007:173-246). During this season there are almost daily occurrences of city wide black-outs. Here the hydro-electric dam of the Volta region becomes a powerful mediator influencing every Ghanaian. Trustworthy technologies such as lights, air-conditioning, and computers become treacherous mediators the second the power goes out. When power surges occur the damage done to the computers stimulates the need for replacement parts. As owners search for these parts, the illusion of the global disappears when the availability of these parts is entirely dependent on the e-recycling habits of technology owners half-way across the globe.

When the lights go out, invisible and forgotten generators and surge protectors become heroic mediators allowing the café business to continue uninhibited by the power fluctuations. However, previously unknown intermediaries such as oil refineries and OPEC price regulators, a continent away, become devastating mediators when the price of the petrol necessary to run a stand-by generator becomes too expensive for a café owner to afford. This very scenario happened in 2014 when the second wave of data was being collected. Due to a number of political and economic factors, the price of petrol skyrocketed and new shipments were delayed for weeks.

The Vodafone communications company can also bring out hidden actants. When the network experiences an infrastructure problem, the connection speeds enjoyed by café customers plummet. Café owners speculate that Vodafone has recently begun increasing prices and at the same time throttling the bandwidth they offer to the cafés, because Vodafone is now in the café business and this is one way of maintaining an edge on the competition. It is unknown just how accurate this perspective is, but what is known is that this belief influences the prices that café owners set and the choices patrons make when deciding where and how to access the Internet. In this way the whole Network, and the price for data are extremely important mediators.

Fourth, when objects have receded into the background for good, it is always possible--but more difficult--to bring them back to light by using archives, documents, memoirs, museum collections, etc., to artificially produce through historians accounts, the state of crisis in which machines, devices, and implements were born(Latour 2007:81).

There may come a day when Internet access in Ghana is as universal and invisible as it is in the majority of the developed world. There may also come a day when the infrastructure and power problems that currently plague the average citizen of Accra during the months of June, July, and August are no longer an issue. In other words, there may come a day when Ghana is

considered a developed nation. When that time comes it will be very difficult to study the non-living actants as they appear in their current iteration. However, academic studies like this one, as well as Burrell's Invisible Users can be used as historical references to illuminate invisible actants. Other studies of the digital divide in Africa, and stories in Ghana's local periodicals about technology and infrastructure policy, can be used like voodoo priests to resurrect actor-networks thought to be long dead.

7.4: Just Keep on Describing

There are a few ways to go forward and continue with this study, with the specific purpose of following health of the café business. The first way is to continue with the current model. In 10 years a researcher could return to Accra with a revised questionnaire and search for the 2014 Internet cafés using the same search method. If Internet cafés are found, he or she could then conduct ethnographic interviews with customers and staff to see how people are engaging with the café and its services as well as what changes have taken place. If no cafés are found, then the researcher would have to develop a way to recruit previous owners and operators of cafés and conduct ethnographic interviews in an attempt to map the downfall of the industry.

The second possible project would have to take place now as the previously identified second phase of production is currently underway. This project, while also ethnographic, would involve following a select group of people over the next few years. These people would be a handful of café owners, the politicians and public servants responsible for the electrical infrastructure and Ghana's ICT policy, and the local executives of the many different mobile service providers, especially Vodafone. Over the course of this study, it would most likely be necessary to follow some other actants within the actor-network, such as the employees and aides of the politicians and executives that are the real developers and implementers of policy.

Regardless of which project is undertaken, or whether both are undertaken, a large investment of time would be necessary to follow these controversies to their conclusion. Over the course of time necessary to see this actor-network flow of action reach its terminus, the researcher would most definitely also observe changes in the way the café patrons engaged with the cafés and the Internet.

If the researcher wishes to continue following the evolving skill set of Accra's Internet users, then this study needs to continue. The question then becomes, should this study continue in its current iteration or should it be changed. The author is currently of the opinion that the study should remain as is, with a few modifications. The process of interviewing at cafés in multiple different regions allows for a diverse sample that is beneficial to this study. Though it does not increase the generalizability of the study, it does offer a multitude of narratives from which to build one's description. Using both a staff questionnaire and a customer questionnaire is invaluable. The two differing sample sets again offer a multitude of narratives from which to make descriptions. The questionnaires themselves, however, need more fine tuning. Some questions have become outdated. Some questions have different meanings, depending on whether they are being delivered to a Ghanaian or not. Also, depending on the amount of time that has passed between projects, some questions might need to be changed to reflect technological changes. One helpful suggestion would be shortening the time between projects to limit the extreme changes in the technological landscape. For the most part, however; the next project should stay as similar to this project as possible. The changes revealed by utilizing direct comparison are invaluable.

Will the Internet cafés of Accra develop a model for continued success? Will Ghanaians' technological skill sets continue to improve? What changing developments will mediators in the

current flow of action experience? How will these developing mediators affect the next project's description? Only time will tell, so it behooves us to continue following the action and describing the developing associations that make up the social.

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Appendix A: Oral Informed Consent Statement

Ghanaian Internet Café Dissertation

Principal Investigator is
Mr. Matthew G LeBlanc, Graduate Student
Department of Sociology
Louisiana State University
126 Stubbs Hall
Baton Rouge, LA 70803
Mlebl83@tigers.lsu.edu

The objective is to understand how Ghanaians are using the Internet when visiting the various Internet cafés around the city. We are interested in how the Internet cafés conduct business, and how the owners, operators, and patrons interact with each other and with the Internet.

We invite you to participate in this study. We will conduct open-ended interviews and observe participants' Internet café activities. Participation in this research is voluntary; you may choose not to participate or to stop participating at any time without penalty. There are no known risks in participating in this study.

The interview and observations will be kept confidential by the research team. Unless legally compelled to do so, the research team will not identify your comments specifically by name.

We also ask to videotape our conversations and your Internet café activities. We will ask your permission to do this separately from the present request. This will also be voluntary on your part, with no penalty for declining.

If you have any questions related to the confidentiality of this research, please contact LSU IRB.

LSU-IRB
Dr. Robert Matthews, Chair
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
Baton Rouge, LA 70803
P: 225-578-8692
F: 225-578-6792
irb@lsu.edu; www.lsu.edu/irb

Appendix B: Release Form For Video Ethnography

Ghanaian Internet Café Dissertation

The Principal Investigator is
Mr. Matthew G LeBlanc, Graduate Student
Department of Sociology
Louisiana State University
126 Stubbs Hall
Baton Rouge, LA 70803
Mlebl83@tigers.lsu.edu

The objective is to understand how Ghanaians are using the Internet when visiting the various Internet cafés around the city. We are interested in how the Internet cafés conduct business, and how the owners, operators, and patrons interact with each other and with the Internet.

We invite you to participate in a video ethnography, a video recorded interview about your involvement with the Internet cafes. Participation in this research is voluntary; you may choose not to participate or to stop the interview at any time. These video recordings will be used by the research team to study how this Internet cafe usage is developing. Portions of the video may also be used for other purposes, including instruction in courses, conference presentations, festivals, theaters or broadcast media, or posting on the Internet.

If you consent to allow the videotape to be used as described, free and clear of any further claims on your part, please indicate your consent here.

I agree to participate in this project as described.

Signature

Please use – my actual name, an alternate name (not my own name) – for me in the video

Date

Name (Please Print)

Witness/Staff

OR

If you consent to allow the videotape to be used only for purposes of transcription, free and clear of any further claims on your part, please indicate your consent here.

I agree to participate in this project as described.

Signature

Witness/Staff

Appendix C: Topic Guide For Interviews

Questions for Owners/Attendants

1. How long have you worked here?
2. How long has this café been open?
 - a. Can you tell me about the history of this café?
3. What are its hours of operation?
4. How many computers do you have?
5. How much does one hour of time cost?
6. Do you offer wireless Internet access?
 - a. When did you start doing this?
7. How is business?
 - a. When are your peak hours?
8. Do power problems ever damage the computers?
9. How often do computers need to be repaired or replaced?
10. Where do you get replacement parts or computers?
 - a. New or refurbished?
11. What happens to the broken computers?
12. Can you tell me a little bit about your clients?
 - a. Age?
13. What do they like to do when they come here?
14. Have you ever had any trouble with your clients?
 - a. Trying to hack the computers to steal time?
 - b. Watching pornographic movies?
 - c. Multiple people sharing one computer?
 - d. Anything else?

Questions for Customers

Introduction

1. Why did you come to the café today?
2. Do you remember the first time you used the Internet?
 - a. When was it, the year?
 - b. Please narrate your first experience with the Internet.
3. How much of time do you spend checking email and how much time do you spend surfing the web?
4. How often do you visit the Internet cafés?
5. At what times do you normally visit café?
 - a. Why do you visit at these times?
6. How long do you stay at the café?
7. How much do you spend in a week at Internet cafés?
8. What are the main reasons you come here?
9. Do you normally come alone, or sometimes with friends?

10. What is your opinion of the about your experience in using the Internet in cafés you visit?
 - a. The facilities, speed, freedom, dealings with the café owner, the cost and others?
11. Do you visit cafés in, in other places?
12. Does anybody in the café help you to use the Internet?
13. Are there other sources of Internet access for you?
 - a. Library, your home, your work and other places?

Internet Uses

14. Could you tell us about one or two things of the most interesting things you've done on the Internet?
 - a. When did you start doing all these things?
 - b. Who encouraged you to do it?
 - c. What were your reasons for trying it?
 - d. Did you get any help?
15. Did some of your friends start using the Internet before you did?
 - a. Do you have any stories about their experiences?
16. What types of things do you do on the Internet?
 - a. Do you use social networking sites (Facebook)?
 - i. How many Facebook friends do you have?
 - ii. How many do you know in person?
 - b. Youtube?
 - c. Web Telephoning (Skype, Face-time)?
 - d. Have you ordered something online?
 - e. Have you created a web page?
 - f. Do you visit news sites?
 - g. Have you used online job listings before?
 - h. Have you used an online map?
 - i. Have you downloaded any software?
 - j. Have you played and online video games?
 - i. What games?
 - ii. Do you have any gaming friends?
 1. Are they here or somewhere else?
17. Since you began using the Internet, have you met somebody new online?
 - a. How many contacts do you have?
18. Do you have email contacts with people in Ghana?
 - a. Are they friends or strangers?
19. Do you have email contacts those within Africa outside Ghana?
 - a. Are they friends or strangers?
20. Do you have any email contacts outside of Africa?
 - a. Are they friends or strangers?
21. Have you ever collaborated on line on any project related to your school or work?
 - a. Can you describe the project and how you collaborated?
22. Do you notice any difference in your life before and after you begin using Internet?
 - a. Can you explain the difference?

Interpersonal Relations

23. Have you ever communicated with someone online that later turned into a face-to-face relationship?
 - a. What happened?
 - b. Who contacted whom first?
 - c. Do you still communicate face to face?
24. Do you know anyone that is friends, co-workers or family members who have had this experience?
 - a. What happened?
25. Have you ever had any of your face-to-face relations became mainly electronic when you start using the Internet?
 - a. What happened?
26. Do you think the Internet strengthens or weakens relationships?
 - a. How does the Internet do this?
 - b. Can you give me a personal example?
27. How has your use of Internet affected your local relations?
 - a. The time you spend with your family, friends, peers, and neighbours in social functions?
28. Does the Internet increase or decrease the number of people you know?
 - a. Can you give an instance?

Introductions

29. Have you ever introduced someone to another person you met on the Internet?
 - a. What happened?
30. Have you ever been introduced to someone that a friend met on the Internet?
 - a. What happened?
31. Do you know this happening to anyone else? Family members, friends or co-worker?
32. Have you ever gotten a job interview through someone you first communicated online with?
33. Have you ever helped someone to get a job or a job interview over the net?
34. Does the Internet solve problems or lead to personal problems?
 - a. Can you give an example?
35. What is your most negative experience with the Internet?
36. Have you been unable to access your mail account for at least one week?
 - a. What was the problem?
37. What are the biggest problems you've found in your experience of the Internet?
 - a. Too much time to connect?
 - b. Not being able to find desired information?
 - c. Too much information?
 - d. What about the cost, is it too much?
 - e. What about links to pages that are no longer there?
 - f. Getting disconnected often?
 - g. Too many useless sites?
 - h. Sites that require registration?

- i. Sites that require payment for use.
 - j. Problems with security?
 - k. Websites that won't allow access because you reside in Ghana?
 - l. Have you ever received any junk email?
 - i. How much?
 - m. Have you ever been the target of a 419 scam?
 - i. Can you tell me about it?
 - n. Do you know anyone who has been the target of a scam?
38. Have you noticed any changes in your life as a result of the Internet?

Final Questions

39. Since the time you began using the Internet, has it made a difference to your overall communication with others in your field?
 - a. Is the change negative or positive?
40. How would you assess the influence of the Internet on your professional activities?
41. What effect would you say the Internet would have on your studies and in shaping your career?
42. Can I know something about your background?
 - a. What is your age?
 - b. What is your level of education?
 - c. What is your occupation?
 - d. Are you married?

THANK YOU FOR YOUR TIME!!!

Appendix D: Tables

Table 3.1: 2003 Internet Cafés and 2014 Alternative Internet Cafés

Region	2003 Café	Current State	Alternate Location
Abeka Lapaz	E-Specie Internet Cafe	Lost	Skytee Internet Café
Adabraka	Laws Internet Cafe	Lost	Gold City Internet Cafe
Adenta	Jean Business Centre	Lost	Vanjay Internet Café
Ashongman estate	Kinda house Internet Cafe	Found - Different Name	New Name - Willidziks Ghana Ltd.
Asylum Down*	GNAT Café	Found - Open	
Atomic Junction	Hotcom Internet Café	Lost	NONE
Banana Inn	Cita Café	Found - Open (Closed in 2014)	Xillion Internet Café
Dansoman	Deonak Café	Found - Closed	Mamud Internet Café
Kwabinya	Oscar Café	Found - Different Name	New Name - Edemas Internet Café
Kwabinya Junction	Rapidlink Business Center	Found - Different Name	New Name - Pauloptis Internet Café
Kwame Nkrumah Circle Station	Bell Africa Internet Café	Lost	Vodafone Internet Café
La	Bemuda Internet Café	Lost	Multi-Lynk Internet Café
Legon	Speedstar Internet Cafe	Found - Open	
Madina	The Ibrahim's Internet Café	Lost	Afrik It Solutions
Mamprobi	Unique Café	Lost	Sharp Internet Café
New Town	Sheedy Ventures	Lost	Slam-In Internet Café
Nima	Fasnet	Found - Closed	
Nima	Lambos Internet Café	Found - Closed	Big Dreams Internet Café
Nungua	Jumedd Internet Café	Found - Closed	Judel Internet Café
Sakumono	Neighborhood Cafe	Lost	DEWebb Internet Café
Teshie-Urban	Win-some Internet Café	Found - Open	
Tudu	Mujahid Ventures	Found - Different Name	New Name - Jr. Walaga Internet Café
UGL	Geo-support Café	Found - Different Name	New Name - Cybertron Internet Café
Zongo Junction	Timora Business and Communication Center	Lost	Wits Internet Café

*Asylum Down was an inaccurate region. GNAT Café was really located in West Ridge, South of Adabraka

Table 4.1 Respondent Age

Minimum Age	15
Maximum Age	38
Mean Age	25
Median Age	24

Table 4.2 Respondent Education

Junior Secondary School	2	3.45%
Senior Secondary School	13	22.4%
Higher National Diploma	23	39.7%
University	18	31.0%
No Response	2	3.45%
Total	58	100%

Table 6.1: ICT Statistics for 2013

	Ghana	Africa	Developing	Developed	World
Fixed (wired) - Broadband subscribers per 100 inhabitants	0.3	0.3	6.2	27.5	9.9
Mobile - Broadband subscriptions per 100 inhabitants	39.9	10.3	17.4	74	27.3
Households with a computer (%)	36.6	8.2	29.2	76.8	41.8
Households with Internet access at home(%)	31.8	8.6	28.6	76.3	41.2

Communities in this table are based on the ITU's classifications; see: <http://www.itu.int/en/ITU-D/Statistics/Pages/definitions/regions.aspx>

Sources: ITU ICT-Eye:<http://www.itu.int/icteye>; ITU World Telecommunication/ICT Indicators database.

Appendix E: Institutional Review Board Approval

ACTION ON PROTOCOL APPROVAL REQUEST



Institutional Review Board
Dr. Robert Mathews, Chair
130 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8882
F: 225.578.5883
irb@lsu.edu | lsu.edu/irb

TO: Wes Shrum
Sociology

FROM: Robert C. Mathews
Chair, Institutional Review Board

DATE: April 23, 2014
RE: IRB# 3485

TITLE: Ghanaian Internet Café Dissertation

New Protocol/Modification/Continuation: New Protocol

Review type: Full Expedited Review date: 4/23/2014

Risk Factor: Minimal Uncertain Greater Than Minimal

Approved Disapproved


Approval Date: 4/23/2014 Approval Expiration Date: 4/22/2015

Re-review frequency: (annual unless otherwise stated)

Number of subjects approved: 135

LSU Proposal Number (if applicable): _____

Protocol Matches Scope of Work in Grant proposal: (if applicable) _____

By: Robert C. Mathews, Chairman 

PRINCIPAL INVESTIGATOR: PLEASE READ THE FOLLOWING –
Continuing approval is **CONDITIONAL** on:

1. Adherence to the approved protocol, familiarity with, and adherence to the ethical standards of the Belmont Report, and LSU's Assurance of Compliance with DHHS regulations for the protection of human subjects*
2. Prior approval of a change in protocol, including revision of the consent documents or an increase in the number of subjects over that approved.
3. Obtaining renewed approval (or submittal of a termination report), prior to the approval expiration date, upon request by the IRB office (irrespective of when the project actually begins); notification of project termination.
4. Retention of documentation of informed consent and study records for at least 3 years after the study ends.
5. Continuing attention to the physical and psychological well-being and informed consent of the individual participants, including notification of new information that might affect consent.
6. A prompt report to the IRB of any adverse event affecting a participant potentially arising from the study.
7. Notification of the IRB of a serious compliance failure.
8. SPECIAL NOTE:

*All investigators and support staff have access to copies of the Belmont Report, LSU's Assurance with DHHS, DHHS (45 CFR 46) and FDA regulations governing use of human subjects, and other relevant documents in print in this office or on our World Wide Web site at <http://www.lsu.edu/irb>

Vita

Matthew Gregory LeBlanc, a longtime resident of New Orleans, received his bachelor's degree in Sociology at the University of New Orleans in 2007. He then earned his Master's degree in Sociology from the University of New Orleans in 2009. After spending a year working for the state of Louisiana as a Social Security Disability adjudicator he decided to pursue a Sociology PhD at Louisiana State University in Baton Rouge. He is a candidate for his Doctorate of Philosophy in the field of Sociology in August of 2016.