

**COMMUNICATION AND CULTURE IN GHANA: TECHNOLOGY'S INFLUENCE AND
PROGRESS IN A NEW DIGITAL AGE**

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By

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ABSTRACT

There has been rapid technological development in Ghana over the past five years. Increasingly Ghanaians are integrating various forms of technology, such as radio, cellular phones, television, newspapers and the Internet into their daily lives.

This thesis argues that such boom in technological growth in Ghana is a result of Ghana's technological predisposition to wireless communication. Ghana's inherent traditional, cultural and historical forms of indigenous communication skills have allowed Ghanaians to accept wireless technology as a natural phenomenon.

Using a multi-method approach of observation, trend analyses and case studies, this thesis breaks its argument into five main parts: 1) understanding technological predisposition; 2) the Akan political system as a theoretical framework; 3) status of technological advancement and the increasing growth rates of Ghana's telecommunication indicators; 4) forms of communication which look at drums as the first wireless technology, the parallels between oral and wireless under one hand and written and wired on the other hand, and a case study of radio soap operas in Burundi; 5) implications of the trends and policy recommendations, which suggests the creation of a

new degree curriculum, the integration of Ghanaian languages in schools and the reduction of continuous Brain Drain to mostly developed countries.

The evidence presented in this thesis supports the main hypothesis that Ghana's historical predisposition to wireless communication has facilitated the recent acceptance and diffusion of new wireless technologies into the cultural fabric of the country. Furthermore, the lack of access to technology and other infrastructure has contributed to Ghana's lag behind the new technological development, rather than the society's inability to understand and adapt to new technologies. As such there should be a pragmatic balance between indigenous forms of communication, especially in the rural areas, and at the same time promote advancing technologies in order to preserve Ghana's culture to foster its technological growth.

This thesis is dedicated to my parents for their unwavering support of my whole educational career. I also dedicate this thesis to my friend John Paul Mensah for his logistical support throughout the preparation of this work.

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PREFACE

This thesis has been an intense and exploratory journey for me. As a Ghanaian living in the United States, I have always been intrigued by Ghana's technological development and how in some instances, it has gone against the stereotypes of African nations and the problems of the digital divide. As such, I decided to center my research on Ghana, its technological progress and the reasons behind its growth. Having grown up with my grandparents, I had the wonderful experiences of learning three different Ghanaian languages and many of the traditional proverbs and songs. I believe that my traditional education has contributed significantly to my open-mindedness and my way of thinking on complex issues.

In addition, my introduction to indigenous forms of communication has helped tremendously my understanding of technological growth. Prior to moving to the United States in 1998, I had neither used a computer or the Internet, nor did I own a cellular phone. Today, I have extensive knowledge of Internet usage, information systems and cellular phones. Some might say that this is because of the opportunities I have acquired here that have allowed me to gain such experience. However, I believe that my personal experiences, having grown up in a multicultural environment, are what have led me to where I am now and have in a sense contributed to my desire to research and write about indigenous communication, technology and Ghana's development process.

CHAPTER I

INTRODUCTION

In every society today, people are getting connected to one another through the technological innovations of mass communication. The development of the Internet and its ability to send information around the world with lighting speed is serving as a conduit between different people and allowing individuals to become more aware of other cultures and lifestyles. Technological advancements have not only allowed for the widespread usage of the Internet, but they have also allowed for the dissemination of information via other modes of mass communication such as television, radio, and newspapers, in developing countries, where basic communication infrastructure is in short supply.

Over the past two decades, technology has become a huge contributing factor to development of various cultures. The West African country of Ghana is no exception. The increasing acquisition of cellular phones and the access to the Internet, for example, have served as a major avenue to communication, hence, the need to study and analyze technology's influence on Ghana's development progress. Furthermore, it is important to understand the role indigenous forms of communication have played in the contribution of Ghana's technological predisposition to advancing technology.

The research problem this thesis seeks to answer is: How has Ghana's technological predisposition to wireless communication contributed to the increase in

technological advancement? How is advancing technology affecting Ghanaians at the social, economic and political levels? This thesis hypothesizes that Ghana's historical predisposition to wireless communication has contributed to its technological advancement. It also argues that the accelerated rate of technological advancement in Ghana can be attributed to Ghana's historical predisposition to wireless modes of communication. It examines various indigenous forms of communication and attributes Ghana's technological predispositions to these traditional forms as well as to the culture's inherent oral society.

WHY IS THIS IMPORTANT? A BRIEF CULTURAL HISTORY OF GHANA

Ghana is a country located off the Gulf of Guinea in West Africa. It comprises ten different regions and its inhabitants speak over 46 different dialects and languages. Like many countries in West Africa, Ghana (formerly known as the Gold Coast) was colonized by the British from approximately the 1800's until March 6, 1957, when, under the leadership and guidance of Dr. Kwame Nkrumah, it became the first country among British colonies in Africa to gain its political independence. Like most developing countries, especially in Africa, Ghana has certain perennial social and economic problems which include heavy reliance on few exports such as cocoa, that suffer from volatile world price fluctuations, recurrent balance of payment crises, foreign exchange shortages, high vulnerability to external shocks and of course continuous dependence on foreign assistance.

Some of these economic problems have been the result the non-violent political instability in Ghana. From 1952 until 1992, Ghana was going through a transitional stage whereby she was trying to figure out what system of government would work best. According to Kwame Boafo-Arthur, “Ghana started with adjustment for almost a decade before democratization” (Boafo-Arthur, 1999: p. 41-72). Unfortunately, this trial and error period led to the increased deterioration of the Ghanaian political system as well as its social and economic status.

As a result, Ghana is now a part of the World Bank’s Highly Indebted Poor Countries (HIPC) program. Although Ghana is poor and underprivileged, a good proportion of the population, especially in the urban areas, is very wealthy. As any one can imagine, the social and economic status of a person is important in determining one’s position in the society.

Mass media can potentially close the gap between the rich and the poor because they provide access to information for Ghanaians. Information and education are very important needs in Ghanaian culture because education through language, storytelling, proverbs and other forms of indigenous communication, is what has allowed traditional socialization to take place. Socialization is a recurring theme throughout this thesis. It is defined as the “process by which a person acquires... the knowledge of the kinds of behavior that are understood and acceptable in that society, and the attitudes and values that make conformity with social rules personally meaningful, even gratifying” (Anthromorphemics, 2003).

There are many agents of socialization, such as, schools, family, mass media, religion and community. In this thesis, education, language and national tradition are the main forms of socialization. This is because these three agents are the foundation upon which Ghanaian culture is passed on and reinforced. Of the three, education is the most important in Ghanaian society. This is because African education “is the education of the African before the coming of the European-an informal education that prepared Africans [for] their responsibilities as adults in their communities” (Boateng, 1983: p. 322).

In addition, the major concepts, technological predisposition and technological advancements, discussed in this thesis deals with the underlying question of how advancing technologies are challenging and affecting these traditional forms of communication, which are primary modes of socialization in Ghana. It is for this reason that it is very important to understand Ghana’s technological predisposition and technological advancement with respect to socialization.

Information and education are the key that aid Ghana’s overall development. It is therefore imperative that people, especially those in developed countries, understand the dynamics among communication, culture and technology in Ghana if they are truly interested in being of service to the nation. Foreign aid sources like the World Bank and the IMF did not truly understand Ghanaian society before they began to implement the policies under the Structural Adjustment Program. If they had, they would have known which forms of communication to utilize in order to aid Ghanaians in disseminating their messages concerning, health care, labor, and education in the country.

Nevertheless, Ghanaian leaders are also responsible for this lack of understanding. Because of their heavy reliance on foreigners for suggestions and directives on how to improve their livelihood, they did not do sufficient internal research to figure out what is currently working best in Ghana and how they can be of further assistance.

The one sector in Ghana that understands the importance of indigenous forms of communication is the health care sector. Many aid organizations, UNICEF, educate rural Ghanaians via radio, *concert parties*,¹ storytelling and community gatherings. Despite the fact that the health care sector in Ghana is still inadequate and has a lot of room for improvement, it is important to point out that the contributors to this sector understand the effectiveness and purposes of indigenous forms of communication. These are conducted via lessons of the past, as well as, the definition of the social norms and mores.

METHODOLOGY

In order to understand and answer the research problem, this thesis uses a multi-method approach to observe and analyze the information that is currently available on information technology, mass media and communication trends in Ghana. One of the major sources is the World Bank's yearly publication on different sectors in developing countries. A trend analysis was conducted to examine Ghana's cultural trends over the past few years. This thesis also included historical analyses focused on indigenous forms of communication. These included venue-oriented communication, performance-oriented

¹ Concert Parties are comedy skits, similar in format to that of plays that convey messages through laughter and jokes.

communication, events and modes of communication and games as communication. Instruments such as drums, gongs, and horns as well as non-verbal communication in the form of dance, song, genuflection, curtsying and theater are all vital components. This thesis also includes an observational analysis based on my position as a participant observer in the culture.

This methodology is based on the premise that Ghana's rapid adaptation to advancing technology is due to its intrinsic predisposition towards wireless technology. As such the message this thesis is trying to convey is that developing countries like Ghana, may be in a good position to move rapidly ahead technologically. I will venture to say that perhaps Ghanaians have a greater predisposition to wireless technologies than Western countries like the U.S. simply because from birth wireless communication has always been the hallmark of societal interaction in Ghana. This research will be beneficial because it will shed some light on the potential Ghana has in developing technologically as well as providing Ghanaians with an understanding of how the culture is well suited for innovative thinking and technological growth.

This thesis is broken down into five chapters. Chapter 1 is the introduction to the thesis. It states the research problem and hypothesis, and provides a literature review. It also provides a cultural premise for the research, which will provide a contextual understanding about the topic. Chapter 2 will take an in-depth look at wireless communication and culture in Ghana. It lays out the theoretical framework, which consists of the explanation of indigenous communication as a cause of technological

predisposition. Furthermore, the theoretical framework defines technological advancement in terms of radio, newspapers, television, cellular phones and the Internet.

The current status of technological advancement in Ghana will be reviewed in Chapter 3. This chapter examines the history of imported technologies, including newspapers, radio, cellular phones, television and the Internet and their current status in Ghanaian society. In addition, a comparative trend analysis of cellular phones and Internet usage between Ghana and the United Kingdom is conducted. Finally, this chapter examines the state of information and communication technology (ICT) in Ghana by reviewing research studies conducted by the Policy Research and Strategic Planning Institute and the Association of African Universities. A brief discussion of the Digital Divide and the problem of language barriers and access to technological infrastructure will also be discussed as some of the restraints Ghana faces regarding technological growth.

Chapter 4 will look at forms of communication by comparing and contrasting oral communication versus written communication and its parallels to wireless versus wired communication. This chapter argues that oral communication is inherent in Ghanaian culture, and it is contributing to the exponential increase in the use of advanced technologies. This chapter also argues that written communication is a harder concept for many Ghanaians to grasp because it requires literacy which may explain why newspapers have not been able to penetrate, especially the rural society where the largest population reside, as quickly as wireless communication, such as radio, cellular phones and the

Internet. Chapter 4 will also study the contribution and impact of talking drums, radio and cellular phones as tools for integration and social change.

Chapter 5 will conclude this thesis with a reiteration of the research problem and hypothesis. It will examine in detail support for the hypothesis. This chapter will also provide a summary of all the major components of this research and its implications for Ghanaian society. A critical element of this chapter will also be a set of policy recommendations that I feel can best help Ghana continue its path of technological advancement without losing its traditional and indigenous forms of communication. Finally, I will give a brief statement of what this thesis hopes to achieve, the overall value Ghanaians can obtain from this research and a suggestion of future research that can be conducted on this topic.

LITERATURE REVIEW

Africa is a continent that is largely untapped in the world of communication. Many authors invest their knowledge and research on the political and economic history of Africa. What many fail to realize is that as our world is becoming smaller via the Internet, it is important to understand the role of indigenous forms of communication in Africa's adaptation to new technologies. This is important because, if used effectively, the fusion of indigenous communication and advanced information technology will help many aspects of the society, such as family planning, AIDS awareness, poverty

alleviation, economic emancipation and social consciousness through access to information in developing countries.

Furthermore, many researchers downplay or are oblivious to the role of indigenous communication in causing some African countries such as Ghana to be technologically predisposed to the latest equipments. They assume that Africa is just slowly adjusting to the advanced technology on its own and do not explore the underlying causes of this transition. In a book entitled Perspectives on Indigenous Communication in Africa, Kwasi Ansu-Kyeremeh explains the contribution of indigenous communication to information and communication technology and suggests that Africa's technological development will be more effective on a macro-level if indigenous communication methods are applied.

As a Volume II, this book picks up where Volume I left off by examining various elements of indigenous communication such as Radio Soap Operas in Burundi, the Akan Political System in Ghana, and Traditional Communication and Mass Media: Finding the Right Mix. This book also provided the theoretical framework, the Akan Political System, from which this thesis makes its arguments.

One of the major findings in this book is that “indigenous communication systems (ICS) appear more anachronistic now than in the early 1990s” (Ansu-Kyeremeh, 1998: p. xi). This is an essential finding with respect to this thesis because it supports the underlying idea that Ghana is advancing technologically. However, it differs from this thesis in that it attributes technological advancement to indigenous communication.

This finding is also worrisome because it gives the impression that cultural attributes are detrimental to technological advancement and on a society. This is particularly true if people think that communication methodologies in developed countries are far superior to those in developing countries, especially when such an attempt leads to the replacement of those aspects of their culture such as language. Nevertheless, this book concludes that there should be a balance between indigenous (traditional) communication and that of the Western forms of communication. Like me, this book “[poses] the view that any policy which does not address itself to this dualist approach is bound to compound Africa’s communication problems even more” (Ansu-Kyeremeh, 1998: p.243).

In Ghana, the Policy Research and Strategic Planning Institute (PORPSI) compiled a book entitled Survey on Information Technology in Ghana. Researchers conducted a survey conducted in 1991 to examine information technology use in Ghana. The institute understood the growing impact of technology on Ghana and thus, wanted to gather quantifiable statistics in order to help policy makers to integrate information technology into the Ghanaian society.

This study is important to this thesis because it provides a snapshot of what information technology looked like in 1991. It has provided groundwork for understanding and comparing the rate at which Ghana has progressed technologically. This study is also unique because prior to the early 1990s, survey research had not been conducted in Ghana, thus, PORPSI showed initiative toward understanding the growing impact of information technology.

Some of the limitations the researchers faced in conducting the survey were that they could not gather accurate information about the number of personal computers and other technological infrastructure present in Ghana at the time. This is because “computers [were] grouped together with other machines as ‘Punch Card and Electronic Data Processing Machine and Machine Parts’” (PORPSI, 1991: p. 2). Nevertheless, with the information they were able to gather, the survey showed an interest on the part of Ghanaians to want to incorporate information technology in their work-related activities.

PORPSI came up with five key findings. These findings stated that a) the number of information and communication technology (ICT) equipment is very high, however, the utilization of the equipment was low; b) software development in Ghana was in its early stages and imported software was the trend; c) there was a designation of computer staff in the organizational charts of many businesses in the private sector as well as departments in the public sector, but these designations were merely organizational titles and did not match the job function of the staff; d) there was a short supply of professionals in the ICT sector, thus affecting the ICT development; and the final finding states e) that the overall information technology sector in Ghana was young and needed to be strengthened, especially in the development of software.

Like PORPSI, studies have also been conducted at the university level by the Association of African Universities to assess the maturity of information and communication technology (ICT) in Africa. In Towards The Introduction and Application of Information and Communication Technologies in African Universities, Akin Adubifya examines ICT in teaching and learning, research, academic information

services, administration and management, infrastructure, financing and training in African universities.

This study is relevant to this thesis because it speaks to the attempt on the part of African academic researchers to understand technological development in universities. The Association of African Universities found in their research that there was a weakness in the technological infrastructure in African universities, thus, the purpose of their study “is to guide, encourage and facilitate the establishment of institutional arrangements that can help African universities and their stakeholders understand the challenges of ICT applications in academic settings” (AAU, 2001: p. 33). This is important since education is one of the core foundations of Ghanaian socialization, thus providing suggestions and understanding how universities, the breeding ground of Ghana’s future leaders, are dealing with issues of development is very essential.

The major finding of this study is that African universities need to assess individually assess their capacity to effectively use ICT in promoting teaching, learning and research. This is important especially if African countries want to compete with the developed countries in information technology. Although I think this is an important finding, it is nevertheless a negative interpretation which is that ICT is the most effective way to teach, learn and research. This thesis argues that indigenous forms of communication like storytelling, dance and theater are also very effective ways of educating so they need to coexist with ICT.

ICT is not the only way in which Ghanaians have studied and measured their technological growth. Mass media is another major avenue through which technological

advancement has been measured. Mass media are providing multiple avenues for information technology, which allows information to be disseminated to a large audience quickly. In 1998, Kwasi Ansu-Kyeremeh and Kwame Karikari wrote on Ghana's mass media system and provided an overview of Ghana's technological growth and progress through mass media in their book Media Ghana: Ghanaian Media Overview, Practitioners & Institutions.

Their book is a compilation of information that provides brief overviews of all the different forms of mass media in Ghana. Media Ghana provides a succinct outline of the state of the media in Ghana, a history of mass media, current media practices, language of the media and technological sophistication, access and the information gap. The purpose of their work is to “[assemble] the basic information about the various media systems [including] both the principal actors and supporting institutions involved in making the media systems functional” (Ansu-Kyeremeh & Karikari, 1998: p. 1).

This book reiterates the fact that Ghanaians are integrating mass media into their lives. The information this publication provides is very supportive of this thesis because it shows that mass media are being to disseminate information to Ghanaians with access. This use of mass media addresses Ghana's issue of Digital Divide. As will be discussed later in the thesis, there are sections of the Ghanaian society that have little or no access to mass media such as television and newspapers because of high costs and lack of sufficient and adequate infrastructure.

The authors conclude their book by compiling generic lists on mass media components including practitioners, editors, foreign correspondents, number of

newspapers, magazines, radio, television, wire services, Internet service providers, film, cellular, computers houses, advertising and public relations organizations institutions and external support organizations. This information is useful however, as this thesis will show, providing the information without any detailed analysis or speculating as to why mass media has increased, how these changes have occurred and what effects mass media will have in the future is not enough to help Ghanaians understand, develop and plan ways to integrate media technology into their society while maintaining their existing culture.

One of the interesting things about these four publications is that they all account for the state of technology and communication in Ghana at one point in time. They all acknowledge the existence of the technological growth and make efforts to address the various facets of the issue. What however, makes this thesis unique is that in my judgment I ascribe Ghana's technological predisposition to the fact that indigenous communication has facilitated the technological growth.

These publications are among the few works that examine how technology is affecting and influencing African societies like Ghana. Other authors have written about technology and Ghana. "Africa Takes on the Digital Divide," written on *allAfrica.com*, is a very important supporting article for this thesis because it talks about issues of access and infrastructure that are creating an information gap between Africa and the rest of the world. In the article, the Gumisai Mutume asserts that information is a human right and that everyone should be guaranteed access to affordable communication tools (allAfrica, 2003). The belief is that if Africans are given the opportunity to have access, they can

utilize it to create unique programs that are beneficial to their society and allow them to participate in the global forum of information technology. The world should not overlook the fact that with the appropriate access Ghana and indeed the rest of Africa can share the continent's rich heritage with the rest of the world.

The Digital Divide is an area in international development that addresses some of the underlying causes of "stunted" growth of the development process in developing countries. This thesis will not discuss the digital divide at length; however issues such as lack of infrastructure, cost of technologies and language barriers are plaguing developing countries. Africa for instance, "has the fewest telephone lines, radios, television sets, computers and Internet users of any part of the world" (allAfrica, 2003). This will build on the assertion that will be developed later in this thesis that Ghana's technological growth is not hindered by cultural adaptation, but rather by the digital divide.

Pascal Zachary's "Ghana's Digital Dilemma" published in the *Technological Review* also discusses issues of the digital divide. Pascal writes about the multiple facets of Ghana's technological state and examines how, compared to the Western world, Ghana is lagging behind. However, despite the obvious setbacks, Ghana is still managing to grow technologically. International companies, like Aetna insurance company, have foreseen Ghana's potential and digitally send their health insurance claims to workers in the capital city, Accra, where "a typist culls the name, address and other personal information from the form, entering it into a new electronic form, which is then sent back to the U.S. The key technology in this process is invisible: a satellite link that bypasses Accra's creaky phone system and enables data to be sent overseas instantaneously"

(Pascal, 2002: p. 66). This is a critical finding with respect to this thesis because it shows how swiftly wireless communication technology is adapted in the society.

“Communication Research and African National Development” by Cecil Blake in the *African Studies Review* examines communication systems in Africa and its successes and failures. This article is very interesting because, although written in the late 1970s, Blake foreshadowed that the reconciliation of indigenous communication would be one of the major tools involved in Africa’s development. Like me, Blake understood the importance of indigenous communication because his major recommendation to developing countries was that they should invest in the research and development of their traditional cultures to better understand their own technological capabilities. This is precisely what the Japanese did to excel. They exploited their cultural attributes of miniaturization of trees (the development of box gardens) by injecting their culture into their high-tech activities.

All of these articles have been very beneficial to this thesis because they have provided useful information about various issues surrounding Ghana and Africa’s technological growth. The major flaw that many of these publications have is that, like Media Ghana they lack the in depth analysis needed to answer questions involving why, how and what can be done about technology and growth in Ghana.

It is for this reason that I decided to contribute to the Ghanaian society and its literature by writing about communication, culture and technology and its effects and influences on developing countries such as Ghana. Throughout my college years, I came across very little literature on the impact of communication in developing nations,

especially Africa. This in fact contributed to my motivation to research, understand and write on this topic.

Therefore, my aim in writing this thesis is to create an awareness and interest in Africa as a hub for technological advancement and a resource for the development of new technologies because Ghana for instance has the capability to effectively communicate via its own traditional and indigenous forms of communication. As such, it is my hope that through this thesis I will provide some insight into the impact of growing technologies in developing nations like Ghana. Hopefully it will spur other researchers to conduct ever more in-depth research on African indigenous systems and how it can be combined with advancing technology to promote issues of importance to Ghanaian and other African communities.

LIMITATIONS OF TECHNOLOGICAL ADVANCEMENT

Although the underlying correlation between Ghana's technological predisposition and technological advancement is positive from the standpoint of this thesis, it is important to note that there are downsides to unguarded increasing technological advancement. One of the major disadvantages of the increasing influx of technology is that if care is not exercised there will be loss of local culture. By providing technological infrastructure to the masses that will allow them to consume information from developed countries, young people are especially susceptible to the influences of westernization through technology. Also, despite the great benefits that come with

broader mass communication, there is great concern regarding who is actually in control of information reaching local people.

Unlike Ghanaian traditional culture where information is usually controlled by the chief or head of the clan, information from mass communication is not controlled by one major source or with the interest of one major group in mind. Mass communication especially that dominated by the developed world, serves not only as a medium for information dissemination but also as a business. In many circumstances, the information is being provided primarily for financial gains. In other circumstances, developed countries use mass communication as a tool for influencing developing countries because of the belief by some Western countries that their system of government and politics is the best.

As such, it is very likely that the open and uncontrolled information that is being disseminated to their society via mass communication can be especially detrimental to its people and the minds of the youth. Nonetheless, as with all things in modern society, some cultures are more advanced than others and as such have more control. “Western cultures (some would say American culture) remain the domineering force in the world today” (Akande, 2002). Cultures like that of the United States have the power to control information than those of the developing country cultures.

Many young people are fascinated with foreign images that they can consume and think of as “cool.” As a result, many of the youth are abandoning their local culture in an attempt to be like what they see especially on the television. This ability to imitate what they see in the media has been made possible by the “aggressive spread of market

economies and communication technologies-often under the control of Western multinationals” (Akande, 2002).

Since, westernization has affected Ghanaians on social, economic and political levels, it is important for Ghanaians to understand technology enough to mold it to suit their culture rather than allow technology to mold them.

With all new things, there is a period of adjustment that needs to take place. The effects of westernization are to be expected at this level in Ghanaian technological growth because the changes are exciting and new. However, it is important that the traditional culture that has existed for generations and served as well be preserved and instilled in the minds of the youth.

CHAPTER 2

WIRELESS COMMUNICATION AND CULTURE IN GHANA

This chapter will discuss the theoretical concepts underlying what I call technological predisposition. It is important to contextually understand what these concepts mean to the hypothesis that this thesis seeks to support, which is that Ghana's predisposition to wireless communication is facilitating early acceptance and the adoption of advanced technology, such as cellular phones and the Internet.

The concept of mass media and mass communication through technological infrastructure is nothing new. Ghanaians may not have been using cellular phones and the Internet in their traditional societies, but they were using talking drums, gongs and other technological instrument to achieve the same goal. Thus, Ghanaians like many African citizens have always been technologically predisposed into handling the latest wireless types of equipments.

UNDERSTANDING GHANA'S TECHNOLOGICAL PREDISPOSITION

Prior to the arrival of the British in the 19th century, Gold Coasters (now known as Ghanaians) had their own way of communicating. This was primarily through music, dance, storytelling and theater. These "wireless" modes of communication allowed for messages to be conveyed from person to person and from village-to-village without any advanced technological infrastructure. For example, in Ghana when a chief dies, wireless

communication, “Talking Drums,” is used to notify the village. “Talking Drums” are drums that are used to signal villages through the sound; “A big tree has fallen, A big tree has fallen” to indicate that a chief is dead.

Drums are very important instruments to measure the level of Ghana’s technological predisposition. This is because drums serve as the vehicle through which the culture can reach the limitations of indigenous communication. In other words, in the Ghanaian culture drums were equivalent to the cellular phones because they convey information over long distances to many people.

It is this cultural predisposition to using “wireless” forms of communication that allows most uneducated Ghanaians to be more comfortable using “wireless” other than wired form of technologies. Thus, this predisposition gives Ghanaians an advantage to overcome a late start in technological advancement. This is an advantage because Ghanaians will not have to go through the many costly steps of adjusting to technological development in the way that the developed countries experienced. Instead, in the cellular phone industry, for example, Ghanaians do not have to be specially educated (through advertising) as to how the technology works or how it is used. This is mainly because their indigenous communication systems such as drums, which serve as a signaling device, enable them to understand the underlying concept of how wireless technology works.

One major concept that runs throughout this thesis is the idea of wired versus wireless. Wireless communication is a term that has been coined to describe the process of communicating over long distances without the technological infrastructure (i.e.

telegraph posts, telephone wires, etc) that would limit the ability to have a far reaching communication technology. Therefore, in this thesis, wireless is defined as a medium through which messages are sent via airwaves. This definition is really important in the understanding of the parallels this thesis makes between indigenous forms of communication, such as drums, song and dance, as wireless modes of communication and cellular phones, radios and in some instances the Internet.

THEORETICAL FRAMEWORK

As the literature review reflects, other writers have researched the growing technologies in Africa. Many of them used different theories to explain and support their work. This thesis, like Perspectives on Indigenous Communication in Africa, will use the Akan Political System as the basis of its theoretical framework. This system is an agent of socialization because it provides a basis for understanding the role of indigenous communication in helping the society adapt to the advancing technology as well as emphasizing the importance of communication. This is a necessity, since many cultures in Africa still rely primarily on indigenous communication while the growth of technology industries is occurring simultaneously.

This is reaffirmed by Ansu-Kyeremeh who says, “Ghana being among the ‘developing countries [in which] many of the traditional forms of communication exist side by side with the modern media” (Ansu-Kyeremeh, 1998: page 176). This statement lies at the heart of the message this thesis is trying to convey. While modern media are

developing, indigenous forms of communication should not be forgotten in the adaptation of new technologies.

This system was first used as a method of analyzing Ghanaian forms of socialization by the late Paul A.V. Ansah, Professor and Director of the School of Communication Studies, University of Ghana. Although titled “political system,” this framework does not deal with politics in terms of government. Instead, political refers to the processes of interaction and social control used by the Akans. Also, this system looks at the hierarchical structure of the Akan society which is made up of the Chief (head of the clan), the Queen Mother (next in line to the chief), the Linguistic (chief’s spokesman) and the people of the community. It is comprised mainly of speaking and listening. This is known as the two-way flow of communication. In this system, one has to understand the process of knowing when to speak and when to be spoken to.

The Akans are the major ethnic group in Ghana. A lot of other ethnic groups such as the Ewes and the Northerners exist; however the Akan were in place prior to British colonization. Furthermore, many of the other groups became part of the Gold Coast during the addition of lands to Ghana by the British. The Akans have a rich heritage and have been around the longest, their system has been the most successful. All the other groups use the Akan political system as their template.

This thesis will focus on the communication aspect of the Akan political system. This aspect specifies in depth the various forms of indigenous communication. This system also applies a ritualistic view of communication. This is because “communication is linked to terms such as ‘sharing,’ ‘participation,’ ‘association’ ...this definition exploits

the ancient identity and common roots of the terms ‘commonness,’ ‘community,’ and ‘communication’” (Carey, 1992: p. 18).

Another aspect of the Akan Political System that will be discussed and is important to this research is the Non-verbal Indigenous Communication component. This consists primarily of “verbal, action, aural, and visual manifestations such as drama, histories, proverbs, public rituals and legends, accompanied by flutes, gongs, and drums – and they are often participatory in nature”(Ansu-Kyeremeh, 1998: page 223). These forms of communication carry messages wirelessly thus creating a culture that understands the concept of wireless communication.

This thesis will assert that Ghana’s exponential acceptance and increase in wireless communication such as radio and cellular phones has been aided by these indigenous forms of communication. Also, the premise of this framework is that communication is culture and in this case Ghanaian culture is in itself a form of communication. Thus, this framework will help answer the research problem and support the hypothesis.

Indigenous Forms of Communication

One of the underlying themes throughout this thesis is that indigenous forms of communication are what make up Ghana’s technological predisposition. As such this section will discuss the communication component of the Akan political system, which defines the concept of indigenous communication and examines the factors that constitute it.

In Perspectives on Indigenous Communication, the author outlines the four major components of indigenous communication. These are Venue-Oriented Communication, Events as Communication Modes, Games as Communication, and Performance-Oriented Communication. In examining the titles of these components, it is interesting to note that they are all ritual views of communication. In other words, they are “directed not toward the extension of messages in space but toward the maintenance of society in time; not the act of imparting information but the representation of shared beliefs” (Carey, 1992: p.18).

Under Venue-Oriented Communication, for example, beliefs are shared at a meeting point in the village. It is here that discussion and debates are conducted in structured and unstructured environments. Many people, especially youth, voluntarily meet in various venues to have conversations as well as to learn about the “goings-on” of the village. It is in this setting that health and education officers take the opportunity to keep the people informed about various health and educational issues.

Events as Communication Modes are similar in that they involve group settings; however, the distinction is that “institutionalized events (usually celebrations made up of a series of ceremonies) facilitate [the] communication of information” (Ansu-Kyeremeh, 1998: p. 186). Some of these events include puberty rites as well as local festivals. Games as Communication, however, involve the exchange of information during the course of playing various games. This form of indigenous communication utilizes story telling via the games like *Ampe*² to pass on traditions and also to scold or stigmatize

² This is a traditional game whereby girls clap, sing and skip

members of the society who violate customs. It also can be used to congratulate members of the society.

The fourth component, Performance-Oriented Communication, consists primarily of drama, song and dance. Local plays known as *concerts* are organized to carry out messages. Traditional dances like *Adowa*³ are also performed. Many messages are carried out through this communication form because the performances are an enactment of the lessons that are being taught. Other performances include *Anansesem*⁴ (storytelling), recitation of poems and puppetry to promote values and tradition.

There are other forms of indigenous communication, such as non-verbal communication. These include genuflection, bowing, curtsying, and men slipping their cloth off their shoulder in deference (Ansu-Kyeremeh, 1998: p.185). These indigenous forms of communication are the backbone of Ghanaian society because they represented the way in which traditions, values and customs have been passed on from generation to generation. It is very important that Ghanaians do not underestimate the influence of their culture and helping to expand Ghana's technological growth. The basic framework is already present, thus "existing indigenous communication channels should be examined and developed and that this would make it possible for an incorporation of such channels into the overall communication plan" (Ansu-Kyeremeh, 1998: p. 246).

³ This is a traditional dance that is performed by women of the Akan community, whereby the women twist their arms and shake their waist in a particular routine that conveys a story

⁴ This is one of the most important forms of socialization where stories are told by elders of the community. These stories contain provides and folktales that reinforce the societies mores and values

Ghana's Indigenous Communication's Contribution to Technological Predisposition and Mass Communication

This understanding on the part of the Ghanaian people that their indigenous forms of communication are useful to their technological growth is very important.

Unfortunately, Ghana, like many African countries, was indoctrinated through colonization into thinking that everything Western is better and thus proceeded to emulate the West. "Suddenly, people all over Africa and the rest of the non-Westernized regions of the world, appear to be imbibing materialistic and individualistic values previously associated with Western culture" (Akande, 2002).

As the quote suggests, many non-Western cultures are developing more ideals and attitudes about the way they see life. Ghana is no different. People are trying in many different ways to associate themselves with something foreign; be it the way they dress, speak, act or even the food they eat. Furthermore, many Ghanaians view products from the West as better than their own. This has not only occurred on an economic level, but it has transcended to a cultural and traditional level, where they view their own modes of communication as less sophisticated than that of the developed countries. Ghanaians have even reached a point where they are mimicking Western forms of communication, such as television and newspapers, as a predominant way of communicating with their people.

According to Cecil Blake, the problem with Africans is that they "possess significant communication forms and structures that are gravely neglected, and whose potential has not yet been fully explored" (Blake, 1979: p.218). Blake describes these "significant communication forms" as dance, drama, song, and ritual. Speculating that

with substantial research, African forms of mass media can supplement electronic and print media. Ironically, Blake made this assertion twenty-four years ago and it still remains true today, reiterating that dance, song and theater as indigenous modes of communication are in fact communicative tools, whose basic premise and use are currently viewed as technologically advanced.

It is also important for Ghanaians to incorporate their cultural modes of communication into their overall communication plan because “mass communication may turn out to be the most important medium of education, whether formal or informal in the less developed regions of the world today, including Africa.” (Edeani, 1980: p.64) Why mass communication? Because Africans have always used communication as their method of education. Storytelling, singing, dancing, theater, drumming, music, riddles, proverbs and poetry are all communicative and educational tools. In a sense communication and education in Ghanaian society are intertwined. An elder will not only give a message to a child but in the message is imbedded a lesson. The benefits of communication as an educational tool are just being recognized by the developed world, although they have always been a part of the African culture. There has not been any written documentation of this because traditional Ghanaians document their culture through their oral traditions in the form of folktales and story telling, music, theater and dance.

Moreover, there is an assumption on the part of the developed world and theorists of modernization that technology and mass media, as we know them now, will “modernize” Africans by “exposing” them to the world. In other words, the

modernization paradigm suggests that “development of mass media systems *is* development” (West & Fair, 1993: p.92). In some sense, this may be true because mass media development allows countries to become a contributing part of the global technological environment. But, this thesis shows that the importance of technology systems, like mass media, has always been understood by Ghanaian culture because these systems have been used for centuries at a micro level.

Currently, cellular phones, radios, television, newspapers and the Internet are instruments of communication that are used worldwide. However, before these technological forms became prevalent, Ghanaians were using other instruments as sources of communication. This inherent cultural characteristic allows for the basic understanding of the principles of wireless communication, which like instruments; consist of coding and decoding sound, thus, supporting my hypothesis that Ghanaians, through indigenous communications forms are predisposed to the latest advanced technologies.

SUMMARY

This chapter has defined and explained what the Akan political system as well as the concepts of technological predisposition and what it means in the context of this thesis. The hypothesis that Ghana has always been technologically predisposed to advanced technology is reinforced through the analysis of the various indigenous forms of communication as well as the overview of the various technological systems.

This chapter reiterates the fact that technological predisposition allows people to understand one another without advanced technological infrastructure. This is because indigenous forms of communication like venue-oriented, performance-oriented, and events as modes of communication provides Ghanaians with the necessary tools to conceptually understand the premise of communicative technology. As Chapter three will discuss later, reading is not part of Ghanaian culture, since local languages are not based on reading but more on sound. Thus, people like to hear others tell stories and convey messages through stories, dances and plays.

In Perspectives of Indigenous Communication in Africa, Ansu-Kyeremeh explains “the reasons for the popularity and effectiveness of this mode of communication for development-oriented messages [is because] it is transactional and highly participatory, allowing participants to work with new information through a familiar and comfortable format” (Ansu-Kyeremeh, 1998: p.225). This observation is reinforced, for example in Ghana and indeed in other African countries, that after many years of denial of HIV/AIDS in the society, the current method of presenting messages about safe sex solutions is through theater and song. These methods have more of an impact than advanced technological infrastructure, like television and newspapers, since people can best relate to these forms of communication. Thus, as this thesis will argue in the conclusion, it is important for Ghanaians to develop their indigenous forms of communication as a backbone for advancing technology.

CHAPTER 3

STATUS OF TECHNOLOGICAL ADVANCEMENT IN GHANA

In order to better understand how technological predisposition to wireless communication can be considered as a positive characteristic for technological advancement, one has to understand what this thesis means by technological advancement. Technological advancement is defined as the process by which Ghanaian society is adapting and using radio, newspapers, television, cellular phones and the Internet. This is a very important aspect of this thesis because of the parallel concepts of advancing technology and indigenous communication.

This chapter will examine the history of western technology in Ghana, the trends in telecommunication indicators and the state of ICT. This portion of this thesis will assert that Ghana's lag in technological advancement is due to a lack of technical infrastructure needed for development and not because there is need to culturally adapt the society. In other words, all things being equal, technology in Ghana will be able to diffuse quickly with very little education needed to stimulate Ghana's technological mindset since the society is already predisposed to technology.

HISTORY OF WESTERN TECHNOLOGY IN GHANA

Like many other developing countries, Ghana's steps towards advancement go as far back as colonization. In 1822, Sir Charles McCarthy introduced the first newspaper *The Royal Gold Coast Gazette and Commercial Intelligencer* to Ghana. (Ansu-Kyeremeh

& Karikari, 1998: p.1) Obviously, this paper was targeted at the British elites who were in Ghana at the time. Over the course of the British colonization, other technologies like the printing press, postal services, the telegraph, and the telephone were introduced in Ghana.

Nevertheless, the purpose for the introduction of these technologies was not because the British were interested in developing infrastructure that will help Ghanaians, but primarily because they needed the technology in order to communicate among themselves across the other countries they had colonized in Africa and across the Atlantic to Britain. As such, many Ghanaians did not know how to use and maintain the infrastructure, and over time changes in government, corruption and a lack of education led Ghana to become a third-world country in a socio-economic crisis.

This section will provide an overview of Ghana's history regarding the various Western technologies: newspapers, radio, television, cellular phones, and the Internet. It will provide a contextual base for why technological advancement is important for understanding Ghana's technological predisposition.

Newspapers

As mentioned above, newspapers were the first technology introduced to Ghanaians. In the 1930s, Ghana created its own press and own system of reporting news with the emergence of *Ashanti Times* (Chick, 1977), the first Ghanaian newspaper. Although it was a new medium at the time, the *Times* was quite popular. In the late 1940s, a British media company, *The Mirror*, came to Ghana and created the *Daily*

Graphic. This competed with *Ashanti Times*, which did not have the money and the infrastructure to survive. By the late 1950s, *Ashanti Times* closed shop and the *Daily Graphic* became the nation's leading newspaper. Nevertheless, over the years, other newspapers emerged to compete with the *Graphic* and provide more widespread news to the people.

Since the time of the first newspaper there have been about 39 newspapers in Ghana (Ansu-Kyeremeh & Karikari, 1998: p.49-53), but only about seven are currently operational. However, there is some uncertainty about the exact number of papers because there is very little information about newspaper circulation in Ghana.⁵ Nevertheless, according to the World Bank's world development indicators, daily newspapers per 1,000 people were about 14 in 1996 (WDI Online, 2003: Oct. 21, 2003).

This is a very interesting statistic because, despite the fact that newspapers were the first imported technology to be introduced to the society, they are not widespread. This is because newspapers and reading are not an inherent part of Ghanaian technological culture. Thus, the lack of predisposition to this form of technology is attributed to its lack of growth. In order for newspaper content to be widely distributed to the masses, the information needs to be converted to radio, a form of wireless communication that has its roots in oral and auditory communication. Both are forms of non-verbal indigenous communication.

⁵In publications like the CIA World Fact Book for example, there is a lot of information about almost every country in the world. Under Communication, they have information about television, radio, telephone and the Internet but nothing about newspapers. This shows the neglect on the part of the international community to research information technology in Ghana, reinforcing the importance of my research.

Radio

Radio is the most important source of information for the majority of Ghanaians. This is because, “radio is the most accessible medium to rural populations” (Ansu-Kyeremeh, 1998: p. 227) where the majority of the society live. As of 2001, there were 12.5 million radios in Ghana (CIA World Fact Book, 2003), which means about 62.5% of the population owns a radio. This also means the majority of the population listens to the radio and is most likely influenced by it. Radios are wireless forms of communication because they use airwaves to carry information.

The popularity of radios and their proliferation in Ghanaian society reinforce the premise of this thesis, which is that Ghana is technologically predisposed to wireless communication. The adaptation of wireless technology is inherent in the culture. This is because radio utilizes sound via airwaves, like drums. Ghanaians conceptually understand how radio (a form of wireless communication) works. In addition, radio programming reflects the Ghanaian system of two-way flow of communication which allows listeners to participate in on-going debates.

Radio participation is very similar to Venue-Oriented communication in that people gather around a radio, listen to the various commentaries, and have a discussion. This is what allows radio to be two-way and participatory. In a sense, radio is the epitome of how indigenous communication has been incorporated with new technologies.

One of the major correlations between radio and the traditional forms of communication is the local language. Radio allows all Ghanaians to have access to

information about what is going on in their environment because it connects to people in their local dialect. Again, this reinforces how indigenous communication predisposed Ghanaians to radio technology because, like folk tales and theater, radio is also in the local dialect of the listening area. This is why radio is the most widespread communication method. Radio literally mimics two-way flow of communication and the major components (sound and local language) of the cultural society.

Television

Television is one of the fastest growing mediums in Ghana. As of 2000, about 11.8% of people had television sets (World Development Indicators). This is a major increase from 4% in 1992. The development of television has been somewhat different than that of newspapers and radio. Because TV is a hybrid between oral and visual communication, important components of indigenous communication, it has great potential to become an influential communication source. However, its potential is slowed by the cost of television sets caused by the digital divide. Television's relatively slow growth is because many people cannot afford to purchase a set, thus causing a gap between those with access and those without.

In terms of technological predisposition, television has the major element of theater. One of its major flaws however, is that westernization is influencing the culture so much that many television programs are in English. This inadvertently reduces the interest this medium holds for the majority of Ghanaians who live primarily in the rural

areas. This also reduces motivation on the part of the locals who will not be able to afford television sets and will not see it as a necessary technology to have because they cannot relate.

Television has not only increased in quantity, but it has also changed in quality. Television in Ghana used to mainly consist of news programming because of the government's control of the only existing television broadcasting station. Over the years, with the help of technology, the number of Ghana's broadcasting stations has increased to 10 in 2001 (CIA World Fact Book, 2003). However, the downside of increased broadcasting stations with private ownership is the emergence of more entertainment programming like talk shows, game shows and soap operas. This was not the goal of the National Assembly in 1965, when television was inaugurated. According to Media Ghana, "Ghana's TV will be used to supplement [the] educational programme and foster a lively interest in the world among us. It will not cater for cheap entertainment [or] commercialism" (Ansu-Kyeremeh & Karikari, 1998: p.5).

Nevertheless, radio and newspapers provide a balance from the entertainment that television is providing. Television does not have the same grasp on society as much as it does in the US because of its limited rate of adoption. Television is not the main source of information for people, and thus, does not have as much influence or power to influence audience members as radio.

Cellular Phones

In order to understand the impact and growth cellular phones have had on the Ghanaian society, it is important to be aware of the history of the telephone system in Ghana. Telephone lines were introduced in Ghana in 1890 by the British; however they were only used in very few sectors such as the postal services. By 1937, principal post offices and other service industries had started using the technology. By the mid-1980's, telephones (land lines) were widely used in Ghana. Usually homes of the rich had at least one telephone in the house. In past years, having a telephone has been a status symbol. However, over the years, telephone use has become very popular. Not only do Ghanaians have access to telephones in their homes, but they also have access to phone booths as well as cellular phones.

The emergence of phone booths in Ghana was very exciting. Many people had seen phone booths in Western movies and on television but had never personally seen or used one. As a result, when they initially came out in the early 1990's, there were very few of them and they were very costly. However, as technology has improved, different companies have figured out a way to make it financially feasible for the average Ghanaian to use a phone booth. The adoption of a prepaid calling card system led to a 275.78% rise in public payphones in Ghana from 1997-1998 (International Telecommunication Union). Payphones were a novelty that people were drawn to. As

show in Table 1, payphones hit its peak in 1998 and since then there has been a sharp decline in public payphones in Ghana.

	1996	1997	1998	1999	2000
Public payphones	453	483	1,815	3,044	3,180
		6.62	275.78	67.71	4.47

Table 1: Public Payphones statistics from the ITU (Economic Intelligence Unit)

This thesis attributes this loss of interest to payphones loss of novelty, as well as the discomfort Ghanaians had conceptually with “wired” technology.

One of the interesting things the excitement generated by telephone booths was that fact these infrastructures were new to a society that is used to wireless communication. The science of speaking through phone lines and standing in a booth was culturally different, very Western, and thus extremely appealing. The introduction of the cellular phone changed the dynamic between landlines and wireless phones.

As illustrated above, the cellular phone industry has grown significantly in the past four years (1996-2000) alone. This thesis attributes the rapid increase of cellular phone usage to the inherent cultural understanding of the process of wireless communication because of indigenous communication forms. Nevertheless, the rise of cellular phones has not necessarily been a good thing on a community level, because it is leading to less interpersonal, venue-oriented and performance-oriented communication; the core components of the indigenous communication forms.

However, cellular phones have been great for people on an individual level, because it allows individuals to stay in touch with family and friends. Businesses are also benefiting because they can get information from one point to another much more easily,

particularly since the landlines are always busy. Cellular phone usage has the potential to be higher than it is now if the necessary infrastructure was in place to handle it.

An article written in the *Technological Review* entitled “Ghana’s Digital Dilemma,” discusses the issue surrounding the increase in cell phone usage without the necessary infrastructure to support it. According to the article, the increase of cell phone infrastructure in comparison to land lines is also clogging the system since there are only 240,000 lines to support approximately 20 million people (CIA World Fact Book, 2003).

This thesis speculates that the clogging of the telecommunication system because of the inefficiency and lack of sufficient infrastructure is one of the major reasons why Ghana is currently technologically behind. The reason Ghana is trailing technologically is primarily because of problems with access and infrastructure, and not a lack of understanding about how to use the technology. It is not the cultural aspects of adaptation that are impeding Ghana’s development. It is the technical and infrastructural aspects. This is evident with the growing use of the Internet, whereby many Ghanaians do not have personal computers (PCs) and yet actively participate in the online world via Internet Cafes. This shows that the inherent understanding of how to use the technology already exists.

Internet

The Internet as a mass media mechanism has grown significantly over the past few years. According to the CIA World Fact book, there are approximately 12 Internet Service Providers (ISP) and about 200,000 Internet users in Ghana. These numbers are

significant because they show the ability of developing countries to partake in the technological development that is going on around the world, provided they are given access to the networks and necessary infrastructure that is needed for technological development to take place.

The Internet has also been instrumental in getting Ghanaians all around the world in tune with what is going on in Ghana. Ghanaweb.com for example, is a website that contains much information, especially news about politics and local affairs. It also has business, entertainment and sport sections. In addition, popular newspapers in Ghana like the *Ghanaian Chronicle* and the *Daily Graphic* have daily online versions of the print newspaper so that people locally and abroad can access it. The increase in access and availability that the Internet has provided has helped raise Ghanaian awareness of various issues in the spheres of politics, health care and education.

The downside of this rapid acceptance of computer technology is the lack of cultural context that it provides. An illustration of this is when writer Pascal Zachary of *Technological Review* visited Ghana and saw how the worldly exposure the Internet provides led to his Ghanaian friend's dissatisfaction with Ghana. "In the last two years, I have watched my friend become more adept at using a PC, faster at surfing the Web. But while he remains excited about computing, his discontent grows. He knows much more about the rest of the world than before, but this very knowledge makes him more aware of his own poverty, isolation, and, indeed, the long odds against his succeeding in Ghana" (Zachary, 2002).

This realization in and of itself is not necessarily a bad thing. The problem is the feeling of inferiority and depression with ones current state and the lack of the ability to look at what is good in the country and strive for that. Thus, it is important that culturally people learn how to sift through the information they are receiving and not take all the images and information they see and read to be fact.

TRENDS OF TELECOMMUNICATION INDICATORS

Despite Ghana's status compared to developed countries, the adaptation of technologies has increased tremendously over the past few years. This section will illustrate with the use of graphs and tables the actual growth of the major telecommunication indicators in Ghana.

This growth is important to analyze because it supports my claims that Ghana's technological predisposition to wireless communication is facilitating Ghana's technological advancement. The chart below provides visual support for my claims and was compiled from the International Telecommunications Union, African Telecommunications Indicators. It shows the growth of telecommunication indicators main lines in operation, public payphones, cellular phone subscribers, TV receivers, number of personal computers and Internet users in Ghana from 1996 to 2000.

Telecommunication Indicators in Ghana (1996-2000)

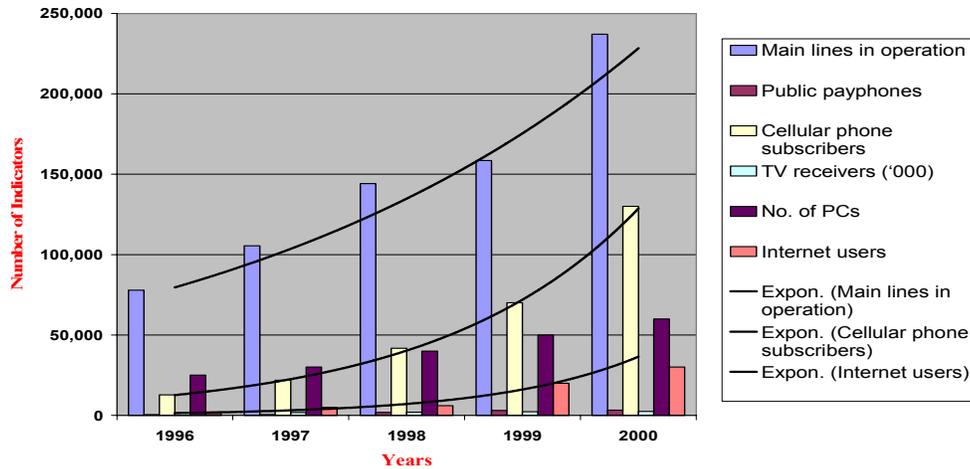


Figure 1: International Telecommunications Union, African Telecommunications Indicators. (The Economist Intelligence Unit, October 21, 2002)

One of the most telling statistics in the chart is the exponential increase in cellular phones (90.95% from 1997-1998) and Internet users (233.33% from 1998-1999). The increase in main lines in operations is also a very interesting statistic. This is because main lines have been erected in Ghana for years, so there are a large number of lines available. Nevertheless, the increase, although high (35.5% and 36.6% from 1997-98 and 1998-1999 respectively), it is not as steep as that of cellular phones and Internet usage, both forms of wireless communication. In order for the increase to be significant with respect to Ghana’s technological predisposition, this thesis compares the percentage increase for cellular phones and Internet usage in Ghana to the United Kingdom⁶.

⁶ United Kingdom was chosen because they colonized Ghana

Unfortunately, the International Telecommunications Union did not have the same chart available for the U.K. as they did for Ghana. To compute comparable statistics, I pulled the same data (Cellular Phones and Internet Usage) from the World Development Indicators⁷. Interestingly, the percentage increase in Ghana over the same period of years is remarkably higher than that of U.K. It is important to note however, that these statistics may in part be due to the prior higher rate of adoption in Great Britain.

I chose 1996 as my starting point because that is the year in which cellular phone and Internet usage emerged in the mainstream in Ghana. Prior to that, there was little recorded activity.

Cellular Phone

	1996	1997	1998	1999	2000
U. K					
Mobile phones	1,232,568	1,498,119	2,511,606	4,568,831	7,270,355
		21.54	67.65*	81.91	59.13
Ghana					
Cellular phone	12,766	21,866	41,753	70,026	130,045
		71.28	90.95*	67.71	85.71

Table 2: Cellular phone statistics from the ITU and World Development Indicators Online

* Percentage change

⁷ See Appendix 2

Internet Usage

	1996	1997	1998	1999	2000
U. K					
Internet users	2400000	4310000	8000000	1.25E+07	1.80E+07
		79.58	85.61	56.25*	44
Ghana					
Internet users	1,000	5,000	6,000	20,000	30,000
		400.00	20.00	233.33*	50.00

Table 3: Internet Usage statistics from the ITU and World Development Indicators Online
 * Percentage change

It is noticeable in the computation above that the actual numbers in Ghana are minimal compared to that of the U.K., nevertheless, the rate of growth of the technology is noteworthy. These charts support the idea that Ghana has exponentially developed, especially in the area of wireless communication. Thus, these tables lend empirical support to this thesis' attribution of this development to Ghana's technological predisposition.

INFORMATION AND COMMUNICATION TECHNOLOGY

As Figure 1 shows the increase in the use of computers and the number of PCs in Ghana, 20% from 1996-1997 to 25% from 1998-1999, (The Economist Intelligence Unit, October 21, 2002) has instigated research on information technology in Ghana. Prior to

the “boom” in computer and Internet usage, institutions like the Policy Research and Strategic Planning Institute as well as the Association of African Universities recognized this growth and conducted preliminary research on information and communication technology (ICT) to study how, if at all, technology has penetrated the society and how it can be capitalized on to further improve the implementation of technology in society. It is important to know that ICT is not the only form of technology in Ghana. Television, Radio and Newspapers have been available for a long time and have as such become integral in the society as compared to ICT which is still new to the society.

In 1991, a survey was conducted by the Policy Research and Strategic Planning Institute (PORSPI) on 91 institutions in Ghana, ranging from State Owned Enterprises (SOEs), Research and Development Institutions and Departments of University of Ghana. One of the major findings from the survey was that “there are a [high] number of informatic equipment especially computers in the public sector [;] however, the level of utilization is low” (PORSPI, 1993: p. viii).

This is very interesting because it shows that in 1991 applying the technology was very important in the utilization of technology. However, as Figure 1 shows, technology utilization has increased tremendously since then. This can be attributed to the increase in access to the technology. In other words, once the technology becomes available to the society, the culture based on its technological predisposition is able to utilize the technology.

The Association of African Universities (AAU) study looked at ICT in Higher Education in Africa. They, too, concluded that “many African universities, like their

nations, have yet to build the basic infrastructures needed to take advantage of the information age” (AAU, 2001: p. iv). This is very important because it once again reflects that access and infrastructure is what is causing Africa to lag behind technologically. Thus, AAU’s aim in compiling the report was to provide assessment tools to African universities in order to help them manage cost and implement ICT in their overall learning structure.

SUMMARY

This chapter began by defining technological advancement and discussed in detail the status of technological advancement in Ghana by tracing the history of imported technologies newspapers, radio, television, cellular phones, and the Internet. The second part of the chapter, trends of telecommunication indicators, supported my claims that there has been an exponential increase since 1996 in technology, especially wireless. The data showed that compared to Ghana’s colonizers, the U.K, cellular phone and Internet usage in Ghana had very high percentage increases from 1996 to 2000.

This finding is critical to this chapter because it also supports the idea that technological infrastructure is what is holding Ghana back from even quicker growth, and the culprit is not cultural adaptation. The last part of this chapter which looked at ICT development in Ghana, reiterated this claim. The studies that were conducted by AAU and PORPSI all pointed to the fact that the lack of technological infrastructure is one of the major contributing factors hindering Ghana’s technological growth.

Nevertheless, it is interesting to see how much progress Ghana has made despite these limitations. For instance, as of 2000 there were only about 60,000 personal computers and 130,000 cellular phone subscribers in Ghana and there was still a large increase in the use of the technology. The findings indicate that inherently individuals in Ghanaian society understand the processes of technological advancement and can easily adapt to its use.

CHAPTER 4

FORMS OF COMMUNICATION

In this chapter, the two main forms of communication will be explored. Oral and written communications are the tools that allow people to interact with one another. Various cultures historically use one or the other; however, as the world is coming closer via English, oral and written communications are both used in Ghana.

This chapter asserts that oral communication is parallel to wireless communication. This is because like oral communication, wireless involves the transfer of information via sound and airwaves. Because of this similarity in concepts, Ghanaians inherently know how to use wireless modes of communication like radio and cellular phones. These technologies are like the indigenous oral communications such as drums that wirelessly sends messages.

Written communication on the other hand is parallel to wired communication. This is because, like written communication, wired communication requires literacy since its underlying concept is foreign to the society. In other words, just as it took the creation of new infrastructure (i.e. schools) to teach Ghanaians how to write, wired technology requires the acquisition of new habits. As illustrated in Chapter 3 phone booths in Ghana were really popular when they initially emerged but this did not last because it required the learning of a new habit which was to go to a booth, stand in it and talk.

Based on these assertions, this thesis argues that the functions of these types are so similar that wired and wireless communications are in fact technological advancements of oral and written communications.

This chapter will discuss these forms of communication using case studies of three different technologies, drums, radio and cellular phones, that will describe in detail this relationship and answer the questions: why and how is Ghana technologically predisposed to advancing technology? What is it in her history or inherent culture that forms the basis for its indigenous communication forms? How is this manifesting itself on a cultural level?

ORAL & WRITTEN VERSUS WIRELESS & WIRED

Ghana, like many African countries has a deep-rooted history of oral tradition. “African children grow up hearing stories that they later tell to their own children. All these tales are part of an oral tradition that is ritually passed on,” as such, oral communication is the form of socialization that preserves Ghanaian history (African Literature, 2003). For purposes of this thesis, oral communication will be defined as, poems, songs, riddles, storytelling, theater, dance and instruments, such as drums and gongs that relay messages.

African culture is based on oral communication, thus, “for centuries, African languages had no written alphabet” and to date “written literature exists in only 49 of the approximately 700 to 1,000 African languages” (African Literature, 2003). In Ghana, there are about sixty-five (65) spoken languages, however only nine of them (Asante

Twi, Akuapim Twi, Fante, Ewe, Ga-Adangme, Nzema, Dagbani, Dagaari, Kasem) are written (Ethnologue, 2003). Written communication is the primary form of Western communication that requires that a given oral language be translated into script format.

One major difference between Africa's oral traditions and the West's written tradition is the inherent need for literacy. Since oral communication is carried out through sounds, people learn the language through listening. One does not need to go through school to learn facts about the society and its way of life. Written culture on the other hand requires literacy, through school-facilitated education, first of the language being spoken and then of the script letters that constitute the language. In 2003, the adult literacy rate in Ghana was 74.8% (Encarta Encyclopedia, 2003), meaning about 35% of the population are illiterate, making written communication a harder concept for many Ghanaians to grasp because it requires the learning of reading. This may explain why newspapers as a written technology have not been able to penetrate society as quickly as radio.

Over the years, colonization and religious missionaries caused many African countries to adopt written communication (African Literature, 2003). Ironically, the written languages they were adopting were not that of their own language but that of the West. These languages consisted primarily of English and French. Since Ghana was colonized by the British, the major language that was introduced was English. Due to the foreign nature of the language and the process it required to learn it, educational infrastructure in the form of schools was created. These differences are very important to note because of the underlying concepts of learning and gaining knowledge through

sound versus schools, form the basis of the parallels with wireless and wired communication.

The Internet is a good example of parallels between written communication and wired communication. This is because the Internet is a wired form of communication (one gets connected through a telephone line or cable) with a heavy literacy and written component (reading and typing) that has grown tremendously over the past few years and continues to grow.

This change can be attributed to the fact that Ghana is trying to catch up and be accepted by the rest of the developed world and knowledge of the Internet provides that. It could also be that the Internet like television is a mid-point between oral and written communication. These technologies have the auditory component that oral communication requires but also have the written component, thus allowing Ghanaians to tap into each aspect of communication, making it somewhat familiar and somewhat foreign at the same time.

Nevertheless, Internet use has not yet caught on for the majority of Ghanaians who live in the rural areas and still use and understand best traditional forms of communication. Ghana, like many other African countries, is suffering from the effects of the digital divide, which consists of lack of access, infrastructure and money to fund ICT for the whole region. The focus and discussion for the rest of this chapter is the relationship between oral and wireless communication.

This chapter will examine three different technologies in Ghana. The first is drums. This chapter will make the case that drums may possibly be the first wireless

technology given the nature of its functionality. This is important to this thesis because it further supports the hypothesis that Ghanaians are technologically predisposed to wireless communication. The second technology, radio, will be explored with a case study of Radio Soap Operas in Burundi. This case is very important to this thesis because not only does it show the strong relationship between wireless communication and indigenous forms of communication, it is an example for other African countries about how to incorporate their traditional forms of communication with new advancing technology to promote social change. Lastly, cellular phones as a booming industry will be discussed. Previous chapters have shown cellular phones tremendous growth but this section will look at how cellular phones actually work and how, if at all, it is affecting the Ghanaian community.

DRUMS: THE FIRST WIRELESS TECHNOLOGY?



Drums known in Akan as *Dondo* have been the premier mode of communication for Ghana for centuries. They are made out of different kinds of wood and percussion strings. Not only are they musical instruments but they are used to convey different messages to members of a community. Different drums of various sizes and shapes send a mixture of messages; the “*atumapan* [are] talking drums , *twenesini* [are] beaten for emergency village assembly meetings, and *asafotwene* [are] beaten as clarion

call to the *asafó* militia to summon members to emergencies such as search and rescue operations” (Ansu-Kyeremeh, 1998: p. 189).

It is the multiple purpose use of the drums that has made Ghana popularly known for its Talking Drums, explained in chapter two as the messages, like the death of a chief, sent via drums sounds to villagers in a community. The use of drums as a mode of communication also speaks to the fact that “traditional talking drums, mimic the tonal patterns of spoken language” (Online Encyclopedia, 2003), thus carrying the same characteristics as oral communication.

Drums as a signaling device work when an *akyerema* (drummers) beats a drum in a specific sequence that carries a particular message in the main compound of the village. The message is heard in the closest town and the *akyerema* in that town also beats his drums to his closest neighbor and within a matter of time, the whole region has received the message and is alerted on what is going on. In most instances, only certain villages (usually the parameters of each clan) receive the message because they are the only ones it is intended for. However, when a chief dies, for instance, the whole region is informed. It is this mode of communicating that allows drum signals to travel long distances wirelessly.

The sounds and signals from drums in some cases can only be coded and decoded by the people for whom they are meant. This function of sending messages via sound waves is parallel to the function of wireless technology like cellular phones. This thesis asserts that drums may in fact be the first form of wireless technology. This idea of drums as a technology may seem radical; however the connection between drums and wireless

technology can be made and understood when one fully understands the influence of indigenous forms of communication on technology.

This connection has not been made by others because for years drums have been viewed as a musical instrument and not as a mode of communication. For this reason, drums as a technology has not been documented in any writing. This lack of documentation addresses the effects written documentation versus oral documentation can have on the future of a given technology. The Western world has developed the ideology that written work is what defines “discovery” where as in most cases the “new” technologies have always existed, just not in forms recognized by the West. Hence, due to the global power and control of information by the developed countries, their “discoveries” are viewed as revolutionary.

Nonetheless, drums are important tools of oral communication because its sounds and messages are a language, whose function is almost equivalent to “programming languages” in wireless technology. Other characteristics of drums that are similar to those of wireless technology are their portability. Most drums are relatively small in size, and their multitasking ability. Listeners of drums do not have to stop what they are doing in order to hear the messages being transmitted. Drums reinforce the parallels between indigenous communication and wireless technology as well as the parallels between oral communication and wireless communication.

RADIO: A CASE STUDY OF RADIO SOAP OPERAS IN BURUNDI

Radio is the one advanced technology that has deeply penetrated Ghanaian society because of its similarity in function to that of the culture's indigenous communication. Radio is the premier example of the parallel between indigenous communication and advancing technology. Radio is not only used for entertainment purposes, but it has a central part in educating Ghanaians on issues of social change. It also serves as a forum for participatory discussions on politics, economics and current events as well as a forum for social control.

In this chapter, radio as a forum of social change will be analyzed. Many African countries like Burundi share Ghana's strong oral traditions. As such, the success of radio soap operas in Burundi is important to discuss because it provides a template for Ghana and other African countries on how radio can be used to educate, socialize and maintain traditional culture in society.

In the early 80s Burundi created a radio program known as *Ni Nde*, which means "Who is it"? The program was characterized as "edutainment" because it was a combination of education and entertainment. In Perspectives on Indigenous Communication in Africa, Devote Ngabirano conducts a case study on *Ni Nde*. The purpose of his study was to perform exploratory research on the use of an entertainment medium, soap operas and radio programming as an educative tool. For his study, he conducted face to face interviews with fourteen Burundians who lived in the United States. Ngabirano wanted to find out whether or not *Ni Nde* was effective and what they thought its future would be like.

According to Ngabirano, “*Ni Nde* differs from other soap operas in that it lacks commercial purposes, the show is a potential powerful means to deliver messages of social change” (Ansu-Kyeremeh, 1998: p. 193). In other words, *Ni Nde* shows how effective radio has been in conveying messages to people especially those in the rural areas, whose only access to information is through radio.

In his analysis, Ngabirano explains the use of radio as the mechanism for the show because of the strong oral traditions Burundians have had for a long time (Ansu-Kyeremeh, 1998: p. 194). In a sense, *Ni Nde* incorporates the traditional forms of indigenous communications like storytelling, and performance-oriented communication like theater and *concert party*. This assessment supports this thesis’ overall hypothesis about technological predisposition as well as the assertion in this chapter that oral communication is parallel in function to wireless technology like radio.

The success of *Ni Nde* on radio allowed the show to expand and grow to become a television show as well. This progression is very interesting in that if *Ni Nde* had been introduced to television first before radio, it would not have had the same impact. This is because television does not have the same cultural impact on society in African countries as it does in the West for various reasons including access and cost, thus, it will not reach as many people as radio does. Furthermore, radio is the closest technology to that of African society’s inherent oral and traditional societies; therefore radio is best understood by a majority of people. This is reinforced by *Ni Nde*’s television counterpart still being referred to as “radio soap opera” strengthening the implication that the radio association is very important in the minds of the people.

Aside from using radio as a communicative tool, language is another major component that makes the show successful. It is performed in the local language of Burundi. This reflects an understanding on the part of the creators and broadcasters, of the importance of language in fulfilling the education portion of the show as well as the inclusiveness it allows because all types of people, rich or poor, literate or illiterate can enjoy the show.

Another major component of the show is the actual content. According to Ngabirano, *Ni Nde* deals with three major themes, the individual, family and community, and national level. This illustrates that the show attempts to address and educate the people on the major issues of the community. “The individual level seems to promote ‘moral’ values such as courage, honesty...the family and a community level explores difficulties related to marriage, treatment of women, [and] some customs that need to be reexamined... [and finally,] the national level depicts problems that the Burundian youth face especially when they leave the countryside thinking the city would offer a ‘better’ life to them” (Ansu-Kyeremeh, 1998: p. 198-9). This addresses the idea that programs that are created by individuals within the society are better suited for the community because they understand the issues of concern and can address them.

This makes *Ni Nde* a very unique program because it was created by Burundians. “It is a show created from within and not from the outside which makes it an example of emphasizing endogeneity...one cannot deny [its] inspiration from ‘radio plays’ produced outside Burundi, [but] the fact of looking for internal talent all over the country reflects a willingness to start something authentic” (Ansu-Kyeremeh, 1998: p. 196). This is

noteworthy because oftentimes in Africa, advanced technologies were introduced into the society by Westerners, thus causing an imposition on the society. *Ni Nde* however, is an example of how African countries can apply the principles of their indigenous communication to advancing technology.

This ability on the part of Burundians to adopt technology to fit their society is a positive attribute that many African countries like Ghana should emulate. This process will allow Ghanaians to be more creative and innovative and less dependent on developed countries to create systems that work for their society. As such, *Ni Nde* is not only a program that benefits Burundians but it has in some ways created a possible template for African countries to create programs with advanced technology that they too can customize it to suit their society.

CELLULAR PHONES: A BOOMING INDUSTRY

The data in Chapter 3 suggest that there is a steady increase in cellular phone services and users in Ghana. The chapter also details the percentage increase and showed that despite Ghana's poverty level and illiteracy compared to the developed world, wireless technology is well understood and used.

Cellular phones are used primarily by youth (approximately ages 13 to 25) and adults (approximately ages 25-55). Since cellular phones are still a new and growing technology, it is a status symbol for many Ghanaians. The populations that heavily use cellular phones are the middle to high income class families that can afford to purchase

the phone and the service. Interestingly, as cellular phones are becoming more popular, cheaper phones are becoming available on the market for less economically privileged individuals to purchase. Cellular phones are becoming the primary mode of communication for all types of people. For instance, it is not uncommon to see uneducated market women in downtown Accra using cellular phones to communicate with their wholesalers and customers.

In order to contextually understand the cultural implications of cellular phones in Ghana, it is important to know the mechanics of the cellular phone industry. There are four major cellular phone service providers in Ghana, namely Celtel Ghana, Ghana Telecom, Millicom Ghana (Mobitel) and SpaceFon. Cellular phones are bought and sold by the service providers at the general markets or are imported from Europe. There are varying prices which makes the purchase of the phone affordable for many people. Once the phone is purchased, a device known as a Smart Chip, sold only by the service provider is also purchased.

Unlike the United States for instance, these providers do not charge monthly fees, unless requested by the customer. The Smart Chip provides the individual with his/her own number and allow Ghanaian cellular phones users to purchase a prepaid card which they install on onto their Smart Chip when their minutes have depleted. Smart Chip technology and its ability to allow individuals to purchase additional minutes as needed have also contributed to the widespread use of cellular phones. Technological predisposition to wireless communication occurs at the onset before the technology is

actually used but once the technology is adopted, Smart Chip technology further allows for the proliferation of cellular phones in Ghana.

Texting and *beeping* are other characteristics in addition to cost and services that have made cellular phones popular. In order to save money, savvy cellular phone users send text messages to one another instead of actually making a phone call. This is a money saving mechanism because text messages require very few units (usually 1 or 2) to send whereas phone calls usually require (8-10) units. Units are the measure by which service providers calculate the number of talking minutes a person has. Thus, when Ghanaians buy their prepaid card, they are in fact buying units (240, 450, and 600) that then are translated into 240, 450 and 600 minutes.

Another money saving mechanism is a system known as *beeping*. Beeping, also known as *flashing* is the process by which an individual dials a number, allows it to ring once and then hangs up. This notifies the person being called that someone wants to speak with them without incurring any cost to the caller.

The increase of cellular phones in the society due to costs, services and unique uses like *texting* and *beeping* “has led to fierce competition between French and American firms that provide the service” (AfricaOnline, 2003). This competition is causing foreign companies to increase their business ventures, which consists of the adaptation of high-tech services such as, Wireless Application Protocol (WAP), which provide Internet services via cellular phones. The introduction of advanced systems and services is a positive sign of Ghana technological advancement because “despite

instability and many wars in West Africa contributing to poor performance by public services, [at least] one service is booming” (AfricaOnline, 2003).

This section asserts that the reason for this boom is the inherent cultural tradition of public interactions. “Mobile phones quickly found a place in African culture, where people are constantly on the move and always want news of their relatives” (AfricaOnline, 2003). Ghanaian society thrives on people’s ability to constantly be able to communicate with one another. This need to always be “in touch” may be a contributing factor to the increase in cellular phone usage, thus, supporting my hypothesis that predisposition, in this case cultural interaction, has resulted in Ghana’s technological advancement. Furthermore, this cultural implication of cellular phones reinforces the parallels between oral communication and wireless technology.

Increase in cellular phones can also affect the Ghanaian society negatively. This is because as more people, especially the youth, become used to using cellular phones as their primary mode of communication, the physical interaction that has always been a part of the culture will be lost. It is for this reason that there is a need for Ghanaian leadership to continually reinforce traditional modes of communication.

SUMMARY

This chapter discussed and explored the parallels between oral and wireless communication and written and wired communications by examining drums, radio and cellular phones and the Internet. These technologies reinforced the relationship between

the various groups. However, the major conclusions this chapter resulted in is that advanced technology can and should be used a method of social change and that Ghanaians and Africans alike can integrate their own traditional and indigenous forms of communication with advanced technology. This is exemplified by Radio Soap Operas in Burundi where radio is used as a mechanism to educate the Burundian community on issues that are important to their society.

The most crucial and controversial aspect of this chapter is my assertion in the case of drums, that they may have been the first wireless technology. This is crucial because if indigenous forms of communication are researched, analyzed and documented in depth, many African societies can learn so much about the contribution of their cultures to technological advancement. This awareness will provide Ghanaians the confidence and pride in their systems of communication and hopefully decrease the perception all things Western are better or superior.

CHAPTER 5

CONCLUSION: WHERE DOES GHANA GO FROM HERE?

When I started writing this thesis, my goal was to discuss the state of technological development in Ghana. Like other authors, I managed to achieve this goal. What makes this thesis different from what has already been written is that I have analyzed a cause accounting for why Ghana in the past few years has had a significant surge in technological advancement. In the process of conducting this research, I realized that my theories about Ghana's technological predisposition were different, but not unfounded.

As chapter four discussed, wireless communication existed in Ghana in the form of drums, gongs, theater and games among others long before the invasion of Ghana by the British. Because there was no written documentation, there was never a realization on the part of foreigners or Ghanaians that what they have always known to be culture is actually the basis for the acceptance of newer advanced technologies today.

One of this thesis' vital and most controversial assertions is that drums as a form of indigenous communication is to be credited not only with Ghana's understanding, acceptance and exponential increase in wireless communication but also for its place in history as the first wireless technology. Drums served as a wireless communication device very similar in functionality (use of airwaves) to cellular phones, radio and even satellite connections. The analysis of drums in chapter four and the in depth look at

indigenous forms of communication using the framework of the Akan Political System in chapter two helps to reinforce this assertion and this thesis' hypothesis that Ghanaians are predisposed to technology because of their indigenous communication practices.

It is important to note that indigenous communication alone can not technologically develop a country. One of the major outcomes of this thesis is that new technologies need to be used alongside existing indigenous forms of communication. The case study of Radio Soap Operas in Burundi in chapter four is a clear example of this idea, whereby advanced technology is used side-by-side with indigenous communication. Of all the Western technologies introduced in Ghana, radio has proven to be the most successful. Throughout this thesis I hypothesized that this is because of radios parallel to Ghanaian oral traditions and its indigenous venue-oriented communication forms.

Unfortunately, colonization and the rise of Westernization and modernization may have threatened Ghana's ability to continue realizing its culture's contribution to its technological advancement. Socialization of young people, particularly, is affecting the future of traditional society because of youth's abandonment of their culture and their assimilation towards western culture. In addition, policy issues, such as brain drain, cultural disintegration, and problems with adapting to technology, are further crippling the society's ability to catch up and improve upon its rising development.

As a result, the major question this chapter will attempt to answer is how do Ghanaians enter the information age and at the same time preserve their indigenous communication forms? This chapter is going to look at the social, cultural, political and economic implications of this thesis. Now that the arguments have been established, this

chapter will discuss how technological advancement is affecting Ghanaian society. Throughout this thesis I have made many assertions as to what may be causing some of the technological problems in Ghana as a result, I have come up with some policy recommendations that will help improve Ghana's technological growth while preserving its indigenous forms of communication. I will conclude this chapter by suggesting future areas of study within this topic of communication, culture and technology in Ghana.

IMPLICATIONS OF TRENDS

One of the major underlying themes in this thesis has been that technological advancement is positive and that Ghanaian society, if given access and infrastructure, will be able to join fully the global information highway. It is important to note that there are disadvantages to increasing technological advancement especially with regards to traditional culture.

The major assertion of this section is that "local culture's role as a spontaneous and integral part of people's life is eroded and it ceases to serve as the means of constructing societal values, reproducing group identity and building social cohesion. The end result becomes global integration at the expense of local disintegration" (Akande, 2002). Hence, this section, will discuss some of the trends and impacts technological advancement has had on Ghanaian way of life.

First, increasing access is allowing more Ghanaians to gain information about what is going on in the world around them. This is contributing to the rapid infiltration of Western culture and ideas, especially into the minds of the youth, who in most cases are

educated enough to be able to use the technology. Secondly, not only is technological advancement affecting the youth, but it is disintegrating Ghanaian culture more generally. In my experience, storytelling, folktales, drama and dance, as cultural pass times are being exchanged for Western entertainment, such as parties and clubbing.

The major component of the society that differentiates Ghana from other countries around the world is also being lost. English is becoming more and more widespread. Although English was first introduced into the society by the British, Ghanaians still held unto their individual languages. Over the years, English literacy has become the standard for development, thus more and more “educated” Ghanaians are leaning more towards English as the preferred language especially for their children.

Finally, as discussed in chapter one, many African countries like Ghana are dealing with issues of the digital divide which are contributing to its problems with adapting to technologies like the Internet. Also, there have been economic and political consequences as a result of the improper adaptation to Western culture and technologies.

Problems of Youth Socialization

One of the significant changes that has occurred in Ghanaian society has been the decline of traditional norms especially by Ghanaians in the urban areas. For example, in Ghana, the younger generation has abandoned the wearing of their traditional clothes except on special occasions or when their parents have forced them to. This is a major problem because traditional attire is what further solidifies Ghanaian heritage and culture. Many young people today are more interested in wearing Western gear such as jeans, t-

shirts and sneakers rather than to wear cloth, sandals and head gears. Ghanaian youth are emulating a lot of the fashion trends seen on television, in movies and in music videos. Many young people who are privileged and can afford to travel abroad bring back with them clothes and fashion statements that are representative of the West and yet they think are cool. This trickles down to the less fortunate youth who want to fit in.

Clothing and fashion are not the only areas in which youth socialization has changed; the music industry has also changed dramatically. In the past, the predominant music on the airwaves used to be traditional folk music and a more urban version known as *High Life*. These days Ghanaians have started sampling western songs instead of using their own traditional songs. Hip-hop has had a huge influence on Ghanaian pop culture. In recent years, a new genre of music emerged in Ghana called *Hip Life* (which is a combination of Hip Hop and *Twi Rap*).

This changed in musical taste to that of a more Western ideal is problematic but at the same time progressive. It is problematic because, Ghanaians are trading in their culture for that of others. On the other hand, it is progressive because Ghanaians are adapting their sounds to that of a new sound which they like. As such, instead of completely trading in their music, they have created a hybrid of the two genres which allows them to enjoy the new music without discarding the old.

Nevertheless, the integration of western influence has contributed to the Ghanaian music industry's adoption of music videos which Ghana never used to have. These music videos are becoming more and more Western in their depiction of various images, such as gender roles.

Another major problem affecting youth socialization is the curriculum by which children are being educated. In recent years, there has been a decline in traditional forms of learning through shows like *Tsetse Kule*⁸. They are being replaced by spelling bees and decathlons. Once again, the introduction of various methods of education children are not a bad thing, in fact they are very essential to the society. However it becomes problem when these traditional forms are being substituted by newer, more “modern” forms of education. As one of my policy recommendations will detail, government needs to create programs that educate children on the importance of preserving their culture.

The many changes that are affecting the youth of Ghanaian need to be taken seriously and addressed. Issues of socialization on a personal level that involve preferences and taste cannot be addressed solely by the government. Families and parents need to educate their children about the beauty of their own heritage and its importance. Nonetheless, it is noteworthy to mention that some Ghanaian adults see the infiltration of Western culture as a fad that will eventually wear off, and they, do not see the major effects it has not only on their children but on the future of traditional Ghanaian society.

Problems of Traditional Cultural Disintegration

In addition to youth socialization, technological advancement is also resulting in the disintegration of traditional culture. As mentioned in previous chapters, some Ghanaians view Western ideologies and cultures as superior to those of their own culture.

⁸ Variety show that uses a multilingual approach in teaching children social norms, values and mores through storytelling, dance and theater. Its format is similar in nature to that of performance oriented

An example of this is in the medicinal field in Ghana. Increasingly Ghanaians, especially those in the urban areas and cities are abandoning traditional herbal medicines for Western medicines, because of the perception by some that they are more hygienic, cure quickly and are better for them.

Ghanaians forgot that for centuries were using traditional herbal medicines to cure various diseases. As recent as the early 1990s, a Ghanaian herbalist, Nana Kofi Drobo II, announced he may have found a cure for AIDS. His test on Ghanaians with the disease was successful, unfortunately, his untimely and controversial death in August 1992 led to the end of his research. Although we will never know whether or not he had found the cure for AIDS, the possibility that Ghanaians may have unconventional methods of curing diseases is something that more Ghanaians should be proud of.

Another additional traditional custom that is gradually declining, at least in rich homes is family socialization between parents and children. Due to Western exposure more young people are more inclined to want to go bowling, play pool, or go to restaurants instead of eating at home. More and more fast food format eateries such as Nandos, Frankie's, Chicken Liken, Shangri-La, Steers and Papaye have emerged especially in Accra and have become immensely popular.

These fast food restaurants are introducing Western foods such as hamburgers, pizzas, and French fries into Ghanaian culture. These dishes are status symbols because they signify modernity. They create a social and financial divide between the rich and the

poor because their costs make it affordable for richer Ghanaians, causing less privileged citizens to strive to afford fast foods, in an effort to raise their perceived social status.

In addition to food, entertainment is another area that is contributing to the disintegration of Ghanaian culture. First of all, Ghanaians are slowly catching on to watching television. As television started becoming popular, many non-English variety shows and sitcoms emerged and were immensely popular. Over the years, however, soap operas have become a huge part of Ghanaian culture. Some of the soaps that have aired in Ghana include: *Acapulco Bay*, *Santa Barbara*, *All My Children* and now *Bold & Beautiful*. One of the major problems with the viewing of these soaps is that has added to the romanticization of the West. The popularity of these soaps lead to the creation of a Ghanaian soap called *Ultimate Paradise*, which followed a model similar to that of *Acapulco Bay* and *Santa Barbara*.

The problem with the creation of shows like *Ultimate Paradise* is that they compete with local dramas, like *Daakye*. *Daakye* is a popular non-English sitcom similar in style to performance-oriented communication. The actors and actresses in the show utilize indigenous forms of communication such as proverbs and riddles to convey messages of social norms and taboos. Unfortunately, *Daakye* cannot afford the production and costs that *Ultimate Paradise* is able to afford because of advertising.

Of all these problems however, the most disturbing changes in social behavior is that young parents are teaching their children to speak English before their local language. This is really worrisome because language is one of the most important forms of socialization. Ghanaian languages are not only used as a method of communication but

they are used to pass on values and traditions. It is a shame that parents are now teaching their children English first because they are growing to believe through technological advancements like mass media that English is more important than their own language.

Ultimately, the loss of the youth in understanding the role of Ghanaian indigenous communication may ultimately affect future technological development, in addition to affecting the original cultures and traditions of Ghana.

Problems of Adapting to Technology

On a political level, advancing technologies, like radio and newspapers, are giving Ghanaians more access to information, thus providing a greater awareness of the political and democratic processes. In Ghana, radio is the mass media medium through which information most Ghanaians receive allows Ghanaians to participate in politics. Radio provides a forum for listeners to receive the daily commentaries. They can discuss amongst themselves issues that are of importance to them. Despite radio's reach, newspapers are becoming increasingly influential in determining which issues are of high priority to the Ghanaian people, especially for individuals living in the urban areas.

As discussed in chapter four, written communication like newspapers has not easily been adopted throughout the society because of the lack of cultural predisposition to that form of technology. This was especially obvious when politicians from urban areas tried to run for local government positions and conducted their campaigns in newspapers. Those who stayed close to radio were very successful in gaining support and winning seats in parliament. Those who leaned towards newspapers got the lowest

number of votes and lost seats because the core majority of Ghanaians, especially those in the rural areas did not gain their political information from newspapers. They get it primarily from community gatherings and radio, where they can engage in their oral traditions of listening to the positions of candidates rather than having to read about it.

With respect to economics, the poverty level, 31.4% in 1992, (CIA World Fact Book, 2003) and financial constraints that the average Ghana experiences, is hindering technological advancement. As discussed in chapter one, the lack of access and basic functioning infrastructure is widening Ghana's digital gap. The introduction of programs like the World Bank's Structural Adjustment Program (SAP) did not help to alleviate the economic crisis in Ghana. Instead, some of the recommendations the program provided included, the increase in privatization and foreign investors for the efficiency of free markets (The Whirled Bank, 2003). As time has gone on, Ghanaians have realized that foreign investors, mainly transnational corporations (TNC), have not focused on helping to build the economy for the local people, but rather on profit that leaves the country, furthering widening the gap.

In a review published by the World Bank in 1998, they noted dissent with the effects of foreign ownership in Africa. "The challenge of generating industrial growth in Sub-Saharan Africa focuses attention on a key question: the role of multinational corporations. Recent opinion in some of the dominant literature on economic development in Africa, criticized foreign firms for not making a significant contribution to economic development" (World Bank, 1998). Foreign investment's effect has not just been economic but cultural as well. The vast wealth of TNC's are taking away from local

businesses that cannot afford to compete with them, thus, making foreign products more predominant in Ghana than local products. This influx of foreign goods and the financial ability TNC's have to promote their products on television and radio, has led to the high demand for foreign products.

This in turn, has caused local companies to try and compete with foreign companies by creating similar products. In order for local companies to compete, they have to put a lot of money into advertising and since they are competing with foreign images, they try as much as possible to make Westernize their ads. This has major cultural ramifications because the focus of some local people is switching from appreciating their own products, to yearning for more Western products. This is because not only are they watching western ads on television but these ads are also being replicated by local Ghanaian companies. The main message that this change is conveying that Western culture is better.

Ultimately this dichotomy between economic growth and its effects on culture reflects the idea that development and modernization are not necessarily beneficial to developing countries, especially when they stunts a country's growth and deteriorate its culture.

POLICY RECOMMENDATIONS

In this section, this thesis identifies two main aspects of in Ghanaian society that need improvement and intervention by the government. The first category deals with maintaining existing traditional culture through language and education and how the

government can improve its already existing initiatives. It is important for Ghanaian children to learn how to read and write Ghanaian languages in school. When this seed is planted at a young age, it will create open-mindedness about formally learning issues of Ghanaian culture on a University level. The second segment in this category is concerned with the university curriculum with respect to information and communication technologies. The second category involves the proper planning for the integration of new technologies. In Ghana, there is a currently a serious crisis of Brain Drain, whereby the country is unable to retain Ghana's wealth of knowledge. For many different reasons, Ghanaians are leaving the country for search of higher and better education, especially in professional and technical fields. This flight of Ghana's knowledge is leaving few resources behind that will improve upon Ghana's current development and propel her to her highest potential.

The reason why I chose these two areas as the basis for my policy recommendations is that I wanted Ghanaians to reflect on what they can do to help themselves, rather than to rely on Western aid. Combined, these two areas of policy concerns synthesize the main conclusion of my thesis which is that it is important for Ghanaians to embrace their traditional forms of communication and use them along side new advancing technologies.

Maintaining Existing Traditional Culture

As mentioned in previous chapters, education has always been a primary component of Ghanaian society. Currently, ICT is being taught sporadically in the

university curriculum. In order for young Ghanaians to be equipped with the necessary tools for learning how to further develop technologically and understand their culture, there should be degree programs that revolve around technological advancement. Understanding the inevitable infiltration of western culture, these programs should at same time educate Ghanaians about the importance of revering their rich cultural heritage.

The implementation of a degree program is important because in order for Ghana to have a role in contributing to worldwide information, they would need to learn the core concepts and processes of ICT. Ghana needs to catch up with the rest of the information world. The curriculum of the future leaders of Ghana should have the essential components of cultural studies, information systems technology, and software and computer programming that will allow them to effectively compete.

The challenge on the part of the government in implementing this program is convincing students that it is worth majoring in. Many Ghanaian students want to learn from programs that they think will be beneficial to them not only in Ghana but in abroad as well. Another major question that will cause difficulties for a program of this nature is the question of “What job can I get with this degree?” This is a very valid question and one that may be difficult for officials to answer if the purpose of the program is not well laid out. This is because with the existing degree programs, varying from engineering, medicine, and law there is very little job availability. Ghana doesn’t enough infrastructures in place that will best be able to support the number of qualified people in these professions. Nonetheless, these degree programs are very good, pay relatively well

and are highly competitive, thus, it will be very difficult to convince students to stray away from these staples that are currently more profitable to young people and try something new. Nonetheless, the creation of this program will be beneficial in the long run in maintaining and preserving local traditional culture.

In addition, Ghana does not have the proper infrastructure to support information and communication technologies causing, “some of the best technical talent in Ghana leaves the country after secondary school to attend British or U.S. universities. These students are unlikely to ever return to Ghana because the skills they gain from attending top universities essentially ‘price them out’ of the Accra labor market” (Zachary, 2003: p. 83). This clearly goes to show that the situation at hand is dismal and the government needs to work on providing incentives like job opportunities, profitable government contracts, subsidized housing and/or provision of grants or loans to further their education in Ghana, to retain young talent and convince others to come home.

Another area that needs to be developed to promote the coexistence of indigenous communication and advancing technology is widespread education of Ghanaian languages. The Ghanaian government has recognized the importance of preserving Ghana’s traditional culture and as such over the past ten years or so, has implemented an education initiative whereby it is mandatory for all students from primary school through junior secondary school to learn a Ghanaian language. The choice of language depends on the area in which the school is located. Thus, young children throughout Ghana are learning how to read, write and properly speak one of the nine written Ghanaian languages. This realization on the part of the Ghanaian government reinforces the idea

that as new technologies are being introduced into the society, Ghana's traditions and cultures should not be forgotten.

Although this initiative is a great one, it has a few weaknesses. One of the major flaws is that students are not made to understand the purpose and importance of learning the language. Having lived in Ghana and gone through the system, I realized that many of us did not truly understand the purpose of learning a Ghanaian language. We saw it more as just another class in the curriculum rather than a core part of our culture that needed to be preserved. As such my suggestion for the improvement of this initiative would be to educate the students on the importance of learning about their own culture. French for example, is taken way more seriously by students than Ghanaian languages because of the notion that French in some way is more beneficial to them.

As such, the major implication of this recommendation is that Ghanaians should not trade in their culture and heritage for that of another. Instead they should work on understanding their own culture and how best they can maintain and integrate new technologies and ideologies into Ghanaian society.

Planning for the Integration of New Technologies

One of the underlying themes throughout this chapter has been that Ghanaians need to be aware of the importance of their traditional culture and its benefit to their technological growth. However, there are deep-seated problems with Ghana's inability to research and develop its indigenous forms of communications. Some of these problems stem from the lack of awareness on the part of Ghanaians about their overall contribution

to technological innovations. Other problems are as a result of complacency on the part of Ghanaians in accepting imported technologies. Those who are not complacent and are interested in learning more about technology leave the country, thus ridding Ghana of its core intellectual group in a process known as Brain Drain.

What Brain Drain reflects is the want on the part of Ghanaians to grow technologically without any preparation for how the technologies will be handled and how the educated population will be utilized to further development. This lack of planning on the part of Ghanaian leadership is as a result of political and economic inadequacies. Unfortunately, in Africa, many political leaders are highly corrupt, thus in some cases, monies that the country earns are usually squandered or misappropriated. In other cases technological advancement is not the primary necessity in the country. The government has juggle the little money that have to improve more pressing needs such as healthcare, education, and economic growth. Nevertheless, the neglect is crippling Ghana's technological potential.

In the discussion of ICT in chapter three, PORPOSI indicated that one of the conclusions it came up with from its survey study was that there was an interest in ICT in the various sectors yet there was a lack in software development by Ghanaians. PORPOSI believed that one of the major ways in which Ghana could compete technologically was if she created software programs of her own, which would allow Ghanaians to provide their technological input. According to Gumisai Mutume of allAfrica.com the African Civil Society Caucus "is calling on African governments to support the creation of African-language computer [programs] to enable the majority of

Africans, who do not speak English or French, to be able to participate” (allAfrica.com, 2003).

As such, in this new curriculum, the issue of software development can be addressed. Nevertheless, in order for this to work, the government, specifically the Ministry of Education, will need to better manage universities and colleges to correct their existing problems of shortage of professors, books, textbooks and equipment. The Ministry of Education should also set up a planning committee made up of academics and private practitioners to create a set of guidelines, goals and deliverables for the implementation of the degree program.

SUMMARY

From chapter one through chapter five, I discussed, supported and reiterated my research question: how has Ghana’s technological predisposition to wireless communication contributed to the increase in technological advancement? Throughout this thesis I have showcased the effects indigenous communication such as drums, gongs, songs, dance and theater have had on the effectiveness of imported technologies such as radio, cellular phones and Internet use in Ghana. I have also discussed the parallels between oral and wireless communication and written and wired communication and have provided various explanations and possibilities as to why Ghana has experienced exponential technological growth.

The two major outcomes of this thesis are that traditional forms of communication need to be preserved and used simultaneously with new advancing technologies. The

second outcome of is that compared to other countries like U.K., in a short period of time, Ghana has experienced remarkable growth that can only be attributed to its technological predisposition. Overall, access, infrastructure and poverty are what have led to Ghana's slow technological development. This thesis has shown that inherently, Ghanaian culture is equipped to understanding technology, especially wireless because of its historical oral traditions.

In conclusion, the purpose of this research is to allow people, especially those in the developed world, to view African countries like Ghana, as more than just an impoverished developing country. There is so much more that is going on in the society inspite of the obvious limitations such as access to technology, inefficient infrastructure, poverty and lack of major economic growth. As such, my hope for this thesis is that it will start a conversation about Africa's possibilities and open people's mind to think outside the box.

FUTURE RESEARCH

In writing this thesis, I came to the realization that there are many issues with respect to technology and development that I could have discussed. Given the opportunity, I would like to:

- Study extensively Ghanaians *indigenous communications*. How exactly do they work? What is their history? How can they effectively be used alongside new technologies?

- Conduct an in depth *analysis of digital divide*. This is because understanding the digital divide can help understand the ways in which Ghana can better prepare for technology and at the same time bridge the gap between those with access and those without.
- Discuss the *impacts of western mass media* on Ghana. I would look at the historical, political, social and economic factors that have contributed to a gradual shift in Ghanaian culture towards western culture.
- Prepare a *survey* that will study people's perception of technological development and whether or not on the ground technology is actually being integrated. The survey would target Internet Cafés, in low income neighborhoods in Accra. It would be aimed at a population of young people (high school age to University level).
- Look at the *IT industry* in Ghana and its *potential impact* on *Ghanaians society*. IT currently looks like a positive industry but since we do not know the full effects yet, it would be interesting to examine in depth what currently exists and speculate on what could be.
- Examine whether or not there is *relationship between* an increase in *technology and literacy* rates. This is important because it may help make population more knowledgeable about the world outside of Ghana

- Study the *relationship between technology and tourism*. Is this the cause of brain drain on the part of Ghanaians and is it the contributing force to more foreign exploration of Ghana.

- Analyze technologies contribution to *safety of the financial industry*, when African countries like Ghana have been rocked with corruption. Will the digitization of the financial sector provide a more conducive environment for theft and fraud? Or is technology increasing the safety of Ghanaian financial wealth from corrupt leaders?

APPENDIX 1

TELECOMMUNICATIONS INDICATORS

	1996	1997	1998	1999	2000
Main lines in operation	77,886	105,534	144,218	158,555	237,178
Public payphones	453	483	1,815	3,044	3,180
Cellular phone subscribers	12,766	21,866	41,753	70,026	130,045
TV receivers ('000)	1,650	1,730	1,900	2,266	2,390
No. of PCs	25,000	30,000	40,000	50,000	60,000
Internet users	1,000	5,000	6,000	20,000	30,000

Source: International Telecommunications Union, African Telecommunications Indicators. (The Economist Intelligence Unit, 2003)

COMPUTATION

	1996	1997	1998	1999	2000
Main lines in operation	77,886	105,534	144,218	158,555	237,178
		35.50	36.66	9.94	49.59
Public payphones	453	483	1,815	3,044	3,180
		6.62	275.78	67.71	4.47
Cellular phone subscribers	12,766	21,866	41,753	70,026	130,045
		71.28	90.95	67.71	85.71
TV receivers ('000)	1,650	1,730	1,900	2,266	2,390
		4.85	9.83	19.26	5.47
No. of PCs	25,000	30,000	40,000	50,000	60,000
		20.00	33.33	25.00	20.00
Internet users	1,000	5,000	6,000	20,000	30,000
		400.00	20.00	233.33	50.00

NB: All figures in RED represent the percentage increase

*The percentages were computed as follows for each year:

$$= ((1997-1996)/1996 * 100)$$

APPENDIX 2

TELECOMMUNICATION INDICATORS

COUNTRY_NAME	IND1_DESC	1996	1997	1998	1999	2000
United Kingdom	Cable television subscribers (per 1,000 people)	35.17183	40.22012	45.64714	51.9319	56.88853
United Kingdom	Communications, computer, etc. (% of service exports, BoP)	39.65055	39.05704	42.62268	43.72184	43.29955
United Kingdom	Communications, computer, etc. (% of service imports, BoP)	34.17425	30.31997	30.40878	32.35292	31.4691
United Kingdom	Daily newspapers (per 1,000 people)	328.7643
United Kingdom	High-technology exports (current US\$)	5.75E+10	6.07E+10	6.73E+10	6.69E+10	7.35E+10
United Kingdom	Information and communication technology expenditure (% of GDP)	7.7	7.7	7.9	8.1	9.1
United Kingdom	Information and communication technology expenditure per capita (US\$)	1556.5	1735	1884.3	1976.8	2187.3
United Kingdom	Internet users	2400000	4310000	8000000	1.25E+07	1.80E+07
United Kingdom	Mobile phones (per 1,000 people)	123.2568	149.8119	251.1606	456.8831	727.0355
United Kingdom	Personal computers (per 1,000 people)	215.9607	238.9264	268.4133	302.5159	337.8175
United Kingdom	Radios (per 1,000 people)	1439.741	1445.983
United Kingdom	Telephone mainlines (per 1,000 people)	521.6	540.1	554.1	574.7	588.5788
United Kingdom	Television sets (per 1,000 people)	634.2783	640.526	641.491	652.0899	891.8114

World Development Indicators, World Bank Group. November 10, 2003

COMPUTATION

	1996	1997	1998	1999	2000
U. K					
Mobile phones (per 1,000 people)	1,232,568	1,498,119	2,511,606	4,568,831	7,270,355
		21.54	67.65	81.91	59.13
Ghana					
Cellular phone subscribers	12,766	21,866	41,753	70,026	130,045
		71.28	90.95	67.71	85.71
	1996	1997	1998	1999	2000
U. K					
Internet users	2400000	4310000	8000000	1.25E+07	1.80E+07
		79.58	85.61	56.25	44
Ghana					
Internet users	1,000	5,000	6,000	20,000	30,000
		400.00	20.00	233.33	50.00

*The percentages were computed as follows for each year:

$$= ((1997-1996)/1997 * 100)$$

** All Ghanaian data is from International Telecommunications Union and all U.K. data is from World Development Indicators

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