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**Communication Technology, Gender and Development in  
Malawi**

**Grace Kaimila-Kanjo**

**A Thesis  
in  
The Department  
of  
Communication Studies**

**Presented in Partial Fulfillment of the Requirements  
for the Degree of Master of Arts (Media Studies)  
Concordia University  
Montréal, Québec, Canada**

**October, 1992**

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## **ABSTRACT**

### **Communication Technology, Gender and Development in Malawi.**

**Grace Kaimila-Kanjo**

This study gives an alternative view regarding the alienation of African women from technology.

Proceeding with a careful analysis of development communication theories, both old and newer theories are seen as inadequate in clarifying the patterns of Third World development because they do not consider gender as a necessary variable in the development process. Present feminist theories of technology, particularly those in the Women in Development school (WID), are also viewed as inadequate in explaining the alienation of African women from technology, as they mainly point to economic and legal factors.

This study posits that the process of technology transfer has to be considered in the context of the socio-cultural base of African societies, especially in relation to the sexual division of labour. Using Malawi as a case study, the study demonstrates that the main cause of African women's alienation from technology goes beyond mere economic and legal factors. African women's gender-roles confine them to routine, mostly unskilled chores. When advanced technologies are imported, the women are not prepared for the jobs generated by the new technologies, and do not have the chance to

even use them. Thus the benefits of using new technologies are accrued almost exclusively by men.

If development efforts are to benefit all (or at least) the majority of the people, then a transformation of gender roles is necessary.

## **ACKNOWLEDGEMENTS**

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should point out, however, that all the inaccuracies, errors in perception and unorthodox views are entirely my responsibility

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me stay in Canada for two years and study towards a Master's degree.

GRACE KAIMILA-KANJO



## **DEDICATION**

This work is dedicated, with loving memory, to my late brother Sam, who taught me to always aim high. Too bad you could not live long enough to see the achievement of your baby sister. Rest in peace.

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## INTRODUCTION

### PURPOSE AND PLAN OF THE STUDY

This study focuses on women, communications technology and development in Malawi. Over the past 15 years, a lot of effort has been made by development planners to give women, especially rural women, in the Third World access to technology. This has been the result of the recognition by later development planners that in the Third World, agriculture, health and nutrition are largely the responsibility of women. It was believed that successful technology transfer in these fields would empower women and free them from the drudgery of their toil. Thus there was massive transfer of technology to women in Third World countries. There was also an increase in the development of the so called "appropriate technology", mostly improved technologies made from indigenous materials. (Ahmed, 1985)

Over the last decade, a lot has been written about the impact of technology on African women. Scholars like Ahmed (1985); Carr (1985); Ventura-Dias (1985); Date-Bah (1985) and Stamp (1989) have documented how the so called "appropriate technology" campaigns have mostly benefited men and led to the marginalization of women. A number of generalizations, often quite sweeping, have been made and conclusions drawn under rather simplistic assumptions based on narrow analyses. Most of these studies have focussed on specific technologies and specific women, and concluded that changes in technology that accompany "modernization", have for the most part, led to a female concentration in domestic and non-

market roles and in labour-intensive activities. While this is by all means true, the reasons for why this has occurred and what policy measures need to be adopted, have been narrowly drawn. Most of these studies have focussed on rural women, agricultural technologies and technologies for rural development. They have repeatedly established that men take over responsibility for women's tasks as soon as they are mechanised or when they are transformed from a subsistence into a market production. In the same vein, these studies have concluded that technological change leads women to harder work for longer hours with less appropriation of the economic returns to their own labour. Not much diagnosis is offered on the causes of such a trend, and certainly, such broad generalizations would not apply to all technologies and every segment of women's work. Consequently, they have mainly pointed at economic and legal factors in African societies as the main cause of the marginalization of women as a result of technological innovation in agriculture and rural development. All this has been based on an unacknowledged assumption that the deprivation of women is merely an incidence of membership of a poor household (equating rural with poor) and not as a consequence of the deprivation of women in the socio-cultural processes which determine the distribution of goods in the household whether poor or otherwise.

I maintain that the problem of African women and technology goes beyond mere economics and legal aspects. While a consideration of these factors is very important, the root of the problem lies in the whole cultural structure of African societies and the fact that most

of the technologies used are not indigenous. It must be pointed out that even where some women are wealthy enough to afford technologies and there are no legal constraints on the use of the technologies by women, women still have not benefitted from technological innovation in most parts of Africa. Studies on technology and women in Africa have overlooked the real problem : the sexual division of labour in African societies. By concentrating on rural women and the legal and economic problems that they face, such studies have ignored poor urban women living on the fringes of city slums and indeed even the wealthier urban women, who are themselves not in any better position than their rural sisters in as far as technology is concerned. Africa has been constructed as a homogeneous rural society and generalizations have been made from mostly the rural population. While it is very true that most of Africa's population is rural, it is important to note that African societies are very diverse. It is important to consider also that segment of the African population which is urban, a population which must also deal with technology, which is foreign. A comparison of the patterns of technological use between the rural and urban populations would enable us to make better conclusions as to whether the main problem is economic or legal or something else.

Studies have maintained that women, both in traditional and modern social structures, have always been the victims of innovation. But, women in Africa, as in most parts of the Third World, face a double burden. The fact that most technologies are developed in western countries means that they have been developed

according to the socio-cultural conditions of these societies. People there have had time to see them develop and adjust to them accordingly. When these technologies are transferred to Africa, or indeed to any Third World country, they must be made to co-exist with traditional socio-cultural structures which in most cases are very different from those in the countries from where the technologies originate. This necessitates quick training (crash courses) and a change in some of the socio-cultural bases of the recipient societies. This is where African women become alienated. Because of cultural norms regarding the sexual division of labour, anything new coming to African societies must pass through the hands of men, who should pass it to their dependents (women and children). Meanwhile, women are being made to shoulder the work that was hitherto done by men, as men spend time being trained and familiarizing themselves with the new technology. When the men master the techniques of the new innovation, they appropriate the innovation, passing it to women only when it does not work to their advantage. In the long run, men's former non-mechanized duties are left to the women.

It is a well established fact that Third World women have the least access to basic needs such as food, shelter, health and education, both within and outside their families. This is because the cultural norms of most Third World societies require women to think about the men in their lives first before they think about themselves. (Ventura-Dias, 1985) Women's work remains primarily invisible permitting little social recognition. This is why they are the first

to be thrown out of jobs and social services when hard times hit. As Ahmed (1985) observes, the displacement is even more acute if the labour force is squeezed as a result of more advanced technologies which can support a higher rate of return to labour. Women have not been prepared for these sectors. In fact, the only sectors of the economy in which women remain a dominant section of the labour force are those which demand low skills and repetitive functions, and which generate low returns because this is what the socio-cultural norms deem women's work.

African women have been subordinated to men in all social formations through all stages of history so much so that the subordination has almost become internalized in the norms of behaviour observed by and towards men and women. Surprisingly, a reworking of these balances often leads to resistance from women themselves. Moreover, women belong to different classes and hence often have different and contradictory interests. In most cases, this is because women in lower classes do not realize that subordination leads to their oppression. It is important, however, to consider women as one group, all of whom are subjected to subordination based on gender regardless of the class they belong to.

To this awareness, my study focuses on Malawian women as one group. Implicit in the mandate of the study is an understanding that technological change is a social process and that to understand the patterns of technological use among Malawian women, one needs to look at the whole cultural structure and the gender division of



labour in Malawian society. Each element of technological innovation that has been introduced, whether transferred from the Western technology complex or designed for the special needs of Third World communities, carries with it assumptions regarding the proper social organization for its use. It comes to a new society with different culture. Social structures, like kinship and the sexual division of labour, have reconfigured themselves to the requirements of the technology, thereby working to the advantage of men, who by virtue of their superior position in society determine exactly how social structures are to reconfigure.

The study has two necessary parameters. The first one is geographic. While the study looks at theories about women in Development in the whole of the Third World, the actual analysis concentrates on Malawi, a small land-locked country in the South Eastern Part of Africa. This has been necessary both to limit the amount of material reviewed, and also because I am most familiar with Malawi. The second parameter excludes consideration of the impact of all technology in general on rural women. Agricultural and rural development technologies have received considerable attention from researchers whereas communication and information technologies have not been considered. Yet, in this so called "information age", it is important to consider how the freight of communications and information technologies to the Third World is affecting women in the recipient communities. Studying communication and information technologies also enables me to study technologies that cut across class. The study does not

primarily concern itself with the impact of communications technologies on women. Exploration of this issue is beyond the scope of this study. This study, focussing on communication and information technology draws attention to the Malawian gender relations and the sexual division of labour and the implications on women's use and access to communication and information technologies. In the study, communication technology will be used as an umbrella term referring to all aspects of technical use, ranging from the hardware (the machines themselves); the software (computer programs, messages coming from the media) and the institutions where the machines are used (the broadcasting station, the office, the home, the school, university, hospital etc.)

## **Methodology and Design**

The research approach used for this study is the one that development scholars call 'participatory research'. Participatory research is an alternative social research approach in the context of development, whose central element is participation. As Sarvaes (1985 : 7) puts it, "it is an active process whereby the expected beneficiaries of research are the main actors in the entire research, with the researcher playing a facilitator's role." In participatory research, the researcher is consciously committed to the cause of the community involved in the research. This challenges the principle of scientific neutrality and rejects the position of the scientist as a social engineer. This is why this study is not very preoccupied with statistical data although these are used where necessary. Participatory research is a problem solving approach.

The objective is to uncover the causes of community problems and mobilize the creative and human potential to solve social problems by transforming the conditions underlying the problems. The major asset of participatory research as Sarvaes (1985) observes, is its potential for the creation of knowledge. As a Malawian woman myself, I am very committed to analysing gender relations in Malawi to formulate recommendations for trying and eradicate gender subordination. It is my belief that this study will create knowledge that will be used by policy makers, Malawian men and women themselves in trying to change some of their attitudes towards women and sex-roles.

## **Background and Theory**

Human ability to transform nature has in the past 200 years or so produced great wonders and improved wealth for humankind. At the same time, it has helped to push the world society into a situation where economic inequality and exploitation of people by people are the order of the day. Technology has enabled people to perform tasks with unprecedented efficiency and speed. Unfortunately, although all societies of the globe have been endowed with the ability of technical inventions, some societies have developed far more sophisticated technical infrastructures than others. With efficiency and speed that technology promises, less industrialized societies have been forced to import sophisticated technologies from industrialized societies in the hope that this will help find a quicker route to development.

In most less industrialized countries, technology has been imported deliberately as part of a national policy for economic development following the modernization paradigm of development. In fact, in some developing countries, technology, especially communications technology, came free of charge as part of the aid package from colonizing powers to their former colonies on the eve of independence. These technological gadgets, often times introduced randomly, are aimed at affecting rapid change in the shortest time possible. President Julius Nyerere of Tanzania once remarked, "While they walk, we must run" clearly indicating that African societies must find quicker roots to development so as to catch up with western countries. If African societies 'run' and develop their own indigenous technologies while developed countries 'walk', maybe, the catching up would take place. The problem, however, is that African countries run by using foreign 'legs'. Massive transfer of technology to the Third World has often been accompanied by misuse, misallocation, or misunderstanding in the recipient countries because too much is expected from technology than the technology can offer. In most cases, the recipient societies are not very prepared for the resultant social transformation. (Stamp,1989) In particular, imported technology has generated negative consequences for women, children and communities - nowhere more so than in Africa.

But why is this the case? The issue has been debated in various quarters ranging from conferences, publications, special women's

studies and new organizations emerging from the UN Women's Year in 1975 and the UN decade for Women (1975-1985). To answer this question, we must get past blaming either parties (exporters and importers of technology) and consider Wajcman's (1990) idea that technology is a social construct, the product of a particular society's history. Technology is the result of new forces of production in a society that dictate a certain way of social organization. At the same time, technology generates new forces of production and new social relations. We can not expect technology to lead to development without paying attention to the forces of production and social relations that are created by it. (Stamp,1989; Wajcman,1990)

Development is necessarily an evaluative or normative concept, which refers not simply to change across time, but moreover to change that brings about improvements of some sort. Taken in this sense, development is almost synonymous with progress, which refers to directional or goal-directed change. But the direction of this change has generated many debates in various quarters. Questions like, what is the direction of the change and what improvements are needed and for whom ? have often been asked.

According to Charlton (1984) and Dissanayake (1985) the direction of developmental change must necessarily lead to greater human ability to influence and control the natural and social environment. In other words, human beings can no longer be at the mercy of forces external to themselves, they must acquire some power over events.

For this empowerment to take place, people must be aware of their choices so as to be able to probe deeply into their lives. Empowerment in turn implies education and training. Unfortunately, access to education and training opportunities is not open to women on an equal basis with men in any society. In developing countries, the case is even more acute.

Most of the earliest literature on Third World women is grounded in the liberal modernization approach to development, which sees development as a linear process whereby the transfer of western technology, institutions and attitudes to "underdeveloped" societies would solve the economic and social problems of these societies. This perspective assumes that modernization benefits women, as well as men and that Third World women face the same problems, i.e. technological and institutional backwardness and poverty. As Parpart (1989) puts it, liberal theory sees women and development as part of an overall process of modernization -- technology, the movement from a subsistence to a cash economy, and the development of complex organizations that increase the need for labour mobility. Any differences between male and female absorption into this process are seen as a failure of diffusion, not as a failure of the model itself.

Third World scholars starting with Esther Boserup in 1970 have challenged these assumptions. Boserup proved that most development projects in the Third World hurt rather than helped women in the Third World. Technology and training, Boserup

observed, benefited men and marginalized women. Boserup called for the reevaluation of development projects and the deliberate integration of women into the process of development. This approach, known as Women in Development (WID), gradually began to make inroads into the development literature and most donor agencies funding development projects in the Third World have incorporated women in development as a matter of policy (Stamp, 1988; Maguire, 1984)

Upon close examination, one can see that WID's acceptability to western development donors is rooted in its acceptance of the basic assumptions of the modernization approach to development. It avoids challenging western sexual stereotypes, particularly the sexual division of labour with its emphasis on women's domestic role. WID calls for new productive roles for women which require neither the reorganization of domestic labour or a reconsideration of women's supposedly 'natural' responsibility for reproductive labour. Moreover, western feminist challenges to the sexual division of labour were dismissed by development specialists as irrelevant to the problems of Third World women, who they argued should remain the preserve of development specialists who understood the special and unique concerns of women and men in the developing world. (Papenek, 1986)

Another group of writers, marxist feminists, emerged to challenge the WID position. Marxist feminists focus on women's economic roles and on class and international inequalities. But like WID scholars, marxist feminists ignore women's domestic roles. Like

other marxist approaches, the approach emphasizes class. But women belong to different classes even in developed societies. As Trihn Mihn Ha (1988) puts it "in every Third World, there is a first world, and in every first world, there is a third world". This means that it is difficult to discuss women as one class of people as some of them enjoy higher status as others, some of them are even much better off than other men in as far as class is concerned, yet they are still subordinated on the basis of gender. This discrepancy gave rise to yet another approach to women and development, the socialist approach.

Socialist feminists, like Sen and Grown (1985) scrutinize the intersection of household and public structures to discover why women are systematically discriminated against (Rathberger, 1989). Thus, the solution to women's oppression lies both on their full participation in non-home productions under conditions of equality between the sexes, and the transformation of household relations and gender asymmetries so that relations of dominance and subordination between the sexes are eliminated. In this study, I beg to concur with the socialist feminists in saying that neither technology nor more earning power are going to liberate women from oppression as liberal or marxist feminists assume. No form of integration is going to alleviate the suffering of the mass of Third World women without the necessary change in social attitudes and a reorganization of the sexual division of labour.



It is my belief that women's alienation from communication and information technologies can not be eradicated without due consideration to the cultural norms of Malawian society regarding the sexual division of labour. This study is directed at why and how communication technology has worked to the disadvantage of women in Malawi and what might be done to make technology benefit women on an equal basis with men. This study calls for a reformulation of the socio-cultural processes of Malawian society, the aim being to initiate self knowledge, instil self-confidence and arouse a social consciousness among the disadvantaged half of Malawian population whom development just seems to pass by.

Essentially, the study pleads, over and above any political imperatives, for a New Communication Order at the household, local and national levels between the sexes. I sincerely believe that information is an agent for change. Information results in learning, in knowing one's options and in determining one's course of action. This entails empowering women with the means to communicate and have access to information on an equal basis with men and this can be done only if there is a revision in the cultural norms about masculine and feminine work.

### **Outline of the Study**

The literature on women and development in Africa makes it abundantly clear that an understanding of national and international political economy is necessary to explain the processes working to disadvantage women and undermine development. The link between

the international division of labour, international markets, commodity production and male control of cash crops, with its concomitant negative effects on the political and economic participation of women, has been documented in many studies. The first two chapters chart the development of the relevant fields of knowledge which point to the different constructions of development, technology and gender.

The third chapter describes gender relations in Malawi, the sexual division of labour and how this affects women's use of and access to communication technology. An analysis of data indicates that women lag far behind men in both use and access to technologies. Because of several constraints based in the socio-cultural norms of Malawian society, women are alienated from technology. In the same vein, chapter four speculates on the trends for use of new communication technologies by Malawian women in the 21st century. It is feared that if the present socio-cultural norms do not change and training, money and time continue to be dominated by men, then women will be pushed further and further away from communication technologies as these become more and more advanced. What then becomes of development if one half of the population does not have access to information resources?

Chapter 5 is the conclusion of this study. It tries to point at some of the policy options that are conducive to achieving the objectives of a fuller human development through the availability of information and the means of its communication to all members of the society.

Although the conclusions drawn are specific to Malawi, it is my hope that these could benefit other African countries, especially those south of the Sahara, who share socio-political problems with Malawi.

# CHAPTER 1

## CONCEPTUAL FRAMEWORKS

### 1- Conceptualizing Development

Development is rather difficult to define. It is a very complex concept which embraces all aspects of human life. Economists are much more explicit in their use of the term since they attach quantitative measures to it. To them, it is used to refer to increases in terms of the income, consumption or production etc. For the purpose of this paper, I will adopt Wimal Dissanayake's qualitative definition of development. He defines development as:

the process of social change which has as its goal, the improvement of the quality of life of all or the majority of the people without doing violence to the natural and cultural environment in which they exist and which involves the generality of the people as closely as possible in this enterprise. (Dissanayake, 1985 : 20)

This is one of the new definitions of development which attempts to redress the value-laden and rather ethnocentric definitions that characterized development theory in earlier times.

To understand development theory, one must look at the historical context of the intellectual and political climate that led to the introduction of the field itself. The use of the term 'development' to refer to institutional and individual changes in human systems was a

post-World War II phenomenon. During this period, colonialism was being abolished and a majority of the colonial countries were becoming independent. Development therefore became an urgent preoccupation. The concept focussed on economic change and was synonymous with economic growth, modernization, commercialisation of agriculture, democracy, industrialization, urbanization, westernization and a pattern of transformation similar to the one that western Europe underwent in the industrial revolution. (Mowlana and Wilson, 1989)

Many development theorists in the 1950s drew upon Darwin's theory of evolution, applying it to human systems. It was assumed that all societies in the world would evolve from one stage to another : Third World countries were placed at the lowest stage of that evolution process. (Hedebro, 1982) Thus, if Third World countries followed the path of the industrial process that developed countries had undergone during the industrial revolution, they would catch up and reach the stage that developed countries were at. This paradigm of development emphasized on investing in the 'modern' sector (industrial, urban, commercial) and believed that the gains made in this sector would eventually 'trickle down' to groups in the traditional sector (rural subsistent). (Schramm, 1964) Hence it was referred to as the 'modernization' theory.

It is important to understand the political climate that led to this kind of thinking. As Valdivia (1988) points out, modernization theory arose out of the American academy during the post-second

world war era. Following World War II, the U.S. arose as the undisputed world power, and the feeling of victorious prosperity spread to all quarters of American society including the academy. Coupled with the general positivistic nature of American social science, the post-second world war euphoria proved to be a very ideal situation for theories of society and social change that took the industrialized Western democracies as the ideal pinnacle of 'development'. American scholars looked at 'successful' developed democracies, especially the U.S. and U.K. and analysed the path taken by those countries to their then-present state. It was observed that there was a causal chain of events which led to their 'development' : Modernizing institutions led to modernized individuals who led to the creation of modern institutions which in turn create economic growth, the goal of development. (Rostow, 1955) This economic growth was (and it still tends to be) measured in terms of GNP.

Because the path taken toward development by the democratic western countries was often similar, there was a tendency in the modernization approach to generalize this process to the entire world, regardless of the social-cultural setting of the other countries. W.W. Rostow's (1955) The Stages of economic Growth: A Non-communist Manifesto is a good example of the thinking of the time. Defining development as mechanistic, inevitable and democratic, his work suggested that if any countries did not embody democratic values, they would be stuck somewhere in the development process. It is clear that in this conceptualization, development theory was an ideological vehicle, aimed at trying to

contain communism. As such, the approach was characterized by endogenism and ethnocentrism.

Putting the theory into practice, many governmental and private donor agencies in the western world, especially the U.S., devoted a lot of economic and human resources to the task of 'modernizing the rest of the world'. Particularly in Africa, development projects were launched which emphasized economic growth, industrialization, urbanization, and commercialisation of agriculture with various international donor agencies providing the funding. This aid was, of course, not apolitical; it was clearly tied to democracy and offering trading partnership with the donor countries. The aid was usually given on political, strategic and economic criteria and not necessarily on need-based criteria. (Mowlana, 1979)

By the mid-1970s however, it had become clear that the enormous aid packages did very little in alleviating the poverty of the Third World countries. (Rogers, 1976) Modernization had failed to deliver the goods. Although positive changes could be noticed in terms of GNP and international trade, several new and vexing problems had been spawned in the process. It became obvious that there was no link between growth in GNP and the conditions of living of the majority of the population. Socio-economic gaps between the rich and the poor tended to increase instead of decreasing; urban congestion, unemployment, famine and starvation prevailed. Furthermore, socio-economic gaps between the developed countries

and the Third World countries increased and a situation of dependency was created. The industrialized countries controlled 'the rules of the game' of the development process and the relationship was that of dominance. And of course, the decided majority of literature on development originated from the Western countries.

Given this context, scholars and development practitioners in the Third World advanced two major propositions regarding development and imperialism. The first was the notion of neo-colonialism which claimed that the developing countries and former colonial territories were exploited by unequal trade and political relationships. The second was rooted in the dependency school of thought advanced by Latin American scholars and supported by their critical North American counterparts, who argued that development and underdevelopment were interrelated and continuous processes - two sides of the same coin. (Mowlana and Wilson, 1989) This dependency theory blamed the Third World's underdevelopment on the unfair relationship between the developed and Third World countries, which resulted in the development of western nations and the subsequent underdevelopment of the Third World.

Despite the enthusiasm expressed by the theorists, the advocates and the planners of the orthodox theories of development, it was clear by the 1970s that the theories as well as the strategies had either failed to meet their desired goals, or in the case of successful implementations, were becoming dysfunctional, creating



sharp criticism both within and without the system. This was manifested through a continuous stream of criticism, rebellion, protest, revolution, self-evaluation and a search for alternatives which reached its peak in the late 1970s.

During the last two decades, as Mowlana and Wilson (1989) note, contributions to a new meaning of development have come from diverse and varied schools of thought, geographical areas and personalities. They include the islamic fundamentalists, the Latin American discourse of such writers as Paulo Freire and Gustavo Gutierrez, and the African challenge of Frantz Fanon, Julius Nyerere, and several others. The new notion of development not only emphasizes traditional and cultural values, but also self-reliance, 'grass-root' initiatives, and above all, an ideology of its own, independent from traditional liberalism and Marxism.

## **2 - Conceptualizing Communication**

Communication, like development, is complex and therefore not easy to define. It is a crucial and pervasive part of society's life support systems and the opportunities of applying improved communication both to stimulate development and to mitigate problems appear substantial. Most scholars dealing with communication and development have not attempted to define what they mean by the term 'communication'. In the context of a paper of this nature, it is important to note that communication is a very integral part of development. There can be no development without communication since human interaction is always the agent and consequence of

information exchange, however rudimentary the structure or distribution process is.

Scholars in Communication Studies have not come up with a single, universally acceptable definition of communication. Different scholars have emphasized different dimensions of communication in their work depending on the field of communication they specialize in (organizational, intercultural, business, development, mass communication etc). From the perspective of development however, it has been the technological and quantitative dimensions of communication that have been emphasized from both scholars and policy-makers over the past few decades. The assumption is that communication is something that one does rather than something that occurs by itself. Thus, communication is defined as a means or process of transmitting ideas or information. (Mowlana and Wilson, 1989) Emphasis is on the source of the information and the means of transmitting it, usually technology.

Challenging this somehow orthodox view of communication, there has been a shift in the emphasis in the analysis of communication systems from an exclusive concern with the source and content of the messages, to the analysis of the message distribution process. Communication is thus defined as a social interaction by means of messages, which are both human and technological. (Mowlana and Wilson, 1989)

In the dominant paradigm of development, communication was seen as the 'prime mover', the means of transmitting information and ideas (mostly about innovation) from a modernizing sector to the rest of the population to motivate industrialization and related values. (Schramm, 1964) The debate of the last two decades, however, has made it clear that communication, although vital, is a much more complex component of 'development', than it was originally thought to be, and that it can not be removed from its social and cultural contexts. The notion of development itself is still a somewhat unsettled concept that continues to have a number of less universal and more culture-bound values attached to it.

### **3 - Development Communication**

Development communication arose as a product of the modernization. Among the modernizing institutions that were talked about in the modernization theory of development were factories, schools and the mass media. The mass media were seen to be more important than the other two as a liberating force that would help pull countries out of their backwardness, especially through instilling modern values in traditional individuals. This was largely reflected in what is called the 'dominant' or 'old' paradigm of development communication.

#### **a - The Dominant Paradigm of Development Communication**

Scholars within communications incorporated the modernization perspective in their studies. The popularity and diversity of the use of communication in developmental activities took root in the late

1950s and early 1960s with the seminal works of Daniel Lerner (1958), Wilbur Schramm (1960), Lucien Pye, David McLelland and Itiel de Sola Pool and others. Their writings had a profound influence achieving the recognition of their approach to development which emphasized the need for capital-intensive technology of communication and centralized planning. The mass media were seen as very important in carrying messages from centralized authority to the rest of the population. It was believed that economic and social progress in the Third World depended on knowledge and information. The role of communication was therefore central to this approach. It was to "disseminate new knowledge, impart new skills, introduce new values, raise people's aspirations, forge a sense of nationhood which would transcend parochial boundaries, reassure people in a state of transition..." (Dissanayake, 1988:20) Information technology, especially the mass media, were believed to have the capacity to speed development because of their capabilities to spread knowledge over a large area to a large number of people. The mass media were expected to disseminate new information to the modernizing elites in the developing countries who in turn would pass the messages to the more backward population, the rural population and the urban poor. It was felt that through communication (the mass media) modernization would 'trickle down even to the lowest strata of the rural and urban poor. (Dissanayake, 1985)

As a result of the influence of this conceptualizing the modernizing paradigm, aid packages that found their way to countries of the

Third World included technologies of mass communication, especially broadcasting technologies. Private organizations and individual governments and intergovernmental agencies such as UNESCO helped in the installation of broadcasting technologies in the Third World. Although it is fair to say that the mass media have the potential for increased participation in the development process, the specific socio-historical context under which they were introduced in the Third World did not make them very useful. The technology was being pressed on the Third World countries in an atmosphere of urgency, not necessarily with the aim of helping the Third World escape poverty and starvation, but to assure the implantation of western development models; of production, administration, consumption and education, thereby making the Third World countries western spheres of influence and trade partners. Economic and political domination was apparently the goal.

The result of this emphasis on technology was that Third World countries did not benefit from the mass media in any meaningful way. To begin with, it is useful to point out that neither technology nor the practices of organization and production that surround it are neutral. Technology acquisition means the acquisition of the institutions that go with that technology. Thus, far from being a set of mere technical practices which Third World countries must acquire in order to catch up with the developed countries, the transplantation of communication technologies has been accompanied by an ideology i.e. cultural influence has transferred

along with the transfer of technology. For example, as Katz and Wedell (1977) point out, broadcasting technology has come with pre-packaged program formats, program contents and socio-cultural institutions of the developed countries.

The technology is of course, developed in the developed countries and finds its way to the Third World through the process of technology transfer. This technology is usually made to the specification of the conditions of the developed countries. When it is transferred to the developing countries, no adaptations are made for Third World conditions. Thus, when technologies are transferred, they have the task of having to co-exist with pre-existing surroundings in the recipient countries which are totally different from those of the countries from where the technology originates and for which they were designed. As a result, it is very difficult to accommodate the new technologies and their institutions to the environment of the Third World. Technology acquisition therefore entails a restructuring of the indigenous institutions to resemble those of the industrialized countries. (Katz and Wedell, 1977)

The restructuring of indigenous institutions to accommodate the imported ones has profound implications which do not work in the interests of the Third World countries. The profit-orientation of most broadcasting institutions due to their high start-up and operating costs tend to reflect a negative correlation in relation to the Third World need for the spread of basic information and education among a largely poor population. Under these conditions,

the financing that the target audience can provide will rarely be enough to cover operating costs, let alone purchase the technology or derive any margin of profits. At the same time, while certain forms of print media are relatively cheap to produce, the low levels of literacy among the poor sectors of the Third World (who are unfortunately the majority) makes print media less than ideal vehicles for improvement of the present socio-economic condition. How can developing countries be made to resemble developed countries when resources are completely different?

#### **b - The Alternative Paradigm**

As a consequence of the failure of the dominant paradigm, communication scholars and planners began to think of alternative strategies which would remedy some of the deficiencies associated with Third World development. Everett Rogers (1976) who initially advocated the modernization approach, came to look critically at the earlier approach and propounded an alternative one.

The criticism of communication in the old paradigm centred around the content of the mass media, the need for socio-economic changes and the shortcomings of the classical diffusion-of-innovations point of view. Mass communications was understood as playing a very important role in development, especially in conveying informative messages from the government to the public in a downward hierarchical mode. The old paradigm placed great emphasis on centralized control of the mass media as it did on centralized planning. The centres were the urban capital cities and through a

structure of bureaucracies and the technologies of mass communication, it was believed that the messages would be extended to the rural hinterlands of agricultural societies. This, clearly entailed a pre-dominantly one-way flow of information from the the government to the people.

Indeed in most developing countries, the modernizing bureaucracies, with their highly centralized, vertical communication patterns were firmly in place, and participation of poor people was extremely limited. Transistor radios were the mass media of the 1960s and they had penetrated every village. But the problem was that most people in the villages were too poor to afford radio receiving sets and even those who could afford them, found themselves unable to maintain use of the sets due to scarcity and/or high costs of battery cells. As such, Everett Rogers' (1976) new paradigm tried to solve some of these problems. His approach underlined the importance of equality in distribution of information; socio-economic benefits, popular participation in development planning , self-reliance and independence in decision making, and recognition of the potential of local resources. Development was thus re-defined as:

a widely participatory process of social change in a society intended to bring both social and material advancement, including greater equality, freedom, and other valued qualities for the majority of the people their gaining control of their environment. (Rogers, 1976 : 28)



The method of communication in the old paradigm meant an imposition of social, economic and communication structure on the people which resulted in the alienation of the people from their traditional and indigenous potentials. Development projects were elite oriented and obviously did not take into account socio-cultural factors.

With the re-definition of development, the role of communication within that new definition also had to change. Newer conceptualizations recognized that the role of communication in facilitating development was often indirect and only contributory, rather than direct and powerful. The old paradigm had overestimated the role of the information carried through the various media. Minimal consideration if any at all was given to other factors, such as social structure and culture; and to the interaction between these conditions and communication. For instance, the most important factors in development are the structural organization of society: the political, social and economic conditions that set limits within which change can occur. (Dissanayake, 1985) Yet, these were not considered.

With this recognition, there was a shift from the old linear and mechanistic one-way model of communication to a more process-oriented and two-way model of communication. Development was seen not just in terms of economic growth, but also in terms of such issues as the quality of life, the need to combine modern and traditional media of communication and the use of appropriate

technology so that all sectors of the population could participate. (Dissanayake, 1985) The newer approach contains some valuable insights and represents a definite step in the right direction; but it has pitfalls as well. Despite their many differences, both these approaches to communication and development can be contained within the same liberal/ democratic tradition of thought. While Rogers critiques the one-way nature of communication in the dominant paradigm, he does not challenge the nature of the messages being communicated. The messages remain those about western ideas of innovation. The newer approach is thus as ethnocentric and technocratic as the earlier one.

#### **c - The Marxist Paradigm.**

There are other critics who have seen in the alternative model of development, only an extension of modernizing emphasis of the old paradigm. These critics originate primarily from within Third World countries, particularly Latin America, although they have few supporters from the U.S. academy. In most cases they represent the new generation of communication specialists who have challenged the dominant traditional paradigms of both communication and development. Their approach is sometimes called the Third World approach. The Third World approach differs significantly from the first two. Advocates of this method stress the fact that it is futile to discuss communication and development in an essentially national setting without paying attention to the trajectory of the historical evolution of each society and the manner in which the world economic system conditions and regulates its development. The

writings of scholars like Herbert Schiller, Kaarle Nordenstreng, Dallas Symthe, Cees Hamelink, Tapio Varis, Louis Beltran and Armand Mattelart reflect the essential thinking characteristic of this orientation.

Nordenstreng and Schiller argue that the idea of a relatively isolated nation developing in accordance with the conditions determined predominantly within the society is not consistent with known facts. Instead they call attention to the global structure in which it is precisely the international social, political and economic system that decisively determines the course of development within the sphere of each nation. They maintain that it is a myth to think of development as the interaction of an international system of sovereign states operating without a basic structure which determines the relations between countries.

The seminal writings of a number of scholars from the Third World also gained widespread attention to this approach. Among them are Gunder-Frank, Don Santos, Galtung, Kaufman, Bertrand, and Barnett Brown. These scholars hold the conviction that development and underdevelopment are only two facets of the same process and that the true nature of one can not be understood in isolation from the other. These scholars are of the view that the factors which are responsible for the growth of the industrially-advanced countries should also be held accountable for the poverty in less-developed countries. Independence from the colonial powers did not change the dynamics of the situation, for the same kind of centre-periphery

relations still exist, only that forms of control are exercised in a subtler form. (Valdivia, 1988)

The primary role assigned to communication within this approach is that of education. In this approach, the teeming millions of poor living in developing countries need to be educated into a new awareness of their unfortunate situation. The vicious nature of the world system and the crippling dependency relations that exist have to be recognized and acted upon. The purpose for education in this context is to mobilise support for a structural re-arrangement of society. While the exponents of the first approach stressed the role of the mass media; and those of the second on a mix between mass media and interpersonal channels; advocates of the third approach stress the efficacy of interpersonal channels. The reasoning is that the mass media in the developing countries are caught up in the dependency relationship of the poorer countries to the richer ones, and are sometimes active supporters of it. Therefore to use them would be unwise and self-defeating. What is required is a strategy of communication that would help further the goals of independent action. In this view, mass media could be purposefully employed only after a structural transformation of society has taken place.

The combined attention of scholars from both South and North brought this issue to the fore front of international concern when the debate found its way to UNESCO, the cultural arm of the United Nations, as a call for a New World Information Order. (Stevenson, 1988) Third World countries complained that they were victims of a

global information order that was characterised by an unbalanced flow of information and communications technologies that favoured the affluent North at the expense of the South. Third World scholars argued that the mass media were not liberating since technology, knowledge of it, trained personnel, spare parts and even the content for the mass media originated and were controlled in the North.

UNESCO commissioned a number of studies to find out the extent to which the complaints from Third World countries were grounded in fact. A study by Tapio Varis in 1973 concluded that information primarily flowed from Western to non-Western countries and that issues of salience tended to be western-oriented and framed. This flow of information was meant to bring as many countries as possible to western ideology, not only for the purpose of containing communism, but also for economic purposes. The New World Information Order (NWIO) debate included Latin American, African, Asian, and Western voices, notably Canada. This proved to be the catalyst for the U.S.'s eventual withdrawal from UNESCO. (Stevenson, 1988)

Although UNESCO acknowledged the grievance as genuine, not much was done to help the Third Worlds reverse the trend. It was, of course, not possible to have a new information order without a new economic order. The old international economic order persisted. Because of this, some of the scholars within the dependency and imperialism school of thought, notably Cees Hamelink (1984), began to make pleas to Third World countries to adopt a policy of

'dissociation'. The notion of self-reliance is central to this approach. By self-reliance is meant

the dependence on the natural and human resources available in one's country, and the ability to define development problems, set goals, devise strategies and make decisions independently and in accordance with one's own social and cultural imperatives.  
(Tehrani, 1985)

Self-reliance is perceived as one way of minimizing, if not eliminating, the external political pressures and trade patterns that are associated with exploitation. Self-reliance is not synonymous with autarchy. Interdependence and international co-operation are also required. However, these will occur in accordance with a new set of rules that ensure a more symmetrical relationship between the developed and developing countries.

This view, like the others before it, has not gone unchallenged. It has been argued that this view meets the political and economic needs of those Third World elites that want to maintain power. While they advocate free and balanced information on the international level to be controlled by sovereign governments, most of them do not support free and balanced information within their borders. In fact much of the rhetoric about increased ownership and participation of the means of mass communications, appears to have been designed to secure power for the elites nationally. National voices have not necessarily changed the character of the messages

nor have they increased access to local grass-roots groups. (Tehrani, 1985; Valdivia, 1988)

A self-reliant approach to development can succeed only if there is participation by the people. One needs hardly mention the fact that in developing countries, the greatest resource for development is the people themselves. Change in living conditions of the mass of poor people has not been as forthcoming as one would have wished because of the highly centralized nature of the enterprise. People's experiences, their cumulative wisdom, their cultural ethos, their perception of problems and their solutions have rarely been considered in the calculus of development. It is concerning through remedying this deficiency that a newer breed of development thinkers is paying more and more attention to this dimension of development.

#### **d - The New Paradigm**

The fourth approach to communication and development that is currently gaining wide recognition is characterized by eclecticism, whereby scholars integrate theories and methods from different disciplines, hence it is sometimes called the 'Integrated approach'. This approach is critical of the earlier approaches for their fragmentary nature and their belief that bureaucratic and technocratic solutions would achieve development. Unlike earlier approaches, this does not adopt a techno-economic perspective, it seeks to pursue a more holistic line of thinking in which cultural and humanistic aspects are as important as techno-economic ones. This

approach urges a systems perspective in which attention is focussed on the functional relationships that exist between different components of any development program. In this approach, the village is seen as the focal point of development and hence all aspects pertaining to village life need due consideration by development communication planners. The creativity of the people and their will to development have to be tapped. Development is understood not as statistics, but in relation to actual human beings living in a specific socio-cultural environment. (Dissanayake, 1985) It is therefore, essential that their desires be consulted. Lehmann (1979) expounds development as a value system within which people are enabled to work for their basic human needs in a free and democratic society. In fact as Julius Nyerere notes, " the purpose of development is the greater freedom and well-being of the people." (Nyerere, 1974:28) As people consciously engage themselves in their own development, they acquire self-confidence in shaping their own future. "People can not be developed; they can only develop themselves.

The newest approach differs significantly from the others in its strong emphasis on the role of culture and people's own aspirations in the development process. Earlier theorists paid scant attention to this aspect. Without the knowledge of the culture of a society and the goals of the people in that society, it is almost impossible to bring about meaningful change and development, however well-intentioned the executors of the development plans may be. Within this approach, the role of communication is to strengthen shared



identities, common values, experiences and aspirations. Interpersonal and traditionally sanctioned channels of communication at the 'grass roots' level become the focus of development efforts. Foreign technologies of communication could be brought in only if they further this process, and they must essentially be accessible to all groups of the society.

There are different approaches to development communication, some of which have come to challenge their predecessors. More recently, these theories have met yet new challenge from feminist theory. Development theories have been criticized for their exclusion of women at both the levels of theory and practice. The goals of all these debates are to use communication to enhance development of both nations and individuals. However what is seen as inclusive in these theories excludes women. Women, who comprise more than half of the world's population, receive as little attention as they do resources. If newer development planners have realised that people need to develop themselves, then women too need to be given the chance to determine the course of their own development. Newer development approaches may claim that they take into account culture and people's aspirations, but really, 'people' here are men. Women continue to have ready-made decisions from the people in power and the men in their lives. If development is aimed at increasing the quality of life of all members of society, as Dissanayake's definition advocates, then women need to be included in theoretical approaches and practice. The next chapter

discusses the context and experience of Third World, particularly African women, in relation to development.

## **CHAPTER 2**

### **WOMEN IN DEVELOPMENT**

#### **FEMINIST THEORIES**

In recent years, there has been an out-pouring of feminist ideas that have explored gender-relations. From our current perspective, it is necessary to organize this vast amount of ideas in a way that is necessary to analyse African (and Malawian) gender relations and the implications this has on the use of communication technologies by women in Malawi.

In an endeavour of this kind, a useful starting point is to explore the development of feminist concerns and studies, so as to put our present study in context. Asoka Bandarage (1988) has reviewed the avalanche of writings on women in the Third World. She has examined the various feminist ideologies that are buried in those writings. Although feminist concerns have been in effect for a long time, feminist studies gathered momentum only in the early 1960s. But as Bandarage (1988) and Stamp (1989) point out, early feminist writing mostly came from white middle-class women who were educated. Women took the skills and knowledge gained from their liberal education in the 1960s and critiqued that education and its texts. This is why this feminism is sometimes called liberal feminism or western feminism. Liberal feminism believes in the inherent viability and goodness of the dominant politico-economic and ideological structures, namely, the capitalist system. While it recognizes the social inequalities and injustices within the status

quo, it sees them as mere aberrations that can gradually be rectified through legal procedures and attitudinal changes.

As Bandarage (1988 : 495) puts it, "liberal feminism sees the subordination of women in capitalist society as a deviation from the general norms of equality and justice for all individuals." It believes that sexual inequality can largely be corrected if women, now confined to the domestic sphere are integrated into the economic sphere as equals of men. (Friedan, 1963; Mill, 1970). Hence the emphasis of liberal feminists on legal measures such as the vote, the Equal Amendment in the USA, affirmative action and attitudinal change strategies such as assertive training and achievement motivation. (Valdivia, 1988) The tendency here is to count numbers of women against that of men. Equality means equal numbers.

Later feminists questioned this approach for many reasons. Among the most important was that quantitative methods count only what is there and fail to account for what is missing. In most cases, what is missing and the reasons for why it is missing are the most important. (Steeves, 1986; Valdivia, 1988) Additionally, feminists criticized the assumptions in this work that you only have to add numbers to the present system and make the number of women equal to that of men. Again, such feminism failed to acknowledge the fact that inequalities did not result just from unequal numbers, but from the whole social organization. By assuming that the existing system was valid, feminists were helping to exacerbate the very

system which generated the oppression of women in the first place. Larger structures, such as the economic, cultural and language systems all play a part in exacerbating sexist practices, and these needed due consideration. (Valdivia, 1988)

Another criticism of this stream of feminism was that it was ethnocentric. As Stamp points out, women writing at this time were mostly white, graduates, and married to well-off middle class men. As such their work was firmly grounded within a white middle-class experience. They thus committed the very mistakes that modernization scholars had just two decades earlier, assuming that their situation could be generalized not only across classes within their own country, but also across all cultures and nationalities. U.S. women thought they would represent every woman in the world and they therefore sought to transfer their feminist ideas to the Third World, chiding their Third World sisters for not being 'feminist' enough. It was this blind-spot which gave rise to another trend in feminist writing, the so called Women in International Development (WID)

WID was created through a group of Third World women who sought to challenge the ethnocentric nature of existing feminist theories. Beginning with Esther Boserup's (1970) study, women researchers came to question the male bias and ethnocentric nature of Western developmental agencies. This bias ranged from choice of topics and particular researchers to the recipients of aid projects and those used to inform agencies on needed aid. The writing clarified that in

terms of education, loans and 'technology', women in the Third World were actively discriminated against. Often, the work of donor agencies worsened the situation, especially among women who had initially occupied strong political and economic roles outside the family. Apparently, as Steeves (1985), puts it, Western male researchers could not understand the strange twist of things which they acted to 'correct'. WID scholars, who were mostly women, also questioned the target audience of projects and provided strong documentation about the strong role of women in the Third World and the need to include them as a crucial component in any development project. These writers were thus at the forefront advocating women's projects in the Third World, so as to bring them into the development process. (Steeves, 1988)

But as Valdivia points out, the only contribution that WID scholars made was to recognize the difference between Third World and Western women. Beyond this, they operated within the general development ideology: modernization. Their main pre-occupation was to 'develop' rural women and integrate them into the general development framework. They continued the trend of imposing western values of development on the rural women,, in areas like birth control, innovations in agriculture, nutrition, and child care. Like their Western sisters, they did not take into account structural organization of society as a determining factor in development, misunderstanding that for any of these programs to succeed, they had to be compatible with the indigenous culture of the women involved. And in a bid to improve rural women, they ignored Third

World urban women. In fact, even their target rural population was not very well served (as the case of Africa in the subsequent section will prove). They merely inserted rural Third World women into the modernization apparatus.

## **FEMINIST CRITIQUE OF TECHNOLOGY**

With feminist ideas penetrating every sphere, technology has not been spared. Over the last two decades, feminists have identified men's monopoly of technology as an important element of women's dependence on men. From campaigns in the early 1970s to train women in traditionally male skills to the women and computing courses of the 1980s, feminist groups and campaigns have attempted to break men's grip on technical expertise and to win greater autonomy and technical competence for women. With dramatic increases in technology, especially biotechnology, genetic engineering, and domestic technologies, women's bodies and work have become increasingly vulnerable to exploitation. (Wajcman, 1991) These and other political struggles around technology, and the difficulties they continue to unravel, have opened up a new exciting field in feminist scholarship: Gender and Technology.

To date however, most contributions have been of a somewhat specialized character, focussing mostly on biotechnology, office technology and domestic technology. A major concern of feminists in this matter has been the impact of technology on women's life, particularly on women's work. Central to this issue is the debate over whether technology is liberating women or whether it is

destructive and oppressive to women. A key issue here is whether the problem lies in men's domination of technology, or whether the technology is in some sense inherently patriarchal. Patriarchal technology being defined as that designed for men according to the masculine body and posture. (Wajcman, 1991) Women have worked to put gender relations in the frame of technology, highlighting the the differential effects of technological change on men and women. They have started with tracing the gendered nature of technology in history and moved further to examine the social factors that shape technological changes. Rather than looking only at the effects of technology on society, they have also considered the effects of society on technology. This section gives an overview of the feminist theories of technology.

Technology, as Wajcman (1991) suggests, is multi-dimensional. Firstly, technology is a form of knowledge. Technological apparatus is useless without the know-how to design, construct, use and repair it. That know-how often cannot be captured in words. It is visual, often tactile, rather than simply visual or mathematical. But it can also be systematized and taught, as in the various disciplines of engineering. Wajcman continues to say that technology also refers to what people do, as well as what they know. An object such as a microwave oven is a technology, rather than an arbitrary lump of matter, because it forms part of a set of human activities. A computer without programs and programmers is simply a piece of metal. Finally, at the most basic level, there is the 'hardware' dimension of technology which refers to physical objects, such as



the computer, TV, VCR, electric kettle etc. In practice, technologies cover all these three aspects which usually occur together. Thus the word technology refers to the hardware, the software and the culture surrounding the use of the particular artifacts. (Franklin,1986)

Feminists have decried the dearth of material dealing with women and technology given the enormous scholarship on the field of technology and society. Criticism has been directed at leading journals such as Technology and Culture which rarely mention gender. (Rothschild, 1983) Another area of concern to feminists is that the history of technology represents the prototype inventor as male. (Rothschild, ibid) As a result, an initial task of feminists has been to uncover and recover the women hidden in history, who have contributed to technological developments. (Wajcman, 1991) This approach is called the historical approach to women and technology.

### **THE HISTORICAL APPROACH**

In this approach, women's profound alienation from technology is accounted for in terms of the historical and cultural construction of technology as masculine. As Wajcman outlines, women historians have found that during the industrial revolution, women invented and/ or contributed to the invention of such crucial machines as the cotton gin, the sewing machine, the small electric motor, the reaper and the loom. This is documented in patent records of the period. These inventions were usually credited to the women's husbands in patent records because of the women's limited property rights. As

the industrial revolution advanced, the technologies invented by women were appropriated by men because of the need for capital. Women had none. English law did not permit women to own property. The effect of this, as Wajcman writes, was to virtually exclude women from participation in the world of the inventor-entrepreneur. At the same time, as Cowan (1979) notes, women were being denied access to education, including the theoretical grounding in mathematics and mechanics upon which so many of the innovations and inventions of the period were based.

Historical feminists also argue that to further comprehend this historical appropriation of technology by men, one needs to consider: (1) the traditional conception of technology, which readily defines technology in terms of male activities and, (2) the shift of the meaning of the word, technology, itself. Wajcman points out that the term 'technology' is itself subject to historical change, but different epoches and cultures had different names for what we now think of as technology. If technology is taken to mean 'innovations' in terms of tools, then women could be said to have been the first technologists. After all, women were the main gatherers, processors and storers of plant food from earliest human times onward. It is therefore logical that they should be the ones to have invented the tools and methods involved in this work. Feminists thus argue that if it were not for male bias in most technological research, the significance of these innovations would be acknowledged. But because of unequal opportunities in education between the sexes, most scholars of technology are men and it

follows that they define technology from a masculine point of view. (Hacker, 1989; Cowan, 1979)

Over the past decade however, feminists have shifted their focus from recovering and uncovering women lost in history, arguing that this is crying over spilt milk. They have begun to focus on the gendered nature of technology itself. Rather than asking how women could be equitably treated within and by a neutral technology, many feminists argue that western technology itself embodies patriarchal values. (Rothschild, 1983) Recent writers (Cockburn, 1983; 1985; Faulkner and Arnold, 1985; McNeil, 1987) have traced the gendered route of the development of western technology. These authors see women's exclusion from technology as a consequence of the gender division of labour and male domination of skilled trades that developed under capitalism. In fact, they argue that prior to the industrial revolution, women had more opportunity to acquire technical skills, and that capitalist technology has become more masculine than previous technologies.

As noted earlier, in the earliest phases of the industrial revolution, women were denied access to education and to property. This has lead authors to suggest that the rigid patterns of gender divisions which developed within the working class in the context of new industries laid the foundation for male dominance of technology. At this time, manufacturing moved from people's homes (and from women's hands) into factories, where it came to be associated with wage labour. Domestic 'tools' were replaced by machines, and on the

whole, men maintained the technical skills required to run these machines. Thus, they were in a position to maintain a monopoly over the new skills created by the introduction of machines. As such, women factory workers, usually worked in the unskilled, lowest paying positions. (Cockburn, 1985) This approach argues that this division of labour within the factory meant that the machinery was designed by men, with men in mind, by skilled male craftsmen. Thus industrial technology from its origin, reflects male power and domination.

These feminist writers maintain that this masculine culture of technology is fundamental to the way in which the gender division of labour is still being reproduced today. As Wajcman (1990) argues, by securing control of key technologies, men are denying women the practical experience upon which inventiveness depends. As has been noted earlier, technology is both knowledge and practice. Innovation is an imaginative process; but imagination lies largely in seeing ways in which existing devices can be improved, and in extending the scope of techniques successful in one area, into new areas. Thus those groups that are not in contact with existing technologies are denied the opportunity to participate in innovation.

Some feminists see the historical approach, useful though it may be in accounting for the gendered practice of technology, as just the starting point. They have undertaken empirical analyses of technology related to invention, development, stabilization, and diffusion of specific artifacts. (Cockburn, 1983, 1985; Mackenzie

and Wajcman, 1985; Hacker, 1985) This research within the Sociological approach suggests that technology is not simply the product of rational technical imperatives. Rather, political designs are embedded in the very design and selection of technology. Thus technology is as much a product of society as society is a product of technology. Rather than call it the sociological approach as Wajcman (1991) and other writers within this school call it, I will label this approach, marxist.

### **THE MARXIST APPROACH**

As Franklin (1984) points out, technologies result from a series of specific decisions made by particular groups of people in particular places, at particular times for their own particular purposes. As such, technologies bear the imprint of the people and the social context in which they were developed. Wajcman (1991 : 23) adds that "technological change is a process subject to struggles for control by different groups within society. As such, the outcomes depend primarily on the distribution of power and resources within society"

It is clear that the marxist approach has moved away from studying the individual inventor and from the notion that technological innovation is a result of some inner technical logic. Researchers stress the effects of social relations on technology that range from fostering or inhibiting particular technologies through influencing the choice between competing paths of technical development, to

affecting the precise design characteristics of particular artifacts.  
(Wajcman, 1991)

The implication of this for women is that their absence from positions of influence in technology may affect the way they use technology and the way it is used. Since preferences for particular technologies are shaped by a set of social arrangements that reflect men's power in the wider society. Because men have authority over technology, there is an obvious gender imbalance in the technologies developed. A change in the socio-economic structure of society is required if technology is to equally serve men and women.

### **Gender and Technology in Developement : An African Point of View**

Few feminist scholars have contributed to the critiques of development practices, much less to their technological orientation. As noted, development theorists have simplistically assumed that the export of communications and other technologies to the Third World will serve as a catalyst for economic growth and therefore development, an approach which perpetuates ethnocentrism and technocratism.

More recent scholarship on WID demonstrates that gender inequities have resulted from introducing technology in the Third World. Esther Boserup (1970) was the first one to point out that the introduction of western technologies and associated biases concerning men's and women's roles in the family and in society (as a result of

colonialism and post-colonial development) have undermined women's traditional areas of power and autonomy and have contributed to their economic marginalization. She maintains that in the pre-colonial era, women were more economically independent from men. There was communal ownership of land whereby land belonging to a household could be used by any member of that household. Women grew 'feminine' crops which they used to feed their families and trade at the market (usually through barter). As producers of food and products for their families, they had developed their own technologies that enabled them carry out their work effectively. Development projects, however, undermined this arrangement through land re-distribution and emphasis on cash crops. Land was given to the male head of the household for the purpose of records in national statistics. Technologies to enable mass production of cash crops were given to the men. Women were left landless and could no longer be the family's food producers and had no income of their own. The result was that women now had to depend on the men in their lives for support. Since the 1970s, other scholars have demonstrated that women have been disadvantaged by the majority of development projects, including projects directed at women. (Carr, 1981; Stamp, 1989) This literature indicates that despite most Third World women's need to be relieved of unnecessarily arduous work, they are not using technologies on a wide-spread basis. The reason for this has been identified as the failure of development agencies to accurately determine women's needs, and to recognize that even if these needs are ascertained,

social structures deny most women the relevant technologies. (Carr, 1981)

Most development projects involving women in the Third World are funded by international aid agencies, which are influenced by the liberal version of western feminism. These agencies have assumed that simply incorporating more women into existing projects will ultimately result in a more equitable distribution of the rewards of development. (Steeves, 1986) Third World feminists however, have argued that more fundamental structural change is needed before gender equity in development can occur.

Most scholars writing on technology and development in Africa share the view that women are caught in a nexus of political and economic dependency. (Dauber and Cain, 1981; Nelson, 1981; Charlton, 1984; Afshar, 1985; Ahmed, 1985; Date-Bah, 1985) Most of these writers borrow their approach from dependency theory, and therefore tend to be reductionist in treating men as a unitary category responsible for the oppression of women, pointing mostly at the differential distribution of wealth between men and women internationally. Like dependency theorists, these writers perceive dependent societies as static and passive recipients of exploitative, capitalist structures and practices. They therefore fail to account for indigenous political economy and the factors that are responsible for the introduction and sustained use of the technologies.



Nevertheless, applying the dependency approach to women and technology is a useful starting point in understanding African women's experience with technology. African women are virtually powerless in development decisions and as Charlton describes, they are caught in a 'triad' of dependency.

In virtually every country in the world...women are dependent upon men in formal politics at the local, national and international levels. Equally important in this conceptualization is the recognition that these three levels are increasingly interrelated. Events at the local level, whether in the private (family/kingroup) sphere or public sphere, are more and more influenced by the institutions of the national state. Moreover, the expansion of multi-national corporations means that virtually no country can be considered impermeable to influences that originate from outside its border... The choice of a village woman to breast-feed her child is conditioned in part by forces over which she has no control: the availability of manufactured formulas, advertising and other sources of information such as healthworkers, prices and cash income, government policies

regulating the operation of multi-national corporations... The conditions of a woman's life, even in remote villages, are influenced by institutions and events that are physically far removed from her.... Whatever their traditional condition, women in general have little or no formal, institutionalized power at the local, national and international levels in comparison to men. Even when women do acquire the public influence locally or nationally, that influence is often undermined by the limited autonomy of their nation state. (Charlton,1984:24-25)

The powerlessness of women to choose is especially important with respect to technology transfer, which impinges so dramatically upon their lives. As Cain (1981) observes, in Africa, it is women who have the role as food producers, both in terms of growing it and

processing it into edible form. They have developed their own indigenous technologies over the years to help them carry out their work. But when western technology enters this domain, men take over the production. Technologies such as maize shellers, rice huskers, ox-drawn farm carts, grinding mills, etc. have displaced women from their former roles in the production of food for the family. Men take over these roles once they are mechanized, since western technology needs training, and it is usually the male head of the household who will get the chance of being trained to use the machines. The result, as Hyden (1986) maintains, is that the food loses its inherent subsistence value and becomes commodified. Farm income is appropriated by men and put to uses that do not benefit women and children. The whole process of food production and marketing assumes a national value and women become more and more alienated from the technology and the commercial process which is conceived as men's domain.

Most scholars writing on technology and women in Africa share the view that technology transfer policies in Africa have not been gender-sensitive. (Bryceson, 1985; Dauber and Cain, 1984; Hyden, 1986; Stamp, 1985, 1989) For instance, Stamp (1989) observes that African governments and development agencies treat technology as a neutral, value free tool. Thus technology is taken as an artefact which will stimulate in Africa, what technology has accomplished in the west. This is grounded in a technocratic view of development. As Stamp further maintains, African governments have not gone past the "technological fix". Governments may decry

the dependency that results from importing western technology; but they have not gone beyond the belief that technical solutions can be found for any problem. Even the 'appropriate technology' slogan rests on the assumption that "if we can get the 'right' technology, then our road to development will be much smoother". (Ahmed, 1985 : 11)

Policies for "appropriate technology" are often inappropriate when gender issues are considered. Who decides which technology is 'appropriate' and whose interests does it serve ? Women are more often passive, problematic recipients of 'inappropriate' technology. As such, most of the 'appropriate' technology development programs have failed women because they have been considered appropriate by the men who choose them or the western women who recommend them. For instance, the question of propriety is very important when it comes to technologies for African women. Some equipment requires women to assume immodest body postures. This might be okay for men or indeed for western women whose code of modesty and dress differs considerably from that of African women. An African woman may not want to use the equipment for this reason. This is a very important factor in Africa. And because those who decide upon respective technologies are usually urban males, what may seem cheap and 'appropriate' to an urban male official may be impossibly expensive for a rural woman given her very limited access to resources. A good case in point are gas stoves that are assumed to relieve women from long wood- gathering trips. The methane gas needed to run these stoves is so expensive that most

rural women can not afford it. Although the gas is supposed to be generated from cow dung, women usually have no cattle of their own. This technology ends up benefiting progressive male farmers who own cattle and charge exorbitant prices for the gas generated from their cow dung. Besides, the stoves are prohibitively expensive for rural women. In addition, some technologies require a readjustment to the temporal organization of household work. For instance, a solar water pump demands that all water drawing be done during day light, yet most African women would prefer to draw water very early in the morning just before daybreak, when children are still asleep, and to have it available for household purposes during the day, when most of them are away on errands. This often results in resistance by women to innovations they perceive as contributing to their loss of control. There is a real need for these socio-economic factors be taken into consideration when planning technology-transfer.

Feminist writers also have observed that Africa's development policies generally show a sexist bias, whereby development planning and implementation are structured in a way that reinforces the existing male prerogatives about the gendered division of labour. (Carr, 1981; Bryceson, 1981; Charlton, 1984) A good example of this is the emphasis by development planners on income-generating activities for women. Like appropriate technology, income generation is a pet concept of WID policy, resting on the same assumption as modernization theory that improved income is the answer to the exclusion of women from development. Income

generating projects encourage women to make things for sale (usually handicrafts, sewing, knitting, cookery and growing vegetables); providing them with the necessary technological know-how and, sometimes, equipment. Women are provided with "appropriate" technology for income generating activities, such as knitting machines, solar water pumps, ovens made from iron sheets and mud, and sometimes, sewing machines. At the same time, men are given title to land and "appropriate" technologies such as the ox-drawn plough, ox-drawn ridgers, maize shellers, rice huskers etc. This means that women stay in 'their place', while men take on the more lucrative commercial production of crops. As Carr (1981) points out, however, a major reason for the popularity of such schemes is that they do not challenge conventional wisdom about sexual division of labour. The productivity of women is advocated without challenging the prerogatives of men in the spheres of commercial enterprise.

Bryceson (1981) observes that income generating schemes are rooted in the notion of 'female' projects that are ancillary to the main business of the nation. Here, the main business of the nation is growing cash crops for export. Skills training can be viewed as an aspect of women's 'domestic' role, which is not regarded as an integral part of the whole production process of export crops. The consequence for African women is that they are discouraged from viewing themselves as competent individuals making a contribution to national production, since women's production is not recorded in national statistics as "productive" work. This kind of training also

ensures that women stay at home. Thus women can work at home while carrying their household duties. The result, both doubles women's work in the home, and restricts mobility, and therefore the opportunity for social contact with other women. Further, being at home all day means that the double job imposes on the entirety of women's time and lifestyle.

Stamp (1989) argues that basic to all technological policies for women in Africa is the perception that women are a welfare problem. Targeted by development projects, income-generating projects, 'appropriate technology' projects, welfare projects (such as health education and family planning) view the woman as a household provider, wife and mother, and not the woman as an individual who has the right to have a status other than that of wife and mother.

Much of what has been said about technology and African women involves communication and information technologies, since these technologies are believed to have the capacity to spread information about innovation to the women. There has been very little research on the relationship between the media and women. Two primary issues are discussed. (Steeves, 1988; Valdivia, 1988) The first is the distribution of negative stereotypes of women in the media and images that reinforce the male prerogative of the sexual division of labour. The second is the use of the of the media for the transmission of information about new technology and techniques. Most of the literature on communication has dealt with the first

issue. But there has not been any research (that I know of) of communications technology per se. Media information is treated usually as a component of projects in agriculture or health education. The present study addresses important lacunae : the socio-economic factors affecting the use of communication and information technologies by women in Africa, particularly in Malawi. The following chapter discusses gender relations in Malawi and the role that communication technology transfer has played in relation to Malawian gender relations.

## **CHAPTER 3**

# **TECHNOLOGY TRANSFER AND GENDER RELATIONS IN MALAWI**

In Malawi today, women play significant roles in the development process, unlike in the pre-independence days when women were largely passive. Before 1964, women did not participate in any formal national activities and were neither agents nor beneficiaries of national efforts. (Kalyati, 1990) Today, thanks to the efforts of the many women and the country's leadership who have worked for the integration of women in mainstream development, a higher level of women are participating in the development of the country. Women can now boast of their own ministry, established last year, which looks into women's affairs. Although there is a need to be wary of the ghettoization of women's affairs, at least, this is a good indication that things are improving.

However, despite their enlarged role in Malawi's development, women lag a long way behind men in most of the key occupational sectors including those sectors that involve decision-making at both local and national levels. In the field of technology, the number of women is terribly low. This state of affairs results from cultural attitudes towards women which reflect a range of conditions that lead to a vicious cycle perpetuating the marginalization of women.



This chapter will discuss the factors which affect Malawian women's use of communication and information technologies. The chapter will highlight data from research findings on the low percentage of women in certain fields, in particular, Science; which is a prerequisite for careers in technology; technical subjects, which train individuals in the development, operation and maintenance of technology; and Management, which trains in decision-making careers at both local and national level. I will also discuss the cultural factors that lead to and perpetuate the marginalization of women and how the national system perpetuates the status quo.

### **THE STRUCTURE OF GENDER RELATIONS IN MALAWI**

Scholars researching gender relations in Africa unanimously agree that the African woman works under very hostile conditions, shouldering 80% of food production and domestic duties, yet she is the last to receive attention related to remuneration, rights and access to national amenities. Landry (1987) observes that the rural African woman contributes an immense, but unacknowledged subsidy to the global economy, through unpaid labour. As a home-maker, she provides free meals, clothing, child care and many other services and products for her family. As Landry (1987:46) puts it, "without her, the entire world of national statistics would soon come crashing down upon the heads of the men who run it." Besides domestic work, she is the one who produces most of the continent's food, and she provides this largely without the benefit of

technologies or farm animals. Yet, this is not considered 'work' by statisticians because it has no monetary value and can therefore not be recorded in terms of GNP.

Okeyo (1987) makes a similar observation. She observes that each day, African women are involved in 80% of food production, 90% of all food processing, fetching fuelwood and water, raising children, home-making, tending to small livestock and trading in commodities. All this is usually accomplished under very hostile conditions, with no or poor implements. Okeyo writes,

women form a large part of national population, usually half or more, but the positions they hold in society and in leadership as well as their access to development opportunity and the benefits accruing from it are neither commensurate with the responsibilities they shoulder, nor their numerical (demographic) proportions in society. (Okeyo, 1987:2)

Malawi is no exception to this situation. Barbara Clark (1975) in her study on the work done by Malawian women found that the rural woman in Malawi worked as much as 18 hours a day in agriculture, domestic and community activities, while her spouse, helped by farm animals, implements, hybrid seeds, professional advice and training, spent half as much time in domestic production. But even outside the rural areas, the circumstances for women are similar. Kainja (1990) observes that women increasingly form a large part of the labour force in the urban areas with the onset of urbanization. Consequently, women work longer each day. In addition to work in the industries, they must also maintain the household, provide food

for their families and fulfil all the other maternal and marital obligations as society demands of them. This context has a bearing on how women respond to and use communications technology.

## **Traditional Family Structures**

Malawi is typical of other African countries in having many tribal groups with different languages and different cultural practices. In terms of gender relations however, all the tribal groups can be divided into two groups: patrilineal and matrilineal.

Patrilineal societies are predominant in Northern Malawi and are based on a traditional polygynous and pastoral ethos which has been radically transformed, but not completely abandoned. (Banda, 1989) Men are usually regarded as household heads whose wives and children are under their care. Descent is reckoned through male family members. Inheritance of status and property transfers through sons, and the eldest is principal heir. Daughters are not direct heirs. A woman normally moves at marriage to her husband's parents' home. As a new daughter-in-law, she is expected to take over a large share of the family's household tasks; and her contribution of a child to her husband's lineage is eagerly anticipated. She may return temporarily to her natal home just for a visit or if she separates from her husband. She may also go and live in an urban area with her husband or she may seek work for herself. Nevertheless she knows that once married, the place where she belongs is her in-laws' family; it is to them and her husband that she must turn first for advice and assistance. She must always consult

with them whenever she wants to undertake any activity of significance. In the case of a husband's death, the widow remains in the household and retains the status of household head although she is expected to consult with her male in-laws for advice. Should a woman be separated or divorced, she is allowed to return to her natal home; but the children must always remain in the in-laws' household.

Matrilineal societies are predominant in central and Southern Malawi. The difference from the patrilineal arrangement is that here, inheritance of status and property transfers to daughters. A man normally moves at marriage to his wife's parents' home. But even in this arrangement, men are usually regarded as household heads whose wives and children are under their care, as men in turn are under the jurisdiction of a particular village chief. The new son-in-law is thus expected to provide for not just his wife and children, but for the entire household of his in-laws. Descent is reckoned through male family members and the children adopt their father's surname. The man may take his wife to live in an urban area, but he knows that once married, he belongs to his in-laws' household and it is to them that he owes his allegiance. In the case of the death of the wife, the husband has the option of staying in the in-laws household or going back to his natal home. If they divorce or separate, the husband goes back to his natal home, but the children remain in the in-laws household with the woman.

At first glimpse, one might think that women have considerable power in the matrilineal societies. In fact, they are just as dependent as those in the patrilineal societies. The reason why men come to stay in the wife's home is because this society considers women to be vulnerable, and therefore needing close supervision by their parents. Women shoulder all the domestic work and labour for their husbands just as the women in the patrilineal societies. They should first turn to their husbands, their fathers, uncles or brothers for advice and assistance and can not act independently of the men in their lives.

### **Socialization and Education**

Socialization in the home and community, including both formal and non-formal education, are equally as important as marriage and family life in relation to the position of women in Malawi and the differing options of men and women based on gender.

**a- Socialization for subordination.**

As children grow up in Malawi, much of their education is provided through the informal life of the home, including the verbal instruction they are given, and their play and work activities.

From an early age in rural Malawi, boys' interests and activities are directed from the home towards the fields and mountains where they herd and play, or towards the towns where they are sent on errands, and finally to the more distant urban areas where they expect to work as adults. Little boys play at herding puppies about the yard, or go out all day with the older boys to herd. Responsibility for goats, sheep or cattle may begin by the age of five or six. Boys learn that they must be dependable in caring for livestock, must endure loneliness and extreme weather conditions, and must assert themselves with the help of sticks and stones to control recalcitrant animals and to defend their grazing rights. Some boys herd and help plough for their own families, while others are loaned or hired out as herdboys to richer livestock-owning families who either have no sons or send their own sons to school. Boys also play with elaborate wire or wooden model cars in anticipation of the time when they will board the real cars, buses or planes when they go to work in the cities.

The activities of rural girls, on the other hand, are primarily turned inwards towards the home and village where they will probably spend their entire lives. The activities they are given and the attitudes with which they are inculcated prepare them for a life of

subordination and service of elders, infants and males. Even toddlers play at carrying water on their heads or follow their mothers into the fields to help gather wild vegetables for food, dung or wood for fuel, and water. Much of girls' play centres around furnishing play houses where they act out adult domestic roles, learn a wide range of tasks and actually care for younger siblings. Girls take on an increasingly large share of the routine domestic work as they grow older, freeing mature women from farming, travel, shopping, attending clinics or participating in community activities. Girls are expected to help in the early mornings tidying beddings, sweeping the yard and the house, cooking, drawing water and heating it for the male members of the family to bathe. After school, the girls are expected to help in cleaning, washing and pressing clothes, cooking, watering gardens and tending to small animals. They are also expected to do numerous other household chores which arise, while their brothers gather at the fields after milking time to play or chat while they wait for supper to be served. On weekends, such tasks as laundry, gathering fuel wood and processing grain occupy much of a girl's time.

Even in urban areas where individuals are relatively more educated, girls are still socialized for subordination. For example, a girl is not encouraged to play with boys or included in the games that boys play. She is encouraged to identify herself with her mother and other women. Thus, when it comes to toys, girls are given dolls and doll houses, toy kitchen appliances and household appliances such as stoves, irons, needles, pots and pans. This, of course, prepares girls

for their domestic roles. On the other hand, boys are given model cars (wired or wooden), battery operated toy trucks and cars, remote control toys and other 'masculine' toys. They are encouraged to spend their time at tasks involving block building, aiming, construction and decision-making.

Chawanje (1990) explains how the socialization of girls often inhibits them from taking their full place in modern society. She notes that throughout childhood, a girl is expected to serve the needs of men in the family and her socialization is aimed at preparing her for marriage and better serving men. Girls are taught to defer to men, obey their orders, and to avoid the places where men congregate. I remember my own mother's favourite words when she felt that I was not doing things in the right way: "You will be chased by your husband just after two weeks of marriage! Which husband can tolerate *nsima*<sup>1</sup> cooked in that way?" And in fact it is women themselves, mothers and grandmothers and other elderly women in the society who preserve and pass on these attitudes to their daughters. Of course fathers are the overseers, making sure the mother effectively passes on these values to the daughter.

In the female world of domestic relations and friends in the school and home, girls develop social skills and learn to assert their wills and leadership abilities; but vis-a-vis men and boys, they must learn to take second place. This has important long lasting implications

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<sup>1</sup> Nsima is Malawi's main staple food. It is made from corn meal



on women's capabilities. As Chawanje (1990) observes, women in administrative positions often find it very difficult to take command; and if they do, they are usually frowned upon by men and sometimes fellow women for behaving like men. There are many new opportunities in Malawi now for women who extend their education and enter urban employment; but there are few role models to help girls to break free from childhood socialization to take advantage of the new possibilities.

The tasks and roles in which boys and girls are engaged while young have also been found to contribute significantly to the development of spatial and sensory motor skills. Chawanje (1990) argues that these skills are crucial in the understanding of concepts used in science and technology since, these fields employ similar skills in their analysis. Boys, because of their games, have a greater opportunity to develop and practise spatial and sensory skills; girls' activities are mostly associated with motherhood and as a result, they have fewer opportunities to develop these skills.

#### **b- Formal Schooling**

In Malawi, more boys attend school and attain higher levels of education than their female counterparts. When girls attend school, they usually drop out before they attain skills and knowledge of satisfactory living. Data from the Malawi Statistics Year Book of 1990 show that at every educational grade level (that is from primary to tertiary) boys greatly outnumbered girls. For instance, if we consider those who attained at least four years of schooling as

the rough index of the literacy level, we can say that Malawian women have a very low level of literacy. The majority of the rural population of women have never been to school and some have less than four years of schooling. Statistics show that 88.3% of Malawian women are illiterate.

Research on the drop-out rate in education conducted in Malawi has revealed a number of factors that impinge upon girls' education. Kainja (1990) outlines several factors that relate to this. She identifies cultural factors as being the most important in that these either prevent girls from entering the school system or if they enter, encourage them to drop out. In most Malawian rural communities today, people still believe that girls are not a priority where education is concerned. As such, little encouragement is given to the girls to achieve high marks in school since it is believed that they will eventually marry and become someone else's responsibility. After school, girls are expected to do numerous household chores while boys do little or nothing. Boys thus have more time to engage in academic endeavours such as reading and doing homework. Also when duties require at home, the girl is called upon to absent herself from school. As a result, she misses instruction, falls behind and can not cope with school. Consequently, more often than the boy, she fails her examinations and eventually drops out. Few girls complete primary school, very few complete secondary school and fewer still, go on to university and other tertiary-level schools.

Because of economic constraints, parents sometimes need to make a choice in sending one child to school over another. In such cases, it is likely the girl who must stay at home. The widely held stereotype in Malawi, like most societies is that men are more achieving, active, striving, intelligent, powerful and independent than women, and that women can not perform as effectively as men. According to this view, women are to be taken care of by the more powerful men while women shoulder the bulk of the laborious household chores. This kind of attitude transfers even to policy makers, who develop policies that reflect the overall social stereotype that women are dependent underachievers. For instance, in the immigration policy in Malawi, the bearer of a passport is a man. In the case of a joint passport, the wife can not use the passport without being accompanied by the husband. The husband, on the other hand, can use the passport to travel anywhere he wants without the accompaniment of his wife. In the development policy of Malawi, women are categorized as a special group, in the same category as children and the disabled! (Statement of Development Policies 1987-1996) This institutionalizes the reality that women are not equal to men.

When it comes to subject choices in school, boys are encouraged to take the 'masculine' subjects such as sciences and technical subjects while girls are encouraged to take 'feminine' subjects, usually the arts, such as Home Economics, Needle Work, and typing. In the majority of schools in Malawi, girls have no choice in the

subjects they take. The school curriculum and timetable in both primary and secondary school are gender-biased. For instance, the timetable is structured in such a way that Home Economics is at the same time as Metalwork, Needlework with Woodwork, History with Physics etc. However, it is not individual choice which determines which of these subjects one can take; it is usually gender. By virtue of being female, girls are required to take 'feminine' subjects while the boys take the 'masculine' subjects. Chawanje (1990) has identified another aspect to this gendering of the curriculum. She notes that in girls' schools, subjects that reinforce their female role are emphasized. If science subjects are included in girls' schools, their laboratories are usually under-equipped. This kind of curriculum excludes girls from science and technically-oriented subjects which are an important prerequisite for professions in technological fields. Thus girls are limited to professions that are traditionally female such as typing, teaching and nursing.

This gender bias in the curriculum is a result of the sex-role stereotype that Malawian society reflects. In a study undertaken by Gondwe in 1989, it was found that society at large, including teachers, believed that girls were not capable of doing the hard sciences and technical subjects. In interviews, teachers indicated that they believed that girls have problems with science subjects and Mathematics, subjects that form an important background for careers in technology, and are a prerequisite for any one applying for a technical field at the University of Malawi. Teachers indicated that girls have problems in grasping scientific concepts and

formulae, and have problems in conducting experiments. According to the teachers girls lack the analytical ability and logical thinking required in these subjects. (Malawi National Examinations Board, 1988)

In fact it is true that girls do not perform as well as boys in science subjects in Malawian schools. A study conducted by Kadzamira in 1987 confirms this. Kadzamira compared the examination results of boys and girls in the Malawi School Certificate Examinations (MSCE) over a five year period from 1982 to 1986. She restricted her study to science subjects (Mathematics, Biology and Physics). Kadzamira's study showed that boys performed far better than girls in these subjects over the entire five year period. Another study comparing examination results of boys and girls demonstrated that girls performed as well as boys and some times even better, in non-science and non-technical subjects.

Although it is a fact that girls do not do well in science subjects, it is, of course, wrong to conclude that it is in the nature of girls not to do well in science, technical subjects and Mathematics. These assumptions perpetuate the fiction that contributes to the gender-based educational cycle. In fact, the socialization of the two sexes contributes to how they respond to different subjects. Girls are 'slotted' into their roles from the start, and they are not encouraged to change this. In fact Kadzamira's study concluded that the possible causal factors for girls' inadequate performance in sciences could be social attitudes.

Society defines what is valued for girls and what they are capable of doing. Girls internalize these values as facts of life and consider science and technical subjects as male domains. They are thus convinced that they can not do well in these subjects and therefore they do not see any need to even try. Teachers, too, hold these values. They consider it a waste of time to concentrate on educating girls in sciences because they will never do well any way. And this is reinforced by society at large. Girls striving to do masculine subjects are frowned upon, and sometimes they are not even given the chance to enter such careers even when they have persevered and qualified.

I remember one girl, who after obtaining a school certificate, went and trained as a telecommunications technician. After training, she got a job with a telephone company. Some of her duties included installing phones and repairing phone lines. This involved her sometimes climbing poles and roof tops. While she was undertaking her duties as effectively as her male counterparts were, she was under a lot of pressure from onlookers (a majority of them, women) because in climbing poles and roof tops, it was inevitable for her underwear to show (since she could not put on overalls, as women in Malawi can not put on trousers or slacks). It is considered very immodest for a woman in Malawi to show her underwear under any circumstances. When she later began to wear overalls in response to the complaints, the same people found it awkward for a woman to wear overalls. Consequently, the girl ended up repairing broken

phones indoors. This just illustrates how social attitudes constrain girls and women from fully participating in fields that are considered masculine.

### **Participation of Women in Tertiary School Level Education**

Statistics show that very few girls in Malawi pass with grades that are high enough to qualify them for entry into university. This is very typical of African countries where the percentage of females in higher education is generally low. (UNESCO Statistical Yearbook, 1985) In 1987, according to University of Malawi Statistics, women formed only 20% of the entire student population at the University of Malawi. Eighty-one percent of these females were enrolled in fields that are considered to be traditional for women, namely : teaching, nursing, community service and secretarial. The percentage of females in science and technology is the lowest. As of 1987, only 10.25% of all professionals in science and technology fields were women (National Statistics, 1987) In the University of Malawi, enrollment statistics in 1990 indicate that very few females, 13.8% of the total female population enrolled, were in science and technical subjects. In fact, only 1% of females were enrolled in fields that are strictly technical, namely, engineering and Mechanics. My own experience teaching at the University of Malawi, can serve as an illustration of this trend.

In 1989-1990, I taught a Communication course to a class of first year Engineering students at the Malawi Polytechnic, a constituent college of the University of Malawi. In a class of 135 students, only

3 were female. When this group was divided into three sections (Civil, Mechanical and Electrical Engineering) there were no females in the first two fields. All three girls were enrolled in Electrical engineering, which they considered 'softer' than civil and mechanical Engineering. In addition to this class, I also taught a class of technicians (Motor Vehicle technicians, Printing technicians, Aviation technicians and Laboratory technicians). There was not a single girl in the first three fields, and only five girls in a class of twenty-eight Laboratory technicians. This course may have been perceived as the 'softer' one among the Technician courses. In fact, this was the first year girls were ever enrolled in Engineering and Technician courses in the entire history of the university of Malawi.

Another area where women are not evident is management. Again, this is a manifestation of cultural attitudes towards women. Because men are considered heads of families and heads of society, they assume the roles of heads of organizations both in the private sector and in public service. Despite efforts to integrate women into management positions, or other positions that require a considerable amount of decision-making, the number of women in such positions is still very low. As of 1987, only 5.3% of all professionals working in management positions were women. Msonda and Rapsilber (1988) undertook a study on the extent to which females participated in Management training programs at the University of Malawi, programs which prepare students for management positions in Commerce and Industry, Finance and Public Service. These programs include Public Administration, Business



Administration, Business Studies, Commercial Studies, Law, and the Social Sciences (Social Administration, Economics and Sociology). The researchers found that the number of female students enrolled in these programs is far lower than that of males, 16% in 1987.

The Msonda and Rapsilber study uncovered some of the factors contributing to this trend. Women managers interviewed in the survey indicated that most women who are trained in Management tend to be denied management positions upon graduation because of the selection process which tends to show preference for men. In cases where women are given managerial positions, they are usually looked down upon by the staff they work with. Men find it awkward to have a female boss, and some women can not imagine another woman being their boss. As such, women's talents have not been appreciated as valuable human resources. Women thus become discouraged and frustrated. Some quit and join professions where their services will be more readily accepted and appreciated, such as teaching and community service.

### **Technology Transfer in Malawi**

In Malawi, as in most other developing countries, communication and information technologies are virtually imported. Information technology transfer in Malawi is based on the 'modernization' paradigm which guided all such transfers from the 1950s. In this conceptualization, the mass media were seen as very powerful, as both a means and a function of modernization. Many mass media modernization campaigns have been undertaken as a result of this

position, capitalizing on the sizable resources that industrialized countries and international organizations provided for its implementation. Malawi is one of the developing countries that have experienced this trend. However, it became apparent in many developing countries that a linear causal relationship between the modernization paradigm and its implementation through media campaigns and actual economic take-off did not exist in practice. As a result, many developing countries have turned to alternative models of development. (see chapter 1)

However, with the dawn of enormous progress in advanced information technologies, "development through mass media campaigns" has re-emerged with renewed strength. This time, it is anticipated that information and telecommunication technologies represent the power to repair the global social and economic inequities. This view assumes that if developing countries upgrade their telecommunications infrastructure and accumulate information, they would speed up their development process. This would in turn close the gap between developing and developed countries. (Pool, 1979; Bell, 1980) Isabel Valdes (1988) notes that the urgent need for more and larger markets by the leading industrial nations has increased the interest of these nations in the Third World as a potential market. She notes that as in previous periods of technological upheaval, Third World countries have followed the path of the industrial centres, acquiring satellites and data processing technologies for domestic applications. Thus both

direct and indirect transfer of the new information technologies is increasing at an astonishing rate.

I am unsure if this is the guiding principal for the importation of information technologies in Malawi. But I know that there are now a significant number of computers that have been imported directly by the government and the private sectors, and more have come with individuals who come to Malawi from abroad, both Malawians who were studying abroad and expatriates coming into Malawi. There is also a great deal of transborder data flow taking place in Malawi, where a number of government organizations and private industries are linked with international databanks. With the installation of the earth satellite receiving dish in 1979, there has been a tremendous growth in the capacity for telecommunications and advanced communications.

The development and distribution of media and information technologies is falling increasingly within the purvey of transnational corporations, which through research and development, have created models of productive efficiency with high-capacity technologies. As the McBride Commission noted,

The high rate of their profits stimulates further investments in communication industries. These are companies with high-capital intensity and high research and design costs. In the electronics production industry, particularly, most of the firms who manufacture equipment for the production, transmission and reception of radio and television are based in the industrialized

countries, are typically transnational and characterised by vertical integration. (McBride et al, 1980 : 108)

With regard to communications technology, Third World countries are at the mercy of the largest transnational corporations which are controlled in the industrialised countries. The fact that few women are represented in the management of these companies means that women's input into research and development decisions, let alone distribution decisions, is miniscule. (Steeves, 1988) Because of this situation, the new products introduced by the market, have gender implications. Since the development of the technologies has been male-dominated, technologies tend to embody masculine values, which tend to be transferred to the Third World with the technologies. In the case of Malawi, where women are unlikely to be found in decision-making positions, it is primarily men who tend to make the decisions regarding technology transfer, even in the case of communications technologies that are primarily used by women, such as typewriters.

### **The Politics of Communications Technologies and Gender in Malawi**

As has already been suggested, women in Malawi are dependent upon men in formal politics at all levels. Since men control most of the decision-making positions, it is usually they who work with most of the communication and information technologies in the office and at home.

The cultural division of labour is reflected in the differential use of communications technologies. My own experience in Malawi confirms this. Very few women have the opportunity to work with communication technologies both in the office and home. Women's use of communication technologies in the office tends to be restricted to the operation of the typewriter, telex machines, photocopiers, word processors, fax machines and the phone. However women have no role in the installation and maintenance of the machines. It is men who install the word processing programs, and it is they who are called upon whenever the secretary has problems using them. Thus while secretaries with training can use these machines, they can neither install them nor service them. They are therefore dependent on men who have technical training. Finally, it is men on the whole who are in control of even those technologies that might be considered 'feminine'.

Given the long-standing and institutionalized association between technology and manliness, the cultural stereotype of women as technologically incapable has been fostered and reproduced in the Malawian work place. Computing is a good case in point. The Malawian society has defined computers as pre-eminently male machines. In Malawi, as of 1990, there were only 21 females who were qualified in computing, that is, programming and systems analysis. (CSR,1990) The only other women who used computers used them for word processing. As we have seen, the socialization process, the education system, and the mass media help to perpetuate gender inequalities from generation to generation and the

gender stereotyping in society and in schools later brings these values to the work place. Like scientific and technological areas of tertiary education generally, the sex ratio of computer science at the university of Malawi is very marked. In the entire five years of university education at Chancellor College of the university of Malawi, I only knew six girls who enrolled in Computer Science, and only two of them took it as a major.

One would, at first glimpse, be tempted to think that computing technology would be appropriated by women. After all, the image of the computer fits with femininity in that it is sedentary work involving rote tasks, detail, precision and nimble typing fingers. However, computing requires knowledge, use and application of computer programs and languages which are taught in Computer Science. Unfortunately, the presentation of the subject has alienated girls. As Chawanje (1990) observes, computers have been linked to things scientific and mathematical, traditionally male subjects. In fact, at the University of Malawi, the tendency has been to place computers in the science/maths department and in the Engineering department in the case of the Polytechnic. In addition, entry into Computer Science courses requires ability in Mathematics.

In the home, it is very unlikely that women will use communications technologies as often and therefore as well as men. Communications technologies found in the home embody meanings and uses which are commensurate with the gendered division of domestic labour. For

women, the home is primarily defined as a sphere of work; but for men it is a site of leisure, an escape from the world of paid work, or field work in the case of rural men. As Wajcman (1990) observes, this gendered division of domestic activities is read onto the artefacts themselves. In Malawi, the communications technologies found in homes are radios, music systems such as cassette and record players or Hi-Fi systems, telephones, televisions and VCRs. The most pervasive and common communications machine one finds in a typical Malawian household is the radio. Music systems are very rare in the rural areas. They are found mostly in the homes of fairly well-off people such as school teachers, health and social welfare workers and progressive farmers. The average rural household can not even afford a radio. Even in urban areas, few people own music systems, and these are usually simple radio cassette players. There is no television transmission in Malawi. As a result, most of the people who own television sets use them together with VCRs for play back of recorded tapes. However it is only the extremely wealthy who have TV and VCRs. Usually, only top government and business bureaucrats and other elites such as university professors who have travelled out of Malawi bring back 'Videos' as they are normally called in Malawi. It is these people too who can afford elaborate music systems such as Hi-Fis or Stereos. The telephone is also not universal in Malawi. The majority of rural women have never seen a telephone in their lives. Even in urban areas, very few households have telephones. Already, the distribution of the technologies excludes a majority of women. And those women who

have communications technologies in their homes do not necessarily have real access or control of these technologies.

In a study of white, working class nuclear families in London, David Morley (1986) found that women and men gave contrasting accounts of their experience with television. It is evident from this study that television viewing reflects existing structures of power and authority relations between household members. Men prefer to watch television attentively, in silence and without interruption; women on the other hand are able to watch it distractedly and guiltily, because of their continuing sense of domestic responsibilities. Male power was the ultimate determinant of program choice on occasions of conflict. Moreover, in families who had a remote control panel, it was almost exclusively used by men. Typically, the control device was used almost exclusively by the father, or by the son in the absence of the father, reflecting his role in relation to domestic power.

This situation holds true even for Malawi. Video recorders like remote control panels, are the possessions of fathers and sons. Because of the exorbitant prices that were paid for the machines, men want to ensure proper use and care of the equipment. The last people to which they would trust these technologies are women. Since it is usually the man of the household who buys the machines, he quickly acquires the requisite knowledge for installing and operating the home equipment. However, women's estrangement from the VCR is not a simple matter of the technical difficulty of



operating it. Some women operate sophisticated technologies in the office, like electronic word processors, often requiring the study and application of a manual of instructions; yet they feel alienated from operating the VCR. Women's experience with video must be understood in terms of the 'gendering' of technology. As Wajcman puts it, "when a new piece of technology arrives in the home, it is already inscribed with gendered meanings and expectations. Along with television, the video is incorporated into the principally masculine domain of domestic leisure." (Wajcman, 1990:90) Thus, in Malawian households that have videos, it is a common scenario to find the man of the house and the male children controlling not only the machines themselves, but also deciding on the tapes that are watched. The same applies to the use of music systems such as Hi-Fi. It is usually men who control them and decide the type of music that is played. Women usually enjoy music of their taste only when the men are not at home, and when men's tastes coincide with theirs, which seldom happens!

Even a relatively simple technology like the telephone is usually controlled by men. In Malawi, every telephone call is metered, and the subscriber is charged a fee based on the length of the call. This system is different from Canada, where users pay a fixed monthly service fee and additional charges for long distance calls. This service fee allows for unlimited local calls. In Malawi, on the other hand, even local calls are charged. This leads to a situation where the men of the house control the telephone in order to prevent their wives and children from making unnecessary calls which would raise

the bill, which men usually pay, since they control the household's money. This sometimes leads to locking the phone. Anyone seeking to make a call then must ask for permission and justify the calling.

Data on women's work in the Third World indicate that in general, far fewer women than men work in mass media and other communication related jobs. This is because fewer women than men have the education and training necessary to operate media equipment, and where they do, few women have the opportunity to work in these jobs, including the national extension services. (Gallagher, 1981; UNESCO, 1985; Steeves, 1988) This is the case in Malawi. There are very few women working in the mass media. Men have access to and control of most of the mainstream media; newspapers and radio. Most of the technicians in the media organizations are men, as are the managers and producers who control production resources and determine the design and content of programs. There are some women in production positions, but their role is mainly restricted to announcing and women's programming. The technical sections of the media are predominantly male domain, including such a simple thing as sound control. At Malawi Broadcasting Corporation (M.B.C.) Radio, where I worked for three consecutive summers ( 1984 to 1986), only one woman held a technical position (sound control). The number increased to two in 1990.

A very powerful force for conveying information in Malawi is the radio. Approximately 75% of urban households own radios and

probably 50% of rural households either own or listen to a radio at some time during the day. (Banda, 1989) M.B.C. Radio, Malawi's only broadcasting service, devotes much of its time to educational, public service, and development-oriented programs. Women's programs are also featured regularly on radio. These are usually Ministry of Agriculture and Health programs, which are often planned and presented by female announcers and information officers from the Department of Information. Much radio time is also devoted to broadcasting and re-broadcasting speeches by leading government officials; almost invariably, these are men. Thus although women play a major role in planning and announcing women's programs, the radio tends to reinforce the traditional cultural norms and political realities of men as public leaders in the highest positions.

Another problem with radio is that most of the development programs that are broadcast are designed primarily for rural women. As such, they neglect urban women. At the same time, although the content is designed for the needs of rural women, the content reinforces traditional stereotypical roles for women, including income generation through arts and crafts, child care, housecraft, cookery and tending to small livestock. Women are, through radio, being presented with the same stereotypical messages that their socialization has inculcated in them. In other words, radio assures that women are incorporated into the development process in their traditional role as 'women'. Also, the messages on radio do not usually reach their target audiences, the rural women. Rural women

have limited or no access to radio at all. They are usually busy doing household chores and working outside the home; drawing water, gathering wild vegetables, taking a child to the clinic, taking grain to the grinding mill or doing laundry at a river. They seldom have time to listen to the radio. During the time when women are at home, they usually do not have access to the radio, which is usually controlled by the men of the house. Sometimes men even take the radio with them when they go out to the fields.

Finally, not only are communications technologies the province of the wealthier countries, but they are almost completely under the control of men. Those formulating the major national and international media policies are almost entirely men working in the fields of science, technology, broadcasting, telephony and telegraphy. (Steeves, 1988) Because of the high-tech nature of communications, the regional and international organizations that control communications have few women in senior positions. (Steeves, 1990) Limited opportunities in scientific and technical education have left women unprepared for advanced communications. And even when educational opportunities are available, women have not entered these fields in large numbers, especially in developing countries. Because socialization and cultural attitudes are the cause of this state of affairs, women have both excluded themselves and have been excluded from the techno-scientific arena of communication systems and policies.

In Malawi, gender inequalities result in the differential use of communications technologies between men and women. Men have considerable control over the present communications technologies. At the same time, more and more technologies which are even more advanced and more expensive continue to be developed. These require high levels of education for their use. Malawian women, who have no power to determine which technologies come into Malawi and which do not, and who have very low levels of education or technical training, will continue to be removed from the high-tech communications revolution. The following chapter discusses the implications of this.

## **CHAPTER 4**

# **COMMUNICATION TECHNOLOGY AND GENDER IN THE 21ST CENTURY : MALAWI**

### **1 - New Communication Technologies**

This chapter deals with new communications technologies. First, it explains the technological innovations which are changing the face of communication, then it outlines the possible implications this technology will have upon the diversity and quality of information. It will also discuss the implications of these new technologies on the Malawian social fabric especially on access to the technologies between the genders.

In the 1960s, Marshall McLuhan promulgated the idea of a new 'global village', a world knit together and transformed by television and other marvels of the electronic age. The 'global village' has indeed arrived and it has come with a bang that even McLuhan himself might never have predicted. The globe has become one information society, encircled by a communications network that links the most distant parts of the earth in a matter of seconds. Advanced communications technologies, the result of the convergence between computers and telecommunications are now a reality and are proving to be a symbol of the communications abundance of the 'global village'. Such new developments are making it possible to publish, broadcast and communicate across the world's surface at even greater speeds and lower costs than ever

before. As a result, national boundaries are growing increasingly meaningless and distance is no longer an impediment to international communication. (Mowlana, 1986)

The new communications technologies are the microelectronics technology (which includes computers, robots, control systems, computer-aided manufacture and design and telecommunications). The latest and most important of these technologies is the merger between computers and telecommunications, called telematics, which has made possible electronic communication in the form of electronic mail, facsimile, teletext and videotext. Such technologies are revolutionizing mass communication.

The new communications technologies fall into a category of technologies that are considered 'high-tech'. 'High-tech' includes equipment with one or more of the following characteristics: complexity, cost and training by professionals before people are able to use it. Good examples of such technologies are computers (even hand-held ones), television, satellites, Video Cassette Recorders, and the present mergers between telecommunications and computers that make possible the storage, transmission and retrieval of enormous amounts of information. Low-tech includes equipment which is simple, relatively inexpensive, requires no exceptional skills to use, and is available in many countries. Examples of this technology are plain telephones, audio cassettes, radio and mimeograph. (Smythe, 1985)

Print media have already undergone a technological revolution through the invention of a phenomenon called Desktop Publishing. Desktop publishing involves software that operates on personal computers. Type-setting, the traditional method of setting words in type to be later run on presses, is disappearing faster than it came. This technology promises to decentralize the publication of print media and makes print communication accessible to almost everyone from grassroots political movements to local authors who would otherwise not find the chance to get published in main stream media. Production of print media no longer requires the large capital investment it used to.

The new technology of video cassette recorders (VCR) and video cameras has revolutionized visual communications. These days, one who owns a video camera can produce a 'video'. Those that own computers and VCRs can produce high quality footage. Footage shot by the video camera is edited on the VCR and computer electronically, rather than by cutting the film as was done traditionally. Special effects such as blending, fading, zooming and photo retouching can be achieved quickly and easily, well at least ideally.

Ithiel de Sola Pool (1989) claims that the new communications technologies will make specialized communications grow more rapidly than mass communications and that this is beneficial in that it will result in information diversity; that is more groups will be



able to produce and access information geared to their special needs. Since communication will no longer require a mass audience to sustain the industry, it will be feasible to create programming for smaller audiences. Pool suggests that the new technologies allow for fuller participation by the public and provide more outlets for creativity.

In the case of Malawi, my view is that the new technologies will further limit access to the media by other groups especially women. It will perpetuate and even increase the marginalization of women in Malawian society. Due to the limited number of women who can handle the new communications technologies, even the diversity of information and the new opportunities offered by the new technologies will continue to be dominated by men. As noted in the preceding chapter, women's advance into what have been traditionally men's jobs is still very small. This is due to a multiple of reasons including gendered division of labour, which really leads to all the other factors such as deficiencies in education; lack of vocational guidance and training; job segregation based on gender; discriminatory practices within organizations; and prejudiced attitudes and behaviour towards working women. It is my contention that the new technology jobs and other opportunities for information diversity will emerge at higher levels of the hierarchy and therefore be predominantly accessible for men rather than women.

There is no real agreement on the actual pace of technological innovation or on the speed of its diffusion in developing countries.

However, there are indications that Third World governments and industries are beginning to look to information technology as a means of upgrading both industry and services and of improving their position on the global hierarchy. Computers and development data bases are starting to be priorities on the agenda of decision-makers and universities in the Third World. Telecommunication infrastructure for the access to these data bases are also becoming a priority of many developing countries (Valdes, 1987), and Malawi is no exception. Greve (1987) suggests that what is revolutionary about new information technology is the fact that it can be, and it is being, applied to almost every sector of the economy and to almost every occupation and that it offers enormous potential for the reorganization and transformation of work. Although it has not yet reached this level in Malawi, a considerable number of sectors and occupations, especially in the airlines, travel, data processing and telecommunications, have started to use and apply information technologies to a large extent.

Transfer of information technologies into the Third World is necessitated by the desire to modernize, and often results in the hindrance of the Third World's current phases of socio-economic development. The cost of importing these technologies and the cost of the skilled manpower is too much for the meagre economies of the Third World. The result is dependency on the developed countries for the supply of the technologies and the manpower to run it. Worst of all is a situation where cuts are made to the governmental budget for services in order to accommodate the cost of new technology,

and usually, women and children are the ones affected by such measures. (Mbilinyi, 1985, Stamp, 1989)

In Malawi, new information technology has not reached a very advanced level of diffusion. It is, therefore, difficult to make any decisive statements about the impact of information technology on women. There is not much information on the subject and my statements are only speculative. However it is necessary to give a word of caution before it is too late. Proponents of technological change argue that the negative consequences of not using the creative potential of the new technologies to ensure the dynamic growth of Third World economies would be far greater than those engendered by its introduction. (Godfrey, 1979; Pool, 1979; Toffler, 1981; Dizard, 1982; Maisonrouge, 1984 ) These scholars argue that technological innovation will result in economic expansion, which will create new jobs in the information sector. They further argue that these jobs will be open to society's disadvantaged groups like women, children and other minorities. This line of thinking is similar to that of the modernization school. The technocraticism is apparent. These scholars believe that all groups in society will have access to and use these technologies in the same manner. They also believe that if Third World countries use these technologies in the same manner as developed countries, then Third World countries will be able to speed their development. Apparently, development here implies industrialization and westernization. No consideration is made in relation to socio-economic differences among societies.

We have already noted that this has proved to be quite disastrous for the majority of Third World countries.

Pessimism occurs in much of the literature which deals with the impact of new technologies on women's employment and working and social conditions. (Boserup, 1970; Greve, 1987; Steeves, 1988; Valdivia, 1988; Stamp, 1989, Wajcman, 1991) The general impression created by this body of literature is that the manner in which technology is presently applied and the work organizations which develop around it have a number of negative consequences for the majority of women workers whose concentration in certain occupational sectors makes them particularly vulnerable to the changes taking place. Contrary to what the technocrats believe, the benefits of using advanced communications technologies are not trickling down to all segments of society. There are disparities between the rich and poor in society; disparities between developed and developing societies; and disparities between men and women. Women, in particular have more fear of new technology. (Parpart, 1989) Fears of unemployment, deskilling, stressful working environments, poor career development possibilities and a further deterioration of the position of women on the labour market in the wake of technological change appear to haunt women's groups and women workers themselves, and to have important implications for educational systems. (Davidson, 1987) We have already noted how technology has created a double burden for women in Africa. Women in other parts of the world, including those in developed countries,

have also been disadvantaged by the introduction of advanced technologies.

Research regarding technology and women in the developed countries, especially western Europe and North America, points to the fact that with the application of new technology to the work place, a large number of processes are open to automation and functions previously undertaken by workers are being absorbed by technological systems, with adverse effects for skills and employment. Occupational sectors in which women predominate are among those being transformed by automation. Thus automation in the manufacturing industries permits one worker to do the work of many and the scope for continuous production processes (and therefore for shift work and night work) has led to the hiring of men to take over the traditional women's jobs of sorting, grading and packaging. (Greve, 1987) This has resulted in a high level of job loss among women workers. Since information technology is being applied to marketing, sales, stock control, personnel administration and office jobs in industry, jobs with a high concentration of women workers, it has inevitable implications for women's employment and working conditions.

A fair amount of research exists in support of the contention that job loss brought about by technological change will be more evident among women workers. (Armistead, 1987; Gutek, 1987) These authors suggest that structural changes brought about by the introduction of new technologies are likely to concentrate

unemployment among women, the young and other minority groups. This is because most of the new technologies coming into offices now such as electronic cash registers, word processors, facsimile, electronic copiers and innovations in clerical and administrative work are affecting jobs primarily staffed by women. Additionally, the new communication and information technologies are very urban-oriented. The need for high levels of education, high costs and the need for electricity means that most of the rural population is virtually being excluded from these innovations. Yet a majority of Malawians live in the rural areas.

Fears of unemployment notwithstanding, new information has the potential to create employment. As was noted earlier, proponents of technological change argue that economic expansion expected of technological innovation could not only lead to job creation, but could also create the possibility for women to break out of traditional women's jobs and sectors. The key question is whether women will be capable of this and whether the new jobs will be accessible to them taking into consideration all the factors that militate against women's entrance into non-traditional job sectors.

In theory, at least, automation, which creates jobs that no longer require physical strength, should open up more new employment opportunities for women workers. Thus, the introduction of electronic data processing should permit women to enter traditional male occupations. The problem is that women usually face strong opposition on the part of the men they threaten to

displace in these highly prestigious areas. (Chawanje, 1991) And as Davidson (1985) and Greve (1985) put it, automation has been the signal for hiring men to supervise the new machines, partly on the assumption that they are more likely to have the requisite technical competence. In addition, the emerging structure of work brought about by automation, such as night shifts, militates against women's competitiveness in industries using computer-based continuous process production, since it is generally believed that women should not work at night (women nurses work at night though!)

Thus, new jobs created by information technology in the service sector tend to be in the professional or managerial ranks where women constitute a minority and do not qualify for, while the secretarial and clerical ranks where women are concentrated are being eroded by it. Thus the new jobs will absorb far more men than women (Greve, 1985)

### **The Malawian Situation**

The same can be said about Malawi in cases where information technology has diffused, especially in corporate offices and banks. While the integrated 'paperless' office is still in the future in developed countries and quite impossible in a developing country like Malawi that relies on imported technology, the new approaches to the handling of information made possible by information technology could eliminate many administrative and support functions. As more information technologies continue to be used and applied, there will be a large decrease in the manual recording of

information in the next few years and its replacement by direct input using keyboards and other electronic devices. While word processors are by far the most important innovation as far as women are concerned, possible applications of information technologies in offices also include facsimile equipment, 'smart copiers', 'intelligent' telephones, electronic mailing and filing systems and telecommunications, linking office machines to one another, which as a matter of fact have already diffused in Malawian offices. This trend is likely to affect the jobs of secretaries and typists, general clerical and administrative staff, filing clerks and accounts clerks, occupations with the highest concentration of working women. In fact, it already has to some extent, affected secretarial work in some offices. The tendency has been to locate office computers in special computer rooms, where mostly male employees use them for electronic mail and data processing. Secretaries are given specific times when they can go and use the computers for secretarial work. It is apparent here that the way secretaries plan their work is being affected by this arrangement. Another tendency has been to employ male accounts clerks when accounting is automated.

I have mentioned earlier that in both industry and services, most Malawian women lack the appropriate technical background, the requisite skills and the training to adjust to the more rewarding, high-status jobs that will probably be created by information technology and will remain in standardized and deskilled lower status jobs. Women's educational background, their career



(choices?) and their initial training, all conspire to limit their access to the new jobs being created. It is striking to note that the proportion of women training in computers and other technical fields at the university of Malawi is less than 1% of participants in university level education. The participation of women in management and supervisory jobs is equally low, which again hinders their access to the new jobs created in these ranks.

In Malawi, the sharply differentiated sex roles and responsibilities of women and men and the differential allocation of resources between the genders has only been worsened with the onset of the new communications technologies. New technology has not only displaced women out of economically viable production, it has also created unequal access to education. Malawi is one of the countries in the world without the technical development or the capital to build their own computer and telecommunication systems. But given the strategic position of information in this era, Malawi is forced to import technologies that will enable the country to get access to the world-wide information banks.

Because 'high tech' technologies need professionals to run and maintain them, Malawi has had to send personnel to the developed countries to be trained in the use and maintenance of these technologies, or inviting them to come to Malawi and train local personnel. Courses have also been established at various institutions of higher education that train people in the use of the new information technologies, especially computers. Apart from

being very expensive for a developing country, this tendency has important implications for women. The personnel sent abroad for technical training are almost exclusively men because of their educational background. Most women do not make it to training courses even within the country or on the job training within the work place. Women attend word processing courses and go back to the office only to have no computer to practise the skills. I have heard a number of Malawian secretaries complain that their employers waste MK1,500 in sending them to a word processing course, because when they came back, they find themselves back to the old typewriter. The computer is either in the boss's office or in the data processing section where secretaries have no access to it. Some employers have at least purchased typewriter-like word processors for their secretaries. It is clear here that in Malawi, the computer is regarded as a 'masculine' technology.

What of women's access to the information being created by the new information technologies? One might as well argue on the basis of what has been said before that women's access to the new information will be very limited, and their participation in the generation and use of the information will be equally limited. Since the new communications technologies are 'high-tech', their use requires not only functional literacy, but also on the specific use and applications of computer programs. Unfortunately most Malawian women can not boast of this. Over 80% of Malawian women are illiterate and the few that are literate usually do not go beyond functional literacy. Extremely few Malawian women have the

capability to operate the new information technologies, let alone make use of the information. Therefore, most women in Malawi will not participate in the use of the new technologies because of lack of technical know-how, lack of enough education generally and lack of access to the machines necessary for this.

Another factor is the disparity in resources between the genders. Even in cases where new information technologies do not require particular skills, like in the case of shooting a video using a video camera, chances are that this technology will not be accessible to most women. The reason is the cost. A video camera costs a lot in Malawi, (MK16,000 in 1990), and most people, including the elites do not own it. Extremely very few people in Malawi own video cameras. This means that women, because of lack of enough financial resources are being left out of this technology. However, even without the economic constraints, social factors would still inhibit women from using this technology. If women had access to the video cameras and shot their stories with it, chances are that they would invite men to help them process their footage to produce a video.

It is within this context therefore that the democratic potential of the new communications technologies is to be debated. Technology transfer needs to be considered in its total context, from its design to its transplantation. Most important are the contextual values and assumptions built into the very ethos of professionalism as technology is transferred to the developing countries. These technologies come with their institutions which generate general

assumptions about their correct and laudable use. This is why developing countries send their students to the countries from which the technologies originate to be trained in the correct and laudable use of these technologies. Those students that return home to work take with them not only the skills, but as Smith (1980) puts it, "also values and attitudes, and not least, a respectability for the men and machines they have learnt to work with." And since these technologies generate patriarchal institutions (Wajcman, 1991) these will perpetuate the gendered division of labour already present in African societies. In Malawi, this is already happening.

## CHAPTER 5

### CONCLUSION

This study has substantively demonstrated that women in Malawi lag behind men in fields that deal with technology and fields that involve decision-making. It has also demonstrated that communications and information technologies are more accessible to men than they are to women. This then means that women's points of view regarding technology transfer are absent when technologies are imported to Malawi. When technology has been transplanted in Malawi, women are the least to use and benefit from it. This is because of the Malawian gendered division of labour and the gender hierarchy which accords women a subordinate position to that of men. This is coupled with the top-down approach of technology transfer which leads to sexist bias in policy as well as inadequate accounting of women's participation in development. This is because male-dominated aid institutions and the government make decisions about technology transfer to Malawi based on male knowledge, and once this technology is in Malawi, it continues to embody the notions that it is to be used exclusively by men. This situation unwittingly reinforces male-domination in technology and alienates women from it. Communication and information technology presents a bigger problem for women because it generally costs more than other technologies in malawi.

It would not be true to conclude that technology per se is the cause of the marginalization of women in Malawi, but certainly it is one of the factors that are further widening the gap between the sexes. The necessity for education and training generated by technological transfer has led into a situation where men benefit from the training and the use of the technology, leaving men's former jobs in the hands of women. Where former women's jobs have been mechanized, men have appropriated them. In the case of communication and information technology, men have had more access to information and leisure offered by the technology while women are denied access. This is because in the Malawian social norms, technology is considered masculine.

Although there is no agreement on the actual role of communication in development, scholars agree that the need for information is real and that information is an important resource in all endeavours of human activity. If economic and social development depend on knowledge of one's options in life (Sweeney, 1983) then it is necessary for everyone in a society to have information. If information has the capacity for enabling people make their own decisions, then everybody in society needs to be informed, so that they can make decisions that affect their own lives. Indeed if people are informed and are able to determine their own destinies, the implications for dignity, confidence and self-help are enormous. I feel, the basis of development is when individuals have dignity and confidence in themselves and are able to determine their own course of action by following the best of options that they have.

Communication technology has the potential to spread information to a majority of people, but this is possible only when the process is democratic and the technology is accessible to all groups on an equal basis.

The newer paradigms of development are opposed to bureaucracy and technocratic solutions. The creativity of the people and their will to develop are believed to be as important as techno-economic aspects of development. Within this approach, the role of communication is to strengthen shared identities, common values and experiences and emphasis is placed on traditionally sanctioned channels of communication at the grass roots level. Foreign technologies are brought in only if they further the process. Even in this conception, however, the traditionally sanctioned channels of communication are left to women while men grab the foreign technologies. The double standards are clear. If newer conceptions of development aim at increasing the quality of life of all (or at least the majority) of the members of the society, then there is a real need for the inclusion of women in all spheres of the development process: planning, implementation and execution of policy and development programs. The mode of communication, whether traditional or modern should not be defined on the basis of gender. This means that women need not only representation but also power in strategic areas of the Malawian society.

With the onset of communication technologies in Malawi, culture has also changed. The technologies have come with a new form of social

organization which is alien to the Malawian environment. As such, adjustments and modifications have been necessitated. While education and training has eased the adjustment to these technologies by the majority of men, women have generally been left out because of traditional sex roles. Education has generally favoured men to women thereby reducing women's options to those that have been traditionally defined.

WID writers such as Esther Boserup, have persuasively demonstrated that the processes of economic modernization in the Third World are marginalizing women both economically and socially. They believe, like western liberal feminists that the social and economic inequalities in society are mere aberrations that can be rectified through legal procedures and attitudinal changes. This view believes that sexual inequality can largely be corrected if women now confined to the domestic sphere are integrated into the public sphere as the equals of men, while the man is still the head of the family. In other words, women, while still central to the maintenance of the family should thus be enabled to take up extra-domestic activities and to be integrated into development. While I agree with scholars in the Liberal Feminist and Women in Development schools, it is essential to challenge the material preoccupation of the liberal feminists which are apparently derived from the modernization school. These scholars are of the view that the main problem is women's lack of integration into the development process. If we merely say that women are not properly integrated into the processes of economic modernization and that



their liberation lies in better integration into these processes, we are overlooking an important aspect. Papanek (1977) and Nash (1976) have argued that women are already well-integrated into the economic processes, only that they are marginalized and their work is not recognized, their contribution is un-valued. It is important therefore to consider if women can be integrated into more self-fulfilling forms of employment within the hierarchical socio-economic structure of African societies and the ideological structures of the capitalist system. While WID thinkers and liberal feminists feel this can be done, I feel that women's integration can not take place within the present Malawian value system.

Marxist feminists maintain that the the marginalization of a vast majority of women - and men, for that matter - is " a structural feature of a social system which puts the profits of a few before the needs of the many." (Bandarage, 1988: 501) While few people make profits, the rest are forced to work towards the profit making of the few. Marxists put sexual oppression in its historical context as it interacts with class oppression and imperialism. It shows that women's oppression is not simply reducible to male ignorance or to the male ego. Women's liberation needs a radical change in our values, material interests and social arrangements at the local, national and international levels.

Marxist feminist theory has a lot to offer in terms of the oppression of women with the onset of imperialism and capitalism in the Third World. However, there is an obvious discrepancy between theory and

practice. The theory is too radical to be practical in a Third World country like Malawi. There are massive odds against structural transformation in a country that has already undergone structural transformation under centuries of colonialism and neo-colonialism. On the theoretical level too, there are many shortcomings on the Marxist position on Women's subordination. Marxism pays attention on the effects of imperialism and capitalism on women. The abstract forces of capitalism, commercialisation, proletarianization etc - are posited as the sources of women's oppression, not the exploitation of women by men. (Rothenberg, 1979) The result is the neglect of such issues as the oppression of women in pre-capitalist and socialist societies. How can one explain the oppression of women by men from a class lower than that of the women? Women and men have never been equal in the history of mankind. While women might have more power in one culture than those in another, it is a fact that women are the marginalized half of mankind throughout the world. Marxist feminists neglect this.

The fact is, analytically, we can separate class oppression from sexual oppression, capitalism from patriarchy, but in reality, they are extricably interlinked. Pre-existing forms of sexual oppression in Malawi have been reinforced by the infiltration of the capitalist mode of production. With the change in the social base of the economy, from subsistence to monetary economy, the benefits of using technologies in the Malawian development model have accrued mostly to men. Men have access to the more lucrative and prestigious jobs in the formal sectors of the economy and women

are relegated to the least productive and paid activities. Both the capitalistic and patriarchal mode of production rely on women's cheap or free labour to make profits.

I feel it is essential to spread the benefits of using new communications technologies to women, who bear the bulk of the work in Malawi. Women need to use these technologies to communicate among each other. While it would help if women were integrated into the formal sectors of the Malawi economy, it would be very helpful if women were empowered and made confident to work with technologies in informal sectors. This is because the Malawian economy can not sustain a lot of people in the formal sector. For both women and men, the ability to realize their development potential depends on their dignity and self-confidence. This depends on access to information and resources. Compared to men, however, women face additional barriers to access because of forces that tend to keep women away from information and resources. It is in this light that I propose that Malawian women be empowered with the capacity to create their own information needs and find their own means of getting resources. If this means the use of technologies, women should not be denied the chance and should be trained alongside men in the use and application of those technologies that enable them to have access to information and resources on an equal basis with men. There should be no segregation in terms of the technologies given to men and women. It would also not be realistic to say that technologies should not be imported. One would however wish that only the necessary

technologies be imported and be made equally accessible to both gender groups. I therefore present some guidelines which, I feel, would help make women more comfortable in working with technology both in the informal and formal sectors.

### **Guidelines for the Future**

Cross cultural research asserts that women could have a greater share in their societies if their role in the family and society in general and their capacity to maximize production were better understood. It has been demonstrated that women play a very big and important role in the production of not only food, but also other commodities in society and that their production could increase if they had equal access to technology and resources with men. The economic contribution of women is known to be substantial, yet their economic options tend to be very differentiated to that of men. Because of socio-economic changes in Malawi, some women have entered the formal sector.

Naturally, women's entry into the work force has dramatic effects in a society where their lives have always been centred around the family home production. On the one hand, women's entry into the labour force does offer women some autonomy, earning power and freedom from the pressures of the home. However, this freedom is only temporary, because buying power is not social power. Women often pay a high price for their new found freedom, limited though it may be. After work, they are still expected to perform their traditional feminine obligations in the kitchen and the household

while the men rest. There is a growing backlash against working women, as men attempt to preserve their dominance over the family and society. Male resentment and hostility toward working women has led to the stigmatization of women who enter the work place. And since men need the money the women make in order to supplement their income in the family, the tendency has been to tolerate working women, but restrict them to the so called "feminine" sectors.

With the onset of the new communication and information technologies, the growth areas for jobs for women are likely to be in professional and skilled occupations which are still experiencing a shortage. Yet training in the use and applications of the new technologies is following the trend of all technical training: it is dominated by men. Many social factors have been responsible for such a state of affairs. It is important therefore in any suggestions regarding technology for the future to recommend non-sexist educational practice, as well as conscientization towards a change in social attitudes towards gender. One might argue that to do so would be to import foreign values to the society. It should be realized at the same time that technologies are not indigenous to Malawi, and neither is formal education. A lot has changed since colonialism and culture has not been static. A restructuring of the social base is necessary, and this could start with a revision of the sexual division of labour

First, it is important to educate and socialize young girls to the full range of potential work roles and activities (e.g. science and technology subjects) and let them make their own choices about what they want to pursue. This must start from a very early stage in the life of a girl and work its way up the educational ladder. In order to achieve this, girls need to be advised of career options in relation to marriage and the work place. Girls need to be involved in technical activities from an early age through the toys they play with and gender-free roles that parents and teachers in the school assign to them. They should be assured that they are just as important as the boys to their parents and the Malawian society in general.

Second, the Malawian school system needs to overhaul the sexist curriculum that it now follows. Girls and boys need to be given equal chances to choose the subjects they want to pursue and if this is accompanied by gender-free treatment, more and more girls will be choosing non-traditional careers. Girls should be given the chance and even be encouraged to take science and technical subjects in school, and efforts should be made to equip girls' only schools with facilities for science and technical subjects on an equal basis as in boys schools. In co-education schools, one's gender should not determine the subjects that one is destined to take. Since these are prerequisites for careers in technology and other technical fields, girls could have more options in choosing a career and not be limited to a few "feminine" fields. Sexism in Malawian schools is a profound problem and requires concerted action on many fronts.

At the institutional level, there must be an acceptance of the problem and a policy decision to work for change. This could start with an audit of all the sexist practices in the system, like for example, putting boys' names ahead of girls' names on class registers and examination candidate lists, or equipping boys schools better than girls schools. This kind of practice reinforces the general belief that boys are more important than girls, that they perform better than girls, while the fact is that the school system has generally favoured boys to girls. At university level, names are put in alphabetical order, but "Miss" or "Mrs" will be put in front of women's names, while nothing is put in front of men's names. This is another form of sexism; it implies that women must always be identified as women, not as other students in the university system. These are the kind of practices that keep women in "their place". I believe it would help if they put everybody's names together on the class lists and not care whether a candidate was male or female.

At the classroom level, change must start with a recognition by teachers that the sexist attitude and behaviour that all of us carry as a result of our socialization are carried into the classroom and do influence what happens here. Teachers need to work at combating sexism in the classroom by generating non-sexist learning situations. This will create learning situations where both boys and girls will feel free to explore all the avenues that are open to them.

Thirdly, women need to be recognized when they have technical skills. It should be realized that although some girls have the skills necessary for careers in technology and technical fields, they need the opportunities to exploit them. Society should therefore open doors for women to enter these fields. This means that an equal opportunities framework must be taken to enable women to take up the technology jobs of the future. This could take the form of affirmative action. Men need to be taught to accept women in formerly male-dominated work environments. Women too need to be taught accept themselves in formerly male dominated environments. It should be understood that this can not take place overnight, but through a gradual process of change through training and an awareness of the obstacles that men put in the way of women's career development.

Malawian society needs to stop looking down upon women and prevent the downgrading of positions held by women. This could encourage men to enter formerly female-dominated occupations, and in turn open doors for women into formerly male-dominated occupations. This could be achieved through the de-gendering of work and conscientization whereby women themselves feel worthy and confident. In most cases it is women themselves who perpetuate gender inequality by accepting male dominance as inevitable.

The odds against women's proper participation in technology in Malawi are high, but the benefits accrued from women's proper



integration in technological fields are enormous. There is need for concerted action between women's groups in Malawi and the government to try and redress this situation and this would start with giving women more information and power. The benefits of giving women access to information and communication technologies would be reaped by society at large. Since women are the primary socialization agents and caretakers of their families, this information would in turn benefit the whole family, the community and consequently, the nation.

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