THE SOCIAL AND ECONOMIC IMPLICATIONS OF AIDS IN AFRICA: CAUSES, EFFECTS AND RESPONSE

A Thesis submitted for the degree of Master of Philosophy

at

The London School of Economics and Political Science

University of London

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May 1996

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ABSTRACT

The overall aim of the thesis is to establish the main non-medical causes and consequences of HIV/AIDS and to put forward a considered understanding first, of risk perception, second of potential and actual coping mechanisms, and third of the policy issues involved. The thesis considers these issues in a socio-economic development context at a number of levels; individual, local, national and international since it is at these interwoven levels that HIV/AIDS is experienced, and where policies and strategies must be directed.

The thesis provides a substantial and critical exposition of the current literature on HIV/AIDS, within a non-medical context of interdisciplinary social science work. The theoretical framework is based on the hazard and disaster management literature, adapted to develop an understanding of the HIV/AIDS pandemic, and to provide a perspective from which to study perceptions of risk and develop potential coping strategies. The importance of established theories on health is also a major consideration in terms of understanding the contemporary issues. These theories are considered in terms of the social construction of disease in historical perspective, particularly Sexually Transmitted Diseases (STDs), and lead on to the contemporary issue of HIV/AIDS. There is a particular emphasis on social and economic development issues, as well as the role of historical processes in development such as the implications of colonialism, so that the hazard and disaster management perspective is contextualised to deal with the specific topic of the AIDS pandemic in Africa.

The thesis is intended as a general study of HIV/AIDS in Africa in terms of establishing potential risks. Kenya is used as a case study to work through these socio-economic and development risk factors. Kenya was chosen because it is one of the more developed African nations, with a large and increasing urban population and because very little Kenya specific work of this nature has been done within the HIV/AIDS context. Where lack of data availability made the use of Kenya impossible, examples were taken mainly from East Africa. The later developing strain of HIV2 in West Africa and its implications has thus been largely ignored.

As the HIV/AIDS pandemic in Africa has progressed within the heterosexual community the search for a 'solution' has become more important. There is a need to understand the interaction of traditional culture, religion, tourism, political unrest, the problems of reliable data and data collection, modelling and prediction and the position of women in society, together with problems posed by externally imposed economic programmes. All these factors are of vital importance for a complete understanding of health issues in Africa, especially those relating to HIV/AIDS.

ACKNOWLEDGEMENTS

Inevitably with a project which has developed over such a long period of time there are an endless number of people who have helped and encouraged it along the way. Firstly I would like to thank the Isle of Man Department of Education (particularly Mr Alun Davies) for financial support throughout, without which the research could not have been undertaken.

I would particularly like to extend my gratitude and thanks to Dr Yvonne Rydin who, in her various roles as Supervisor and Graduate Tutor, has provided a continuity of constant support, advice and encouragement, together with constructive criticism and editorial comments. Without her help and enthusiasm, particularly in times of doubt, the project would not have been completed. I would also like to acknowledge Dr Sylvia Chant for her initial interest in the project, Dr Rupert Hodder for his comments on an earlier draft and thank Professor Derek Diamond for his encouragement in the laborious closing stages.

There are a number of other people who must claim some responsibility for my continuing academic endeavours. Therefore I would like to thank Mrs Ann Masterton and Mr George Quayle for not only instilling my interest in geography but also for helping and encouraging me to come to the LSE and study further.

I would particularly like to thank my parents for their constant support in every way, not least financial, throughout my further education and for always being on the other end of the phone when things go wrong. My brother David must also be thanked for his steadying advice on the 'workings of academia' in times of trouble.

I would especially like to thank Sarah, Brian, Hazel, Alison and Peter Wicks for their friendship and academic encouragement. I must also thank Claire for helping to turn an often frustrating time in Kenya into an adventure providing endless anecdotal reminiscences. Thanks also to Martin, Dawn, Jo and Lynne who have lived with me and my thesis at varying times. It is difficult to mention everybody by name but I would like to thank the entire graduate community in S504, who through mutual suffering provide mutual support, as well as a friendly and relaxed working environment. Finally thanks are due to the LSE Department of Geography as a whole which has provided me with six and a half years of education and entertainment.

Helen Walker
December 1993

It is a bizarre, complicated and difficult set of circumstances which cause me to add acknowledgements to a thesis such a long time after the first set were written. In spite of these I do not retract any of my earlier comments, as at the time of writing I sincerely believed them, and this is my opportunity to thank those who have stood by me since that time.

I would particularly like to thank Professor Nigel Spence formerly of the LSE for his support through my viva. The Director of the LSE, Dr John Ashworth, should also be acknowledged for ensuring financial support and by consequence the Department of Geography who ensured the necessary facilities were at my disposal. I am particularly indebted to Dr Sarah Bradshaw (Middlesex University) and Dr Jonathan Barton (LSE) for their perceptive, extensive, critical and in depth editorial comments on the thesis, a difficult task and one way beyond the calls of friendship. Also to Hazel Johnstone who not only proof read the final draft but provided an unceasing support throughout the whole process.

From a personal point of view I would like to thank once again my parents who along with David have been a phenomenal source of support and help. Thanks also to John, Martin, Dawn, Brian, Allyson, Lynne, Tom, Gillian and all the other friends named and unnamed last time for their continuing support both academically and personally. Without their understanding and encouragement I could not have got through the many and varied battles of the past few years.

Finally I would like to thank my colleagues at the School of Oriental and African Studies, especially Graham Thomas, who not only effectively provided the funding for me to finish the thesis by employing me, but also restored me with sufficient confidence and faith in human nature to complete the task in front of me.

In the lyrical words of the late Peter Wicks, "The learned dream of the academe does it ever leave you cold?"

Helen Walker
April 1996

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GLOSSARY

AIDS	Acquired Immune Deficiency Syndrome
AZT	Zidovudine
CBR	Crude Birth Rate
CDC	Centre for Disease Control
CDR	Crude Death Rate
ELISA	Enzyme Linked Immunoabsorbent Assay
FIV	Feline Immuno-deficiency Virus
GAN	Global AIDS News
GDP	Gross Domestic Product
GPA	Global Programme on AIDS
HIV	Human Immuno-deficiency Virus
IMF	International Monetary Fund
KAP	Knowledge, Attitude and Practice
MEP	Member of the European Parliament
NCPD	National Council for Population and Development
NGO	Non-Governmental Organisation
PHC	Primary Health Care
PWA	People With AIDS
SAP	Structural Adjustment Policy
SIV	Simian Immuno-deficiency Virus
STD	Sexually Transmitted Disease
SWAA	Society for Women and AIDS in Africa
TASO	The AIDS Support Organisation
THT	Terence Higgins Trust
UN	United Nations
UNICEF	United Nations Children's (Emergency) Fund
WHO	World Health Organisation

PREFACE

" AIDS must not be allowed to join the list of problems that the world has learnt to live with because the powerful have lost interest and the powerless had no choice...." (Michael Merson, WHO GPA, 1993)

Introduction

HIV and the resultant transference to AIDS was first discovered and acknowledged as a major life threatening disease in the early 1980's. Since this time there has been much written on the subject with a large proportion of research centred on medical issues and debates, on the potential for a cure or a vaccine. More money proportionately has been diverted to scientific research in this field than any other contemporary medical issue. In spite of this, no cure has been found, vaccine trials are yet to occur, and history tells us that the chances of finding a cure or vaccine for a virus of this type are limited (see Chapter Two). Due to HIV targeting the immune system vaccines are unlikely to be a financially viable option for the developing world.

Since the early 1980's the disease has spread to epidemic proportions in most African countries. Despite this, funds have been diverted into medical AIDS research in developed nations. The role of such medical projects in Africa has been questioned (Cliff and Smallman Raynor, 1992). An increasing awareness that a medical solution is not imminent, and that the financial constraints on many African nations would prevent the use of such a medical solution, has instigated a search for alternative methods of managing this disease. Under the constraints that developing nations face, AIDS increasingly began to be seen, by NGOs and academics working in the field, as another development issue, not solely a medical one. As such, social, economic and political factors are now seen to have played a key role in the rapid spatial and population specific spread of the disease. It is this view, that AIDS is a development issue and must be tackled accordingly, that forms the basis for the research and the context of the argument.

The Research Approach

The thesis aims to provide a critical exposition of the current literature on HIV/AIDS within a non-medical framework. It will provide a concise analytical report covering a variety of perspectives. The study has used a wide range of academic sources to collate information from various perspectives. This has been complemented by a review of the British, North American, and to a lesser extent, Kenyan press to establish present attitudes within the media. Other key sources include the on-line database "AIDSline", a regularly updated system based at the London School of Hygiene and Tropical Medicine and information from the Internet which holds a comprehensive and varied collection of articles and up-to-date statistics, from individual sources, academics and international aid agencies such as the World Health Organisation (WHO).

Over and above these sources, publications produced by, and for, Aid agencies were of importance. These have been used to establish current thought within agencies actually working in the field, and to provide a comparison with articles written by representatives of the media, medical, and academic communities. These publications, such as the WHO's Global Programme on AIDS journal, also provided regular, accessible and contemporary data. Although some data collection problems were encountered (see below and Chapter Five), the above provides the basis of the thesis.

It should be noted that when the project was originally conceived, the aim was to collect primary data on HIV/AIDS and those affected by the disease. The original project envisaged research being undertaken in Kenya, involving one-to-one interviews at a community level in Mombasa. The aim was to establish, at a grassroots level, how HIV/AIDS was perceived, whether it was consciously seen as a risk and coped with accordingly or not, in order to put forward and develop realistic education messages for this region. Academic data on Kenya at this time appeared relatively limited, and thus primary research seemed an essential and viable option. Mombasa was chosen as the research location for a variety of reasons: It is a major tourist resort and thus influenced

by, and susceptible to, disease from outsiders; it is also a port, again increasing the chances of transmission of disease both from and to external sources; and finally, because of the religious and ethnic mix within the city. This would have helped in understanding the significance of religion and ethnicity with regard to attitudes to sexual behaviour and responses to HIV/AIDS.

Unfortunately, after 12 months of applications to the Kenyan government for a research visa, and a month long 'tourist visit' to the country to assess the situation and affiliate myself to the University of Nairobi (one of the many and varied requirements of a student research visa), it became apparent that the visa would not be granted within the time and funding constraints. The decision not to grant a visa was made primarily on the grounds of the unacceptable nature of the proposed research topic, although this was never explicitly stated. The only alternative appeared to be entering the country on a tourist visa and then trying to undertake the research project. My experiences with the Kenyan bureaucracy, their refusal to refund the fee for the visa after it had been turned down, along with advice I received from academics in both the UK and Kenya, suggested that the risks involved in this were not justifiable. Furthermore, I felt that the moral and ethical implications involved in falsely declaring my reasons for visiting, and perhaps also giving false hope to those I was interviewing, were unacceptable. Ultimately, therefore, the research focus was forced to change, and became a desk-study, based on the available published data and secondary sources.

It is important to acknowledge that there are inevitable problems in desk-based studies. First, there is bias and at times 'creativity' with official statistics and data. As can be noted from the above visa problems, countries are often unwilling to allow research over which they have no control and which may paint a negative picture. Second, authors may incorporate their own bias, which may or may not be conscious or acknowledged. Third, further questions may be raised on a study based on secondary sources since by definition this is a further interpretation of the facts, and one which is unaware of the

specific issues in the field which may have influenced its initial collection and interpretation. Finally there are problems with generalisation and the definition of terms and their comparability with different studies.

To avoid the problems of generalisation, Kenya was retained as a case study. However, the emphasis placed on Kenya had to be reduced, to a certain extent, given one of the primary reasons for choosing it as a research location had been because there was relatively little accessible research done on HIV/AIDS in the country. However, since the initial literature review had been undertaken for this region, and since the importance of country specific examples had been lessened by the change in emphasis of the thesis, where feasible Kenya continues to be used as a case study of a 'typical' African country for the purposes of illustration or explanation.

Consequently, the importance of the theoretical framework used is now far greater and provides the focus of the thesis. This theoretical argument is based around the belief that HIV/AIDS can be considered as a potential disaster within a hazard framework. This approach is designed to help to understand the social construction of the problems relating to disease. It also aims to show HIV/AIDS as a development issue, not solely a medical one, and that the perception of it as such, at every level, is paramount in decreasing its long term impact on the economic and social structure of many African nations.

Thesis Structure

The first chapter of the thesis outlines the theoretical framework of hazards used to develop an understanding of the AIDS pandemic as a disaster. This is considered in terms of the social construction of disease in an historical perspective, and leads on to the contemporary issue of HIV/AIDS. Further discussions will centre on the main theories used to establish the hypothesis that HIV/AIDS is a development issue, which can be studied within the natural hazard/disaster literature, in order to provide useful and

practical policies to prevent its more disastrous potential from occurring. Theories used to develop frameworks within which to understand major health issues are also considered. The level of development and its differing impacts are the final considerations of the opening chapter.

The remainder of the thesis will focus on the three main co-factors which have been involved in the spread of HIV/AIDS (see Fig 0.1); that is medical, social and economic. Thus the second chapter outlines the medical aspects and approach to HIV/AIDS. It considers the stage that medical research has reached, and the extent to which patients may now be treated. The medical issues, however, are only a part of the AIDS debate. The third chapter concentrates on the social aspects of AIDS, the impact of religion and traditional beliefs and behaviour in an African, and more specifically Kenyan, context. It attempts to dispel popularised media myths about African promiscuity and its relationship to the spread of HIV/AIDS, through consideration of culture, and continues by considering gender roles and relations, and social development. Finally the position of children and the role which they may have to play in the future spread and response to HIV/AIDS is discussed.

The fourth chapter concentrates on economic aspects, again beginning with an historical approach, in order to understand how economic factors have assisted the development of a disease environment in which HIV/AIDS could evolve. The role of colonialism and latter day development policies imposed by the developed on the developing nations, such as Structural Adjustment Programmes (SAPs), are major considerations in this economic development process. This chapter then moves from such macro-scale policies into micro-level issues, at both the household level and within the two case study industries of tourism (formal sector) and prostitution (informal sector).

The concluding chapter of the thesis considers the extensive problems of establishing accurate data and reliable modelling techniques for HIV/AIDS. It then brings together

these problems with policy issues and coping responses under the natural disaster hazard framework established at the outset. This framework helps in understanding people's perceptions of the risks and dangers of HIV/AIDS in a social context.

Factors Involved in the Development of HIV/AIDS in Africa

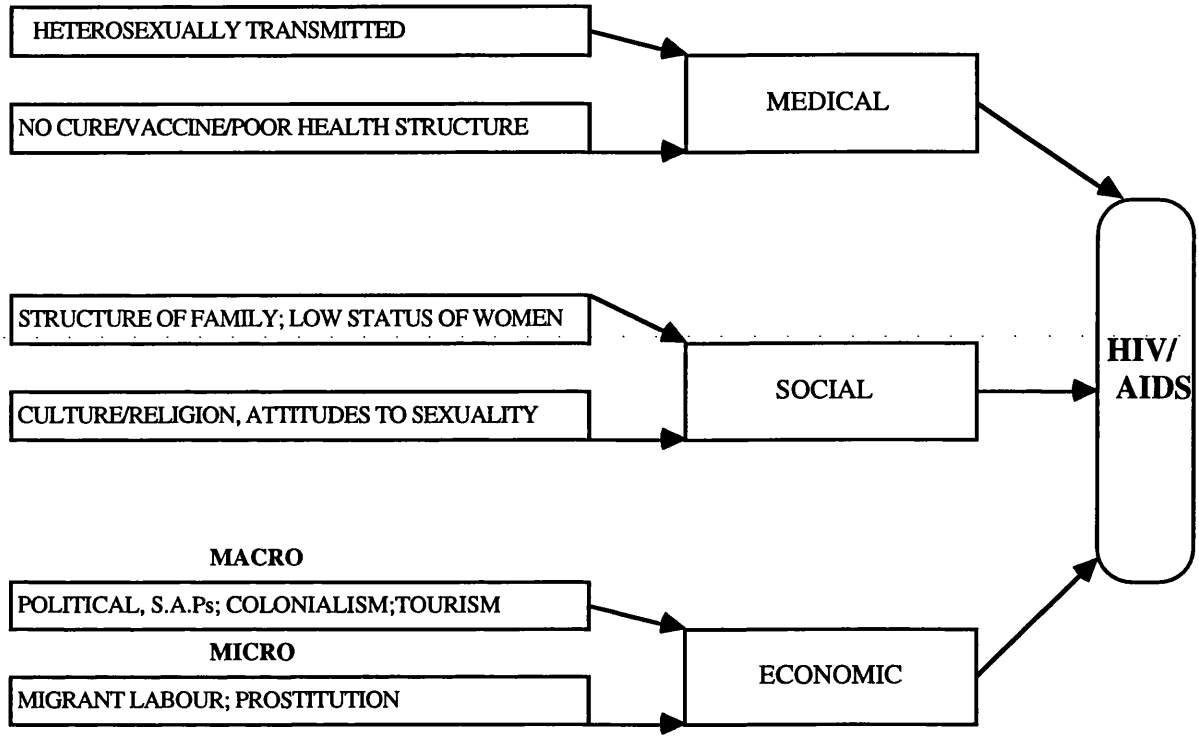


Figure 0.1

The Kenyan Context

Since Kenya is going to provide the primary source of illustrative examples it is important to give a brief outline of its geography, historical development and political, social and economic structure. It is these contextual features which have allowed HIV/AIDS to manifest itself in the way that it has. Many of these conditions may be seen as typical of other African countries, although it should be noted that Kenya is often considered to be one of the more developed African nations. As can be seen in Figure 0.2 Kenya borders Ethiopia in the North, Sudan in the Northwest, Uganda in the West, Tanzania in the South and Somalia in the East. It has over 400 kilometres of Indian Ocean shoreline and is entirely within the equatorial zone (Central Bureau of Statistics

(Kenya) 1993). Within Kenya there are 43 ethno-linguistic groups; the major groups being Kikuyu (21%), Luo (13%), Lubya (14%), Kamba (11%), Kalenjin (11%), Meru (6%), (World Factbook, 1996). Christianity (28% Roman Catholic, 26% Protestant) and Islam (6%) are the predominant religions with various indigenous beliefs adding a further 18% (ibid).

STATISTICS

Territorial Area: 582,000 km2
8 Provinces; 48 Districts; 43 ethno-linguistic groups; Christianity and Islam predominant religions (Central Bureau of Statistics (Kenya, 1993)
Population: 28,261 000 (UN Pop Div 1994)
Growth Rate: 2.8 - 3.0% (ibid)
Life Expectancy: Male 50.72 - Female 54.16 (ibid)
Infant Mortality: 66 per live 1000 births (ibid)
Illiteracy: Male 20%; Female 42% (UNESCO, 1991)
Per Capita GNP: US$ 310 (1992) (World Bank, 1994)
Reported Cumulative AIDS Cases: 56 573 - est. Urban prevalence 9.6% Rural 4-5.5% est. No. HIV+ people by 1996 1.7 Million (reported by Kenya Government) (WHO GPA, 1996)

Figure 0.2

Kenya became an independent nation from British rule in December 1963 and to date remains in the Commonwealth. It was a multi-party state from 1963 until 1982 when it became a one party state, under President Daniel Arap Moi. International pressure forced multi-party elections to be reinstated in 1992. This resulted in Arap Moi and his Kenya African National Union party (KANU) being returned to power with 37% of the vote. The National Assembly, with a total of 200 members, is made up of 100 KANU representatives with the two leading opposition parties (FORD-Kenya and FORD ASILI) having 31 members each, other parties make up 26 seats. The President nominates a further 12 extra members (World Factbook, 1996).

Kenya's census statistics reveal population increases from 5.4 million in 1948, to 15.3 million in 1979 and 21.4 million in 1989. Results of the 1989 census showed an intercensal population growth rate of 3.4% per annum (a decline from figures varying

between 3.8 and 4.1 % for the period from 1979) this figure however was estimated to be even lower at 2.8% by the UN Population Division in 1994 (WHO GPA, 1996). The population is presently estimated at 28 261 000 (WHO GPA, 1996) and is expected to reach 30 million by 2000 (Central Bureau of Statistics (Kenya) 1993). 27.3 % of Kenya's population live in urban areas and the intercensal growth rate of the urban population is approximately 4.8% (2% above the national growth rate) (Central Bureau of Statistics (Kenya) 1993). Nairobi has an estimated 2 million residents and about 77% of the population live in the corridor from Mombasa, through Nairobi to Kisumu (WHO GPA, 1996). Despite the growth in the urban population, agriculture is still the mainstay of the Kenyan economy accounting for 25% of the GDP and 65% of exports, whilst manufacturing accounts for about 13%. Tourism, coffee and tea are the principal generators of foreign exchange.

According to the Kenyan government's Demographic and Health survey of 1993, Kenya has gone through several economic phases since independence. While the latter of these will be considered in greater depth in Chapter Four, where the economic implications of AIDS are discussed, a brief guiding outline of this economic history is of some use in understanding the present socio-economic conditions in the country. In the first ten years of independence (1963-1973) the country enjoyed low inflation, high employment creation, and a relatively stable balance of payments position. The second economic period (identified as 1973-78) saw this record growth immediately following independence upset by three major shocks, all of which were as much of global as of local significance. First, the 1973 oil price rises caused extensive internal and external economic imbalances. Second, in 1977-78 the increase in the price of tea and coffee steadied the balance of payments to an extent, before the third, the oil price rise in 1979. The next phase resulted in slow growth, compounded by global recession in the early 1980's, and the 1984 drought. 1986 saw government implementation of Structural Adjustment Programmes in agriculture, trade and industry, supported by the World Bank and the International Monetary Fund (IMF), improving economic growth at least

superficially. Declining growth has been the final and present stage of Kenya's economy, attributable to a decline in external resources and poor performance of the main exports. In fact GNP fell from US$430 in 1990 to US$310 in 1992 due mainly to the collapse of tea and coffee prices (Central Bureau of Statistics (Kenya) 1993).

HIV/AIDS was first officially reported in Kenya in 1986. The epidemic is classed as mature with a reported cumulative total of 56,573 actual AIDS cases (as of 25/4/95) (WHO GPA, 1996). The number of HIV infected people is estimated to reach 1.7 million by the end of 1996 and as many as 300,000 new adult and 115,000 paediatric AIDS cases are expected in the same time frame (ibid). The Kenyan National Council for Population and Development (1992) estimate the urban prevalence of HIV to be 9.6% as opposed to between 4 - 5.5 % in rural areas. In 1985 the National AIDS Committee of Kenya was established and various programmes and policies have been developed. Nevertheless in 1993 AIDS was declared a national disaster (WHO GPA, 1996).

CHAPTER ONE

HIV/AIDS AND NATURAL DISASTERS

" As long as there is evidence that the world is likely to be plunged into warfare, riddled with *disease*, or racked with disasters of various kinds, human society is under great pressure to seek rational strategies with which to deal with such events." (Kirby, 1990:18, my emphasis)

The Need for a Framework

This chapter aims to set out the natural disaster/hazard framework in relation to HIV/AIDS and to consider within this framework possible ways of perceiving and coping with the disease. It will then continue with an analysis of historical disease patterns and their importance in understanding contemporary problems and concludes with present strategies in developed and developing countries. There has been much written about the theoretical framework of risk perception and coping strategies[1] (Horlick-Jones, 1992; Douglas, 1992) in terms of health issues (Phillips, 1990), including disease patterns, as well as of household survival strategies during periods of economic stress (Brydon and Chant, 1989), and of natural hazards in the various time scales which they occupy (Blaikie et al, 1994), but there has been little in the way of a direct framework within which to place HIV/AIDS (Barnett and Blaikie, 1992). There is, however, a need for some form of analytical framework so that policy and response may be ordered to incorporate and structure all of the relevant factors involved in the perception of, and reaction to, this disease.

In much of the media hype surrounding HIV/AIDS, dramatic headlines have proclaimed the calamitous nature of the disease and its disastrous effects in Africa. It is interesting, therefore, to take this more literally, and place HIV/AIDS into the framework within which 'natural' disasters have been analysed. This framework is increasingly being used to analyse social science issues because of its use of human reaction and perception of risk

[1]Coping strategy/mechanism is a term used to describe a process of active defences and effective problem solving against an external event over which there is no control.

and 'natural' coping mechanisms. Providing a framework such as this may help to show the variety of factors which are involved in the spread and control of HIV/AIDS.

It is important to note that hazard and disaster are not interchangeable. In the present context becoming HIV+ is the hazard and the AIDS pandemic[2] is the disaster. Hazards are agents or circumstances with the potential to cause loss. Disasters focus on the relative significance of the consequences (Jones, 1991). Defining HIV/AIDS as such allows the use of a simple and pre-constructed framework within which to analyse the various social and economic problems which are normally associated and acknowledged within hazard management. The comparison of HIV/AIDS with more commonly encountered disasters, such as earthquakes or famine, also provides a useful and easily understood teaching tool. Essentially the reason for using this framework is to establish the importance, variance and quantity of socio-economic co-factors which need to be considered alongside the physical properties of a disaster (which in this case are the medical issues).

The disaster framework breaks down these co-factors of the hazard and subsequent disaster into manageable sections of understanding. These sections allow us to understand the pathway from the medical identification of the disease, to the importance of risk communication and perception, of establishing the vulnerable population,[3] and of coping strategies. It also considers the potential impact of a large number of deaths, temporally and spatially, on the social and economic structure of a defined population. There are a number of different issues, and their incumbent theoretical messages, which must be considered and moulded together to form an acceptable explanation of the way in

[2]A pandemic is a disease or plague of epidemic proportions world-wide. An epidemic has been defined as a disease which can cause or threaten to cause more than 1000 people to die or be seriously disabled (Doll, 1987). A plague is defined by the medical dictionary as an epidemic disease causing a high rate of mortality. However epidemiologists now use the term epidemic to describe an unusual occurrence of a rare disease. Thus a single case of smallpox (virtually eradicated) could conceivably constitute an epidemic whereas the million cases of gonorrhoea in the US each year would constitute an endemic but not necessarily an epidemic (An endemic is "A disease regularly or only found among (specified) people or in a (specified) country " (Oxford English Dictionary)). Mortality rates now therefore are not particularly good indicators for definition (Foege, 1991). Foege (1991:12) thus defines plague as a "disease or other condition causing high mortality or morbidity and often accompanied by social dislocation", which placed in a global framework describes the pattern and proportion of AIDS.

[3]The vulnerable population is fundamentally different with HIV/AIDS than with most natural disasters (see The Importance of Risk Perception p26).

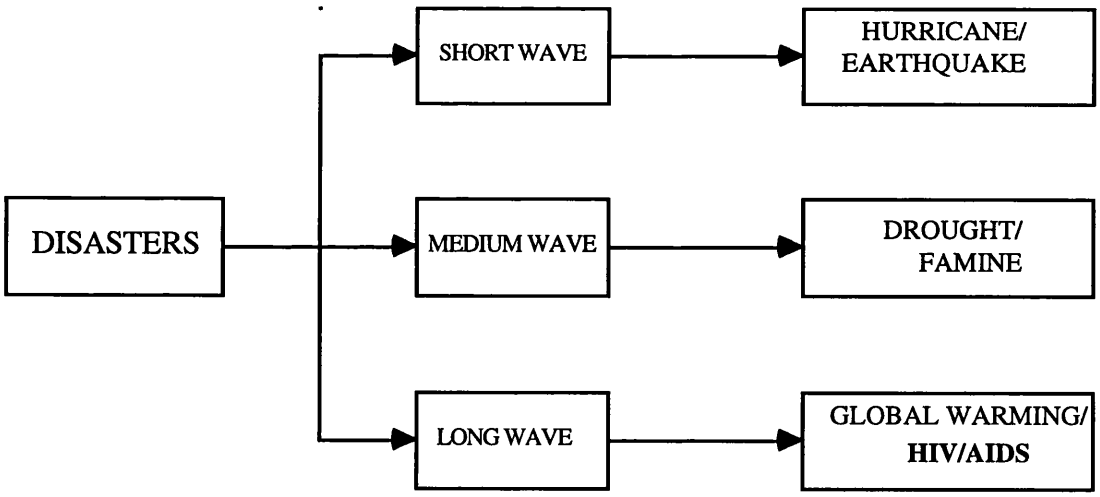
which societies in developing nations have reacted to HIV/AIDS, and may be expected to react to it in the future, if model predictions regarding the increase of the disease are correct. Having established this, the thesis will then attempt to consider some of these issues within both the context of disaster and, more specifically, that of disasters in developing countries.

Inevitably there are a number of problems in placing what is perceived as a fundamentally human disaster into a framework for 'natural' hazards. Nevertheless, humans are playing too large a role in contemporary natural disasters to continue calling them 'natural' (Horlick-Jones and Jones, 1993). As Jones (1991) suggests, all hazards are by definition human modified to become disasters, thus may be defined only as 'quasi-natural hazards'. A distinction needs to be made between the trigger events which may be 'natural' and the associated disasters which are largely induced by humans (Wijkman and Timberlake, 1984). Natural disasters are an integral part of human life especially in the developing world. Our whole perception of disasters has more to do with social, political and media conditioning than with logic (ibid). Thus it is important at the outset to be clear about the nature of hazards, and how they may be defined, before attempting to use this framework to understand HIV/AIDS.

Kirby (1990) has pointed out that the study of germs and germ-caused disease shows the historical process whereby an invisible threat becomes real. This contains lessons for those concerned with the cultural and social aspects of hazard policy. For example, similar situations may be seen in many forms of environmental pollution where effects are not apparent or immediate. What is crucial to understand is that a natural disaster event only takes on a hazardous nature when the human element is added. That is, most hazards are natural events which only become labelled as hazards when they interact with society (Jones, 1991). Disasters are the consequence of major impacts of these interactions. An earthquake measuring high on the Richter scale (based purely on the physical properties of an earthquake) which takes place in the middle of the desert has no hazardous implications

because it has no human impact. Locate that same earthquake in a city and the outcome is very different. The impact is particularly great when placed in the context of a developing country where poverty has forced shanty towns with poor housing to develop on the outskirts of cities on unstable marginal sites, such as the landslide prone areas which have extensive 'favelas'[4] built on them in Brazil. Essentially, in a disaster as Jones (1991:49) states, "The rich lose their money - the poor lose their lives". In this instance, in order to be close to employment people are forced to live in a hazardous zone. If wealthy people *choose* to live on a fault line in the USA, they do so consciously and take out insurance to protect themselves and their property (Blaikie et al, 1994). In the same way, while the HIV virus is harmless outside of the body, within the body it becomes potentially fatal. Barnett and Blaikie (1992) have attempted to make this link between natural hazards and HIV/AIDS in order to try to shape the coping mechanisms developed by vulnerable populations to protect themselves against disasters, to protect them against HIV/AIDS. They have categorised disasters as short, medium and long term (Figure 1.1). In earlier hazard literature these tend to be called rapid onset, slow onset and elusive (Burton et al, 1978).

Short, Medium and Long Wave Disasters



(Reproduced from Barnett and Blakie:1992:56)

Figure 1.1

[4]Favela is a country specific term for illegal and informal squatter settlements in Brazil.

A short wave disaster, such as an earthquake, has a number of features; the event is clearly apparent, it is quick and dramatic. A medium wave disaster, such as famine, takes much longer to become apparent, it is not until a large number of people are starving or dying that the failure of harvests and food distribution systems is noticed. With a long wave disaster, such as global warming, the onset is even slower. With the latter, populations may be unaware that it is happening (hence the elusive hazard terminology) and when it becomes apparent it is too late to prevent. At this time it can only be coped with and prevented from becoming any worse.

Although the differences between disasters may seem apparent and vast, coping systems are in fact very similar, just temporally different. In terms of a short wave disaster in earthquake prone areas, for example, there are established coping systems set up to accommodate the threat in the long term. Whilst not physically preventable, there are ways of reducing the impact of an earthquake, if money, technology and political will are available. Short term strategies are also implemented; aid is often sent and housing re-built.

In terms of medium wave disasters such as famine, again, once a threshold is reached (i.e. a large number of people are recorded as dying) there are short and long term strategies: immediate relief with food supplies, followed by terracing farm land, improving farming techniques, developing storage and distribution methods. With famine, however, unlike a short wave disaster, time is taken before normal coping procedures for death become saturated.[5]

AIDS differs significantly from many natural disasters in that it has no visible or dramatic onset, nor are there any obvious recognisable stages to respond to. It can most easily be likened to a long wave disaster, such as global warming, and coping strategies understood

[5]Death is an expected and inevitable fact of life for which there are well established rituals for grieving, mourning and coping without the individual, however when there are an unprecedented number of deaths these 'normal' patterns can not always be followed and thus coping procedures become saturated.

within this framework. Global warming itself is a hazard on the horizon which has the potential to fundamentally change life on earth (Mitchell 1990). Essentially both global warming and AIDS are cumulative, diffuse, slow acting and insidious products of long term interaction (Royal Society Report, 1992).

As noted earlier, long wave disasters can only be coped with, prevented from becoming worse, put simply: 'managed'. The thinning of the stratospheric ozone layer, for example, cannot be repaired, it has already occurred, and while it is self healing it is also repetitive. Similarly the greenhouse effect and global warming are understood to have been caused by pollution begun during industrialisation, when its potential impact was not appreciated. Having discovered the link between these issues and pollution, the only solution is to reduce the pollution, or at least prevent it from increasing and, perhaps more importantly, to cope with any negative effects such as sea level rises and global warming. Here both the cause and management solution are human initiated. It is a particularly difficult hazard because of the diversity of causes, the complexity of mechanisms, the uncertainties that surround the nature, scale and timing of possible outcomes, and the international developed/developing country dimension to the problem. Another problem with global warming is that it is only detectable amongst a background 'noise' of climatic data which themselves are very poorly understood (Royal Society Report, 1992).

Obvious comparisons can be drawn between global warming and HIV/AIDS. It too seeps into populations most often un-consciously, since HIV has a ten year incubation period. Thus when AIDS becomes visible an individual may have already unwittingly spread the disease further. Detecting AIDS in the context of a developing country is also problematic given the background 'noise'; the mass and variety of disease barely distinguishable from the opportunistic infections AIDS patients may die from. Here it becomes important to cope with those suffering from the disease, and prevent it spreading further, by introducing or improving sexual and wider health education. Once there is an awareness of AIDS and a critical threshold has been reached, whereby coping with illness and death

is no longer 'normal', the need to cope becomes apparent, but as with global warming HIV/AIDS cannot be eradicated, within the current constraints of research and development, only managed. That is, we can attempt to limit the problem and adjust to the changes.

Although the spread of HIV occurs via human interaction, the overall affects are no different than an earthquake or global warming. In *theory* building does not have to take place in an earthquake prone region, similarly there is no need to use spray cans, fridges etc. There should also be no need to have unprotected sex.[6] All of these things happen for various reasons not least poverty and a lack of education. This is why earthquakes are often seen as 'classquakes', and over 65% of AIDS cases are in the developing world. The critical issue here is vulnerability, this is the ability to anticipate, cope with, resist and recover from the impact of a natural hazard. Vulnerability is very often related to socio-economic position, be that at an individual or an international level (Blaikie et al, 1994). It should be noted, that although hazards can not be seen to be the cause of underdevelopment, they do contribute to maintaining the differential between the developed and developing worlds (Jones, 1991).

The issues of morality and perception are called into question when HIV/AIDS is discussed in this context since many may find it difficult to see the similarities between spraying on deodorant and unprotected sex. Moral judgement may colour a rational argument that both may have similar long term implications. Thus as Barnett et al (1990:21) have shown,

> "disasters do not happen, they unfold,.....the structural pre-determinants of disasters are formed over a long period and render sections of the population vulnerable to discrete events....(e.g. earth tremors)....Thus natural events are seen as a 'trigger' to a disaster and the nature of society and economy in which this trigger occurs is now seen as crucial in understanding their precise impact."

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[6]Naturally the issue is more complex than this comparison or the simple suggestion that in theory there should be no need to have unprotected sex. For example, the desire of both men and women to have children is not accounted for.

Just as our perceptions are constructed in contemporary social contexts, so issues of illness have always been socially constructed.

HIV/AIDS AS A SOCIAL CONSTRUCT

Historical Perspectives on Plague

While it is increasingly a widespread assumption at all levels of education that problems will only be resolved by 'hard' quantitative or experimental research, the importance of studying history and literature should not be underestimated in terms of their relevance to understanding present day phenomena in the light of past experience (Fee and Fox, 1988). To see HIV/AIDS in the context of a natural disaster, we must first consider the value of historical evidence from disease in the past. As Ranger and Slack (1992:3) note,

> "Past epidemics continue to throw a peculiarly sharp light on the ideologies and mentalities of the societies they afflicted"

Although at first an epidemic may affect some populations more than others, over time the distribution spreads and alters. An epidemic in Africa is likely to spread geographically and eventually reach pandemic proportions. Thus pandemics provide an ideal database for comparative study because, by definition, they are eventually common to most cultures and continent. As with many other epidemics, AIDS has questioned and undermined religious, political and medical assumptions and attitudes. This is particularly so in developed nations which have become complacent about successes in banishing major diseases (Feldman and Johnson, 1986), HIV/AIDS has suddenly threatened our medical security (Ranger and Slack, 1992; Brandt, 1988). Thus it could be said that,

> "The question of AIDS is essentially linked with modernity, its virulence and relative untreatability lead us to question a cornerstone of faith in science, experts and progress" (Small, 1988 quoted in Aggleton et al, 1989a:2).

While increasing medical knowledge, understanding of biological organisms and changing social perceptions have not only helped prevent or cure disease, they have also created new hazards. In the natural evolutionary competition of viruses and the human species we are still not guaranteed a winning status (Lederberg, 1991). Historically disease has

stretched health services, decimated populations, altered social structures, sapped the strength of nations, shattered families and reduced productivity (Ranger and Slack, 1992). It is important, therefore, to use the past to provide a model of understanding of the integral web of causal factors involved, in terms of the cultural environment and how human activities before and after the emergence of such epidemics, dispose of, or inhibit, such events (Risse, 1988). Reviews of *response* to mass disease are as important socially as the analysis of causes, since long term collective memory fades and many reactions are duplicating themselves, "in spite of our perceived sophistication" (ibid:56).

Actual reported and estimated AIDS cases (13-17 million) (WHO GPA, 1996), when set against the great pandemics in history, appear relatively small and insignificant. Cliff and Smallman- Raynor (1992) point out that the Justinian pandemic of plague in AD542 caused some 100 million deaths and some 25 million were caused by the Black Death in between AD1436 and 1452. In more recent times the Spanish influenza pandemic of 1918-19 is estimated to have caused up to 20 million deaths.[7] Such comparisons are difficult because early pandemics differ fundamentally from AIDS in that they are generally characterised by very short incubation periods (of about 6-8 days) from primary infection to disease development; HIV/AIDS has an incubation period of 8-12 years. Consequently, with no action (if estimated HIV cases are correct), AIDS could in time easily take its place in the ranks of catastrophic pandemics. Drawing too close a comparison between treatable non-life threatening venereal disease and AIDS is also dangerous, since by doing so historical judgements and attitudes are brought together. Acknowledging these difficulties of comparison, there are a number of underlying themes which may be used to understand the spread of disease and coping processes in the case of HIV/AIDS.

[7]It is interesting to note that all of these epidemics took place during periods of extreme population displacement. The decline of the Roman Empire, the increase in international trading and the birth of capitalism and the first world war. As will be seen later, in Africa HIV/AIDS has been most prevalent in areas of migration, trading, or extreme displacement due to refugee camps and/or war (Blaikie et al, 1994).

First, it should be noted that just as social, political and religious conceptions influence public perceptions of disease in the same way that scientific and medical theories do, these elements are not easily separated, particularly in the sensitive area of venereal disease. Scientists and medical researchers may bring their own perceptions and cultural ideas to bear in the construction of scientific theory (Ankrah, 1989; Fee, 1988). Second, with such large scale diseases, there is commonly a need to apportion blame on someone or some place as the perpetrator; just as it was *Spanish* flu (Kirby, 1990; Douglas, 1992), so AIDS allegedly hails from Haiti or green monkeys in Africa (Chiruuta and Chiruuta, 1989). Historically there have been scapegoats; groups or societies. History may be used to shape present perceptions, especially in the case of AIDS which carries with it so many non-medical problems and prejudices. As Markova and Wilkie (1987:403) note,

> " In the nineteenth century venereal disease was viewed as an affliction of those who wilfully violated the moral code and as a punishment for sexual irresponsibility. In the 1980's AIDS is also seen as a moral disease."

Responses to epidemics of various types since the nineteenth century have thus been shaped by a whole host of moral assumptions about the sexual behaviour of those they affect (Aggleton et al, 1989a). It is vital to understand these public reactions to AIDS in order to approach the subject of education from an acceptable and appropriate angle. If it is possible to achieve an understanding of how a demographic variable such as disease can affect lives, then it becomes possible to discern people's responses to an increasingly lethal disease environment.

The history of the attitudes towards, spread and control of syphilis provides a good comparison to the present AIDS epidemic (Fransen et al, 1991). Syphilis is also predominantly a sexually transmitted disease, although it has only an incubation period of 12-20 days compared to much longer periods for HIV/AIDS. In the mid 1800's it was estimated that 1 in 4 British soldiers had syphilis, for which reason the government introduced the Contagious Diseases Act enforcing medical examination of prostitutes and their detention if found to be carrying the disease; at the time it was also proposed that soldiers' wives should be tested. This illustrates the hypocrisy of a government stance

against women as the 'sole perpetrators of vice' whilst simultaneously condoning male promiscuity. Women (as prostitutes) have historically been blamed for the spread of STDs as opposed to their male customers (Seidel, 1993; Richardson, 1987). In the US. during the First World War, prostitutes were portrayed as the enemy against the 'heroic' fighting servicemen. It was not until 1937 that the Surgeon-General of the US published information to educate people about the dangers of syphilis, in order to separate the moral issues from the medical and to facilitate its control (McCombie, 1990).

This early twentieth century double standard may also be seen in the diagnosis available to health officials who could decide the 'true' cause of syphilis in each individual case. This cause was either medical (i.e. the micro-organism Treponema pallidum), or the underlying cause was simply 'promiscuous sexual behaviour' (Fee, 1988). These diagnoses carry with them a different emphasis on the social reality, together with different messages of responsibility and blame. Fee suggests the first puts forward the primacy of medical treatment and the second that of 'moral exhortation'. British observers of syphilis in Uganda around this time were also influenced by assumptions about moral disintegration and dangerous female sexuality, to the extent that they ignored evidence that it was present in an endemic, non-venereally transmitted form (ibid).[8]

The parallels between AIDS and syphilis become quite extensive when seen in this light, as essentially they have been socially constructed in much the same way (Ranger and Slack, 1992). Both, in a medical sense, are caused by a micro organism (in the case of AIDS, HIV) and both can be transmitted non-sexually. Perceptions of both, however, are based entirely around the possibility of sexual transmission and the attendant responsibilities for this are placed firmly on the shoulders of the groups which they most affect. In a similar way AIDS has been attributed to minority groups in the developed nations such as the homosexual community. The complexity of interplay between

[8]Non-venereally transmitted syphilis was common in many Asian and African countries, characterised by poor socio-economic conditions and primitive sanitary arrangements.

political, social, economic and medical factors can therefore be seen as having historical precedents (McCombie, 1990).

It should also be noted, that in the beginning of the 20th century the cause of syphilis was unknown. Syphilis like AIDS became a leading cause of morbidity and mortality and was stigmatised as a disease of bad blood and yet, within a limited time, the cause and a method of control had been found. This earlier drama and question of medical abilities is reflected in the current decade (Smallman-Raynor et al, 1992). Presently the AIDS epidemic is being addressed in the same way as the earlier epidemic of syphilis, via education and social engineering (Brandt, 1988). AIDS, as Mann has claimed (Green, 1988), is a threat to the social shape of Africa in a way that other disease or events (malaria or starvation) is not, in that it has the potential to impact upon the urban elite as well as the poor.

It is important to consider not only the spread of HIV/AIDS in the light of the spread of diseases throughout the century from a geographical and medical perspective, but also to consider what attitudinal coping mechanisms were developed and how successful they were. In both the fight against syphilis earlier in the century and in the fight against AIDS today, the solution of chastity and monogamy has been put forward (Guardian 17/02/93). The more pragmatic approach is to advocate safer sex. It has only been in the more modern literature that safe sex practices have been explicitly written about, explained and promoted. Concealment of the cause of an illness or of ill health is a familiar phenomenon in the development of representations of incurable illnesses (Taylor, 1990). It may also reflect the stigma associated with STDs. The danger is that difference (of behaviour, race, or gender) is so often closely associated with inferiority. As Barnett and Blaikie (1992) have suggested, research must be careful not to reinforce this with apparent 'facts' about susceptibility of racial and ethnic groups. It must be remembered that mortality is universal and ultimately these groups will be merely the first to be affected within a more widely disseminated epidemic.

Religious attitudes, not only to the disease but also to sexual practices, are another important variable. It is not exclusively the privilege of Western leaders to make moralistic judgements; it must also be said that village elders in many African regions have put the existence of venereal disease down to lax morality and unwanted modernisation. Likewise today in the West homosexuals are blamed for AIDS, reinforced by fundamentalist beliefs that good Christian people who maintain wholesome traditional values will not contract AIDS. This connection between AIDS and homosexuality has resulted in a certain type and degree of stigma. In Africa, however, the stigma is related particularly to the promiscuity of women, their prostitution, uncleanliness and infidelity, which in turn brings out the fear and bigotry of ill-informed people.

An examination of public responses to syphilis in the past, and HIV/AIDS today reflects in both cases the process of anchoring of these diseases to death, stigma, improper sexual behaviour and just punishment (Markova and Wilkie, 1987). Furthermore, it reveals a remarkable similarity in the way the public in both cases express fears and concern by trying to maintain traditional moral values. However,

> "...this virus has no morals, doesn't concern itself with low or high risk groups. It just is.....Anything, it seems, is better than facing the truth, that however much we might wish it were possible, you cannot legislate a virus out of existence." (Guardian, 25/6/92).

There are no innocent 'victims' who have accidentally been infected because they were haemophiliacs, just as there are no deserving guilty, infected people because they are drug users, sexually promiscuous, or homosexual. It must be remembered that,

> "AIDS is not a 'gay' disease; a virus does not discriminate. It affects those who are heterosexual and gay, white and black, the wealthy and the poor, women and men, and also children - it is a social problem which we all need to be concerned about." (Richardson, 1989:xiv).

The above discussion has demonstrated that, like many other diseases, HIV/AIDS only acquires meaning and significance from its human context, the way it affects people and the medical, political and cultural reaction that it provokes. It has questioned whether venereal disease can or should be treated from a purely medical point of view, as a disease that is the result of an infection by a micro-organism or as something caused by social,

moral or spiritual afflictions (Fee, 1988). The question remains as to whether it is ethical to retain this perception of a venereal disease as something which is 'immoral' and which corrupts and degrades.

Over time, plagues and epidemics have demonstrated the fallibility of nations, whatever their political or economic status, by crossing human boundaries of culture and beliefs. While ultimately we may cure AIDS we will not eradicate infectious diseases, but by reducing suffering it may be possible to examine the processes by which perceptions of disease engender prejudice, cultural change and social disruption (McCombie, 1990).

HIV/AIDS as a Contemporary Hazard

By understanding that disease has been socially constructed in the past, it becomes easier to understand the attitudinal response to HIV/AIDS in contemporary society (Johnson and Covello, 1987). To explore this current response to disease the issues surrounding HIV/AIDS will now be placed in a risk/hazard framework. First it is important to establish what is meant by a hazard. How can it be defined and what is its relevance to the spread of HIV? Mitchell, (1990:132), defines hazards as such;

> "Hazards are interactive phenomena that arise when instruments with the potential to cause loss come into contact with persons, property or resources thereby threatening life, emotional security, material welfare and societal institutions."

It is established that hazards are a product of human interaction with the environment rather than random 'acts of God'. Mitchell (1990) defines hazard as: a function of risk, where risk is the probability of a damaging event or circumstance with the likelihood of loss or harmful consequences occurring, that is a combination of probability and consequences; with exposure, where this is the number of population at risk; with vulnerability, as the potential for experiencing loss; and response where this is the degree to which the society or individual acts to reduce or avoid loss or infection. Basically hazard is a social construct and has to be recognised as such by humans thus:

Hazard =f (Risk*Exposure*Vulnerability*Response)

Hazards, therefore, are the result of varying combinations of these factors. They may affect some more than others dependent upon external and often uncontrollable factors and thus are relative not absolute (Mitchell, 1990). In terms of HIV/AIDS, risk becomes the chance of a person being infected with HIV and its consequences;[9] exposure is mainly the sexually active population; vulnerability varies through age, sex and socio-economic status but there is virtually 100% chance of dying once infected with HIV. Finally in this context response could be seen as practising safe sex, avoiding casual sex, using clean needles, testing blood, reducing the frequency of partner change etc. (Royal Society Report, 1992).

As the likelihood of a hazard is a varying combination of the above factors, some individuals may be more vulnerable to HIV than others. For example, people may be forced to live in hazardous areas, as a result of their socio-economic status (Blaikie et al, 1994). The economic insecurity of women may force them into a form of prostitution, increasing both risk and exposure through increased sexual activity (see Chapter Four). In terms of the latter, vulnerability would also increase because of gender variation in susceptibility to HIV/AIDS (Vaughan, 1987), (see Chapter Three). Similarly, economic insecurity could decrease the potential for response because of the inability to force the use of condoms (see Chapter Four). Within this context, Emel and Peet's definition of hazards seems appropriate:

> "A natural hazard is an interaction of people and nature governed by the co-existent adjustment processes in the human use system and the natural events system" (Emel and Peet, 1989:63).

The worst of these hazards, however, are those which are termed 'megaproblems', or 'hybrid hazards' which result from a mix of technological, social and economic factors, like hunger, disease and poverty. Furthermore, death and disability due to a specific disaster need not occur during the course of the hazardous activity, but can be delayed for a number of years (Royal Society Report, 1992). As someone may be permanently disabled

[9] Risk by the same definition as hazard would be a function of Hazard * Exposure*Vulnerability. Risk perception and communication being initially the most critical factors, in terms of understanding and response to hazard and disaster (Royal Society Report, 1992; Blaikie et al ,1994).

or die of the injuries sustained in an earthquake, so a person may be ill and ultimately die as a result of HIV infection.

A hazard impact is not an inexplicably random event. It can be traced back as a product of the interaction of the 'natural' system and human activity over space and time. As such it can be defined and possibly predicted, in terms of its potential impact, based upon past magnitude and frequency. Even with something as unprecedented as HIV/AIDS, for example, patterns may be established from past STDs and their routes of development. Crucially it is human activity upon which frequency and magnitude of hazards are dependent. It may be assumed, therefore, that adjusting human behaviour to minimise the impact would be more beneficial than attempting to constrain the environment. In the case of AIDS, altering human behaviour would be more practical than attempting to find a medical solution.

Before using this framework to interpret risk perception and coping mechanisms relating to HIV/AIDS, it is important to give a brief explanation of the conflicting theories within the discipline in order to aid understanding of the concept. This may help to explain the varying interpretations of the framework and how this may influence the debate relating to HIV/AIDS. Determinism, for example, argues that activity is naturally determined, essentially that we have no control over our own destiny. Within this, HIV/AIDS or any other disease would be seen as predetermined to affect a given society. The human ecology school of thought claims that relations between nature and humans is related to human adjustment, which accounts for influencing factors from nature without direct determinism by it. This effectively argues, perhaps more realistically in terms of AIDS, that disasters may occur due to a chance occurrence of natural extremes, and social and economic factors accentuate or modify the circumstances (Emel and Peet, 1989). AIDS undoubtedly has had a far greater impact in areas with less 'sympathetic' social and economic structures. Essentially people transform the environment, into usable positive resources and negative resources (hazards), by their use of natural phenomena and

behaviour (ibid). Responses to hazards are dependent upon the awareness of the potential risk and the vulnerability of the population, this is a particularly important concept in terms of the management of HIV/AIDS. It is also interesting to consider Hewitt's (1983) viewpoint, that the most recent disasters have occurred in areas characterised by extraordinary socio-cultural change (as is apparent in Africa) so that hazards are among one of the more certain aspects of life for people otherwise devoting their energy to the social uncertainties of everyday life. This form of human development and socio-cultural change in itself can be a cause of 'natural' hazards (Emel and Peet, 1989:65), but more importantly, for the purposes of this study, it undeniably has played a role in developing the rapid spread of HIV/AIDS. As Blaikie et al (1994:3) explain,

> "There is a danger in treating disasters as something peculiar, as events which deserve their own special focus, By being separated from the social frameworks that influence how hazards affect people, too much emphasis in doing something about disasters is put on natural hazards themselves and not really enough on the social environment and its processes."

Emel and Peet (1989) have put forward four perspectives to try to find an explanation for the apparently unavoidable and inexplicable nature of disasters. First, they suggest that hazards are natural events which require greater technological investigation and improved warning systems (education/medical research). Second, it is possible that it is technological adjustments which aggravate natural problems (was the AIDS virus created in a lab and 'accidentally' released, was it introduced through live vaccines created from monkeys and used three decades ago?). Their third explanation is that it is social variables rather than technology which are significant in causing disasters (for example, the economic situation and social position of young women in developing countries has forced them into prostitution and therefore caused or spread a disease like HIV/AIDS with a certain inevitability). Fourth, they suggest that disasters are due to:

> "...an increase in the global population concentrating people in hazard prone areas, particularly in under developed countries, with poorly chosen and inappropriate technologies aggravating the problem; this seems to be a mixture of neo-Malthusian and technological causation..." (Emel and Peet, 1989:63)

here, perhaps, the impact of HIV/AIDS is greater, because it is sexually transmitted in areas where migration has brought together disproportionate numbers of the population with (unfulfilled) promises of social or economic support.

There are three underlying themes in the thesis which can be interpreted through the natural hazard/disaster literature. First is perception of the hazard and the subsequent disaster. That is, awareness of the chances of becoming HIV+ and the potential of this developing into AIDS and ultimately death, and the resulting pandemic. Individual and societal perception is central to policy response. The second arises from the social and cultural debate. This sees AIDS as socially constructed by its surrounding social and economic influences. Coping, for example, can not be understood, nor projects developed by policy makers, without consideration of the socio-cultural factors which affect a population's ability to cope. Furthermore, economic structures have to be considered at both the macro level of external policy control, such as structural adjustment, and the micro level of individual poverty and the ability to respond to HIV/AIDS. Third, is the issue of development and the impact of this both on, and by, relief projects and policy. In summary, it is important firstly, for the danger to be perceived, secondly to have the knowledge to cope and thirdly, to have the available 'tools' to do so.

THE HAZARD OF HIV/AIDS IN A DEVELOPMENT CONTEXT

One of the basic arguments of the thesis is that HIV/AIDS is a social and economic issue which has been perpetuated by, and evolved into its present form because of, underdevelopment. Thus it is important to consider the broad developmental and health issues which are established in the literature.

The Issue of Development

The differences between developed and developing nations are stark and extensive in most spheres. Natural hazards, for example, traditionally have a far greater human impact in

developing countries and a higher economic impact in developed ones, due to the nature of the vulnerable population (Blaikie et al, 1994). Whilst it is not the intention to indulge in a lengthy debate over the definition of differences between the developed and developing world,[10] it is important for the purposes of the thesis to establish differences in the demographic and epidemiological development and transition of African nations. The differences in the epidemiological health structure are often a result of, and comparable to, the extent of development. That is, development brings with it different health problems and policies. Crucially, as will be seen, development policies do not necessarily mean better health (Kearns and Joseph, 1993), and since HIV/AIDS is a pandemic, by definition, there must be disease environments throughout the epidemiological transition which encourage the disease to spread. However, in an African context the vulnerable population can often be defined as those unable to protect themselves for social and economic reasons, hence the link with development. There are a wide variety of theories and practical means of tackling health and development issues, those considered here will be those most applicable to the treatment of HIV/AIDS. The distribution of mortality within the given population, for example, is of vital importance. As populations continue to increase, so too does unemployment. This often leads to migration to urban areas in search of different or higher paid work. This alters traditional population patterns, traditional roles and the equilibrium which they had provided.[11] In Kenya, for example, the urban population has increased from 15% of the total population in 1985 to more than 27% in 1990 (Nelson, 1992). Urbanisation like development is no guarantee of better health.

Perhaps of most importance in the present context is the concept of human capital and the role which it has to play in health issues. The importance of human capital is often considerably undervalued in development programmes. Essentially it is the value given to

[10]These are often focused on GDP and numbers of people living below an economically defined poverty line, but are increasingly drawing on quality of life indicators also.

[11] This is not to suggest that traditional roles are better nor more appropriate, but that they are different and by definition more established. Changing population dynamics also affect a variety of other socio-cultural factors.

each individual in terms of the extent of their productive and reproductive ability, based upon their education, health, and work, traded off against external constraints which may affect these. Jones (1990) believes that investment in human capital may ultimately be more profitable than in more 'tangible' assets, particularly in relation to development. Essentially he claims that better health and nutrition provide a more vigorous and thus productive population. Within this there are direct and indirect advantages: a decrease in absenteeism, greater physical and mental productivity, longer working lives and a decrease in costs for caring for the sick (ibid.). It is a long term policy, however, which needs time to show its net effects; its role within the structural adjustment process (presently favoured by external agencies, see Chapter Four) is consequently often ignored. It should also be noted that to maintain human capital is not simply a case for the medical sector or a technical response. Health requires 'basic human needs', unfortunately a quantitative way of expressing this rather nebulous ideal continues to elude the social scientist (Phillips, 1990). The definition of health and how to achieve it, therefore, takes on very similar conceptual and philosophical problems as the definition of development itself. Part of the Marxist theory on development is that underdevelopment was caused by the inclusion of developing nations into the international economy and the promotion of capitalist modes of production to strengthen developed capitalist economies (Jones, 1990). Thus any attempt to improve the health of the population, particularly at anything other than basic primary levels, is doomed to failure unless the wider scale problems of international economic order are resolved (ibid). Whilst providing an essential view of underlying circumstances for contemporary health problems, this could be looked at as integral to the expansion of capitalism, rather than the unanticipated side-effects of development initiatives (Phillips, 1990).

Seers (1979), meanwhile, suggests development is almost a synonym for improvement. There are several conditions seen as necessary for development: the capacity to buy food and physical necessities, a job (paid or otherwise) and equalisation of income distribution, since gross inequalities indicate the existence of mass poverty and inequalities in other

social spheres. Add to these improved education levels and political participation, and there is a route towards development. In theory, if these factors are simultaneously and equally distributed throughout a developing countries population, development would be a positive improvement. In reality, it is a rather naive conclusion since it is rarely achieved and part development, either by means of improving a single issue or disproportionately improving services through the population, may have the opposite effect to positive development.

It may be suggested, therefore, that indices of national income, as Phillips (1990) claims, are not meaningless but have a greater utility as indicators of development potential than as a measure of development. It is important for the development process to achieve change in the non-economic indicators within which indices of health are crucial. As Jones (1990) suggests, there is a significant correlation between life expectancy and the level of economic development, differences in death rates may also vary according to social class, level of education, gender and rural/urban location.[12] Accelerated development may be a causal factor in contemporary health problems as much as a solution to them. Development issues and their politics are extensive and long running debates way beyond the remit of this thesis. Essentially there is no simple one way relationship between health and development. Whilst development generally brings improvements in diet, housing and a decrease in infectious diseases, it is also often associated with rises in degenerative diseases of a different aetiology (Phillips, 1990). As with development, therefore, in health we may also see varying stages of transition, although in this case in terms of epidemiology as opposed to social or economic conditions.

Health Issues

A technocratic view of health is simply the absence of disease. However, illness and disease are relative, and to the sociologist they are social constructs in which societies view symptoms and appropriate treatment differently (Phillips, 1990). This being said, health projects in Africa have often been geared towards 'Western style' prestige projects usually

[12]Rural/urban variation however may cancel out one another. Unhygienic conditions in urban areas may be countered by poverty, lack of amenities and strong traditional ideas in rural areas (Jones, 1990).

taking the form of hospitals. These national hospitals tend to absorb the greater part of a nation's health budget but only provide a service for the minority elite in urban regions (Little, 1982). The importance of individual expensive operations such as heart transplants must then be traded off against larger scale relief of family poverty (Jones, 1990). There is also progressive care, where a patient is treated to a certain level dependent upon their condition, but no further on the grounds that any less would be inadequate but any more a waste of resources. This ventures into difficult moral arguments which include a large portion of the worlds population being denied access to quality medical care (Joly, 1991).

However, as Phillips (1990) notes, unattainable statements of intent promulgated by slogan-led health initiatives are common, as the state often assumes responsibility for health care, but is rarely equal to the task especially where political instability reigns. This is illustrated by the case of Kenya, where the stated government policy is to provide free access to health care for all its citizens (Ominde, 1988). In reality, in Kenya, because of the geographic remoteness of many communities, transport costs and the high cost of medical supplies and trained personnel, health services are episodic and traditional healers are still the first line of defence for around 75% of the population (Miller, 1984). Since traditional healing may involve skin piercing, injections and often exposure to blood, in terms of HIV/AIDS this may create even more potential problems (Green, 1988).

Other aspects of the 'development' process may also have adverse outcomes in terms of health. Continued urbanisation, for example, fuelled by migration, provides an ideal environment for the spread of STDs as well as other diseases. Fransen et al. (1991) have considered this within an economic and demographic transition framework. They have suggested that STDs are characteristic of the status of a country's development in terms of its coinciding epidemiological transition. As development increases, the epidemiology within the population changes, so susceptibility to different disease patterns alters. Generally STDs (and thus HIV) characterise countries in transition. STDs are seen as an infectious link between a pre-transitional epidemiological environment, which is

dominated by infectious diseases and malnutrition, and a post-transitional environment characterised by non-communicable and mainly adult diseases. Essentially both environments provide certain characteristics through which STDs can manifest themselves. AIDS can become a pandemic encouraged by different, but equally effective, economic and physical factors within the two epidemiological communities. Fransen et al. (1991), conclude that although many developing nations had begun to move forward into a different epidemiological environment, policies like structural adjustment, resulting in declining health and social services, show the need to reassess resource allocation and health service priorities. HIV/AIDS cannot be allowed to be an entirely separate issue because ultimately there will be another disease ready to take over within a new epidemiological transition.

In terms of treatment of HIV/AIDS and disease in general, while in the developed world scientific medicine has placed a premium on treatment rather than prevention, in a developing world context prevention is often seen to be a more realistic option (Jones, 1990). In conceptual and practical terms 'populist ideologies' have their counter parts in health care since enormous gains can be achieved without high technology.[13] Primary Health Care (PHC) is one such option available, first advocated by the WHO in 1975. The aim was decentralisation of community health care, at a basic level making essential health care "universally accessible to individuals and families in the community by means acceptable to them, through their full participation and at a cost that the country can afford" (Phillips, 1990). Thus it was seen too form an "...integral part of the country's health system, of which it is the nucleus, and of the overall social and economic development in the community." (WHO 1978, quoted in Phillips 1990:52).

In the light of HIV/AIDS investment in human capital per se, and its attendant socio-economic needs, could prove particularly valuable, since a general decrease in ill health and malnutrition would make people less vulnerable to this and other diseases. In this

[13]With HIV/AIDS there is no high technology (a cure/vaccine), although admittedly there are drugs which can treat the symptoms and extend life available in the developed nations.

regard, PHC could not only encourage a reduction in ill health and malnutrition making people less susceptible to the disease, but may also have many other positive socio-economic outcomes, such as increased productivity or improved child health. PHC has become the dominant approach, not only because hierarchical systems have been seen to have failed and high technology has been proved to be un-viable in the developing world, but also because of the growing belief that people should have more say in something which affects them and their families so intimately (Morley et al, 1983).

More specifically, PHC provides curative, preventative and promotive/educational activities of a basic nature. Within PHC, selective health care programmes have also been developed for specific immunisation projects (Jones, 1990). Cost effectiveness is usually the remit of these projects, favouring immunisation over other health strategies where it may be harder to quantify, economically, their effectiveness (Phillips, 1990). Not all diseases may be tackled simultaneously, however, and treatment is dependent upon their severity, coupled with other possible positive outcomes that treatment may have (Lewis et al, 1989). For example, a specific project directed towards HIV/AIDS could be invaluable, in terms of other diseases and health issues, because of the type of project it would be,[14] if coupled with factors such as empowerment of women, family planning and education of children which may also have other positive developmental repercussions (May and Anderson, 1987).

PHC at least provides a symbolic move towards 'self help' rather than inappropriate technocratic solutions (Jones, 1990). These may be tapped into with each new epidemiological transition. To allow a disease such as HIV/AIDS to override this would be extremely detrimental to the development process. Having said this, because of its nature and the section of population most vulnerable to it, it is important to see HIV/AIDS as an extraordinary problem within the development process, and its potential affects must

[14]By definition this would not be a direct medical intervention as there is no cure or vaccine.

be seen, accounted for, and acted upon as a priority before it has more serious implications.

In summary, since most research, both medical and social, has been carried out in developed countries (over 90% of AIDS funding is spent by the developed nations) (WHO, 1996) and much of the developing world research has been funded, and usually carried out, by developed countries, and thus inevitably incorporates their emphasis and prejudices in terms of cultural interpretation, it could be suggested that there has been "too much epidemiology and too little social science" (Ankrah, 1989:267). There certainly is little doubt that finance for HIV/AIDS is predominantly filtered into medical rather than social science research. Although, as Smithurst (1990) suggests, it could be the incurability of AIDS that adversely structures the public perception, as much as the social and cultural implications, thus justifying greater emphasis on medical issues.

Even within social research on HIV/AIDS there are a number of problems. First, the role of Western researchers entering various African nations to undertake research is highly problematic. Western researchers, for example, may enter with perceived cultural stereotypes and ethical or moral values which ignore the often harsh economic realities of Africa (Ankrah, 1989.). Even if research is conducted in a way which is ethically accountable, this is often made difficult by mistrusting governments (perhaps justifiably) with strict research visa requirements. Contravening these regulations can lead to expulsion (ibid). Over and above these problems of ethics and access are more practical problems of data collection. Language, ethnic, and internal (household) conflicts may vastly alter the information collected in comparison to the actual reality of the situation. As Ankrah (1989), suggests it is important to study 'risk gradients' rather than 'risk groups' thus identifying individual factors and behaviour rather than individual 'people types'. For example, to single out women as 'perpetrators of distress and evil' as opposed to highlighting the dangers of sexual networking, could be particularly destructive (Caldwell et al, 1989). Second, there are endless sampling problems; poor transport and

communication, as well as frequent migration mean follow up research is often difficult. Third, as Bleck (quoted in Ankrah, 1989:271) simply points out "sexual behaviour is a difficult thing to observe". Fourth, databases have often been incomplete before campaigns are begun, because of the urgency with which campaigns were implemented, it has often been difficult, therefore, to assess their worth in terms of success, where things went wrong, and why. Finally, there is very little funding for indigenous research.

TOWARDS A STRATEGY

> "Human response to hazards is related to people's perception of the phenomena and their awareness of adjustment opportunities." (Emel and Peet, 1989:63).

The Importance of Risk Perception

Having raised the debates surrounding health and development issues, the importance of seeing HIV/AIDS as a risk, within the context of development must be established. Hazards are essentially threats to people and the things that they value (Mitchell, 1990). These values change over time and through the life cycle and are dependent upon specific social and cultural spheres. Different attitudes and values are also related to, and dependent upon, the different expectations of health and safety which people may have in developed, as opposed to developing, countries. This accounts for the fact that it is the characteristics of a hazard or a disaster that people evaluate, as opposed to a single abstract within it, such as risk. Other factors which are harder to quantify such as quality of life are also part of the equation.

The response to a hazard, or the threat of it, is dependent upon the perception of the risk held by individuals and policy makers (Foege, 1993). Unless risk is perceived it cannot be coped with. However, it can only be coped with effectively if it is perceived at an early stage. Until someone is forced into coping with HIV/AIDS, it is unlikely that they will previously have perceived it as a risk, certainly where education and medical knowledge remain very limited (Barnett and Blaikie, 1992). If it is recognised, long term strategic action is frequently overwhelmed by short term expediency.

There are a number of perspectives regarding risk perception, particularly in an area such as AIDS, where society tends to judge against those who take risks in 'taboo' spheres of life (Kirby, 1990). Risk perception involves peoples beliefs, attitudes, judgements and feelings, as well as the wider social or cultural values. Attitudes and reactions to HIV/AIDS, as established earlier, are socially constructed, therefore it exists within its particular socio-cultural context.

It is important to note at the outset of this discussion on risk, however with respect to HIV/AIDS, that people may often be unaware of the risks which they are taking. Alternatively, they may have no alternative to accepting that risk. In terms of HIV/AIDS there is little correlation between the real risks involved in the early stages of the pandemic and the extent of the social responses. In an historical sense of disaster, the greatest risk was environmental and cultural practices evolved around it (Mitchell, 1990). In more complex contemporary societies two things happen: firstly the natural order is disregarded and secondly more complicated risks assume predominance (Kirby, 1990). Risk perception becomes inherently difficult to define because it is multi-dimensional and personal, with a particular risk/hazard meaning different things to different people within different contexts. What is seen as the product of natural forces as opposed to human behaviour is culturally variable. Whether or not it can be accepted that AIDS is a *natural* disaster because of its social properties, there is no argument that the *risk* is socially constructed - no human activity is risk free (Royal Society Report, 1992).

The importance of societal influences must also be considered in terms of the fact that there is rarely an isolated individual, more often a 'social being' who necessarily lives among a network of formal and informal relationships which influence that person (Horlick-Jones and Jones, 1993). Blaming also helps to create a psychological as well as social boundary between those affected and the self, all too frequently disease is associated with 'other' groups (Nelkin and Gilman, 1991; Douglas, 1992). There are a number of individual attitudes and classifications of these socio-cultural factors which

influence risk assessment which should be considered. The individualist approach is to see risk and opportunity as going hand in hand. Fatalists do not know what is going to happen, but are prepared to accept it as fate. Heirarchalists are willing to accept risks set at high levels, as long as they are based on the knowledge of recognised experts, whereas egalitarians accentuate risks of economic growth or technological development so as to defend their own way of life and attribute blame to those holding other beliefs (Royal Society Report, 1992:112). Cultural theory, meanwhile, would explain a refusal to take medical advice about the dangers of HIV/AIDS as a preference rather than weakness of understanding, that is if a person does not change their behaviour but have been counselled about the dangers of it then they are making a decision to take on that risk (Douglas, 1992). Of course the main criticism of these in the context of this study is that they assume choice, knowledge and awareness which are rarely applicable in a development context.

Once a situation has been recognised as 'risky', epidemiological investigations become increasingly complex as they try to answer more detailed questions. What is the potential size of loss? Are there synergistic effects with other factors? Can anything be learnt or established from the preceding morbidity? (Royal Society Report, 1992). Recognising an increase in mortality from any other than the more dramatic disasters is difficult, unless it affects young people, as AIDS does, or is sufficiently large to become apparent amongst the normal risks of death in middle/old age.

Crucially, HIV/AIDS is more evident within the strongest section of the population, those who produce and reproduce and who are usually least vulnerable to hazards, given that most natural disaster literature identifies the vulnerable as the very young or the elderly. The issue of vulnerability is particularly important when considered within the risk framework and the related area of coping mechanisms (Blaikie et al, 1994). It should be noted that there is also a gender dimension to vulnerability to HIV which will be discussed in more depth in Chapter Three (Seidel, 1993).

Having established that a crisis needs to be recognised as such before it can be coped with, this recognition cannot only be at one level of acknowledgement. Recognition of risk at a governmental level does not automatically lead to recognition at a community level, which is the level where affects are most likely to be seen first and most directly, and where immediate operation of coping mechanisms are needed (Barnett and Blaikie, 1992). Until it actually affects a community directly it is unlikely to be acknowledged since it is more natural to take a passive, non-reaction to something which is at the time invisible than to act upon it. Thus, the population are seen to be,

> "...absolving themselves from the responsibility for their behaviour...by succumbing to the collective rationality" (Kirby, 1990:27).

Similarly there are different levels of awareness within the local context. Some households within a community which have been directly affected by losing a member of their own family become more aware of the situation, and are directly forced to cope with its repercussions. Other households may be indirectly affected by having AIDS orphans living with them, or knowing relatives or neighbours who have died. There are also households which will have remained unaffected entirely (Barnett and Blaikie, 1992). Essentially attitudes towards disease and the risk it holds are mediated through the community and are rarely calculated anew by the individual (Kirby, 1990). It is unlikely, therefore, that research on short term individual behaviour will provide an understanding of long term risk taking and risk aversion. Instead more accurate appraisals are likely to come from an understanding of collective action in particular localities.

There is some debate regarding to what extent individuals make decisions and how influenced they are by external factors (Douglas, 1987, 1992; Rayner and Cantor, 1987; Royal Society Report, 1992). That is, whether individuals make decisions which are influenced or dictated by institutional bias or not. It is doubtful whether any risk assessment can be entirely objective. In countries such as Kenya, the credibility of interventionist strategies is increasingly questionable as communal economies have declined and increasing numbers of ethnic groups are demanding freedom to decide their

own future. The conflict between globalism and parochialism is, therefore, seen in the AIDS debate because there is no single world view or perception of the disease (Royal Society Report, 1992).

With an issue such as HIV/AIDS it becomes increasingly difficult to disentangle social values and world views when identifying, estimating and evaluating risk (Barnet et al, 1994). To add to this, risk itself is multi-dimensional (Royal Society Report, 1992). This then begs the question as to where a risk becomes a public matter, and what effect power structures and electoral pressure will have on the emphasis on intervention.

Once the risk is perceived there becomes a need to manage the risk, by setting a number of goals, before actual coping can take place. There is a need to gather and interpret accurately the data available and to establish what action is needed to influence human and/or physical behaviour. This should include an analysis of appropriate 'risk communication' techniques, which establish who communicates the risk and at what level. Furthermore, there is a fine line to be drawn between risk assessment and risk management, that is risks which are to be 'managed' by the state and those which are to be left to the individual (Royal Society Report, 1992). Since 'natural' hazard management is often seen as a 'public good', populations may refuse to acknowledge the risk as a natural phenomena, since 'natural' hazards are perceived as something which should be tackled by a regulatory power preferably at no direct cost to themselves (ibid).

Much contemporary risk management of HIV/AIDS centres around blood testing. The institutional arrangements for handling blood and the associated risks have taken on far greater implications with the advent of HIV. This raises ethical, legal and political questions of when, where and who to test, especially when results are unreliable. It is interesting to note the increased perception of the risk from blood products which HIV has instigated, since the chances of 'accidental' infection through a needle are nearly a hundred times smaller than that for Hepatitis (the different outcomes for HBV being a 30% chance

and for HIV 0.3% chance) (Royal Society Report, 1992:176). Although this may be because of the dangers associated with HIV, it is also coupled with fear of the unknown and a social distrust of risk values imposed from regulatory power.

Generally there is some degree of choice regarding what level of risk a person is prepared to bear based on their apparently informed judgement of the perceived problem. In theory, in the case of HIV/AIDS a person is able to make an informed decision to have unprotected intercourse with a partner, based on an understanding of the chances of transmission and a readily available supply of protective contraception if they chose to use it. However, in developing nations, it is rarely an informed choice and the option to use condoms, either because of their lack of availability, cultural restrictions, or the power base of the relationship, is not always practical. With so many factors there is generally a trade off between long and short term gains in favour of immediate survival rather than long term planning. To reinforce a point made earlier,

> "In searching for *individual* rationality, we are likely to ignore the conventions of local practice. By appealing to the individual in a common sense way, we ignore the constraints of collective action..." (Kirby, 1990:33).

In other words, there is a need for recognition of collective action within a given locality rather than short term interpretations of personal behaviour.

Furthermore, people tend to be more willing to expose themselves voluntarily to a risk over which they have control, such as smoking. If that choice is removed and risk is forced upon them by external forces, it is harder to accept because it is out of their control. Perhaps risk perception can be seen, as AIDS itself is, as a function of a series of social, economic and cultural problems, which vary both spatially and temporally. Over time transition towards development leads to a restructuring of risk priorities which require different coping mechanisms. Finally, the problems of risk communication should be noted. That is as a response to any given risk, who communicates it to those at risk, when and how? This is crucial for the success of any HIV/AIDS project and will be discussed further in Chapter Five.

Coping Strategies

Once risk has been established, the second theme within this framework is coping. A coping strategy is the process of active defences and effective problem solving against an external event over which there is, or has been, little or no control. This issue of coping, and the ways in which individuals or societies cope with situations, is again dependent upon social and cultural factors. Coping strategies are of course numerous and varied. One element of coping is dealing with risk and questioning why people place themselves at risk. However having already considered this, what now needs to be established is which coping strategies are already available and which can be adapted as a basic resource for coping with HIV/AIDS. This must, however, be considered at various levels, from an individual response to coping, to a global one.

One major point relating to the need to cope with large numbers of AIDS-related deaths is that there are already established coping mechanisms for dealing with death within societies. In other words, in itself, death is not an extraordinary phenomenon which is seen to instantly require a new form of coping. However as Hartig et al (1978:26) explain: "....people do not typically remain unconcerned when deaths suddenly increase for reasons unknown."

But, as noted previously, the change in status, from an unaffected population to an affected population, is gradual and may remain un-noticed until it reaches a critical threshold at which point it is often too late to rectify the problem from its root cause (Barnett and Blaikie, 1992). Instead it has to be coped with, or managed in terms of preventing further damage. Essentially, once a critical mass of people have become ill and are dying the usual processes for coping with death become inadequate. The case of Uganda illustrates this point. In some regions of Uganda, AIDS related deaths have reached such an intense level that traditional mourning periods of three full days are no longer feasible in terms of maintaining average output rates (of production), especially where large numbers of the population are already sick and under productive (ibid).

Traditional funeral proceedings have had to accommodate and adapt to the fact that so many people in the working population are dying.

The uncertainty which is inevitably associated with any kind of disaster leads people to undertake a variety of coping experiments as the new situation evolves in order to find some method of normalisation, and also to confront their necessarily altered expectations and hopes (Barnett and Blaikie, 1992). Where the initial process has such a long incubation period as HIV/AIDS does, and where earlier stages can only be identified by blood tests and widespread medical information (which have not been readily available in Africa), it is not until the number of cases reaches a critical threshold, where it is apparent that it is producing abnormal affects, that these coping processes are *seen* to be needed and therefore implemented. This transition may be expected to be as long, drawn out and delayed as is the disease progression itself. Since mutual suffering tends to provide mutual support the increasing time taken for coping abilities to become saturated may further lengthen the process.[15] Once the unprecedented nature of the disaster/disease has been overcome, the process of coping is recognised firstly at an individual and community level (Barnett et al, 1990). Equally so, it is at this point that the rapidity of the spread of AIDS also increases dramatically and established death coping patterns quickly become inadequate. Each household will adopt different coping mechanisms, not only because of the different ways AIDS has affected them, but because the natural demographic profile and risk patterns will be different between households and will change over time (ibid). Essentially it is difficult to place the solution entirely at either an every day individual level or at a public policy level, a community level is probably a more realistic group to direct action towards.

[15] Knowledge and understanding of a disaster is only relevant until such time as memory fades or denial occurs(Blaikie et al, 1994). Thus populations may rebuild in an area which may have been affected by earthquakes in the past but not in recent history in the belief that it will not happen again. This may also be seen in terms of AIDS because of the length of the time lag between infection with HIV and death through AIDS so that by the end the two may seem unrelated.

At the level of the individual, human agents can shape events and particular contexts positively or negatively by the coping strategies they adopt. There tend to be two basic types of coping processes. The first is to provide pre-emptive actions to minimise the probability that the disaster will occur. This has not been the outcome on a wide scale in Africa in the face of HIV/AIDS. Such short term intervention in Africa is of little use since the disaster is in progress.[16] The second strategy, and only change of significance, would need to be a widespread alteration of sexual activity which would only occur well into the epidemic, once it had been recognised as such at a number of different levels, from individual and community to government, national and international. Pre-emptive actions may be the outcome in the less affected regions of the world, if use is made of the lessons learnt from Africa and if action (education for example) is taken early enough.[17] In Africa, however, there are only a series of possible post disaster reactions which tend to be identifiable with the different stages of the disaster.

In Figure 1.3, adapted from Cuny (1983), varying stages in the development of a community coping plan may be seen. Once AIDS has been acknowledged and the need for a coping strategy has been recognised, there are a variety of stages that planning may take. This diagram may be used and interpreted at an individual, national and international level. Potential strategies may only be adopted if the criteria and constraints, as outlined in the thesis (socio/economic/cultural), are approached by the plan. Those strategies and plans which are adopted are considered in terms of their consequences before a longer term plan is developed and implemented. The impact of this in the longer term is then considered in the light of its effects on other goals and objectives. In terms of AIDS this could mean the diversion of limited funds from other health care projects. The hindsight review is essentially an evaluation of the longer term impact and the importance of maintaining a preventative policy for a particular hazard (Cuny, 1983).

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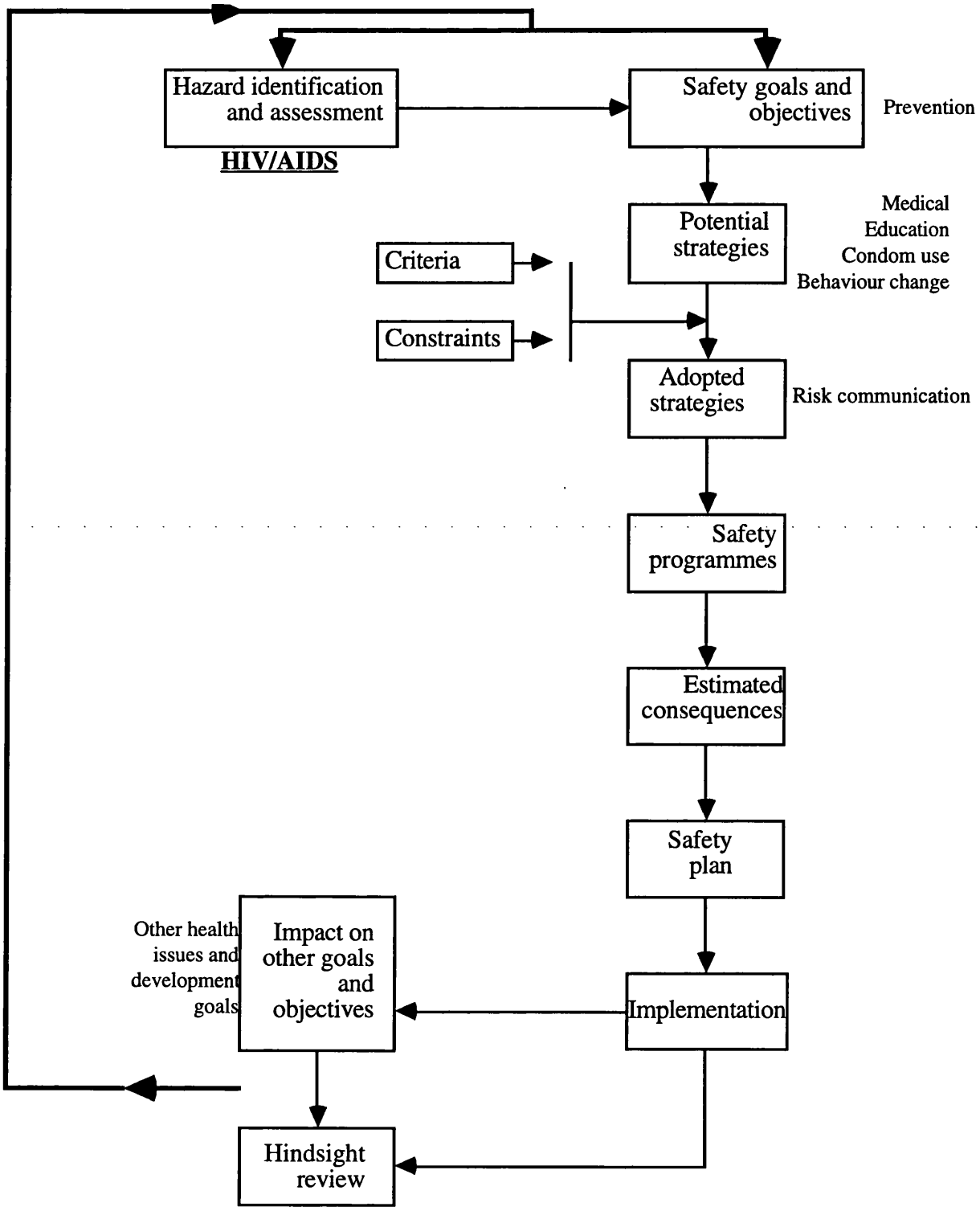
[16] Naturally, education programmes are of vital importance in Africa but would be fundamentally different to those used in the early stages of the pandemic in Asia because the disease is at a different stage of the pandemic and thus requires different types of coping strategies.

[17] Such as Asia where the disease is beginning to develop rapidly: 1/4 of new infections are estimated by the WHO to be in Asia (WHO GPA, 1996)



Development of a Community Safety Plan

(Adapted from: Cuny, 1983)

Figure 1.2

Essentially, coping may be seen in a number of different ways. The important factor, however, is to ensure that coping is seen to be needed before 'natural' coping mechanisms become saturated and the individual, community or national response collapses under the unexpected pressure of the disaster. Generally speaking as a disaster unfolds the coping becomes more radical and desperate. This unfolding is also sequential in terms of the people it involves over time (Barnett and Blaikie, 1992). Care must be taken, however, not to impose coping strategies on individuals or communities which are inappropriate, not understood, or seen to be needed by those they affect.

PERCEPTION AND COPING IN A DEVELOPMENT CONTEXT

> "In the face of this (HIV/AIDS) challenge health can be conceptualised as a resource held in common, threatened world-wide, and requiring nations in all humility to learn from each other." (Guardian, 16/9/91)

The issues of perception and coping can also be illustrated in terms of the variation of policy response between the developed and developing world. In this section these two different responses will be discussed in relation to the different populations and high risk groups that they affect. It also considers the type of response that has been implemented and been effective within the two different contexts.

The Developed Countries - Problems and Response

In order to analyse a typical response to HIV/AIDS the United Kingdom is used here as an example of a developed nation. HIV/AIDS in the UK has predominantly affected young male homosexuals, at least in the first stages of the disease's development in the country. Indeed the first and most prominent charity, the Terence Higgins Trust, was set up in 1983 in the name and memory of one of the first young homosexual men to die of AIDS in 1982 (THT Annual Report, 1990). Government interest ensued only after the Chief Medical Officer at the time, Sir Donald Acheson, became aware of data indicating the spread of HIV/AIDS amongst heterosexuals. This increased awareness of HIV/AIDS as both a heteroand homosexual disease, coupled with lobbying from the THT, instigated the first major campaigns in the mid 1980's, beginning with the leafleting of every household

in the country with the government's 'Don't Die Of Ignorance' campaign facts leaflet in 1987 (HMSO, 1987). Further advertising campaigns followed, along with more practical help; initiatives such as needle swapping centres, for example. Government money was also channelled into grants for charities like THT to continue their support for HIV+ and AIDS patients. These funds were directed into projects such as the Buddying scheme, and education projects aimed not just at the gay community but also the general population (THT Annual Report, 1990).[18] General public awareness of the disease has also been increased with the co-opting of 'personalities' into the campaign and the red ribbon AIDS awareness scheme.

Despite of all this, and the decrease in the spread of HIV/AIDS in comparison to predictions in the 1980's, the British government in May 1993, under the leadership of Health Secretary Virginia Bottomley, announced that HIV/AIDS would cease to receive special priority in National Health Service policy. This included slashing the Trust's grant by 2/3rds (it has received £3 million of public money in the past decade). The logic behind this is difficult to comprehend, bearing in mind that had no action been taken then it is conceivable that the epidemic would have reached the estimated proportions predicted in the 1980's. It would appear that political, financial and medical oriented debates predominate within the issues of HIV/AIDS in the developed world.

The Developing Countries- Problems and Response

It is important to see HIV/AIDS as an issue to be treated appropriately and differently in the developing world because of the unique requirements of these countries, the vast numbers of cases and because HIV/AIDS has the potential to prevent further development. It is also important to avoid using HIV/AIDS as another excuse to 'use' the developing world as an experimental ground. Undoubtedly the spread of HIV/AIDS has been treated very differently within the developing nations. Many of the differences between the

[18]Gay groups have latterly complained of the disproportionate emphasis on the heterosexual community in comparison to the disproportionate cases of HIV in gay men and other high risk groups. These groups also campaigned against the THT's financial association with the AZT drug company Wellcome, which they claim is unethical (Bygrave 1993).

response of the developed and developing nations can be seen to be finance oriented. In the developing world, although not always a conscious policy, campaigns have been set up by small groups in a similar style to PHC projects. These have been small scale, low finance projects, rarely finding government support. This has been the case not only because of a lack of health and education budgets, but also due to the political fear of acknowledging the problem. Major schemes in the developing nations tend to be funded externally by bilateral and multilateral aid agencies (often with political agendas) and Non-Governmental Organisations (NGOs). Again the most successful and longer term projects have been those based at a community level. Indeed the policy of many NGOs is to tap in to existing community level projects, often those set up under PHC or family planning schemes which have established trust within the community.

While these projects tend towards the training of counsellors and counselling, in themselves they have taken a variety of forms. For example, Action Aid, a British based charity, has provided financial assistance to set up a number of self help groups, such as TASO (The AIDS Support Organisation) in Uganda. Other organisations have targeted particular groups. A number of women's groups, led by the Society for Women and AIDS in Africa (SWAA) have engineered campaigning around those issues which make women more susceptible to AIDS, these include early marriage, female circumcision and wife inheritance (see Chapter Three). WAMATA in Tanzania was also set up to raise women's consciousness, specifically on the use and availability of condoms. In Kenya specifically, there have been a number of these small scale projects set up by different agencies. For example, education and information have been targeted at youth projects in Kisumu (funded by the aid agency CARE) (Central Bureau of Statistics (Kenya) 1993), and peer education initiatives have been set up by UNICEF in collaboration with the Ministry of Education. AMREF, an NGO specialising in counselling for People With AIDS (PWA's), condom educational materials, and condom procurement, has set up a number of small scale projects specifically aimed at truckers (a key high risk group) (WHO GPA, 1996). However the success of these groups may be dependent on the care

taken to ensure health promotion techniques do not construct the image of high risk groups to be at fault (Seidel, 1993). In terms of larger scale relief projects, the limited government programmes initially took the form of advertising on billboards, in magazines or poster campaigns in hospitals. Often these are backed by WHO sponsored national AIDS programmes. In Kenya, following on from the establishment of the National AIDS Committee in 1985 two medium term government plans have been implemented, one from 1987 to 1991 and the second from 1992 to 1996 (Central Bureau of Statistics (Kenya) 1993). These plans have basically set up a series of task forces and collaborated with small scale projects usually financed or established by international organisations such as UNICEF or WHO (WHO GPA, 1996). Some sex work programmes have been more successful than others due to issues of sensitivity. Peer group programmes have consistently been more successful than the top down approach (Seidel, 1993). Other ways that have been used are travelling puppet and drama shows. Although these have been seen to be successful in raising awareness, they do invite moral questions regarding covert messages. Care must be taken that their purpose is stated.

The role of the media has been important for communicating risk in both developed and developing nations. While recognising it as a source of information, the media has a tendency to dramatise the facts. When using the media there is also a need to overcome 'interest decay' (Horlick-Jones and Jones, 1993). That is, there is a need to prevent a sudden short period of prominent articles following a particularly 'saleable' story, a celebrity dying of the disease for example, detracting from, or preventing, regular factual reports; these reports must be of sufficient relevance to maintain public interest. If this is achieved the media could be used, by campaigners, NGOs, or people with the disease, to increase public and governmental interest and money where otherwise the issue's importance may have declined (this is true in both developed and developing world contexts).

In a developing world context there are also a number of important causal factors which have had an influence upon the present spatial and population specific patterns of HIV/AIDS and by definition, therefore, affect the responses to the disease. It is inevitable at the beginning of a pandemic that there will be some spatial variation, dependent upon rural/urban, regional, economic or gender differentials. Civil unrest, political uprising and extensive military movements have historically been associated with disease patterns, particularly, sexually transmitted disease (Cliff and Smallman Raynor, 1992). There is a history of sexually transmitted disease which can be identified in Africa and patterns used to help analyse the present situation. Long term problems like warfare, where there are mass movements of transboundary refugees, may prevent the establishment of AIDS campaigns because of practical and prioritisation problems. Soldiers away from wives, coupled with the inevitable economic instability brought on by warfare, often means an increase in prostitution, and thus of STDs. Mass movements of people which, may again, have been caused by warfare, not only take disease from their start point to destination, but also along the route taken to reach that point. There are, for example, presently a large number of displaced people and refugees in Kenya from neighbouring countries; notably 300,000 Somalis (WHO GPA, 1996). Indeed in 1994 the Kenyan government estimated that there were around 350,000 to 400,000 displaced people in the country (ibid). Similarly, refugees now returning to the relatively stable Mozambique from Zimbabwe have come back HIV+ (Barnett and Blaikie, 1992). Uganda too is only just coming to terms with stability and still has the scars of warfare within its community including key areas of high HIV prevalence along it s borders.

Border lines, where smuggling between countries occurred during the seemingly endless civil wars of the 1970's and 80's are regions most affected by HIV/AIDS because they provided trading points (often illegally during the wars) (Barnett and Blaikie, 1992).[19] Long distance travel from and to these borders means that truck routes are seen as

[19]Kenya was, in the early 1990's, reported endlessly to be on the edge of civil war as the West put pressure upon President Daniel Arap Moi to introduce multi-party elections by withdrawing aid. When these elections were held (December 1992), after being cancelled a number of times, Moi won, but only on the strength of many vote rigging allegations, unrest, and a widespread military presence.

principal corridors for virus spread, given the availability of prostitutes along these routes coupled with temporary overnight stops (Lewis et al, 1989; Dawson, 1988).

Of key importance is that no one factor is, or can be, mutually exclusive to the others and it is at that critical point where the factors meet that the pandemic is at its worst. Thus, in the short term, the greatest impacts may easily be identified as regionally specific. In high prevalence populations in some regions in Africa (for example border areas) mortality rates from AIDS in adults aged 20-50 have been estimated to exceed death rates from all other causes (Barnett and Blaikie, 1992). However, in the long term, there remains the potential for the disease to spread in this way throughout the continent.

All of these factors help to explain why Africa is probably ahead of the rest of the world in terms of timing of the epidemic. It may also be the case that this is because it lies closer to the source of the disease (see Chapter Two). This, coupled with the already relatively weak health of the continent's population, provides an ideal background for an epidemic to quickly spread. It is this critical meeting point of these varying factors which needs to be recognised for a realistic and successful policy strategy to be implemented. This strategy will be considered later in the thesis, once the social and economic factors which affect this have been established.

Summary

This chapter has established that the theoretical basis of the thesis is to consider HIV/AIDS in terms of a development issue, within a natural hazard/disaster theoretical framework, as a socially constructed disease. The basic concept and structure of disaster/natural hazard management was then considered in order to understand the relevance of the concept to HIV/AIDS. To understand HIV/AIDS as socially constructed, the chapter discussed disease from an historical perspective and how the treatment of, and attitude to, plague in the past may be used to understand present attitudes and responses to HIV/AIDS. The broader issue of development was considered in terms of its impact on the disease and,

within this, theories relating to health policies in a developing world context. Finally, HIV/AIDS in this context of disaster was explained in specific terms, that is the importance of risk perception, and coping mechanisms. Differing responses to the disease in a developed and developing world context were also used to underline this point. The following chapters will develop this to see how, in developmental terms, social and economic characteristics have shaped, and may be used to shape, health policies relating to HIV/AIDS.

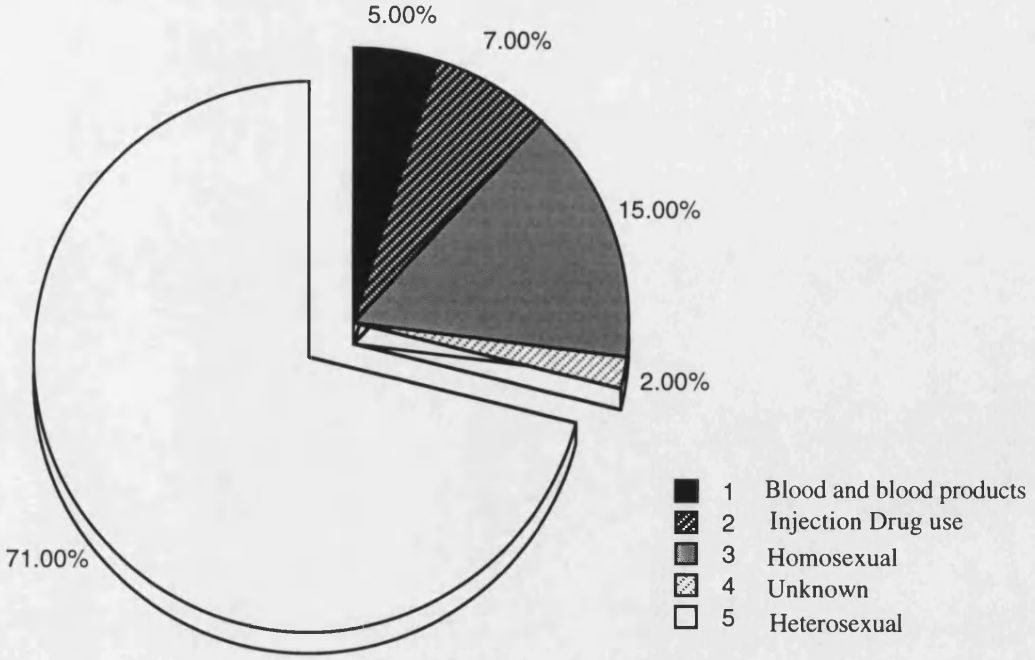
CHAPTER TWO

THE MEDICAL APPROACH TO HIV/AIDS

Global Figures

HIV/AIDS has now reached pandemic proportions and is registered in 193 different countries. Although actual cases of AIDS as yet remain fairly modest (1,291 810 actual cases in adults and children, globally reported to WHO's Global Programme on AIDS by 15th December 1995) millions of people are already infected with HIV (WHO GPA, 1996). The WHO estimates that between 13-16.9 million people world-wide are HIV+ and by 2000 the total global number expected to be HIV+ may be as high as 20 million (WHO GPA, 1996). Over two thirds of these cases are in the Third World, with 11.2 million in sub-Saharan Africa and nearly 3 million in South and South-East Asia (ibid). As illustrated in figure 2.1, heterosexual intercourse accounts for about 70% of all infections globally and this is expected to rise to between 75-80% by the year 2000 (Panos, 1990b). This helps to account for the fact that, globally, one third of reported cases of HIV are women.

Proportion of Global Adult HIV Infections by Mode of Transmission (January 1992)



(Reproduced from The Times Higher Education Supplement July 3rd 1992)

Figure 2.1

Another important group vulnerable to HIV/AIDS is children. UNICEF estimates that during the 1990's 2.7 million children will die of AIDS and 5.5 million more, under the age of 15, will lose their mothers to the disease (Panos, 1990b). In many African regions 20-30% of pregnant women are infected (Anderson and May, 1992). It should be remembered that reported AIDS cases do not give an accurate picture of the extent of the problem at present, since they indicate how many people were HIV+ at a certain point in the past. These figures do, however, indicate that AIDS, in Africa at least, is a problem not only for men or women in high risk groups, but for the family as a unit, and that it has the potential to affect the economy and infrastructure of a community at both a local and national level; its greatest impact is yet to come.

Origins

In 1979, as WHO formally announced the eradication of smallpox, simultaneously HIV was taking hold in the USA and Africa. In spite of intensive research, both by way of finding a cure and a vaccine, the origins, and indeed place of origin of HIV/AIDS, remain very uncertain (Smallman-Raynor et al, 1992). Fear of the unknown has a tendency to promote a need for blame and this blame usually rests on those unable to defend themselves (Douglas, 1992). Rumours abounded in the press, and to a lesser extent still do, about AIDS having originated from homosexual Haitian immigrants to the US, an accidental release of American biological warfare tests, or from Green Monkeys in Africa, transmitted through sacrificial ceremonies involving human/monkey sexual relations (Chiruuta and Chiruuta, 1989). The African nations have laid counter claims against these apparent racial hate campaigns (Aggleton, 1989a).

Indeed the most likely dominant route of HIV1 and 2 transmission does probably originate from some form of SIV (Simian Immuno-Deficiency Virus) from monkeys in Central and West Africa respectively (although evidence for HIV 1 is more circumstantial than that for 2) (Smallman-Raynor et al, 1992; New Scientist, 1988a).[20] As to how this strain

[20]SIV as well as feline models of the virus (FIV) have provided an excellent historical epidemiology of the virus which has been useful for both medical and social research.

originally entered humans, however, is open to speculation. Some have linked this transmission of SIV with malaria tests in the 1920's to 1950's where monkey blood was systematically injected directly into humans. However, in many rural regions being bitten by monkeys is common place, as is the hunting and eating of them; one Zairian tribe, for example, is traditionally known to eat raw monkey brain. These routes of transmission to humans appear more feasible than the popular myth of human/monkey sexual encounters (Grmek, 1990). It is interesting to note that a spread to pandemic proportions from a number of isolated incidents is conceivable based on the cumulative nature of the spread of HIV (see Chapter Five).

Whatever its early forms and development, AIDS was first recognised and reported in the late 1970's and early 1980's. Although the epidemic is a phenomenon of the late 20th century, HIV had been occurring and developing for some decades without being identified. Testing of stored blood has found incidences of the diseases from as far back as the 1950's[21] before which there is little evidence of the disease, however, its absence may just as easily be due to poor testing and a lack of available stored tissue (Smallman Raynor et al, 1992) . Recognition of the disease followed from sporadic occurrences of a particular type of pneumonia, pneumo-cystic carnii pneumonia, and a rare form of skin cancer, Kaposi's sarcoma (Barnett and Blaikie, 1992).

Those patients first identified as suffering from these diseases, initially all young homosexual men,[22] had all also been treated for various other opportunistic infections, that is infections that would normally be shaken off by the body's immune system. Increasingly it was recognised that such opportunistic infections would only lead to life threatening illnesses in those whose immune system is suppressed. Although there was originally some debate over who actually identified or 'discovered' HIV and its

[21]Recent reports (in the UK media in 1995/6) have suggested that these much older examples found of HIV/AIDS may well have been false due to inadvertent contamination of stored tissue by recent strains of the virus in laboratories.

[22]Although in the developed nations AIDS has been predominantly identified in homosexual men, the epidemic building in Africa has always been identifiable as predominant amongst high risk heterosexual groups.

relationship to AIDS, this was eventually resolved by agreement between French and American politicians. HIV and AIDS were finally identified and internationally named as such in 1983/4, with AIDS being recognised as the final stage of HIV.[23] It was also acknowledged that it not only affected homosexual men but was found extensively in the heterosexual populations of Africa.

Human Immuno-deficiency Virus (HIV) is a retrovirus (which literally means backwards), thus essentially it has the capacity to reverse the usual direction of genetic information (Smallman-Raynor et al, 1992). It readily reproduces (as does, for example, the common cold) using material from the cells of its host. The virus colonises on a type of lymphocyte which has an essential role in producing immunity and may also colonise some of the nerve cells in the brain (Doll, 1987). In spite of this, it is relatively slow acting and after an initial apparently unrelated illness immediately after infection, like a severe bout of flu, it can appear to lie dormant for a number of years. This allows an infected person to appear totally healthy and asymptomatic and unwittingly infect others before any action is implemented, either individually or on a wider political or medical scale.

During the incubation period, high levels of the virus are detectable immediately after infection for a short period of time (months or weeks). Soon after this antibodies then become detectable in the blood, at which point it becomes possible to test for the virus. However, identifying HIV is made more difficult by its immense plasticity and genetic diversity. As a large number of different strains of HIV appear during the incubation period, it is difficult to identify similar strains of HIV from patient to patient. It is also hard to isolate individual strains within one patient during the period from the initial transmission of HIV to the development of AIDS. This would suggest that it is a virus which is still evolving (Smallman-Raynor et al, 1992).

[23]At the Amsterdam conference on AIDS in 1992 and in Berlin in June 1993 it was suggested that in a couple of individual cases HIV had not been identified where AIDS had been the cause of death (WHO, GAN, 1992 no.3). At present these anomalies are sufficiently rare to assume HIV remains the causal factor in the medical progression towards AIDS.

Historically, isolating and developing a vaccine against a virus has been difficult. With HIV the virus changes guise continually while attacking the immune system, and as the immune system is broken down so more types of the virus survive. Anderson and May (1992) have thus questioned whether the diverse array of forms of virus are the consequence of the destruction of the immune system or the cause of it. As the number of strains increase and the immune system becomes unable to control the large numbers so it collapses. When this happens those strains with fast replication rates dominate and are the only ones identifiable. It is important to underline the fact that HIV destroys the body's defence systems only, it does not kill people directly, but instead opens the way for other infections to destroy the body.

It is interesting to consider tuberculosis (TB) within this framework of opportunistic infection. Cases of TB, which tend to flourish wherever there is poverty, malnutrition, overcrowding and poor health care, have been increasing in recent years. Estimates suggest 1.72 billion people (1/3rd of the world's population) are latently infected at any one time, and 9 to 11 million are actively infected, of which three million will lose their lives (McKenna, 1992). Perhaps of more importance than the resurgence of a disease which is entirely preventable and treatable, is the critical fact that TB and HIV have shown a tendency to coalesce and co-infect individuals (WHO has estimated that 4.5 million people are co-infected with TB and HIV, 98% in the Third World (ibid)). Those individuals who are HIV+ are 3 to 4 times as likely to die from active TB than HIV- people, resulting in TB being the prime cause of death in adults with HIV in the developing world.

As noted earlier, two strains of HIV have been identified and consideration of HIV 2 adds a further dimension to AIDS research. This slightly different and possibly less virulent strain of the disease is most prevalent in West Africa (Smallman-Raynor et al, 1992). Whether this is a development of the disease itself, or evidence of a region developing HIV differently from elsewhere, is not really known. While HIV 2 is spreading, its

current rarity in Europe and North America reflects the present failure of this virus to bridge the gap between high risk heterosexual groups in West Africa, and high risk groups in the West (ibid).

Whichever strain of HIV an individual contracts, Acquired Immune Deficiency Syndrome (AIDS) is the set of infections that stem from the viral infection (HIV) and is the final outcome. It is almost always fatal. AIDS occurs when the body's immune system has deteriorated to such a point that the HIV+ person submits to opportunistic infections which their immune system when functioning correctly would repel (Lewis et al, 1989). Once AIDS develops, life expectancy is as low as 1-2 years.

It is important to note that while the link between HIV and AIDS is overwhelmingly accepted there has been some debate around this issue (WHO GAN, 1992 no.3). There is, however, overwhelming evidence that HIV is the cause of AIDS. First, HIV has an affinity for T4 lymphocytes, the white blood cells whose depletion is responsible for the immunosuppression seen in AIDS. Second, studies have shown AIDS to develop in individuals after the introduction of HIV (Smallman-Raynor et al, 1992). Furthermore, while the majority of children infected with HIV perinatally die within 5-6 years, un-infected children born to HIV+ mothers do not develop AIDS. AIDS and HIV also cluster in the same social groups in the same geographical areas. Finally, HIV can be isolated from virtually 100% of AIDS cases (ibid).

Although HIV/AIDS has spread rapidly and extensively, HIV is in fact a relatively fragile virus. It cannot live outside of the body for any significant length of time, and is transmitted only through bodily fluids (Richardson, 1989), not through casual contact such as drinking from the same cup as an infected person. Although HIV has been shown to be harboured in most bodily fluids (blood, semen, cervico-vaginal, urine, saliva, breast milk, lymph, cerebrospinal and tears (Smallman Raynor et al, 1992)), essentially there are only three main modes of transmission which have been identified: (1) semen or vaginal

and cervical secretions (therefore through unprotected intercourse homosexual or heterosexual);[24] (2) through blood, either transfusions or intravenous drug use;[25] or (3) from an infected mother to her baby, before, during or after birth.

Attitudes to social and sexual behaviour vary geographically, therefore, the relative importance of these different transmission routes also varies. In the early stages there were three broad patterns of infection established (see Figure 2.2). In pattern 1 (found mainly in North America, Western Europe and parts of Oceania) the primary population affected were intravenous drug users and homosexual men. In pattern 2 areas, (notably Sub-Saharan Africa and the Caribbean) HIV and AIDS were found in sexually active heterosexuals. Here many women of childbearing age and, thus, an increasing number of children were affected. In pattern 3 areas (Asia, North Africa and the Middle East) prevalence was low but increasing (Chin, 1990; Panos, 1990b). In 1988 WHO estimated that approximately 25-35% of estimated total cases were in pattern 1, 40-50% in pattern 2, 13-20% in 1/2 (many Latin American countries were classed as such) and only 2% in pattern 3 (Smallman-Raynor et al, 1992).

These percentages and patterns are altering dramatically as the pandemic continues to take hold in Africa and increasingly in Asia (present estimates are that nearly a quarter of new infections of HIV are in Asia (WHO, 1992)). This can be seen by comparing WHO statistics from the beginning of the pandemic, the late 1970's and early 1980's, to present estimates of 1995 statistics (see Figure 2.3). While allowances must be made for changing statistical collection techniques and definitional variations, the change in country patterns of HIV/AIDS infection is quite dramatic over these two decades.

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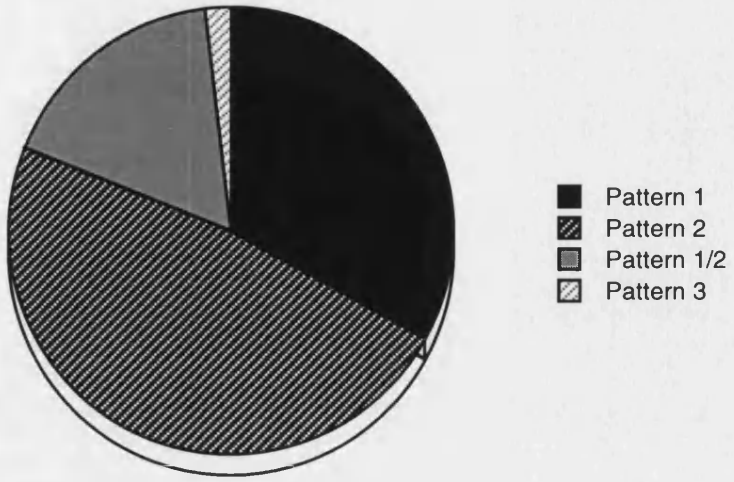
[24]Different forms of sexual contact are conceivably more risky, such as anal or oral sex. It is important to note that whilst academically little research has been done relating to these practices that they should not be disregarded by safe sex education campaigns.

[25]Where needles are shared, or where pumping blood in and out of the syringe is practised in order to ensure that none of the drug is wasted, the risk of infection is higher, because of the chances of coming into contact with contaminated blood.

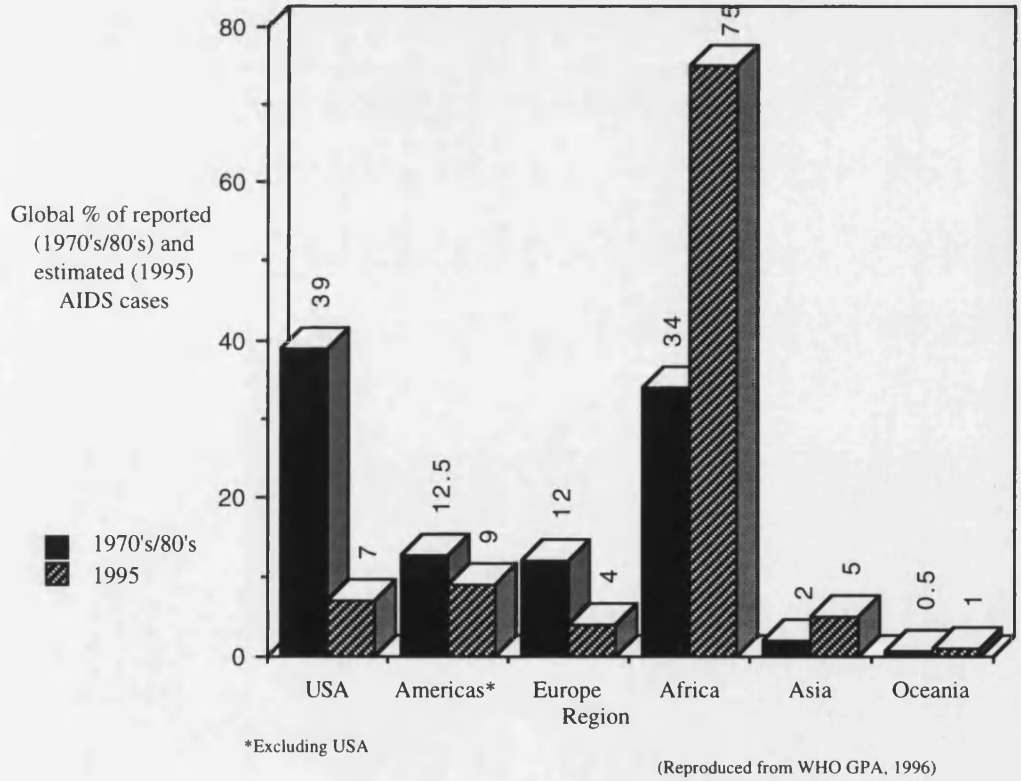
Percentage of HIV/AIDS prevalence regionally in 1988



(Based on statistics from; Smallman-Raynor et al, 1992)

Figure 2.2

Total number of AIDS cases in adults and children from late 1970's / early 1980's until late 1995



(Reproduced from WHO GPA, 1996)

Figure 2.3

The average length of time between acquisition of HIV and AIDS is approximately 10 years. This incubation period is rarely less than three years but the exact length may be influenced by a number of different factors. Direct entry of the virus through large quantities of infected blood after a transfusion would speed the process because of the sudden density of infection. The incubation period may be significantly shortened where there is malnutrition and high exposure to infectious diseases, since these factors will also impair the immune system. Thus, as with plague throughout history, HIV and AIDS may take on a seasonal pattern with infections increasing where harvests fail and malnutrition is at its height, since poor health results in a greater susceptibility both to HIV, and more significantly, to the onset of AIDS related opportunistic infections. It is conceivable, therefore, that short term nutrition repletion programmes could be a potential coping option.

The possibility of becoming HIV+ appears also to increase significantly where a person has any other form of STD (Lewis et al, 1989). While this may also be linked to an indication of higher promiscuity there is a definite correlation between genital ulceration and an HIV+ status. Brown (1990a) has suggested that there is a 3.5 times greater chance of HIV infection if already infected with Gonorrhoea. Gonorrhoea is relatively common, often untreated, and was already recognised as problematic in Africa before the onset of AIDS. Similarly with syphilis, Brown (1993a) claims that every time a woman has sex with a man infected with syphilis (and HIV) she faces a 30% risk of becoming infected with HIV, whereas under the same conditions in a low risk group the risk of HIV infection in a single encounter is estimated at 0.1%. The average number of partners over time, together with the variability of sexual activity, and period of infectiousness, are also of importance in determining the spread of HIV. Thus, higher rates of transmission in Africa may be more a function of the greater risk of infection per sexual encounter than the total number of partners. Furthermore the chance of transmission varies during the different stages of HIV and AIDS; it is high immediately after infection then decreases, but subsequently increases with time towards the progression to AIDS.

The likelihood of vertical transmission (from mother to child) is directly related to the severity of the disease symptoms at the time of conception, which is in turn related to the emergence of the different viral forms throughout the progression of the mother's HIV. A baby whose mother is infected with HIV can be infected in three ways; in the womb before birth, possibly during birth, through blood or vaginal secretions or in a few limited cases through breast milk. It is not, however, a forgone conclusion that a child will inherit the disease. About one third of the children born to HIV infected mothers will themselves become HIV+ (mother to child transmission is the greatest source of child infection) and of these, most will die before they are five years old. Children are more susceptible to speedy progression than adults dependent on the mode and intensity of infection. WHO has estimated that 25% of HIV infected babies will have developed AIDS by their first year, and 80% by their fourth year (Chin, 1990:222). However, since it may take up to 18 months to establish a baby's HIV status, often they will have died before the disease is diagnosed. Among those who do live longer, however, the incubation period is still much shorter than for adults. This can perhaps be partially explained by the fact that most adults have, throughout their lives, had to survive a barrage of diseases to which they have built up an immune system and are thus more resistant in the future. A baby, however, has only some of its mother's antibodies and so its immature immune system is more likely to be susceptible and succumb to disease.

A Cure? Drugs and Testing in the Developing World

Research into AIDS has been more heavily financed than any other recently discovered disease. While in many developing world countries it is not only life threatening, economically crippling, and has the potential to alter population structures, no cure or vaccine has as yet been developed, nor is it likely to be in the foreseeable future. Developing drugs is not only expensive, but in the case of HIV, also very difficult. The principal medical strategy against viruses has usually been immunisation, evoking antibodies which recognise the peculiarities of the virus. Since HIV actually targets the immune system this option is effectively removed.

Current treatment for AIDS is still dependent upon 'first generation' drugs, AZT and the related drugs ddI, ddC and dd4. While AZT was not the first drug developed against AIDS, it was the first to be approved by the US government. It was not in fact a new drug especially created to combat HIV/AIDS, but one which had been developed in 1963 by Dr Jerome Horowitz in an attempt to combat cancer. Failing in this it was left un-patented until a use was found in AIDS treatment by the drug company Wellcome (Bygrave, 1993). The drug, which has been relatively widely available in the developed world, was first produced and granted a licence in the United States after early trials were cut short in August 1989, based on the apparent success of the treatment, and the urgency to find some method of controlling the disease. Such anti-viral drugs can not cure AIDS, nor treat it, only 'manage' it by stopping the virus replicating, (they are 'reverse transcriptase inhibitors') and slow down the progression of the disease (Brown, 1993c; Bygrave, 1993). Originally it was also thought that they might prolong the latency period (Kiefer and Hulley, 1990). More recent data have shown that it cannot delay the onset of AIDS in the long term, or the time of death of an infected person who starts taking the drug whilst still well, but HIV+ (Brown, 1993c). AZT has, however, been shown to prolong the life of people who actually have reached the stage of full blown AIDS, from 6 months to 2-3 years, although this is probably as much a result of more vigorous treatments for the resultant opportunistic infections. However AZT appears to lose its power over time as strains of HIV which have become resistant to it appear in the blood (Brown, 1991d).

Recent announcements in the media in April 1993, and at the Berlin AIDS conference in June 1993, have disproved much of the initial research. These announcements were made on the basis of Concorde trials carried out in Europe and set up by Britain and France, which began in 1988 but continued when American tests stopped (Brown, 1991d). They claim that the delay in progression to AIDS is limited and transient (ibid). Whilst these trials may also be wrong, AZT has always had its critics amongst people with HIV/AIDS. When it was initially marketed it was prohibitively expensive (the price has been reduced

now) and it was prescribed in large doses which increased the side effects (one of which is severe anaemia) leading to it being denounced as worthless and toxic (Bygrave, 1993).

In a developing world context AZT, and similar medical interventions, are not seen to be a practical option since they are not only prohibitively expensive, but should also be administered under clinically controlled conditions rarely available. Other drugs developed in the early stages of the pandemic such as the WHO sponsored drug KEMRON may be more appropriate for the African nations. Indeed the development of the drug had some African input and was tested and developed in Kenya. The drug worked on the homeopathic principle of regular small doses which are more financially and practically possible in the African context of poverty and improvised medical care (World AIDS, 1991). KEMRON is a wafer thin alpha interferon. Interferons are cheap and readily available. They are produced in the body in response to viral infections in cells and are active against viruses attacking the body. They also serve to stimulate the immune system (Brown, 1991d). It is claimed, although it has never been conclusively proven (outside of short lived trials in Kenya) that the drug stunts the progression of HIV to AIDS (Onyango, 1990). Allegedly, there had been cases where sero-de-conversion had occurred, in other words the virus had disappeared from the blood and significant increases in the CD4 cells which fight HIV were shown (Brown, 1991d). In spite of trials in the US and Canada, which failed to back up the findings from Kenya, KEMRON became available in the country.

One of the dangers of marketing the drug in Kenya is that it could be marketed under the auspices of a 'cure'. Families already financially crippled by the illness and desperate for help, may become even deeper in debt in the belief that there is an available cure. This is particularly so since KEMRON had been backed by WHO giving it a high degree of legitimacy. The inherent danger in marketing such drugs is that individuals will see the treatment as a cure, thus generating false security and subsequently undermining education and safe sex campaigns to prevent the further spread of HIV.

Suggestions for the future may lie with the immune system, and in the treatment of opportunistic infections. The problem with this is that as one infection is conquered, so another takes its place (Bygrave, 1993). Drugs may be based on a balancing act designed to boost some parts of the immune system and suppress others which assist the virus, the danger here lies in over stimulating the immune system which may then encourage the virus to replicate. In theory, since it takes ten years to develop, it is likely that there is something within the immune system holding back progression which could be isolated and replicated in vaccine form to extend that ten year fight indefinitely. Present research is developing 'protease inhibitors' which hit the HIV life cycle at a different stage to that of the 'reverse transcriptase inhibitors' (Brown, 1991d; Bygrave, 1993).

This also raises a number of long established ethical issues regarding testing of drugs; that is whether it is ethical to instil false hope in people through such tests (particularly using African countries with less stringent medical ethical laws as 'guinea pigs'). In developed countries it appears that many HIV+ people are willing to embark on drug tests purely because there is nothing to lose. This presents a particularly difficult moral dilemma where these are controlled (placebo) tests and thus there is only a 50% chance of actually being given a course of treatment. WHO have planned large scale vaccine tests in Uganda, Brazil, Rwanda and Thailand, however, when, and what vaccine they will use, is questionable. This will involve setting up massive, expensive laboratory and chemical facilities not usually available in these countries, somewhat ironic, as Dr Levine at the University of South California points out (Guardian, 26/6/93), since the health budget per person for Uganda is far less than the cost of a single HIV antibody test.

Following on from the problems experienced with successful drug use in an African context, the problem of adequate testing must also be considered, both in terms of testing for HIV/AIDS diagnosis, and the testing of blood in order to protect blood supplies for transfusions from being infected. Enzyme Linked Immunoabsorbent Assay (ELISA) is

the test which is most common in Africa. While it produces test results quickly (within hours), it has a very high false positive test rate; many people are being incorrectly informed that they are HIV+ when in fact they are not. Although positive tests may be eliminated, or at least substantially decreased, by secondary testing this is rarely a financially practical option. Furthermore, counselling of patients before and after the test is rarely available, so people find it difficult to cope with the implications of a positive result.

This raises a question of central importance; if a vaccine was discovered how useful would it be in the context of the developing world? The first dilemma would be who to vaccinate; those most at risk or those most able to afford it? In Africa it would be virtually useless since it is unlikely it could be afforded by anyone; Vaccines developed for diseases such as TB, Yellow Fever or Cholera for example, are rarely available to the indigenous populations facing such diseases on a daily basis, because there is no finance, sufficient medical knowledge or infrastructure available. It can therefore be concluded that a new, and probably expensive, vaccine against a sexually transmitted disease would not be widely available to the African population. A vaccine might have some use in the developed world, although even this may be finance dependent. Assuming that a vaccine did become widely available within the next 10 years, it is conceivable that a further 10 million people would already have contracted HIV.

Were a medical 'cure' for HIV/AIDS discovered its use, in an African context, would be faced with similar problems to those of a vaccine, in that presumably it would be based predominantly on financial viability. A medical solution, therefore, would be unlikely to resolve the problem especially since the economic trend in many countries is to move away from supporting health and social services (Bygrave, 1993) (see Chapter Four). However, it is conceivable that, as with any disease, as an individual contracts it they may then develop immunity for the future, assuming that they do not die. That is, as the 'susceptibles' within the community are removed, through death, the immunity of the

remaining population increases and the epidemic goes away. Without medical intervention this is extremely unlikely for a virus of this kind in the long term, and in the short term is a 'solution' unacceptable to those suffering and dying from the disease (ibid).

Essentially the focus of attention needs to be socially as well as biologically defined. The solution is not simply a case of 'waving the scientist's magic wand' (Mack, 1991). The spread of AIDS cannot be considered solely in terms of its physical properties. Whilst many explanations lie with the immediate cause of infection most of these are related to sexual practices. Furthermore each society structures its sexuality differently and with differing restrictions;

> " Epidemiological studies of HIV transmission have generally been the source of assumptions about which sections of the population are at a 'high risk'..... Anthropological analysis suggests that these assumptions may be conceptually ill founded. Epidemiological research has tended to view sexual behaviour as a set of isolable and quantifiable findings, by placing sexual behaviour in context it points to the need to reassess risk by shifting to an emphasis on *which partners* and under what circumstances" (Standing and Kisehka, 1990:iv).

Summary

This chapter has considered the medical aspects of HIV/AIDS from it's origins to the present stage of research for a vaccine or cure. This has allowed the origins of the disease to be discussed while discounting a few of the more popularised myths surrounding HIV/AIDS. It has considered the predominant modes of transmission, in order to understand the best ways of education. Having established these modes of transmission, it becomes easier to see who is vulnerable and thus target them in campaigns. Finally it has highlighted the necessity to recognise that not only is a vaccine/cure not imminent, but a medical solution is not a practical one in an African context. Having established an understanding of the medical issues related to HIV/AIDS the next chapters will consider the disease within a social and then economic context in order to understand the co-factors concerned in the development, and thus control, of this hazard.

CHAPTER THREE

SOCIAL FACTORS OF HIV/AIDS IN AFRICA

Introduction

In chapter one the issue of HIV/AIDS was placed within the hazard framework, and stress was placed on the need to consider the disease as a socially constructed phenomenon in its present form. This was proposed in contrast to its predominant construction as a medical issue. This chapter aims to consider the social issues relevant to the hazard framework and their relationship with the cause and effect of HIV/AIDS and responses to them. The difficulties in establishing the differences between social factors should be noted at the outset. These are interrelated and overlapping, to the extent that the role of each in terms of the cause, effect, or response is often hard to distinguish. For example, within the wider issue of gender, sex work may be perceived equally as a cause, effect and response to HIV/AIDS. Thus it is necessary to consider the interrelationship of these factors, in order for their importance and impact to be established within the framework.

Culture and religion are significant in shaping the social factors to be interpreted. The spatial variation of African cultures and religions, pre colonial, colonial and post-colonial is extensive. The extent of the impact of HIV/AIDS is partly dependent upon the strength of traditional culture and its interaction with religions (Christianity, Islam, indigenous beliefs, etc.), since these factors influence attitudes to sexuality and marriage, which in turn are variables related to the extent and distribution of HIV/AIDS. Societies affected by HIV/AIDS have tended to construct metaphors about it which are often more emotional than rational, and can often be traced to that society's history, culture, and religion (Taylor, 1990). As Taylor (1990) claims, these illness metaphors draw social and moral boundaries between the imagined states of civility and disorder, and describe the disruptive forces society fears from outside its borders as well as those from within. The response is thus dependent upon the perception of the status of those who suffer from the disease; historically and presently the poor, alien and sinner have all become objects for

stigmatisation. If people who are HIV+ are 'sinning' against traditional religious beliefs then society has the 'excuse' to ostracise them. Response to disease can be a powerful tool in emphasising social divisions and prejudices (Risse, 1988).

The first section, therefore, looks at the potential impact of various religions on the spatial and attitudinal variation of the disease. HIV/AIDS within the family is the next consideration, that is the role that household structure has had in the spatial and social construction of HIV/AIDS, and how this has, and will subsequently be, altered as a result of the disease. This will include an overview of attitudes to family planning and family size. Gender variation and particularly the role of women within the household and family in terms of production, reproduction and health care are also considered. The chapter ends with a consideration of children and the specific problems of orphans. The effect of HIV/AIDS on children, in terms of their own health and changes in reproduction, is also of major importance in order to establish changing household structure and future dependency ratios.

Religion

Adding a religious aspect to any issue causes controversy because of the strength of belief and contradictory nature of different faiths. As has already been discussed, in terms of risk perception, society as a whole sets constraints on people's behaviour and shapes attitudes and beliefs. If a country has a predominant religion, or regionally-specific dominant religions, the chances are that the local laws and customs will be influenced by them, and that these will affect perceptions of morality and values (Taylor, 1990). The diversity of religions in Africa means that different cultural, legal and behavioural practices are stigmatised within different regions, and many also conflict with 'traditional' beliefs.[26]

The role of the church and the influence of religion should not be underestimated within HIV/AIDS research. In Kenya, for example, church-related medical systems account for

[26]Traditional beliefs are those which have been developed and handed down through generations based on culture, custom and practice. These practices may often be seen to have the power of unwritten laws.

approximately 30% of hospital beds (Greely, 1988). In spite of this input to medical care many churches have been slow to respond to HIV/AIDS because of their moral positions relative to it. This is true especially of those churches with a conservative religious orientation which disapprove of family planning schemes on a general basis (ibid). More radically, it has been suggested (Shorter, 1973) that religion can be a fossil in society, a rigid force of conservatism and reaction which stifles progress and creativity.

Despite the important role of the churches in health care, Kenya is quite advanced in providing contraception. An estimated 17% usage by married women in 1984 increased to 33% in 1993. The use of more modern methods of contraception such as the pill has also increased from 10% to 27 % in the same period, with increasingly fewer women favouring voluntary abortion (Frank and McNicoll, 1987, Central Bureau of Statistics (Kenya) 1993). NGOs provide approximately one third of these contraceptives (Greely, 1988, Central Bureau of Statistics (Kenya) 1993).

Kenya itself is a highly fragmented and differentiated society, a land of social contrasts and contradiction (Miller, 1984): 59% of the population is Christian (26% Protestant and 28% Catholic), 6% Muslim and between 18 and 30% are adherents of 'traditional' faiths (as noted earlier, in Kenya there are 43 ethno-linguistic groups) (Miller, 1984; World Factbook, 1996). These religions may affect the spatial and temporal distribution of HIV/AIDS in a number of ways: via attitudes to sexuality; physical requirements of the religion such as circumcision; and strict moral beliefs with respect to contraception. It is imperative that there is an understanding of the influences of African culture, including its various religions, towards sexual activities in order to develop appropriate educational and public awareness campaigns (Adamchak et al, 1990).

Whilst it is not the intention to judge any single religious belief, it is important to exemplify the influences and related problems that different beliefs may have in order to show their possible impact on society. Catholicism provides an important case study. In

Africa as a whole there are 92 million Catholics, and by 2000 there are expected to be 100 million (Guardian, 11/2/92). Although in Kenya only 28% of the population are Catholic this still amounts to over 7 million people. Often a conflict may occur between traditional practices and the imposition of religious beliefs. In many developing African societies Catholicism can be seen as an alien religion brought in by outsiders whose beliefs directly conflict with those of the 'traditional' society.[27] The difficulties come not where the two conflict, but where they interact together and produce a negative outcome. Once incorporated into indigenous practices, certain beliefs may be followed and others ignored. For example, if Pope John Paul II's advice on the prohibition of contraception is followed, but not that on monogamy, there are important implications in the context of HIV/AIDS. To the outsider this may give the appearance of hypocrisy, to those involved it is simply how the two have evolved - although again the influence of colonialism imposing religions on societies should not be underestimated.

Historically, because of its strong stance against contraception, Catholicism has been criticised by those trying to implement population control programmes in the developing nations (Feldman, 1990). People who fear God will not act against the teachings of the church. Governments may also take this stance and not allow the legal distribution of contraception, even if this means massive population increases which are economically crippling. This controversy over Catholic attitudes to contraception is not new. When the rubber condom became available in the 19th century as a practical means of combating the ever increasing outbreak of syphilis, the Roman Catholic church fundamentally opposed it. In 1826 Leo XII banned the condom because it prevented debauched individuals from suffering from a disease that was a 'necessary and certain punishment for deviating from sacred practices' (Feldman, 1990). This basically follows the idea that such diseases are God's retribution for 'wrong' behaviour.

[27]Take for example, the monogamy required by Catholicism alongside the acceptance of polygamy by some African tribal groups.

AIDS has introduced a far greater moral dilemma in terms of mortality. Justifying a continuing stance against contraception when the risk of mortality is high, not only for the mother but also the unborn HIV+ child, is difficult to argue from other more liberal philosophical stances. Opposition to contraception also raises the question of abortion (in terms of a mother who tests HIV+ and then aborts the foetus), which the Catholic church also condemns.[28]

It is not only Catholicism as a set of beliefs, however, that may have a significant impact on the spread of HIV/AIDS. Despite the low overall proportion of Muslims, Islam is the dominant religion in many coastal and urban areas of Kenya (Miller, 1984). Ports, Mombasa in particular, tend to be predominantly Islamic. The coastal region also has the largest percentage of polygamous marriages in Kenya, around 29% (Kenyan National Council for Population, 1989).[29]

Mombasa for much of its history was a port existing for the trade of African ivory and grain in return for imports of cloth and wine. The Arabs fought for the area from the Portuguese at the beginning of the 20th century, and when it came under the control of the Sultan of Zanzibar it came indirectly under British rule. The British found a society, which having been exposed to the outside world through trade had already undergone changes, that is the Arab traders as the first settlers had integrated their culture with that of the Swahili. Nevertheless further changes came under colonialism. With the abolition of slavery and the immigration of many non Muslims, the practices of Islam were no longer as widespread or respected. However, up to and including the present day, old town Mombasa and the surrounding suburbs can be considered 'Muslim', typical of many

[28]Pope John Paul II was accused in the European Parliament of condemning people to death by using his visit to Kampala to repeat his ban on the use of condoms, offering abstinence as the solution. This was seen by one Labour MEP as "bizarre, as condoms are now as much a form of medical protection as contraception" (Guardian, 11/2/93).

[29]Polygamy is most practised in rural regions and predominates amongst less well educated and older women. Approximately 20% of women in Kenya were estimated to be in polygamous unions in the demographic and health survey of 1993 (Central Bureau of Statistics (Kenya) 1993).

regions in Africa where Islam dates back to pre-colonial trade, and where, for example, the day runs in terms of the call to prayer.

Muslims follow the principles and beliefs laid out in the Koran which is believed to be the word of God and was written during the lifetime of the prophet Muhammad of Mecca. Indeed,

> "Islam is based upon the firm belief in the existence, perfection, uniqueness, and unity of God who in the past sent prophets at intervals with missions which contained the seeds of the moral guidance" (Abdul-Rauf, 1977:18).

Critically, the Koran claims that women are equal to men *but different* (Abdul-Rauf, 1977:36). Statements from the Koran such as "A childbearing woman lacking beauty is better than a beautiful but infertile one" (ibid:53) and "It does not seem fair to impose domestic leadership and its attending responsibilities upon a creature who is occasionally burdened with pregnancy and the inconveniences of the monthly menstrual discharge" (ibid:53) together with "get married reproduce and let your numbers increase" (Abdul-Rauf, 1977:85), suggest that women are not equal, and that their main role is one of childbearing. As with most religions there are few Muslims who hold stringently to all the rules of their bible, but essentially in Islamic society from an early age women do not have many rights, or control over their own destiny.

It would be wrong to suggest that Muslim law is entirely rigid, as it does allow scope for interpretation in the modern era. Nevertheless the position of women is most often dictated by men. A father may still 'help' to chose a husband for his daughter and a wife requires her husband's permission to seek employment outside of the home. Thus the idea that; "Men are in charge of women because God has made the one of them excel the other and because men spend of their property (for women's support) Surah iv:34" (quoted in Shepherd, 1987:243), still appears to be accepted.

While divorce may not be as easy as the popularised idea of saying 'I divorce thee' three times, divorce rates tend to be higher within Muslim communities. This also increases the

number of single people having affairs or remarrying. Indeed Shepherd (1987) has suggested that one in two marriages end in divorce.

Islam permits polygamy for men although it does not actively encourage it, however, if a man's first wife is barren it is more than acceptable for him to take another wife to reproduce (Shepherd, 1987). The practice of birth control, unless called for by legitimate causes (it is unclear what legitimate causes may be), conflicts with the Islamic belief of trusting in God. Birth control also disagrees with the 'need' for divine creation to increase the number of Muslims in the human race. As with the African population as a whole, children tend to be representative of status.

Islamic attitudes to homosexuality are not as rigid in many ways as those towards male and female relations. In Mombasa, for example, homosexuality is accepted since Arab culture is still admired. The fact that there is a long standing tradition of male homosexuality in many Arab countries means that it carries no great shame in areas of Kenya populated by Arab Muslims. Homosexuals may move freely amongst women, who do not have to be veiled in their company unlike when in the company of other men. In fact a marriage between a poor man and a rich woman is more shocking than homosexuality, since rank is of such great importance (Shepherd, 1987). HIV in this community is most likely to be male transmitted, either through male domination of women, or through high risk homosexual behaviour (ibid).

Many religions also carry with them varying rules which may impact upon sexual behaviour or susceptibility to STDs. Individual compliance with circumcision may be part of a man's identity as a member of his ethnic or religious group (Bongaarts et al, 1989). Male circumcision is thought to decrease the susceptibility to HIV transmission and Bongaarts et al (1989) have traced geographical patterns of circumcision against patterns of the spread of HIV showing its importance. This correlation suggests that patterns of circumcision in Africa could have been a factor which moulded the evolving geography of

HIV infection (Smallman-Raynor et al, 1992). There are still many questions about the extent to which circumcision affects the chances of HIV infection, as the zones identified as having a high incidence of HIV initially were non-circumcised areas. This may simply suggest that the virus is yet to reach an equilibrium. It has also been suggested that circumcision (male and female) could be one response to the virus, although this would raise a number of moral and cultural problems (Smallman-Raynor et al, 1992). The extent of male circumcision is quite varied throughout Africa, and is dependent upon religion; in Kenya only 15% of men are uncircumcised;[30] in Tanzania, this is much higher (60%) rising to 90% in Uganda and Zimbabwe (Moses et al, 1989).

Traditional cultures have a tendency to encourage early sexual activity (Standing and Kisekka, 1990),[31] which in itself can be dangerous for female health. Circumcision amongst traditional African tribal religions, especially female circumcision, has long been an emotive and highly controversial subject, especially when debated across cultures. Female circumcision has often been seen as an extension of male control over women's sexuality, perpetuated by older women over girls under the influence of elders and tribal law. Whatever the form of circumcision, even the form of clitondectony[32] practised by the Kikuyu in Kenya, it limits women's sexual pleasure and thus their 'sex drive', supporting the basic belief of many religions that sex is for procreation not pleasure. By decreasing sexual desire, so the number of sexual encounters may conceivably be less, and therefore the potential for HIV transmission reduced, however, this assumes female choice. Ironically amateur unhygienic methods of circumcision can easily prevent the fundamental aim of procreation by creating serious pelvic infections which in turn may cause sterility. The re-use of blades and the mixing and loss of blood in the process of circumcision are issues which have taken on far greater significance with the advent of HIV/AIDS (Hardy, 1987).

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[30]Circumcision is dependent upon tribal affiliation. All Kikuyu men, for example, are circumcised as this is seen as 'making a boy into a man' (Nelson, 1978)

[31]Education programmes must as a consequence be set towards basic levels. This itself may be difficult with cultural constraints on discussions of sexuality (Standing and Kisekka, 1990).

[32]Clitondectony is the practice of female circumcision which just removes the clitoris rather than the complete genital mutilation of some forms of circumcision.

In Kenya, circumcision was one of the first areas of opposition between European colonialists and some of the indigenous population, because it was felt by the Kikuyu's that it established a female's status as an adult woman ready for sex and marriage. Independent schools were set up because the Christians forbade circumcision in their schools (Kenyatta, 1938). Now, whether a Kikuyu woman is circumcised or not tends to be a function of age, education, class, religion and birthplace. Older women tend to have been circumcised, as do less well educated and rural women. Many Christian sects are against circumcision and thus regional differences are identifiable by prominent religion. Although it is hard to ascertain reliable statistics, Nelson (1988) estimates that only around one third of Kikuyu girls are now circumcised.

The Kikuyu believe in the necessity of sex, particularly for men as demonstrated by the fact that there is no word for celibacy in their language (Nelson, 1978). Granting a husband sexual services is an essential part of a wife's duties and refusal is legitimate grounds for divorce. Before colonisation this need for sexual services was satisfied through polygamy. It prevented men from searching out prostitutes and decreased the transmission of STDs. In post colonial times male migration increased and an informal arrangement of sexual liaisons whilst in town was established. These liaisons were with women who were not wives, nor necessarily 'traditional' prostitutes (see Chapter Four), but who provided sexual and domestic services for the men whilst away from their spouses (ibid). Unlike formalised polygamy, however, these women are seen as more of a threat to the acknowledged social structure because they have some control over their own sexuality and children, rather than being under the economic and physical control of men.

It can be seen that religion raises a number of issues which need to be incorporated into risk assessment programmes and coping plans, particularly at a regional level. Beliefs relate directly to social attitudes towards sexual behaviour and expectations, which must be incorporated into any consideration of education programmes. Nevertheless it should

be noted that whilst knowledge of religious and cultural variation may help in the development and implementation of campaigns, that knowledge is rarely sufficient to change people's learned behaviour (Feldman, 1990).

Women and HIV/AIDS

> "AIDS affects women not only as individuals who are HIV infected but also in their multiple roles in society and the family, as health care providers, educators, wives, mothers, and income providers. The status of women within the family and society makes them particularly susceptible to HIV infection a 'social vulnerability' related to their generally low status....The stigma attached to AIDS can subject women to discrimination, social rejection and other violation of their rights." (Petros-Barvazian and Merson, 1990:2).

This section is a consideration of women's roles in society and the effect that HIV/AIDS may have on changing this. More specifically it will consider the role of women within the household as health carers, as producers and as reproducers, which are important both in terms of coping with HIV/AIDS and in terms of its transmission.[33]

In 1990, World AIDS Day (December 1st) was devoted to Women and AIDS, an acknowledgement of the fact that HIV/AIDS world-wide was affecting women as much as men. It aimed to show how their role within society was making them susceptible to the disease, and that policies could no longer afford to be directed at only medical issues, but also social and economic ones in terms of gender, status and opportunity. Most HIV+ women are of child bearing age (20-29 is the peak incidence (and that of greatest fertility) as opposed to 29-39 for men). In Africa these figures may be explained, in part, by men's preference for younger sexual partners, who they presume to be in a lower-risk group. This preference is supported by evidence from Uganda (Barnett and Blaikie, 1992). The present distribution of AIDS also reflects a gender inequality in access to economic resources (Kreiss et al, 1986, see Chapter Four).

[33]Women's role in the transmission of HIV/AIDS and within the 'sex work' industry will be considered later Chapter Four.

Women's sexuality in an African context is almost entirely linked with their ability to have children (Nelson, 1988). Men may require proof of a woman's fertility before marriage, hence the large numbers of premarital and teenage pregnancies. The female 'sex drive' is acknowledged only in terms of the need to control it. Men who migrate try to stop their wives from using contraception so that they do not have affairs which might decrease men's control over women. Nelson (1988) has pointed out that women's rights to sexuality are secondary to men's rights over their fertility. There is also greater structural control over female sexuality than male (Adeokun, 1989). Maintenance of the reproductive health of women is also important, since ritual practices such as coercive sex or circumcision can result in infertility which may then mean economic and family support is withdrawn. Furthermore, women may be more likely to be infected with HIV through regular childbirth because of the widespread practice of blood transfusion (Panos, 1990b). In Kenya, attempts to decrease the spread of HIV/AIDS and increase female education regarding fertility and contraception have been made. However, because of the continuing desire for a large family and male control of sexuality, it is possible that the upshot of AIDS, despite rapid urbanisation,[34] could ultimately result in an increase in fertility as attempts are made to replace those children who are dying.

Family Planning

Attitudes towards, and an understanding of, family planning is vital for any HIV/AIDS risk analysis or coping project. Population growth and the expected size of families is an important variable where contraception is to be introduced. Lack of use of contraception may not be because of lack of availability or a fundamental religious belief against it, nor necessarily a dislike of condoms, it may instead be due to the desire to have a large family due to cultural traditions (Frank and McNicoll, 1987). One reason behind the continuing desire for a large family may be seen in 'derelict' laws. In Kenya, for example, men may

[34]Based loosely on the demographic transition model theory, urbanisation usually brings with it a decrease in fertility for a number of reasons; including increased access in terms of contraception as well as increased education, a decrease in reliance on children for family business, i.e. rural smallholdings, and a change in, and modernisation of, cultural attitudes. Urbanisation is often associated with development and materialism which decreases the desire for a large number of children.

practice polygamy and widows often have no rights to property or land inheritance, in spite of the 1970's equal inheritance laws. This situation increases women's dependence on their children as they get older (Miller, 1984). Large families are also relics of predominantly rural times where children were relied upon for help on the land. Even now in some rural areas they may often be taken out of school during harvest periods (Barnett and Blaikie, 1992), thus agrarian reform also needs to be tackled as a social issue in this respect.

In Kenya the problems of population growth were recognised in 1948. The colonial government became alarmed at the census results which showed vast population growth rates (Khasiani, 1988). The government health policy was to control, prevent and eliminate communicable diseases, health deficiency conditions, environmental hazards and problems associated with child birth. Government expenditure on health, however, remained one third of that allocated to education (ibid). In the initial stages of the policy the government encouraged private practitioners to provide family planning facilities. A population advisory committee was established and Kenya became the first sub-Saharan country to adopt a family planning programme. In 1955 Family Planning Associations were set up in Nairobi and Mombasa. Later, in 1961, the Family Planning Association of Kenya was formed, although this did not become the official national family planning programme until 1967 (Central Bureau of Statistics (Kenya) 1993).

The assumption was that fertility reduction was associated with a decrease in female and child mortality, and its main goal was to increase the social and economic conditions of the Kenyan family. Its demographic goal was to decrease population growth (Khasiani, 1988). In an aim to improve on the work of the Family Planning Association and in recognition of the weaknesses of earlier programmes, the National Council for Population and Development (NCPD) was formed in 1982. The Council's mandate was to formulate population policies and strategies and to co-ordinate the activities of government

ministries, NGOs and donors involved in population, integrated rural health and family planning programmes (Central Bureau of Statistics (Kenya) 1993).

The success of this co-ordination of churches, NGOs and voluntary organisations by the NCPD is debatable. In attempting to provide a network of available contraception, targets have not always been reached, but due to training of health workers field educators and advertising by 1982 it was estimated 88% of Kenyan women knew of at least one form of contraception (Khasiani, 1988). By 1993 this figure had gone up to 97% of both men and women knowing of at least one 'modern' form of contraception (Central Bureau of Statistics (Kenya) 1993). The importance of this is not really the success of family planning, but the fact that there is an established planning infrastructure and 'tried and tested' methods of educating populations within target communities on subjects related to contraception and sexuality. These are an available resource to be tapped into by an AIDS campaign. Furthermore, the fact that there has been a long term campaign towards family planning shows that the socio-economic problems created by large population growth have been recognised at a governmental level, and are in the process of filtering down through the population.

Despite recognition of the problem, the family planning programmes have failed to achieve their 1960's aims to reduce family size so that 'every pregnancy was the result of a voluntary choice' (Frank and McNicoll, 1987). This is particularly so in rural areas where education levels are lower and desire for large families remains high (Khasiani, 1988). This would suggest that high fertility lies in demand rather than supply, although it should be noted that family planning programs often fail (certainly in the first instance) because they are not based on concrete knowledge about sexual patterns and local practices (Ahlberg, 1991). Interestingly, male desire for more children remains slightly higher than that of female (Central Bureau of Statistics (Kenya) 1993). Government action should focus on social understanding, welfare and education and not just on the provision of contraception. If organised within the present family planning infrastructure, this could

have positive repercussions in terms of decreasing the spread of HIV/AIDS. Until such time as social expectations within Kenya change, then behaviour is unlikely to change either. As Panos (1990b:48) notes,

> "When society defines the primary function of a woman as bearing children, not bearing children makes that woman an abnormal part of that society. To change the focus on childbearing entails a re-education of every single member of that society"

Although there may be an awareness of contraception, the only methods which also prevent HIV infection are barrier forms of contraception. When used properly, condoms provide an effective barrier against HIV.[35] One of the disadvantages is their use being controlled by men (Panos, 1990b). Different interpretations of this message, however, could be used in order to make condoms a more attractive option. By giving men control over their wives' sexuality and preventing the use of the pill (or other female controlled forms of contraception), condoms and the power which they then take on over fertility could make them a more acceptable form of contraception. This, however, is not a particularly acceptable solution given its negative impact in terms of women's rights, nor especially practical in a society where male desire for more children is higher than female, and where male status in society is also partly dictated by this.[36]

There is also the issue of femidoms, the female equivalent to condoms. The femidom is a protective sheath for women, which has been marketed as a step towards female control over protective contraception. The advantage in theory is that it is, or could be, safer because it is made of polyurethane not latex. This also gives it a longer shelf life, and makes it less likely to deteriorate due to oil based lubricants (Panos, 1990b). Tests have also shown less chance of leaks or slippage. There are, however, a multitude of problems.

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[35]It should be noted that in 1993, of the 33% of married women using contraception only 1% were using condoms as a form of contraception, and only 6.8% of all women who had ever used contraception between the ages of 15-49 had used condoms (These figures were taken from a sample of 7540 women interviewed for the Kenyan NCPD Demographic and Health survey in 1993).

[36]According to the Kenyan Demographic and Health survey of 1993, regardless of the number of children they have already a slightly higher percentage of men than women say they want another child. The stated average ideal number of children for men is 3.8 and for women 3.7.

First, morally and practically, it returns the issue of contraception to women because it is their responsibility to use it efficiently and persuade their partner to use it (Panos, 1990b). Second, they are expensive, unproved in terms of protection or possible dangers, and are virtually unavailable in Africa. Third, they cannot be used without the knowledge of the partner and thus if a woman's partner opposes the use of condoms (culturally or in terms of contraception as a whole) then it may be assumed that he is going to be as unwilling to use femidoms. Their use is questionable, both practically and morally. One solution may be education on the prevention of HIV. This must consider issues related to sexuality and the empowerment of women, allowing them to be more confident in negotiating and instigating condom use.

Family size, cultural expectations of families and family planning programmes are of importance in terms of social issues because of their role in the structuring of societal expectations and 'norms'. It is difficult, however, to generalise about 'the family' in Africa;

> "Obvious objections may be raised to any sweeping characterisations of family systems.....over such a vast region, where great diversity of cultural tradition, historical experience and current political development are easily pointed out" (Frank and McNicoll, 1987:213).

Family laws are often very different and dependent upon region and religion. Nevertheless family systems are still very resilient elements of the social structure.

In Kenya, in spite of government efforts to decrease birth rates, there is presently an annual natural increase of 3.4% .[37] The total fertility rate (ie. the average number of births per woman) is approximately 5.4 children,[38] although urban fertility tends to be lower (around 5.8 for rural women in comparison to 3.4 for urban) (Frank and McNicoll, 1987, Miller, 1984, Central Bureau of Statistics (Kenya) 1993). This may be explained by a

[37]This has decreased from 4.1% in 1984 which at the time was considered to be the highest in the world (Khasiani, 1988)

[38]Although apparently high this figure is far lower than the 6.7- 8 which was reported in the 1980's (Frank and McNicoll, 1987). Figures do vary depending on the source, those from the Kenyan government tend to be lower.

greater exposure to education and waged employment, which have been shown to be inversely related to fertility (Ominde, 1988). There is a correlation particularly between those who have received a secondary education and low fertility. Thus it may be assumed that,

> "Providing better educational opportunities for women will do much....to improve standards of health nutrition and child care. Better educated women also exercise more control over the size of their families" (Jones, 1990).

In rural areas, a limited level of education can cause abandonment of traditional methods of birth control without the introduction of modern methods. For example, as breast feeding has decreased so the time taken before the onset of ovulation after giving birth has decreased as well (Jones, 1990). Decreasing postpartum abstinence, formal polygamy or a reduction in community sanctions to premarital births, have combined with an increase in reproductive lives and child survivorship to create high fertility and population growth rates.

The urban population is also increasing, having doubled since independence and is presently growing at twice the population growth rate (although this is partly through migration). Preferences for high fertility (relevant to the spread of HIV/AIDS through its obvious repercussions for the lack of use of contraception) may be founded and explained in terms of the cultural and social realities, and their role at an individual economic level (Frank and McNicoll, 1987). That is, whilst at a national level high fertility may be inappropriate for economic growth, at an individual level it may be necessary and expected. Whilst the rational economic viability of 2-3 children may be accepted, that of 4-6 is harder to justify (ibid). Most women and men however still express a continuing and apparently socially constructed preference for larger families. As mentioned earlier for men fertility extends beyond economic rationality, since paternity still confirms status and prestige. As Caldwell et al (1989:195) note,

> "The key to the African attitude ...is that religious values associated with sex are concentrated on procreation and not on sexual activity as such"

Social Structure and Dependency Ratios

Much of the literature based around modelling, predictions, and data collection from regions with a high incidence of HIV/AIDS in Africa, has indicated that the disease, because it specifically affects the productive and reproductive section of the population, has the potential to be responsible for dramatic demographic change. More importantly, this could take the form of increasing dependency ratios. Green (1988) has suggested that AIDS could re-shape the whole social and institutional landscape of Africa, whilst Barnett et al (1990) showed that the cumulative curve of parents' deaths through time (since 1982/83) in Uganda was increasing due to AIDS, thus increasing the number of orphans and dependency ratios. More radical suggestions have indicated a back swing in the demographic transition with potential negative population trends (Caldwell et al, 1989).

Why then are dependency ratios so important? A dependency ratio essentially accounts for all of those people not aged between 15 and 59, that is either a child or an adult no longer recognised as a worker. In a developed country context these people would theoretically be supported by the state financially, in terms of education and child benefit payments or in the form of old aged pensions. This financial support from the state must always be subtracted from net profits made by the productive or supportive population who are working. In a developing world context, there is usually no state support for these non-workers, and they become dependants of the family. At a family/household level, therefore, the greater the ratio in favour of productive people to dependants, the better off that household tends to be.

In the developing world on average the proportion of people aged under 15 in the population is more than twice that in industrialised countries. The Kenyan population is exceptionally young. In 1983, 51% of the population was under the age of 15 and, in spite of changing growth rates, this figure was still being quoted 10 years later (Central Bureau of Statistics (Kenya) 1993).[39] It should be noted, however, that many under 15's

[39]Critically in Africa where heterosexual transmission of HIV predominates this still leaves 45% of the population in the 15-60 age group which is the most sexually active (Yemane-Berhan, 1988)

do work unofficially in the informal sector.[40] Nevertheless this group, (under 15's), when added to the elderly (some 4% are over 60) constitutes a major burden for the working population (Miller, 1984). In 1979 there were 113 dependants to every 1000 head of population aged between 15-59 (Ominde, 1988:40). This, together with a population doubling rate every 17 years, will naturally increase to an estimated 120 per 1000 by the end of the century.[41] In terms of AIDS, this means that for every adult that dies there are proportionately more children left as dependants for the wider family to care for. This role is increasingly been taken on by grandmothers (Panos, 1990b).

At a national level the extent of dependency slows capital formation and can divert capital away from investment into the provision of basic services (Khasiani, 1988). This is somewhat ironic since there is in fact a greater need for health, welfare, water, education and housing services. At a household level high dependency ratios lead to lower incomes (often due to unemployment), a reduction in saving capacity and ultimately a lower standard of living. A population of this structure is in general vulnerable to disease, particularly those affecting the productive and reproductive age group since there are then an ever increasing number of people needing care and fewer carers (Barnett et al, 1990). With a disease such as AIDS, which unlike most diseases does not strike the 'weaker' members of the household, such as children or the elderly, but instead the workers (aged 15-59), it is possible for a negative dependency ratio to result. In other words, it is conceivable, and indeed has already occurred in areas of high HIV incidence (Barnett and Blaikie, 1992), that there could be a dramatic increase in orphans and the elderly looking after themselves.

As has been established, traditionally large families are considered an investment in the future with children looking after parents once they are no longer able to do so

[40]Informal sector employment is used as a term for all economic activities which are not incorporated in the formal or officially recognised sector. Income tends to be low and irregular, there are no benefits or protection by law or state. Most informal sector work operates on the margins of legality and the term can be split further into legal and illegal informal sector, the latter being that which prostitution would fit into, for example (Brydon and Chant, 1989).

[41]It is conceivable that this population doubling rate may itself decrease because of the AIDS pandemic.

themselves. With the onset of AIDS, increasingly there are fewer people to care for the elderly or orphaned children so they either care for themselves or for each other. Grandparents have often been forced back to work in order to keep orphaned grandchildren. Similarly children have been removed from school early to care for the sick and enter the labour market. Thus, " a minority of the population must work to support the majority for the foreseeable future, a situation that has unfortunate economic implications for individuals and for national growth" (Miller, 1984:65).

The particular sections of populations primarily affected could themselves alter dependency ratios. For example, HIV infection was originally linked to status, occupation and education levels, in that those in the higher socio-economic groups had a greater frequency of partner change. This led to them having a greater susceptibility to HIV, altering the demographic and class structure of Kenya. It also resulted in a lowering of the returns on investment in education, since there was a shorter time to reap the returns before death. Over time this may change since the better educated may be in a position to change their behaviour by conscious choice and be more open to education campaigns.

The question remains as to how significant these isolated situations are, on a national scale. Anderson et al (1988, 1992) predict that dependency ratios will not change significantly at all. They have stated, through modelling, that whilst the direct effect of mass mortality in the sexually active classes due to AIDS will increase the ratio of dependants, the general depression of population growth rates will counteract this due to the decrease of 'effective births', because of the deaths of infected babies and fertile parents. The overall net effect would therefore be negligible. This, they point out, is not to negate the importance of HIV/AIDS, since the disruption to the social organisation and economic fitness of countries would still be great:

> "Similar analyses of the impact of directly transmitted infections such as smallpox and bubonic plague, that were of great historical significance as causes of human morbidity and mortality, suggest that AIDS has greater potential to depress significantly human population growth rates. This stems from the ability of HIV to transmit both horizontally via sexual contact and vertically from mother to unborn offspring, the high mortality associated with infection and the apparently long period

over which infected persons are asymptomatic but infectious to their sexual partners" (Anderson et al, 1988:233).

Nevertheless, the effect of AIDS is dependent on the demographic and epidemiological status of a given community. It is interesting to consider, therefore, Table 3.1 taken from UN statistics which shows the estimated differences in Kenya between population growth rates, Crude Birth Rates and Crude Death Rates in a population both affected and unaffected by AIDS.[42] Analysis of this table reveals negligible change in population growth rates (0.1% difference in 2005). This could be seen by Malthusians as a positive change, in that population growth rates in Africa are too high. At a household rather than a national level, however, the effects may be negative and it is possible to see the importance of the effects of (relative) decreasing life expectancy and rising death rates increasing over time. These rates may be seen as the disease selectively infects children through vertical transmission and increases infant mortality, whilst it also infects the sexually active productive and reproductive populations increasing adult mortality. At a family level, parentless or childless groupings generated by variable time sequences of infection within that community will have serious social implications. Thus while dependency ratios as a whole may not change, within any given community the individual effects of changes could be quite extensive and negative.

Family and Household Structure

The family is an important element in the understanding of HIV/AIDS, this is very much a relative term and may be interpreted, especially in rural/traditional areas, as the whole lineage rather than a residential domestic unit. Marriages, in Kenya, are often between lineages not just individual husbands and wives (Frank and McNicoll, 1987). A bride wealth may still be paid to the wife's family which often means that she gives up any rights she may have to her children on marriage (ibid). As Goode claimed in 1963 (quoted in Caldwell et al, 1989), if the new African nations (created post colonialism)

[42]It should be noted that these estimates are taken from 1992 data, population growth rates in Kenya have in fact decreased at a slightly greater level than shown. The importance of the table is more to establish the potential percentage differences between a population with and without AIDS.

followed the path of preceding emerging nations, there would be an accentuated move away from tribal family patterns toward a conjugal system. Although this may be true to a certain extent, illustrated by the increasing number of non-traditional marriages in urban areas where there is no bride price paid, the conjugal bonds still tend to be maintained by a symbolic bride price contract (Frank and McNicoll, 1987).

Kenyan Estimated Population Growth Rates; With and Without AIDS

	1980	**1990**	**1995**	**2000**	**2005**
Population size 1000's					
With AIDS	16 632	23 585	27 885	32 818	38 351
Without AIDS	16 632	23 622	28 050	33 202	38 993
	1975-80	**1985-90**	**1990-95**	**1995-00**	**2000-05**
Population Growth %					
With AIDS	3.82	3.43	3.35	3.26	3.12
Without AIDS	3.82	3.45	3.44	3.37	3.22
Crude Birth Rate /1000					
With AIDS	53.6	45.6	43.7	41.7	39
Without AIDS	53.6	45.6	43.8	42.7	38.9
Crude Death Rate /1000					
With AIDS	15.5	11.4	10.3	8.1	7.9
Without AIDS	15.5	11.2	9.5	8.1	6.8
Number of Deaths/1000					
With AIDS	1180	1240	1325	1390	1410
Without AIDS	1180	1215	1230	1240	1235
Life Expectancy at birth					
With AIDS	53.4	57.9	58.9	60.3	62.5
Without AIDS	53.4	58.4	60.9	63.4	65.7

Source: United Nations 1992

Table 3.1

Household is, perhaps, a more appropriate term to use for this discussion. A household may be defined as a residential unit whose members share domestic functions and activities (Brydon and Chant, 1989). Each household has an array of resources, economic and social, allowing a culturally defined maintenance of production and reproduction within the household unit (Barnett et al, 1990). The household is seen as a common form of social organisation in most regions of the developing world, and often is the primary place for the structuring and enforcement of gender relations (Brydon and

Chant, 1989). It is the point at which reproduction[43] and production[44] meet, and also the focal point of the sexual division of labour. When HIV/AIDS is introduced into a household it has the potential, through illness and mortality, to alter roles and responsibilities within that household (Barnett et al, 1990).

The nature of households in this context (affected by HIV/AIDS) are important for a number of reasons. First, household structure helps to establish the power relations within the household and thus the extent of male control over women (this may take a number of forms, sexual or economic, for example). Second, household structure may differ spatially because of migration, thus explaining differences in the spread of AIDS. Within the household a variety of functions, production,reproduction,health care etc., are undertaken which may be influential in the spread of HIV/AIDS. AIDS is often perceived as a 'robber' by depleting these household resources (Barnett et al, 1990). Finally, household structure may be affected by the changes in population structures as a result of the disease.

It may be observed that where polygamy exists the basic household unit tends to be that of a mother and her children. Often these units are relatively economically independent as well as socially accepted (Caldwell et al, 1989). Since women are the main workers (although not the owners or decision-makers) on the land in rural regions their responsibility is increased. In Kenya the earning capacity is quite heavily reliant upon women (Arap Moi, 1986), due to the role of agricultural production in export earnings. Agriculture accounts for 27% of GDP and 65% of exports (World Factbook, 1996). This is particularly relevant to the study because of the potential damage to the economy if women in this productive population are affected with HIV/AIDS (either directly or as carers), since illness may cause a decrease in productivity (Ainscow, 1991). Women's

[43]Reproduction may take a number of forms: that of biological, producing children: Physical, the daily regeneration of the labour force through cooking, cleaning etc: Social, maintaining ideological conditions which uphold the social and economic status quo (Brydon and Chant, 1989:10).
[44]Production may be broadly defined as income generating activities although this is not wholly satisfactory as the line between 'domestic' reproduction and production is difficult to draw (Brydon and Chant, 1989).

position as head of the household may be their own choice or resulting from widowhood (possibly due to AIDS), desertion, temporary male migration or female migration to urban areas.

Female-headed households, formed as a result of the death of husbands (from AIDS), face a series of problems. These may include: the extra stress of caring and earning a living, the potential loss of support of their own children;[45] a loss of enhanced status and its associated benefits; and the breakdown of traditional work patterns due to a local shortage of men. The stigma of a husband dying of AIDS may make re-marriage difficult, although expected, where marriage does occur it may further spread the disease to a new husband and children. Women's low status may also be seen when remaining 'faithful but fearful' in terms of their husbands' infidelities. Tribalism in the past placed a strong supernatural importance on women's faithfulness in the absence of their men and this may remain in present beliefs (Kenyatta, 1938). A final consideration on the relationship between households and HIV/AIDS would be that if a woman is confirmed HIV+ then she may be more likely to lose her husband and/or children by being forced out of the household, and this could increase the number of female-headed households.

To cope with changes in household structure, caused by any variety of 'abnormal' factors (and in this we may now include HIV/AIDS) survival strategies are forced into being. These are activities which households undertake in order to improve, or maintain, their social and economic conditions in the face of crisis. Survival strategies may take many forms and include a change in household structure or women's entry into the labour market, usually within the informal sector, and/or migration in search of work (Barnett and Blaikie, 1992). In many newly formed female-headed households,[46] in urban areas as well as rural, when faced with poverty and no regular income,[47] women have been forced to seek employment within the informal sector (which may include prostitution).

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[45] Loss comes in many forms, losing the ability to have children is as great a loss as losing a family member in a society where children are of such great significance (Panos, 1990b).

[46] These female-headed households may be temporary or permanent, dependent upon the migratory pattern.

[47] Often male kin may not be able, or do not bother, to maintain regular economic links.

While many women may work within the informal sector because of the lack of formal sector opportunities, it should be noted that the informal sector may have certain advantages in terms of women's employment. Informal sector work is usually able to adapt to incorporate child care and to provide an adequate income for the woman's family (Nelson, 1988). Whilst female-headed households are not necessarily the poorest of the poor, there is a tendency for them to be created because of poverty, urbanisation and other environments created by developing economies. With increasing urbanisation it is likely that these phenomena will increase, which in turn may have implications in terms of the spread of HIV/AIDS and women's roles in society (Ainscow, 1991).

A further strategy may be the extension of households. Extension may take a variety of forms: the incorporation of younger or older kin or friends; close or distant relatives; male or female members. Extension occurs to provide child care, household reproduction and an adequate income. However it should be noted that,

> "extended families not only reflect short term crises and the need for people to pool incomes and resources, but also mirror rational decisions made by individuals to ameliorate their longer term prospects of survival" (Brydon and Chant, 1989:44).

In the context of HIV/AIDS the coping mechanisms, in the short term, may be entry into the labour market for women and children, or for orphaned children to be taken into an extended household. Women are increasingly being forced into situations where poverty is worsening and are grasping at various different ways of coping. Nevertheless, if the greatest impact of AIDS is yet to occur, established mechanisms will become saturated, without advice, education and help.

As yet, coping systems throughout Africa have not been entirely saturated, and the burden of illness and death as a result of AIDS continues to be coped with in the 'normal' way. In practically every country, whatever its level of economic development, the majority of health workers tend to be women, particularly if the 'informal' health care sector of family and community care is considered. Women tend to play a major role in caring for the sick in place of hospitals or professional help, adding to an already heavy work burden. The

length of time that AIDS takes to kill, not only exhausts the patient, but also the carers. Women also tend to take longer to seek treatment (on average women suffered 64 weeks of illness before seeking help as opposed to 24 for men) (Panos, 1990b). If these female carers are HIV+ themselves, this may ultimately result in them developing full blown AIDS much sooner after HIV infection, particularly where they are undernourished and have suppressed immune systems (Richardson, 1989). This also leaves open the question as to who cares for them when they develop AIDS, after they have already nursed their partners through the long and painful process of dying (Barnett and Blaikie, 1992). The burden of HIV falls most heavily on the poorest women in the poorest communities (Panos, 1990b).

The Situation of Children

One of the continuing methods of spread of HIV lies in the fundamental decision to have children. AIDS counts rarely incorporate children because of the difficulties of diagnosing AIDS in infants (Preble, 1990). As noted in Chapter Two it is often difficult to distinguish AIDS from other diseases at a young age on clinical grounds, because of the background 'noise' of malnutrition and pulmonary infections (Barnett and Blaikie, 1992). It is the increase in diseases such as tuberculosis which have served as an indicator since many are the result of immune systems broken down by AIDS. Attempts to eradicate these other diseases should not be outweighed by AIDS research since the two are intrinsically linked. As has already been shown, nearly 3 million children are expected to die from AIDS world-wide over the next 10 years and twice as many are expected to lose their mothers. Thus children will rarely have reached sexual maturity nor participated in reproduction (Barnett and Blaikie, 1992). Estimates suggest that between 6.1% and 10.9% of the population of children aged 0-15 in Africa will be orphaned (Preble, 1990). It is estimated by UNICEF that in Kenya, 115,000 new paediatric AIDS cases will develop by 1996 and that 3% of those HIV+ in the country are children under 5 years old (WHO GPA, 1996). These predictions not only pose a phenomenal challenge to coping mechanisms and household structures but also present the question of how to cope with

huge numbers of sick children, orphans, and a changing dependency structure. There is some irony in the fact that child mortality through AIDS has come at a time when it was just being controlled through immunisation and improved nutrition.[48]

Amongst women, one of the most distressing experiences is the birth of a sick child (Barnett et al, 1990). When a child is born with HIV it is often as a direct result of the woman's actions at some point in the past. The guilt factor of being responsible for a child's suffering becomes a constant reminder of these actions, as well as an indication of what will ultimately happen to her and more than likely to her partner (ibid).

One solution, for the HIV+ mother is not to have children. However, the issue is not that simple. It is more the case of trying to give women an informed choice about having children. Furthermore in a developing world context, it is unlikely a mother will know her HIV status (Preble, 1990). If she does, it is unlikely that she will have been counselled about the risks of having children. The choice of having children could then become a trade off between risking the unborn child being HIV+ (around a 40% chance) or losing a husband/partner and the financial support that they provide by refusing to have a child in a society where it is expected (Barnett et al, 1990).

The issue of abortion should be considered again at this point, since this in itself can be life threatening in a developing world context where facilities may be inadequate, especially if it is performed illegally because of conflicting moral and religious beliefs. The danger of an abortion is further accentuated when blood transfusions are given to replace blood loss, this is far more common and dangerous in a developing nation where blood is unlikely to have been screened. A woman who is not HIV+ and having an abortion for other reasons or any other operation may find herself infected. Medical education is required to avoid un-necessary use of blood transfusions (particularly during

[48]Malthusian theory would explain this as a natural balance, where natural disasters, famine or disease, control population growth. Where humans have prevented this through intervention so stronger diseases develop to maintain a balance.

childbirth) to try to ensure it is used as a last resort treatment. The anguish of the mother must not be underestimated when considering the effects of abortion, particularly if she has been forced to take the decision because she is HIV+ and fears the infection passing on to an apparently healthy foetus. This decision may also rest on the shoulders of a young teenage woman, as teenage pregnancies are rapidly increasing. This is particularly the case in an African context where men traditionally choose a wife around ten years younger than themselves, and, as noted earlier, are increasingly choosing even younger women (especially as mistresses) in the belief that, given their age, they must be un-infected with HIV (Barnett and Blaikie, 1992).

Similar issues of trade off can also be seen in terms of breast feeding. As far as HIV is concerned, the potential infection through breast milk from an infected mother to her child poses the dilemma of whether to risk stopping breast feeding and lose the potential immunisation properties of the milk. In the developed world, doctors may advise HIV+ mothers to bottle-feed, but in developing countries bottle-fed babies are twice as likely to die as those breast fed because of dirty water, unsterile bottles, and under nourishment (Panos, 1990b; WHO, GAN, 1992 no.2). The chances of HIV being passed on through breast milk are thus far less than potential mortality via bottle feeding. Once again it becomes a trade off between risks. The importance of perception or misperception of risk, crucially the need for reliable risk communication, and the establishment of suitable coping mechanisms is again exemplified. Care must be taken, however, not to make AIDS the only issue tackled in this particular poverty and health trap.

Orphans

In Kenya, AIDS is expected to account for more than 300,000 orphans by the end of 1996 (WHO GPA, 1996). In an African context orphans are defined as children who have lost one or both parents and so figures may appear much higher than might be expected with a western definition of both parents being dead. However, it is the nature of the disease that the loss of one parent will shortly be followed by the loss of another (Barnett and Blaikie,

1992). The coping mechanisms, therefore, are often begun after the loss of the first parent.

In a situation where a father dies first,[49] the mother is likely to have been caring for him and been unable to work; the structure and format of the household will already have altered. Children may have suffered some neglect and a lack of parenting as their mother's energies are firstly aimed towards their father and thereafter attempting to earn an income (Barnett and Blaikie, 1992). Hence household structure may change and the progression of children taking on the role of orphans may begin before both parents are actually dead. It is interesting to consider those families where the mother has died first, and the father is left to look after the household himself when sisters or mothers are unable to take on this responsibility. Children in these households have been found to be less likely to receive the care they need (Preble, 1990). It is an indication of the extent of the disease in some areas that such radical changes in the male role could be forced on to the social structure of a country.

There are a number of ways of coping with orphans presently in use, although it is possible that in certain parts of Africa where the epidemic is particularly acute these mechanisms are already becoming saturated (Barnett et al, 1990). The options available to orphans for care are: their mother's or father's brothers and sisters (aunts and uncles); both sets of grandparents; and in Christian areas, Godparents or non-relatives who are close friends or neighbours.

Evidence from Ugandan needs assessments have shown that although extended family networks are trying to absorb these orphans according to traditional rules, many are vulnerable to increased mortality (Barnett and Blaikie, 1992). This may be due to a number of factors, including increased economic and health stresses on their caretakers many of whom are elderly (Hunter, 1990). It is an indication of the increasing size of the

[49]This is more often the case since the husband/partner is statistically more likely to have brought the disease into the household (Barnett and Blaikie, 1992)

problem that in spite of this range of different options there are still orphans who are left to care for themselves or to become dependent upon the community in which they live (Barnett and Blaikie, 1992). There is inevitably a financial consideration in terms of taking in orphans and richer households do take in more orphans than the poorer sections of the same family, simply because these families may themselves be struggling to feed, clothe and school their own children. Fears about children themselves being infected with HIV if their parents have died of AIDS may also discourage families from taking in children. Education once again becomes a key factor.

Grandparents taking in children poses a number of problems not only financially, forcing them to return to menial jobs when they would normally be retired and cared for by their own children, but also in terms of a lack of effective parenting and schooling (Beer et al, 1988). A single grandparent in areas of high HIV/AIDS incidence may be left with a number of children from each of their sons or daughters, and may have neither the space nor control required to bring them up in a way that their parents may have done (Hunter, 1990). In this situation children are often taken out of school (usually female children) to take on the domestic role that would normally have fallen to their mothers (this role may already have been taken on by the female child to assist with caring for her sick parents) (Barnett and Blaikie, 1992). The long term implications of female children being taken out of school may be great in terms of reducing their earning capacity in later life. A potential increased role for women in the labour market through improved education and individual rights may be negated because HIV/AIDS has prevented, or slowed down, their progression towards equal rights. Similarly a certain level of education, it would seem, is vital in order for counselling to be effective, training for jobs, decreasing fertility and, to go full circle, in slowing down the progression of HIV/AIDS.

Older male children may also be taken out of school to work and earn money when the grandparents are unable to provide adequately for the children. It is conceivable, therefore, that in the long term AIDS has the potential to alter the whole social structure of

the working population. A lack of education through either deliberate removal of children or truanting due to a lack of parenting is not the only consideration of grandparents taking on orphans (Hunter, 1990). Health is often a problem, not only that of those children who are themselves HIV+ which requires money for adequate care, but also nutritional problems resulting from inadequate provision of food. Grandparents in rural areas often lack the energy to work in their gardens so the range of food for orphans is limited. Further troubles may come in the form of rights over land and the parental home. Another social issue should be raised at this point, that of the grandparents themselves; who cares for the elderly now that their grown up children are dying (Beer et al, 1988)? This is not an issue normally associated with natural hazards/disasters, since the elderly are generally assumed to be the most vulnerable and do not have to cope, rather are coped for.

Assuming both parents have died and neither the maternal nor paternal relatives can take on the responsibility of looking after them, for whatever reason, then the household of orphans may be left to care for itself. The success of this is dependent upon a number of factors relating to the willingness of the community to help in the initial stages with funeral arrangements and food supplies, the proximity of relatives to include the children in family gatherings and maintain their integration with their kin, and more importantly the age and sex of the eldest child and the number of very young dependants (Barnett and Blaikie, 1992).

Coping alone is perceived to be most likely to succeed where the eldest child is female and can take on the maternal role within the domestic environment. Girls are brought up from an early age to help in the household and with younger siblings. If there is a boy close in age he may work as well as the girl so as to keep the others at school, fed and clothed. The aim tends to be to keep male children in education if the females can keep the house, and in rural areas, ensure the smallholding is running well. Problems inevitably occur where a number of young children are needing care and it should be remembered that the youngest may well be HIV+ and require expensive medical care and treatment. Many of

the problems which are faced by grandparents are also faced by these households of orphans, in terms of malnutrition, lack of parenting and inability to afford school fees, this may also be because they are unable to deal with the authorities. A further problem is the threat of being evicted from their homes by landlords who refuse to recognise them as tenants (Barnett and Blaikie, 1992). Little research has been done into urban orphan households but begging and illegal petty trading are the most likely forms of income available to them in this context.

One final option which may be available to cope with the increasing numbers of orphans is orphanages. The social and cultural implications of mass orphanages in the long term have been much discussed, the main issue against them appears to be taking children away from their home village or region (Bartholet, 1991). The number of orphans who actually do stay within the area with relatives, as opposed to being taken away by distant relatives or friends to be brought up in a different village and culture, is actually quite small and so really this issue is not that important (Barnett and Blaikie, 1992).

One must also question the reliability and function of orphanages by acknowledging the Romanian experience. Here large orphanages in some instances resulted in children being abused, ignored, and un-educated. Many of these orphanages also became areas of high HIV infection. Whilst this may not necessarily be connected or relevant in an African context, since this occurred in a specific political situation, problems of mass institutionalisation of children must be recognised and policies identified to prevent such negative outcomes (Bartholet, 1991). Large scale alternatives are not really clear, but the recommendation appears to be towards community-based institutional care, providing integration with families and education, health and nutritional care. There are clearly financial constraints in such circumstances.

The issue of children and orphans in the context of HIV/AIDS is extremely emotive and since there are no 'innocent or guilty victims' of the disease, a child may have been

infected as a result of it being passed from its mother, via the inefficiencies of a medical service, via blood (especially to haemophiliacs), or in some cases via sexual abuse. Children are the key to the future and they must be educated about HIV/AIDS and its transmission but, as discussed, factors such as non-attendance at school and informal sector employment must be taken into account if barriers are not to be formed preventing access to information.

Hunter (1990) believes that the 'orphan burden' will continue to increase and suggests allocation of funds, both national and international, to prevent breakdowns in the present familial and community support and increasing child mortality. She claims that the 'orphan burden' provides,

> ".... a window on the potential for massive social breakdown and dislocation in sub-Saharan Africa resulting from high AIDS related mortality" (Hunter, 1990:681).

Whilst AIDS prevention must be careful not to squeeze out other vitally important child health policies, it is necessary to spend a great deal of time and money on paediatric AIDS cases and in developing feasible and culturally acceptable models for child care (Preble, 1990). If children are uneducated, because their parents are dead and they cannot afford to attend school, or are malnourished, then the long term implications in terms of both the spread of HIV/AIDS and of the economic and social well being of the country as a whole may be affected.

Summary

This chapter has considered a number of social issues regarding the cause, effect and response to HIV/AIDS. It has shown the interrelationships between social factors which make individuals or groups within the population particularly vulnerable. These factors include culture and religion, and gender and generational differences. Combined they may be used to explain spatial and temporal variation of the disease. These social factors also highlight the population-specific nature of the disease, in that it effects the reproductive and productive sectors of the population and that it, therefore, has the potential to alter

dependency ratios. The importance of these factors will now be considered within an economic framework, in terms of the potential long term effects that AIDS could have on the economic structure and development potential of Africa. The role that local and international economic policies have had on assisting in the evolution of the disease will also be discussed.

CHAPTER FOUR

ECONOMIC ASPECTS OF HIV/AIDS IN AFRICA

Introduction

> "Failure to identify and address the social and economic factors underlying the spread of HIV infection in Africa has.....led to an overwhelming concentration on sexual behaviours - and certain assumptions about them - with an almost exclusive focus on modifying these, without concomitant concern for influencing their structural determinants." (Sanders and Sambo, 1991:158)

The economic implications of HIV/AIDS can be seen at a number of levels. This section aims to consider the potential economic costs of HIV/AIDS, in the short and long term, and at an individual and national scale. The causal link between the stage of development of nations and the variation in the spread of AIDS, both spatially and within the population structure, will also be discussed. As with the social aspects of HIV/AIDS there are often extensive problems in differentiating between causal factors and those of response, since the two tend to interact. This inherent problem will be tackled by considering the economic implications at a macro and micro level.

At the macro level, first, an overview of historical factors relating to the present economic situation of African nations will be presented. Within this the implications of colonialism for economic and governmental structures will be considered. The heritage of colonialism may also be seen to have influenced the migrant labour movements and urbanisation, which will in turn affect the spatial variation of HIV/AIDS cases. A discussion of causal factors at a global level will follow, including consideration of the effect of international developmental policies particularly those focusing on health issues. Structural Adjustment Policies (SAPs) imposed by 'world lending agencies' such as the IMF or the World Bank will also be considered since these have had quite extensive impacts on the priorities given to health services and projects. These can be interpreted both as affecting the speed of the spread of disease, and the availability of response mechanisms.

Discussion of the importance of employment opportunities, particularly with regard to coping strategies will begin the analysis of micro level economic factors. Within this more general discussion two case study occupations of particular importance to the spread and affect of HIV/AIDS will be considered: tourism and prostitution. Although tourism does have an informal side, it is here taken as an example of formal sector employment.[50] Given the economic importance of tourism to many developing nations (in Kenya, for example, it is the greatest creator of foreign exchange), the economic consequences of losing this revenue because of an AIDS related decline in tourism will be considered, together with the role of tourism in the spread of HIV/AIDS. Prostitution on the other hand, it will be argued, is largely an 'informal sector' occupation (see footnote, 40). Its importance in terms of providing a potential economic coping strategy for women affected by HIV/AIDS will be discussed as well as the impact which prostitution has had, and may have, on the spread of HIV/AIDS.

Colonialism and its Legacy

First, it is important to consider the history of the economic development of many African nations in order to understand the present conditions and constraints. Colonialism, for example, did undoubtedly effect labour movement, migratory patterns and the present economic status of many developing nations. The Marxist belief is that colonialism, which stemmed from capitalism in Europe, sought the conversion of one part of the globe into a chiefly agricultural field of production to supply the other part, which remained chiefly industrial (Wolff, 1974). One of the impacts of colonialism was altering the structure of populations. By introducing transport routes and large scale export agriculture it set in train a trend away from the predominantly rural population to one of rapid urbanisation and rural-urban migration which continues today (Schoepf, 1988).

[50]Formal sector employment; describes people working in large scale enterprises, factories, public services, offices, registered commercial establishments etc, workers in formal sector employment are in theory protected by wage and labour legislation, earnings should be regular and relatively high (Brydon and Chant, 1989:165).

Britain's plans for Kenya, for example, were to make it a profitable part of the empire. This was in response to falling rates of profit and over production in the industrial nations, and to offset those countries in the empire which did not provide raw materials and profitable markets. This economic plan involved a massive reorganisation of land, labour and capital resources and involved a rapid transformation of the African population into a wage labour force (Wolff, 1974). Much of this was achieved by changing taxes and providing an impetus for migration through changes in the agricultural sector. It also resulted in a reduced and altered status for women (Sanders and Sambo, 1991). The direct role of the colonial state in creating a space economy based on structural inequalities, Gould (1991) claims, remains evident in Kenya today under the African political regime. Religious missions before and during colonialism also played a role in changing expectations, modernisation and innovation.

Migration, as has already been suggested, may be a major factor influencing the spread of HIV, as it has been for disease patterns in the past (Thadani, 1985). During the colonial period, in many parts of Africa extensive, and sometimes forced, male migration from rural to urban areas occurred to provide adequate labour for colonial use. In some cases camps were set up along transport routes for the migrants (Sanders and Sambo, 1991). This caused diseases of the time to spread throughout the population far more rapidly than had been previously so. Migration led to the formation of a permanent work force in the towns, with large scale agriculture controlled by a decreasing minority. Such labour migration caused prolonged absence from the home, increasing the incidence of family breakdown and also leading to the instigation of a number of different sexual encounters for the migrants (Hunt, 1989). STD's were particularly prevalent during this time because of the formation of temporary sexual liaisons in urban areas with both the indigenous population and colonialists. Historically the organisation of the labour market in this way has created not only a society where STDs are prolific within a systematic temporal and geographic pattern, but it has also fragmented families and households either temporarily or permanently (Hunt, 1989).

Historically many African cities have a predominantly male skewed population because of this temporary migration for employment (Nelson, 1988; Dawson, 1988). In Kenya, for example, early labour movements were confined to men, and involved circular migration between centres of wage employment and rural communities (Thadani, 1985; Nelson, 1988). This may in part be explained by fewer urban opportunities open to women, beer brewing or prostitution being two of the limited informal sector options open, both of which are reliant upon and perpetuated by male consumers (Dawson, 1988). With extensive urban male migration, increasingly financial, educational and agricultural responsibilities fell on women as heads of household.

Increasingly women are migrating themselves in search of work.[51] The sex ratio is beginning to even out, as male employment has become more permanent and men believe that a job relinquished will not be easily replaced (Nelson, 1988; Thadani, 1985). Nevertheless 57% of employed males in Nairobi in 1988, were without their spouses in the city (Dawson, 1988). The role of migration is, therefore, an important factor relating to the rural/urban variation of disease patterns, due to urban demand for labour, rural labour supply and the process of return migration (Hunt, 1989).

With the benefit of hindsight it is easy to criticise and lay blame on colonialism for endless contemporary problems. It does not, however, provide a constructive format for resolving these issues. While the causes should be recognised, they must be tackled within the present political situation to try to move the developing nations towards some form of world economic equality and prevent present and future disease patterns from developing in the same way as disease patterns in the past.

MACRO-ECONOMIC ASPECTS OF HIV/AIDS

Moving on from the impact of colonisation and its influence on the present day spatial variations in the spread of HIV/AIDS, more contemporary economic issues and their

[51]Migration may be short or long term, permanent or circulatory, dependent upon the region and the nature of work people are migrating to do. Female migration is more often circulatory.

effect on the health of African nations will be considered. It is important to note the impact of macro-scale economic issues on micro-scale economies. While increasing interdependence between nations has undoubtedly contributed to post war world growth, it has also led to increased vulnerability in the poorer nations, due to the unequal nature of the relationship. Those countries who have prospered during periods of growth have had the ability to survive in times of recession, yet this survival has often be at the expense of those nations with weaker economies. Within this global economic system how individual countries resolve their domestic economic problems may be seen to affect growth in other countries (Vickers, 1991).

After colonialism and the rise of self-ruled African nations, development was perceived as a realistic goal for many countries. Migration, while continuing, was increasingly a choice made by those migrating. Mortality rates declined, life expectancy began to increase and there was improved economic stability. Disease increasingly was controlled with the importation of drugs and medical knowledge from the developed nations. Although the situation was not ideal, and development had not occurred as rapidly, nor as effectively as hopes and expectations had predicted, it was beginning to improve. After a number of years of this slow but steady development, facilitated by the relative political stability after the internal warfare and power struggles often identified with independence, there ensued considerable changes.

In the early 1980's a sudden down turn occurred. This was not due to a dramatic change in internal policies or political revolution, but due to adverse changes in the world economy (Vickers, 1991). Oil price rises in the 1960's and 1970's effectively caused a fall in the value of commodity prices which were compounded by increasing policies of protectionism in the developed world. This led to much higher import prices as well as a fall in purchasing power based on exports.[52] In this climate many developing nations who had borrowed heavily found themselves in severe economic crisis (Vickers, 1991).

[52]It has been claimed by the World Bank that the cost to developing nations of this protectionism presently exceeds the value of international aid (Vickers, 1991:1)

When HIV began to take a hold in the late 1970's and early 1980's economic recession and the so called 'debt crisis' was reaching its peak within Africa. During this recession, suggested to be the harshest and most prolonged since the 1930's, there were further contributory factors which in Africa included the 1984-85 drought. At this time an estimated 70% of African countries experienced negative cumulative growth rates in GDP (Vickers, 1991). Subsequent instability in exchange rates caused further speculation, increased debt, reduced imports and meant an even greater need for external credit. Since this was a world-wide recession, international aid, which would have been of some help, also decreased in real terms below promised (and expected) levels (ibid). Aside from commercial banks, (in Kenya, notably Barclays and Standard Charter) the only major lenders still prepared to lend by the late 1970's were the World Bank and International Monetary Fund. The latter would lend only if the debtor countries agreed to introduce economic restructuring; that is 'Structural Adjustment Policies'.

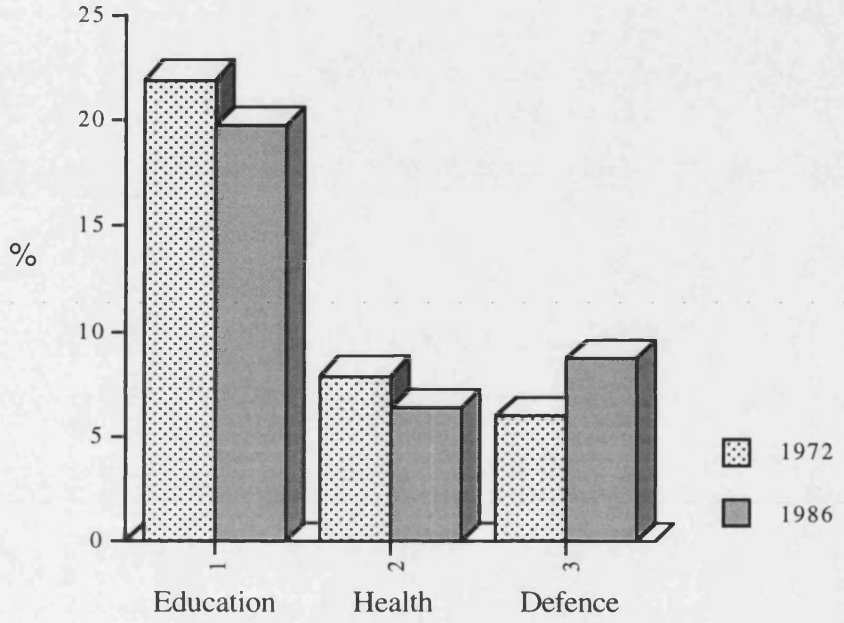
Structural Adjustment Policies

SAPs were aimed largely towards a correction of balance of payment deficits. The developing nations were perceived as requiring an element of 'belt tightening' in the form of domestic absorption (Appleton, 1991), involving a cutback in spending, in order to bridge the credit gap and at the same time an increased emphasis was placed on cash crop exports (Vickers, 1991). This effectively meant cutting basic government services, such as removing food subsidies, decreasing health care, education and social policies, together with commercialisation of government owned companies along with a currency devaluation (Sanders and Sambo, 1991). In Kenya, for example, government expenditure decreased in real terms in both education and health from the early 1970's, although notably there was an increase in defence spending (see Figure 4.1).

As a result of these policies, and the subsequent inability of countries to import the goods needed to further their 'development', there was a decline in real wages, a rise in inflation and an increase in unemployment, and thus a general decline in the standard of living.

These conditions ultimately increased mobility of the work force, particularly in terms of rural to urban migration in search of work, which in turn resulted in a rapid expansion of the informal sector and increasing poverty.

Central Government Expenditure as a Percentage of Total Government Expenditure in Kenya 1972 and 1986



(Adapted from Vickers, 1991:28)

Figure 4.1

The effects of SAPs can be seen at a macro and micro level. In terms of the former, economic studies have estimated that in many countries annual repayments of interest and capital amount to more than the total of all new aid and loans received each year (Vickers, 1991). On average repayments claim 25% of the developing world export revenues (ibid). Micro level studies, usually of a sociological or anthropological nature, have shown the impacts of such programmes have differential effects on varying sections of the population. Most notably, negative impacts can be seen in terms of low-income groups and in particular women within these groups. Fiscal policies implemented as part of adjustment programmes during this time may be seen as regressive. For example, 76% of the programmes supported by the IMF between 1980-83 included increases in indirect

taxes, and 46% in tariffs and fees, as against only 13% involving personal, corporate or property taxes which would affect the higher income formal sector workers (Vickers, 1991:27). There is little doubt, therefore, that structural adjustment policies adversely and disproportionately affect the lower income groups of whom a large percentage are women. This, it has been suggested, has resulted in an erosion of the human capital resource base of the economy (Sollis and Moser, 1991). More specifically, women who have been forced to work longer in reproduction, as well as being forced into productive roles, can not be seen as an infinitely elastic resource base; this is a coping strategy which will quickly become saturated with the advent of HIV/AIDS (Sollis and Moser, 1991). Calls have been made for modifications to SAPs to recognise these social aspects and improve gender bias.

The relevance of these policies in terms of the spread of HIV/AIDS and the options of coping with the disease can be seen in a number of ways. First, the reduction of health care means general health levels are lowered and thus there is a greater susceptibility to HIV and, in the latter stages of AIDS, to opportunistic infections (Lewis et al, 1989). Second, with decreasing employment and unsubsidised food prices comes an increase in malnutrition, again leading to a greater susceptibility to HIV infection and shorter progression time to AIDS. Third, increased mobility to and from rural and urban areas directly speeds up and increases the spread of disease, particularly sexually transmitted disease throughout the population. Fourth, it may accentuate the economic powerlessness of women via forced entry into the informal sector and sex work. However, while SAPs may be seen to have an influence on the prevalence of HIV/AIDS it should be noted that the disease itself has economic costs.

Direct and Indirect Economic Costs of HIV/AIDS

Economic issues can not be considered solely in terms of their effects on the spread of HIV/AIDS, the effect that HIV/AIDS potentially has in terms of the costs on the economy must also be considered (Lewis et al, 1989). As Fransen et al (1991) have pointed out,

AIDS is not only becoming the leading cause of urban adult deaths, it is also a major cause of direct and indirect economic loss amongst the productive population. Direct economic costs may be seen as costs of diagnosis and treatment, the use of hospital facilities and the manpower of health services. The nature of AIDS ensures that many patients (although perhaps more so in the developed than the developing world), experience long drawn out periods of contact with the health services.[53] Hence the direct costs are high, with expenses equal to those for other severe conditions such as cancer.

Indirect costs, that is the loss of earnings as a result of morbidity and premature mortality, may have more profound economic ramifications. Cliff and Smallman-Raynor (1992) suggest a number of reasons for this: first, because HIV is transmitted primarily by sexual contact and intravenous drug use, mortality is concentrated in the young and most productive age group of society. Second, in developing nations health care is predominantly undertaken by household members, usually women in place of hospitals and professional help. Thus carers are taken out of the work force, or their economic role is reduced for a period of time.[54] Third, in the early stages of the African pandemic HIV/AIDS was identified with the more highly qualified groups of the population, since they were more able to afford to pay for high risk sexual behaviour (and/or drugs). The economic loss to the country of this section of the population is great, since a large proportion of limited resources in the form of time, money and education had been invested in them for which few returns will be reaped as they are unable to re-invest their education in the country because of their early death (Lewis et al, 1989). Furthermore, this more skilled component of the population is less easily and quickly replaced; the disappearance of such skilled workers from the export sector in particular has potentially serious repercussions (Desmond, 1990).

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[53]It has been quoted by WHO that the USA spend more on 15 AIDS patients per year than the entire health budget for an African country. Medical treatment for AIDS patients in the USA cost $4.4 billion in 1991 ($32,000 US per patient). In Zaire the amount spent on an AIDS patient from diagnosis to death is between US$104 and 631; nevertheless in real terms this is a far greater burden than in a developed nation (WHO, GAN, 1992 no.2).

[54]Although women may have to leave the labour force or decrease their contribution when caring for the sick, ultimately they may be forced back into the labour force (predominantly the informal sector) because of the resultant poverty after losing a partner.

As HIV/AIDS progresses through the young working population further implications can be seen in terms of loss of production, which takes affect at a number of levels both individual and national (Miller, 1984). A small minority of the population are increasingly being relied upon at a micro level to produce enough for the increasing numbers of dependants. At the macro level they are also expected to produce exportable goods to improve foreign exchange rates and pay off debts, while at the same time attempting to help the country progress towards development. As seen in Chapter Three, changes in long term dependency ratios may mean that those groups of the population previously dependent on families may become, or try to become, dependent on the state (Miller, 1984).

However, there appears to be a general hesitance on the part of economic analysts to generate specific macro-scale estimates of direct and indirect economic costs of HIV/AIDS, perhaps because of the uncertain and unpredictable nature of its progression. The lack of relevant information and the variability in costs for different transmission categories, over time and in different countries and regions, are also factors (Smallman-Raynor et al, 1992). However, estimated costs of HIV/AIDS from those regions where 98% of the world's projected AIDS cases were recorded by the end of 1991 (see Table 4.1), show the approximate cumulative economic total cost of AIDS in 1991 to be $240 billion US. Loss of earnings makes up nearly 88% of this cost.[55]

Cliff and Smallman-Raynor (1992) state that the estimated annual cost of AIDS during the last five years could represent 12-13% of an African country's GDP. In a Ugandan context this is the same as the current contribution of the manufacturing sector to the Ugandan economy. The potential implications within developing nations without structured or properly financed health policies are, therefore, quite extensive. It is conceivable, if these calculations are correct, that UN prophecies of negative economic

[55]The very low budget of medical economic costs for Africa can be explained by the low health budget of about $1 US per head of population per year. This further reflects the low productivity by value of the African population.

growth rates in the late 1990's are possible. The only way of preventing this would be to slow the pandemic down by education and prevention, which requires co-operation between the economic, medical and social professions (ibid).

Projected Cumulative Costs of AIDS 1981-91(prices in 1985/6 US$)

		Costs per AIDS patient (in US$)		Projected costs (in billions US$)		
Continent	Projected AIDS cases	Direct	Indirect	Direct	Indirect	**TOTAL**
Africa	575 000	850	15 300	0.5	8.8	9.3
Latin America	155 000	13 300	115 700	2.1	17.9	20
USA	270 000	80 000	541 000	22	146	169
Europe	69 000	80 000	541 000	5.5	37.3	42.8
TOTAL				30.1	210	**240.1**

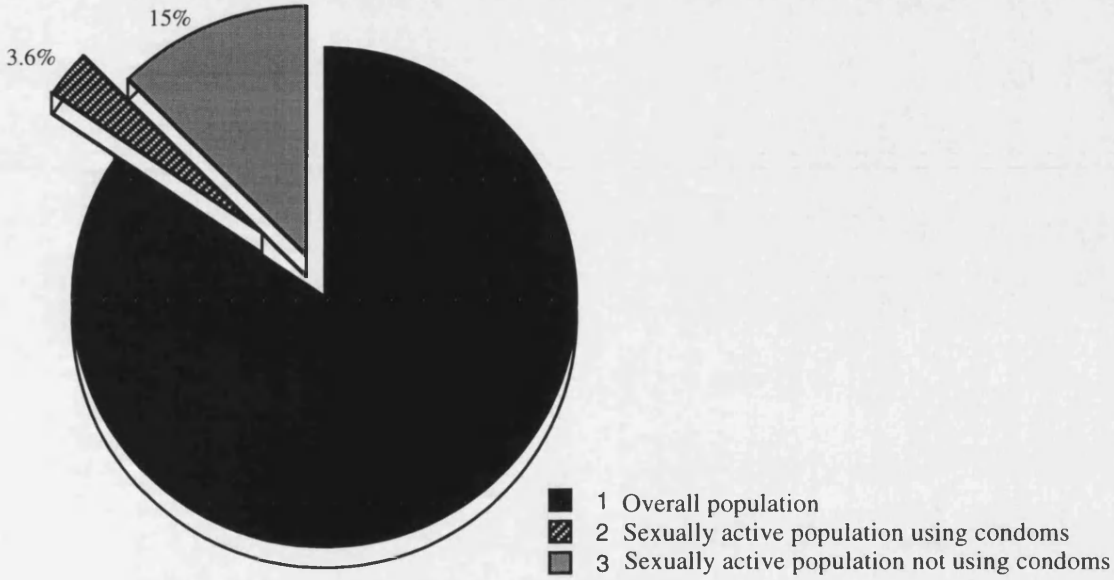
Table 4.1 (Source: Cliff and Smallman-Raynor, 1992:196)

One potential solution to the AIDS pandemic in Africa is education in the use of condoms (Standing and Kisehka, 1990). Assuming that the social and cultural restrictions which surround condom use and the African man can be changed, a further economic issue is raised regarding the numbers, cost, and distribution of condoms. Although condoms may only cost a few cents, adequate provision for the average sexually active African population implies great economic costs. Sambo and Sanders (1991:161) cite a hypothetical example within Zimbabwe.

Assuming that sexually active males (aged 15-50) comprise 15% of the population and need only two condoms each per week, the total number of condoms required for this group per year would be 130 million. The Zimbabwe programme distributes only 26 million condoms per annum, all of which are imported. The foreign exchange implications of estimates such as this for an already depressed economy, are huge. As seen in figure 4.2 in terms of the present condom provision in Zimbabwe, only 3.6% of

the overall population have access to condoms, which is only 24% of the male half of the sexually active population. One solution to this problem could be to set up processing plants within any given country to provide condoms for domestic use. Given the nature of macro-level adjustment policies there are inherent problems with such suggestions. Money would have to be provided for new infrastructure, raw materials would have to be imported, along, initially, with expertise and knowledge, and with internal demand so high, no costs could be recovered via the export of condoms. Since the present policy, as has been shown, is to shift away from health expenditure, and is dominated by export oriented cash crop debt repayment schemes, this would make such schemes unpractical.

Percentage of Population with Access to Condoms in Zimbabwe



(Adapted from figures in Sambo and Sanders 1991)

Figure 4.2

This simple example illustrates the fact that HIV/AIDS cannot be considered as purely a medical issue, since one possible 'solution', that is increasing the availability of condoms, has great economic implications. Whatever underlying physical factors there may be in terms of transmission of the disease, there are also a host of factors at an international level in the form of recession, protectionism and aid, beyond the control of individuals and individual governments. As Standing and Kisehka (1990:231) note, with regard to HIV/AIDS, "socio-cultural issues are as important as epidemiological ones."

Although AIDS presently is not the main cause of death in Africa, (cancer and TB[56] still outweigh it) in the long term it could become so. Michael Merson when head of the WHO GPA claimed that these long term implications could be altered partially by economics (Brown, 1993c). If all developing countries increased their health budget by 1%, resulting in a budget of $1.5-2.9 billion US per year, this would pay for condoms and STD treatment (claimed by Merson, in this context, to be the most *cost effective* method) and decrease estimated AIDS deaths from 20 million to 10 million in the year 2000. One can therefore conclude that, since present SAPs were implemented before HIV/AIDS became an issue, and even supposing that they were acceptable in terms of decreasing health services at that time, with the advent of HIV/AIDS their justification becomes increasingly spurious.

> "Structural adjustment programmes are incomplete...too mechanistic...and in too short a time perspective...they must be made to complement the efforts of African governments to attain their long term development objectives. Consequently they should, through their effects on the economy and the African social fabric, contribute to the preservation of basic human rights and fundamental freedoms and help to eliminate policies that discriminate against minority and vulnerable groups" (Vickers, 1991:5).

In spite of this, some policy towards structural adjustment is probably necessary to overcome economic imbalances. Creation of growth, as opposed to a decrease in spending, would be more consumer friendly for the poorer sections of the community. It is quite conceivable, for example, that the multiple economic, cultural and social problems which are faced by African women, much more than their actual *choice* of sexual behaviour may in fact pose a greater threat of HIV infection, simply through the lack of control an African woman has over her life (Sambo and Sanders, 1991). Projects should be aware of the disadvantaged economic position of women and create some political initiative towards improving their position in society.

[56]Although increasing numbers of cases of TB could be as a result of AIDS (see Chapter Two).

MICRO-ECONOMIC ASPECTS OF HIV/AIDS

Household Economic Implications

If the potential implications of a simple policy prescription such as condom use can have such serious effects on a national scale because of a weak economy, then the effects of AIDS in terms of the economics of fragile household finances could be considerably worse. Every household has a number of resources, economic and social, which allow for household production and reproduction in normal times and for it's members to pursue a culturally defined lifestyle within a certain income group. AIDS, with its increased mortality rates, particularly among the younger productive members of the household, has implications for the roles and responsibilities adopted by those within it. Inevitably the disease will have an impact on household assets and income generating opportunities, thus placing household budgets under pressure (Barnett et al, 1990).

Global economic recession can be seen to affect individuals by altering emphasis and priority in daily productive and reproductive tasks. This may include altering household structure or increasing time spent in informal/formal employment. There are also cultural determinants which may decrease potential income under circumstances of financial crisis. The regard for, and expectation of, large families, both reduces household saving capacity and leads to lower overall income in terms of household production and reproduction. This may also be seen at a national level since the continuation of large families maintains high dependency ratios. High dependency ratios, as has been discussed, slow capital formation and in turn divert investment from the provision of basic services (such as education, housing, health and water supplies) which ironically are under greater pressure from increasing (and sick) population structures.

Furthermore, when households are under external economic pressure there is a greater propensity for more members to enter the labour force. In low-income households members may have to enter the informal sector to gain some form of employment. Often these new workers will be women. These women may have little control over their lives

and are less likely to have an opportunity to earn a realistic wage and be able to afford a reasonable standard of living. As regards to AIDS this makes them more vulnerable both physically and economically. Sanders and Sambo (1991) have noted that the search for employment may lead women into prostitution. The lower the socio-economic status, the more susceptible a woman is to economic incentives to have unprotected sexual encounters (Sanders and Sambo, 1991). As Konotey-Ahulu (1989:22) notes, "the present distribution of HIV reflects a pattern of gender inequality in access to economic resources"

Data on both prostitution and more permanent unions, suggests that they do not exist in isolation from the wider social and economic crisis in Africa (Standing and Kisehka, 1990). Moreover,

> "No AIDS prevention programme can afford to ignore the socio-economic aspects of sexual behaviour or operate in isolation from the need for action in poverty and gender inequality" (Standing and Kisehka, 1990:vii).

In more general terms, the availability of formal and informal employment has long term implications for people with HIV. Those who are, or were, employed in the formal sector will often receive medical and funeral financial help. Those not formally employed, or unemployed, are reliant on family and friends to help in these spheres. Since a dignified funeral is an important part of African culture this, added to the emotional strain and stigma of the disease, is yet another financial burden on the family and supporting community (Davachi et al, 1989). Nevertheless it is one which is taken on by communities which so far have maintained a strong solidarity and goodwill towards AIDS patients and their families (ibid). It should also be noted that,

> "Extreme poverty (and its attendant powerlessness and dependency) breed widespread human rights' violations. Lack of resources seriously impedes the realisation of human rights of the poor. Yet present day development programmes and projects aimed at generating economic growth and development have often tended to exacerbate rather than alleviate the problem. In most developing countries there is an urgent need for development and economic growth, but such development must be attainable and such growth must be economic growth with a human face. This can only be realised if an effective human right to development is articulated and implemented." (Vickers, 1991:18).

Economic issues take on an increasing weight when humanitarian issues are raised alongside them in terms of rights to medical facilities, co-operation and access to education. This is not just a phenomenon of the developing nations; in the United States heterosexual AIDS is being increasingly perceived as a disease of 'poor' people (Joly, 1991).

The next section will consider two industries in the formal and informal sector of employment. This will establish the role which economic factors have played in the cause, effect and response to HIV/AIDS. Whilst it may not be possible to see prostitution as formal sector employment (in the context of Kenya), tourism creates jobs in both the formal and informal sector (including prostitution). Tourism is classified here in terms of formal sector employment by way of example because of its particular relevance to HIV/AIDS.

FORMAL SECTOR -Tourism

> "....The very recent threat of AIDS as an incurable STD will have important implications for the popularity of some tourist destinations (...in Africa) in addition to its major health effects on the entire populations of some regions..." (Lea, 1988:70).

Whilst Africa by no means has such an established and constructed sex trade, or promotes sex holidays, as countries like Thailand, places such as Mombasa, one of the major east coast resorts of Kenya, have a large number of people passing through throughout the year. There is little doubt that the ease and ability with which people now travel throughout the world is a major factor in the propagation of most human disease (Smallman-Raynor et al, 1992; Feldman, 1990). Essentially it is an example of the 'truck down' theory seen on a global scale.[57] Whilst the more radical theories which propose prevention by bombing airports are somewhat extreme, there is little doubt that were

[57]Truck down theory is a term often used in the geographical literature when describing the way that disease patterns can be traced along major roads or truck routes in many African nations. In regions where the transport network is not well developed and most traffic is channelled along a few principle routes it is not surprising that these routes have become the main initial areas of HIV infection. Disease patterns, particularly those relating to sexually transmitted diseases, have often been associated with migration or refugee routes or temporary overnight stopping places for truck drivers, where temporary sexual liaisons are most likely to occur.

population movement decreased, the spread of disease into pandemic proportions would be less likely (Lea, 1988). Consideration of tourism within the economic framework also helps to establish the extent outside influences may have on perceptions of HIV/AIDS, its spread and also its affects on traditional beliefs and religions.

For Kenya, tourism is the greatest creator of foreign exchange, having overtaken coffee and tea several years ago (Richardson, 1987). Indeed in 1988 it contributed to over one third of total export earnings (Sinclair et al, 1992). The government had an aggressive strategy aimed at increasing growth from 1991 levels of 650 000 visitors annually, to 1 million in five years time (Olindo, 1991). Following the dramatic five year increase of 121% between 1983 and 1988 this would seem a realistic goal (Sinclair et al, 1992). Careful management is obviously required, not only in terms of the country's image, but also in protecting the resources which make it so popular. In terms of the latter Kenya has promoted its beaches and safari parks in an attempt to encourage 'ecotourism'. However, these are resources which can be easily spoilt by increasing numbers of visitors. Thus campaigns have been initiated to attract the few high spending tourists, and for such people the image of the country is important (Sinclair et al, 1992).

Naturally, with tourism being such a large part of the nation's economy its protection is very important. This is especially true with an industry which, while in recent years has been an economic success and has excellent long term potential, is also fickle and can be adversely affected by anything from military unrest, global recession or health scares (Miller, 1984). Having ridden the storms over the ivory trade and more recently the frightening reports of deaths in national parks (in particular the adverse publicity in Britain over the Julie Ward murder) the issue of HIV/AIDS has become the latest threat to this valuable foreign income. The extent to which this threat is realistic, and how many people would actually consider cancelling a holiday because of a health scare over HIV/AIDS is unknown. Since HIV/AIDS, is a pandemic people could just as easily come into contact with it in any other country, including their own. How much is in the minds of

government officials remains to be seen but presently, in Africa, HIV/AIDS is taking a low profile. Since as Hall (1992:66) notes,

> "tourism is not as is often claimed a spontaneous phenomenon. It does not occur in a disorderly way, as a result of uncontrolled demand. It is a product of will. It unfolds under the impetus of a powerful tourist promotion mechanism supported at the highest level"

The African governments may well be right in attempting to keep the issue of AIDS under wraps.

It should also be noted that tourists rarely cancel going on holiday, it is more likely that they merely alter their plans. This often involves a change in destination, thus the loss of tourism in one country becomes a gain in another, as trends and requirements alter. Many developing nations are now trying to follow the lead of places like Kenya, which have successfully marketed tourism to increase foreign capital, competition within the tourist market is therefore increasing. Despite attempts to attract tourists it must be remembered that the costs and benefits that developing countries gain from international tourism depend on the contractual relationships between firms located in destination countries, and those in industrialised countries from which the tourists originate. In most cases the country of origin has more power to dictate publicity about a country than the country has itself (Lea, 1988). This is also true about attitudes to health issues.

One observation is that the sort of visitor Africa presently attracts (ecotourists, for example) would have made a deliberate choice to visit an African country. This decision would not have been based on the prevalence of HIV/AIDS which is endemic throughout Africa. While the screening of blood may become an issue to a tourist if an accident occurs (although some tourists can take plasma with them) it is unlikely any tourists will come into contact with HIV/AIDS unless they have an unprotected sexual encounter with an infected local (or other tourist) which they could equally do, and be at risk in any country around the world, including their own.

Whilst tourism and the potential it offers for economic development may be great, and while it continues to be widely acclaimed as 'generating a multitude of beneficial effects upon economic indicators like employment and balance of payments' (Mathieson and Wall, 1982), it is easy to ignore the negative factors which contemporary tourism brings with it, and the environmental and social risks which it involves for the indigenous populations. There has been a distinct lack of attention centred on the relationships between tourists and the local populations, in terms of both costs and benefits. Few of the main tourist agencies, hotels, or attractions are run by, or profitable to, local populations. In Kenya they have tried to put profits back into local areas in the form of education and health care (which would also be of benefit to the tourists). Nevertheless, the social and now health costs paid by the indigenous populations are increasing. Generally, positive economic factors have been accentuated and the negative social ones ignored. It should be noted that tourism is usually considered in terms of tourists becoming infected with HIV rather than them infecting others. The 'tourist first' attitudes of many governments has consistently put economic considerations ahead of social concerns. It should be remembered that while tourists who have indulged in casual sex whilst abroad may well carry HIV with them onto the plane and transmit it back to their regular partners at home, they could equally have infected those temporary partners they left behind (Panos, 1990a). The issue of 'sex tourism', or even of tourists who happen to have sex whilst abroad, is an emotive one, further complicated by value laden condemnations which are aimed at prostitutes for providing sex, tourists for using them, developing countries for promoting the availability of women, and industrialised countries for not educating and targeting men about HIV/AIDS and the use of condoms before they leave home (World AIDS, 1992). For many countries fear of frightening off tourists upon whom the government is economically reliant has thwarted action against HIV/AIDS.

> "It is the behaviour of the passport holder, not the passport itself, which allows HIV to pass from one person to another." (Panos, 1990a:118).

In terms of being seen to counteract HIV transmission a number of countries have introduced immigration restrictions to people who are HIV+. This generally has only

been for long term immigrants, not tourists.[58] There is little point in enforcing travel restrictions since, as the WHO pointed out in 1987, it is a pandemic, no region in the world is free of the disease (Aggleton et al, 1989b). Furthermore antibody tests in the short term provide very unreliable results, since the three month incubation period between infection and a positive result are one of the highest risk times to pass on infection. In addition there are major ethical and counselling implications regarding a person's right to privacy.

> "HIV screening programmes for international travellers would, at best and at *great cost*, retard *only briefly* the dissemination of HIV both globally and with respect to any particular country" (WHO 1987, quoted in Aggleton et al, 1989b:54).

Given the varying approaches to HIV/AIDS and the different perceptions regarding risk groups it is not really surprising that there is little agreement on the subject of international travel restrictions. By late 1989, 24 countries required certificates from foreign visitors proving that they were 'AIDS free' (Panos, 1990a). In other countries the restrictions are less defined, and people may be turned back if found to be carrying AIDS related drugs such as Zidovudine, for example. This carries with it a certain degree of irony, in that those who are aware of their symptoms are more likely to be educated in the consequences of irresponsible behaviour (ibid). Few countries openly screen short term visitors for fear of losing valuable business and tourist trade. Furthermore,

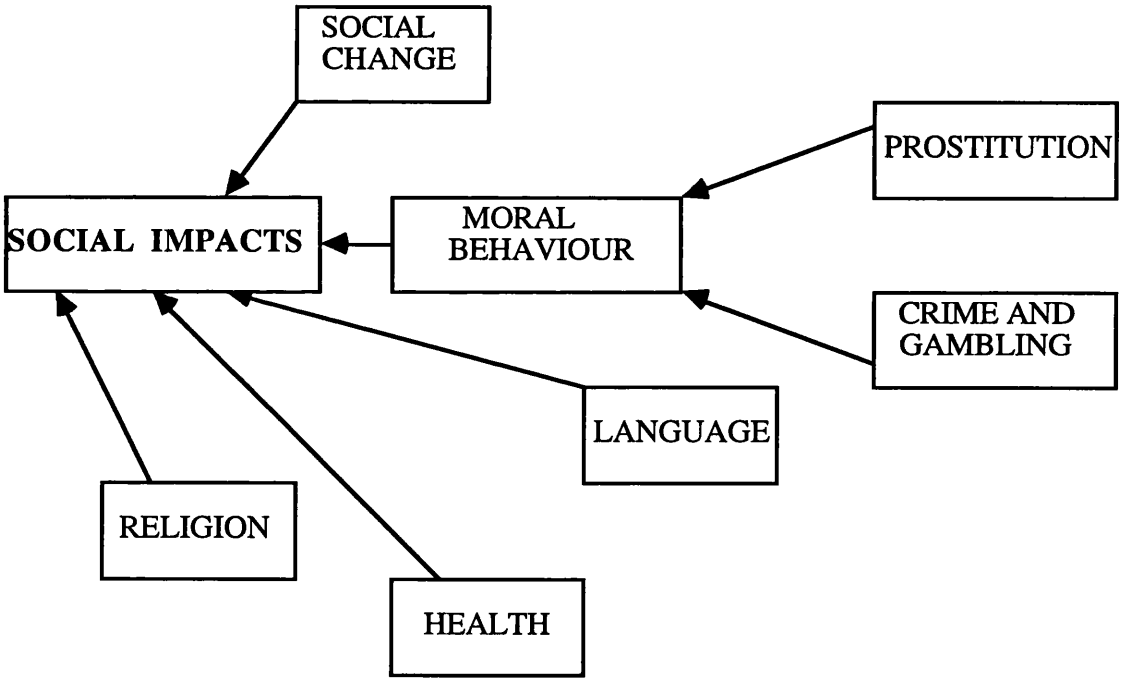
> "The diversion of resources towards HIV screening of international travellers and away from educational programmes, protection of the blood supply and other measures to prevent paternal and perinatal transmission, will be difficult to justify in view of the epidemiological, legal, economic, political, cultural and ethical factors mitigating against adoption of such a policy. No screening programme of international travellers can prevent the introduction and spread of HIV infection" (Panos, 1990a:117).

For many people being on holiday provides the opportunity to indulge in practices which they would not undertake at home because of 'respectability' or financial constraints. Provided with anonymity and money to spend on their 'enjoyment', indulging with a prostitute becomes acceptable, and in many cities around the world prostitution is available to provide a 'service' for tourists and businessmen. As Hall (1992:74) notes, "Sex

[58]Stated government policy and actual border control differ vastly and corruption usually in terms of bribery with customs occurs in many nations (Panos, 1990a).

tourism has resulted in people being regarded as commodities." Prostitution, for example, offers an above average wage in a tourist city and yet to the tourist it is cheaper than at home. Similarly because of different, and perhaps, more relaxed attitudes to sex, it becomes more acceptable and available. Authorities tend to refuse to acknowledge the existence of sex tourism and statistics are extremely difficult to ascertain given the illegal and informal nature of the 'industry'. Essentially the attitude tends to be that what a tourist does in the bedroom is not the business of the government, especially if it ultimately results in economic returns to the country in the form of foreign currency (Hall, 1992). It would be wrong to suggest that all prostitution is instigated and perpetuated by tourists, because it is generally already functioning for the local populations.

Social and Cultural Impacts of Tourism



(Reproduced from Lea: 1988:63)

Figure 4.3

A final consideration must be taken of the social and cultural conflicts created by tourism. As can be seen in Figure 4.3, one of the most significant and most undesirable social impacts of tourism is its perceived effects on the 'moral standards' of the host population,

religious values are ignored and the increase of prostitution and of crime are cited as evils of tourism (Lea, 1988). More recently health issues have taken on greater significance since the advent of HIV/AIDS, although it must be remembered that other diseases are also spread by tourists from one area to another or from origin to host country (Pearce, 1989). Ultimately, however, sex can never be policed, as long as the economy provides no other choice for survival, and as long as the industry is ignored by government and there is little education or interest in the well being of prostitutes or clients, it will continue. HIV will continue to be transmitted between continents as well as within them.

INFORMAL SECTOR- Prostitution

> " No AIDS program will be effective without an understanding of the wider socio-economic aspects of sexual behaviour" (Standing and Kisehka, 1990:55).

Historically social stigma has been attached in many different forms to disease and behaviour related to that disease. STD's have consistently brought with them stigma, particularly for women. On the one hand, women have often been portrayed simply as a 'partner' in a submissive monogamous sexual relationship. On the other, those women not perceived to be following this traditional established role are often labelled and classified as those who contract and spread such 'undesirable diseases' as those which are sexually transmitted (Seidel, 1993). For men the stigma regarding STDs tends to be less. A conflict of interests is raised here as can also be seen in the issues surrounding HIV/AIDS, in that history has always portrayed the 'need' for male sexual satisfaction and a number of partners - this has long been accepted by both men and women. History would have us believe that it is men's nature to be polygamous, as it is women's to be monogamous, whether this is a formalised contract or not (Nelson, 1988). This allows men to have a number of sexual encounters, whilst still controlling the sexuality of their wives, sisters and daughters. In the light of western feminism this may be classed simply as double standards, however, care must be taken not to impose western demands for equality upon women who have different problems, priorities and cultural upbringings.

As with many of the issues considered so far there is an historical element to the female position in society. The extent, in Africa, of sexual exchange for money or goods within, or for the majority of women, outside of marriage and its inextricable link between economic and social survival can be seen to have been founded and explained by the introduction and re-interpretation of traditional patriarchal values from European law during colonialism. During this period women were further subjugated, as even limited rights to land ownership were withdrawn (Bassett and Mhloyi, 1991), this left women who were unmarried (particularly with children) or widowed, with little in the way of income generating alternatives. Working in the informal sector became an economic necessity and for many women this meant prostitution.

In an African context care must be taken in defining prostitutes by imposing Western values on the term and ignoring the often harsh economic realities (Ankrah, 1989). Day's (1988:421) statement that, "acts of prostitution may be defined as the exchange of sexual services for money or goods between two or more people" is too simplistic. In Africa most sexual exchange contains some kind of monetary component or exchange of gifts or domestic commitments at some point (Nelson, 1988; Green, 1988). To then label this as an act of prostitution would be to misunderstand the constrictions under which it occurs and label virtually every non-marital sexual union in Africa as an act of prostitution:

> "Simply labelling categories of the population without contextualising the behaviour so labelled contributes nothing to the understanding of the social phenomenon lying behind the label" (Standing and Kisehka, 1990:5).

There are a variety of these definitional problems regarding prostitution; for example, distinguishing between wives and 'friends', or defining relationships which may range from 20 minutes to a town 'marriage' lasting for years (Day, 1988), or between formal and informal polygamy. Essentially, "many paid relationships are not purely commercial" (Caldwell et al, 1989:208).

Since men, and some women, may have multiple partners 'professional' prostitution is not necessarily the greatest risk for HIV transmission. In Kenya differences are defined

within the language. The term 'Malaya' is used to describe not only prostitution, but also informal unions that involve the exchange of money and/or the provision of food and lodging. 'Wazi Wazi', however, is used for those women who openly solicit custom (Day, 1988).

A further distinction is often made in the literature between high and low level prostitutes (Lewis et al, 1989). A high level prostitute is effectively a professional who sells sex for money or favours as a major source of income. She may solicit customers in a bar and is able to make more money from this than in a traditional 'female' job in the formal sector. A low level prostitute, on the other hand, may resort to prostitution in times of poverty out of desperation, or have one or two customers in a role as a 'town wife' for a regularly migrating male. Low level prostitutes are less able to dictate the terms of the relationship, the significance of which will become apparent in terms of the spread of HIV. This form of prostitution may also be undertaken together with other part-time informal work such as beer brewing (Nelson, 1978; Dawson, 1988). A further difference between these high and low level prostitutes and those in a Western context is that: prostitutes working in the developed nations tend to create a marked distance between their working and their private lives, in Africa this is rarely possible because of the even greater link with poverty (Day, 1988).

In anthropological studies sexual behaviour is determined in terms of the social construction of the community (Standing and Kisehka, 1990). It is, therefore, important to determine sexuality not in Western terms of prostitutes or homosexuals, but what acceptable cultural-sexual behaviour and attitudes are, in an African context. In a marital union women effectively are exchanging sexual, domestic and reproductive roles for economic stability (Nelson, 1988). In a non-marital, long term union this may also be the case. Women may manipulate various kinds of sexual relationships in order to maximise their economic security. Nelson (1988) sees this simply as a natural extension and mirror image of the contractual marital sexual relationship. For some women prostitution may be

a conscious choice, more money may be earned than in other forms of employment and it may also bring with it more freedom. Practices linked with prostitution, therefore, tend to be linked to much wider issues which may include, the nature of available labour, and the establishment of filiation (Day, 1988).[59] Control of, and access to children is one of the fundamental differences between prostitutes and their married counterparts. Children of married couples go to the wider sub-group of kin, children of prostitutes stay with their mothers. As seen in Chapter Three this may result in the formation of female-headed households. Property may also provide security for women, indeed more so than marriage. Property can be bought through prostitution and thus unions may be formed later on in life on the basis of the economic independence gained earlier through prostitution (Day, 1988).

Unfortunately there is limited information about prostitution levels in the developing world, since it raises such a high degree of hostility. This is because it is seen as either morally unacceptable or male exploitation of women (Nelson, 1988). Nevertheless, if sex work is implicitly linked to poverty, and in an African context this essentially means that women often do not have a choice in linking sexual encounters to some form of economic agreement, in the context of HIV/AIDS it is an area of male and female sexuality into which a better understanding needs to be pursued and realistic alternatives offered if the spread of the disease is to be limited.

Causes of Sex Work

Having established that sex work[60] exists in various different guises, it is important to establish the reasons behind these so that root causes may be tackled by coping mechanisms. First, an understanding is needed as to the conditions under which individuals choose, or are forced, into exchanging sex for resources. Second, these should be considered in terms of marital, non-marital, extra-marital and commercialised

[59] Filiation, is how children are legitimised and incorporated into the wider group of population.
[60] The definitional problems regarding prostitution may be overcome by referring in general terms to 'sex workers'

sexual unions. In terms of all of these, exchanging sex for economic benefit may not be the most important component of the union, but for women who have little access to other forms of production, sexual and reproductive unions are powerful. In the absence of other employment, due to the wide scale economic and structural crisis in Africa, sex work may be the only resource available for women to exploit. In spite of this the question of whether poverty leads to prostitution must be raised, and cannot easily be answered, as there are many poor women who do not work as prostitutes (Day, 1988). This opens the question of personal choice and in terms of responses and perceptions of risk may require particular consideration, since alternative options must be able to match the relative freedoms and economic benefits offered by sex work. Whilst often a desperate move, sex work may provide a rational choice for urban dwellers to gain an independence which they would not achieve as wives or formal sector workers. Nevertheless it remains an institution that shows an unjust social order and economically exploits women.

Increasingly single women have begun to migrate to the rapidly increasing urban areas as male employment has become more permanent (Nelson, 1988), this conceivably has increased the number of women in informal sector work in urban areas. Sex work may be more easily identified in urban areas for a variety of reasons: a high degree of poverty, and the lack of available work for women (in rural areas a traditional role tends to be pre-defined for them). This, coupled with a large migrant community of male workers away from their rural families (as well as soldiers and tourists), provides a background to establish and promote sex work. In urban areas sexual activity tends to start earlier as does abuse and a high level of teenage pregnancies (Standing and Kisehka, 1990). This may be due to a lack of understanding relating to reproduction, together with the economic security that a number of male lovers offers a young woman. In poor urban shanty towns there tends to be a far less judgmental attitude towards these activities than amongst the urban elite. Men sympathise that women are forced into sex work to survive, as a function of their shared poverty (Nelson, 1988).

If one is to consider the different types of socio-economic sexual liaisons it is important to also consider the strengths of each and target the weakest. For example, a woman who is a professional 'high level' prostitute may have more economic power to not only dictate which relationships she is prepared to be involved in, but also the terms of that relationship (Dawson, 1988). In other words, she can refuse sex without a condom because financially she can afford to lose a customer. From this perspective it is very difficult to discourage sex work in, for example, a tourist city since it is lucrative and may in fact actively encourage prostitution by offering an above average income. For many women it is an economic activity which, whilst providing short and long term physical risks, brings in a good return and an independence and freedom from economic exploitation which would rarely be possible in any other socio-economic role available to them (Nelson, 1988).

A low level prostitute who is economically unable to refuse a customer, or dictate terms or financial rewards, and who may only be involved in sex work in order to provide a meal for her children, is also unlikely to be in a position to enforce condom use (Lewis et al, 1989). To this group, sex work provides an 'emergency' supply of money. It is at this point that the issue of fatalism may be seen; abandoning prostitution in this situation could be a 'ticket to destitution', not only for the individual woman, but also her family. It should be noted when considering responses that condoms are only as useful as the *will* to use them or to ensure their use. Furthermore,

> " acceptance of prostitution as an inevitable social institution is lodged in the assumption that sex is a male right.....Viewing prostitution as woman's choice is a way to reduce all women to the lowest and most contemptible status of women in a male dominated society" (Barry, 1984 quoted in Hall, 1992:66).

The economic incentives to have unprotected sex are far higher for those more in need. As Nelson (1988) has pointed out, presenting a poor person with an offer they cannot refuse is a form of blackmail, and many of these women see themselves technically forced to sell their sexuality whatever the risk. In terms of marital unions, as Adeokun (1989) has noted, there is a greater structural control of female than of male sexuality, and lactational

abstinence remains the most effective control on marital sexuality. As has already been considered in terms of family planning, knowledge and usage of condoms as protection against a husband's infidelities is rarely practical.

Sex Work and HIV/AIDS

Sex work does exist and its effects in terms of the spread of HIV must be recognised and dealt with. Already, as might be expected, there have been substantial differences in seroprevalence rates between high and low level prostitutes. In a study of Nairobi prostitutes Kreiss et al (1986) noted 66% of women in low level prostitution were HIV+ and only 8% in higher levels of prostitution. Moreover the risks appear to be increasing for prostitutes and customers alike. In another Nairobi study the proportion of HIV+ prostitutes had risen from 4 to 61% between 1981 and 1985 (Schopper, 1990). Other available statistics show similar trends, in Adamchack et al's (1990) study in Zimbabwe 75% of 'prostitutes' carried the virus, as opposed to only 6% of pregnant women who provide useful comparable data. These high figures may also be the result of a disinclination to use contraception and/or avoid reproduction, both of which are often culturally dictated. There is also a greater susceptibility to STDs for sex workers through a statistically higher number of encounters.

Improved transport and periodic national economic crisis have resulted in a dramatic increase in international sex work which has aided the spread of HIV regionally around Africa. Responses which have already been put into practice have showed some limited success. Nairobi sex work issued with free condoms were using them on half their clients within six months (Standing and Kisehka, 1990).[61] Whether this would continue when there is no free and readily available supply is questionable. In Mombasa an attempt was made to provide some screening and free treatment of STDs, as well as issuing cards to bar girls who have had treatment and are disease free as an incentive to help prove to

[61]Difficulties in comparison should be noted, in that each researcher for each individual project may use a different definition of prostitution or behaviour, which is often not stated in the research. In this particular study it is also difficult to ascertain the accuracy of 'use' of condoms. This makes comparison and criticism of data on such issues particularly difficult.

potential customers that they are 'clean' (Standing and Kisehka, 1990). This itself, however, has quite serious moral and ethical implications, in terms of exploitation, abuse through false cards, and control over a person's individual rights. It is also unreliable, since HIV takes time before it shows up in tests. With little education or access to resources, other alternatives are non-existent, and so to lay the blame on sex workers and single them out for specific education programs (as was done with syphilis in the early 20th century) is pointless without offering these women a realistic economic alternative. Whilst short term economic rewards may be great, the health, social and psychological costs of sex work are extremely high, not only in terms of the sex workers themselves, but also that of their customers.

Male Prostitution

One final consideration regarding sex work is that it is not entirely female dominated, there is a role being played by men as prostitutes, although information on this is even more scant than that on female prostitutes. Homosexuality in many African regions is not an exclusive socio-sexual identity as it is in Europe and America. Commercialised homosexuality occurs in many of the large cities attracting tourists and businessmen. Standing and Kisehka (1990) have identified two main groups of homosexuals which are not entirely commercialised but are partly so. These may, in certain regions, be acceptable with little or no stigma. One is where men are segregated and alone, in the military or away mining, for example. The second is highly stratified social groups where older, married, rich men may take a young male lover (and pay him). High risk practices, that is regular unprotected sex with a number of partners, however, generally take place in tourist cities where commercialised sex may produce a high revenue. Shepherd (1987) has developed this further by establishing the role of homosexuality in a Muslim community which appears otherwise dominated by sexual segregation and male domination of women.

In her Mombasan case study of 50,000 Swahili mixed blood Arab Africans, Shepherd (1987) found 5000 (10%) were homosexual. This percentage rises when the lifetime shift between homo and heterosexuality is accounted for. Within this community there are well established rules, and discrimination over work capabilities or religious piety is rare. Chances of a 'good' marriage later on in the life cycle may be reduced, but it is assumed that a switch to heterosexual behaviour and marriage will occur. Homosexual relations in Mombasa are almost always between a young, poor partner and an older, richer one, whether this is for a brief act of prostitution or a more lengthy relationship. The Swahili for a male homosexual is *shoga* and many older married partners may have been *shogas* themselves as boys (12 years upwards) before marrying and later taking on a male lover.

A city such as Mombasa, which is a tourist resort and a port, provides trade for both male and female sex workers. Men, like women, may 'dip' into prostitution when short of money or a job, but continue their normal relationships with women. Whilst presently there may be a roughly equal male/female sex ratio in HIV patients in Africa, the susceptibility of the homosexual community must not be ignored. All the more so because it is not an exclusive identity and thus the likelihood of transmitting to a wider community is much greater.

Responses to Sex Work and HIV/AIDS

The causes and effects of sex work and the transmission of HIV/AIDS have been established, potential responses should now be considered. Both epidemiologically and practically, an intrinsic link has been found between HIV transmission and the prevalence of STDs. As sex workers, by definition, have a high number of sexual encounters and are, therefore, more susceptible to STDs in the light of HIV/AIDS they have become an even more serious health issue. For women, screening, treatment and prevention must be given priority in Africa. This will not only improve health, prevent many pelvic infections, the potential implications of sterility, and spontaneous abortion, but also decrease the speed of HIV transmission.

Nelson (1988), has commented that allowing all adults sexual freedom would prevent stigmatisation and the development of specific high risk groups, but this would then challenge the patriarchal system, which is often perpetuated by culture and religion. Basically, she claims that religious groups find it easier to recognise (but not openly acknowledge) the institution of commercialised sex for a few 'fallen' women, than sexual freedom for all. Moralistic campaigns are generally inappropriate and *choose* to ignore the existence of sexual violence, coercion, prostitution and harassment.

It is important that HIV/AIDS prevention should avoid involvement in these moral arguments and account for contemporary attitudes and established coping mechanisms. The limited information about attitudes to sexuality, together with the cultural, political, gender and generational constraints imposed by society regarding open discussion about sex and HIV/AIDS must also be acknowledged. One partner for life is rarely realistic, and would not only require massive changes in behaviour and social expectations, but would not guarantee the partners HIV- status before marriage. Furthermore, campaigns assuming Western ideals of mutual consent and satisfaction are not necessarily relevant in an African context. The cross-cultural relevance of campaigns is debatable. It is conceivable that in terms of sex work socio-cultural and economic issues are as important to HIV/AIDS prevention as epidemiological ones.

The potential role of NGOs in easing the social and economic implications of HIV/AIDS in a country, in providing education and contraception, their knowledge of the local amenities and ability to handle culturally sensitive issues such as changes in sexual roles, behaviour and relations between husband and wife, should not be underestimated (Greely, 1988; Lewis et al, 1989). Where HIV/AIDS is concerned some NGOs, as Greely (1988) has suggested, are uncomfortable with advocating condom use against HIV/AIDS because they believe that it interferes with their message regarding the importance of family planning. They cannot allow the stigma of AIDS to interfere with their family planning aims. Education and information, which in the absence of an effective curative drug

and/or vaccine would be essential, is also a costly undertaking. Deeper understanding of, and increased attention to, the economic as well as the social and cultural parameters of the sub-Saharan HIV/AIDS epidemic is needed for implementation of preventative measures.

It is particularly important that the multiple social, cultural, and economic burdens carried by women of child bearing age in Africa are considered. Women often have very little control over their own lives which in terms of HIV transmission may have quite serious implications with regard to protecting themselves.

> "Singling out prostitutes who otherwise have little access to education or other opportunities and effectively stigmatising them as the sole transmitters of the disease cannot provide a solution particularly if they are not offered a realistic economic alternative" (Garcia-Moreno, 1991).

As has been shown, at times women *have* to use sex for a living. This has crucial importance in terms of economic restraints together with a low social position and status. Another factor relating to sex work and the spread of HIV is its illegal nature. Public health programmes may not reach all those involved. Laws which marginalise sex workers also marginalise those who have sex with sex workers, and by association women who do not consider themselves as commercial sex workers believe they are not at risk. Efforts should be aimed at expanding women's limited options both practically (condoms) and socially (employment). Finally in a study in Kinshasa, Day (1988) has calculated that HIV would decrease by only 25% with the elimination of prostitution/formalised sex work, thus care must be taken to avoid exaggerating the role of sex workers in the spread of the HIV pandemic.

Summary

HIV/AIDS should be seen in the context of an interrelated set of economic and political processes. These include mass unemployment, unplanned urbanisation, landlessness, sex work and the decline in health care . All of these have helped to create an environment into which HIV/AIDS can, and has, easily manifested itself. It is these issues, in conjunction with medical and sociological ones, which should be tackled if HIV/AIDS is

to be controlled (Standing and Kisehka, 1990). Any achievement of a more socially oriented policy towards HIV/AIDS will, however, require political and economic agreement at both domestic and international levels. The hazard framework allows us to understand the relationship between, and impact of, the various medical, social and economic factors relating to HIV/AIDS discussed in the preceding chapters. Consideration must now be given to the way forward for data collection and risk analysis within this hazard framework, at both an individual and international level, in order to develop, response, coping strategies and policy.

CHAPTER FIVE

POLICY AND RESPONSE

Introduction

This final chapter will act as an analysis of the present situation regarding data availability and the understanding of HIV/AIDS related issues. An important element in the analysis of any phenomenon is the quality and availability of data. This is particularly true of risk perception. Information and knowledge provide the power to establish realistic coping responses, to either prevent the perceived risk from actually occurring, or to allow rapid and effective response to its consequences. First, at an international scale, the limitations and problems of global data collection are considered, along with the effect that this has had on the development of policy responses. The contemporary situation in Africa, in terms of current policy responses and perceptions of HIV/AIDS will then be discussed. This will include discussion of the African political attitude towards health issues and will question the level of 'political blindness' surrounding HIV/AIDS. Following on from this, is a discussion on the World Health Organisation's Global Programme on AIDS (WHO, GPA), and its data collection, the issues of modelling and data collating systems; their merits and faults.

Conclusions will be drawn regarding the basic arguments of the thesis. First, the importance of perceiving HIV/AIDS as a socio-economic and development issue rather than a medical one is highlighted. Second, the importance of an easily understood and manageable framework from which the area can not only be studied, but which can also be used for policy structuring and implementation is stressed. Finally, some considerations for the future of HIV/AIDS research and potential means of coping with the disease, are discussed.

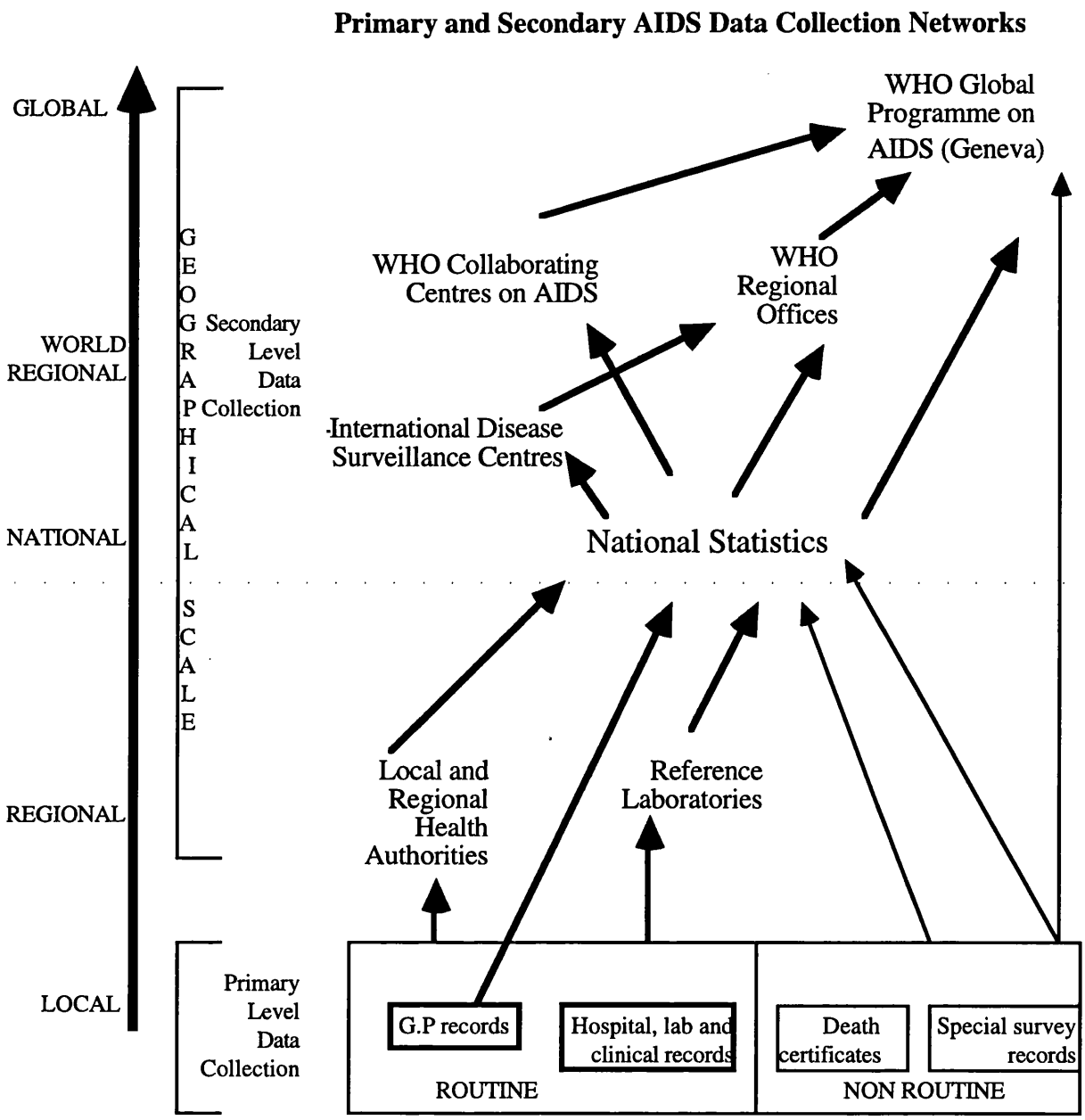
CURRENT RESPONSE

International Response

In 1948 the WHO and its global statistics collection was set up by the UN with the stated aims of eradicating epidemic and endemic diseases, improving nutrition, housing, sanitation and environmental hygiene, to promote maternal and child health, and to provide resources for health research. In 1965 the epidemiological surveillance unit was set up to study six identifiable diseases (Plague, Yellow Fever, Smallpox, Cholera, Typhus and Relapsing Fever) and develop a global data base (Smallman-Raynor et al, 1992).

By 1987, aware of the potential pandemic proportions of AIDS, the WHO set up a global programme specifically for AIDS: the Global Programme for AIDS. The GPA, established with just 13 members of staff, has now grown to several hundred staff as the enormity of the problem has become apparent (WHO, 1991). The GPA, based in Geneva, now has 6 regional offices and involvement with 50 developing countries. By 1995, 193 countries and territories had requested and received technical co-operation in tackling the pandemic and 117 had some form of national AIDS programme run with the technical assistance of WHO. The intention was to curtail the spread of the pandemic by meeting a global challenge with a global response (WHO, GAN, 1991).

The stated objectives of GPA were to: overcome the magnitude of denial; counter discrimination; prevent HIV infection; reduce it's social impact; and co-ordinate and unify AIDS research (Smallman-Raynor et al, 1992). The emphasis of the programme in terms of these multiple aims has changed along with the spread of the pandemic. For example, adequate and equitable health care for those progressing from HIV to AIDS has more recently become a priority as more people have reached this stage in the disease. The GPA works at a number of levels as can be seen in Figure 5.1.



(Reproduced from Smallman-Raynor et al 1992:64)

Figure 5.1

At an international level GPA works with NGOs, UN development programmes, UNICEF and health departments. At a national level, government departments, the national AIDS programme and community based AIDS organisations are involved. At a community level they try to work with those living with HIV/AIDS, since their involvement in campaigns provides the most powerful and credible message (WHO,

GAN, 1991). The GPA has developed ways of measuring the success and failure of programmes by building into national AIDS programmes tools for evaluation, to enable long term planning and use of the most effective schemes (WHO, GAN, 1992 no.4). One method put forward for use are Knowledge, Attitude and Practice surveys (KAP). Suggested as a means of improving planning, implementation and evaluation, standardised KAP surveys, however, have their limitations particularly in the sensitive areas of sexual behaviour (Schopper et al, 1993). The main problem which needs to be overcome is not so much analysis of the success of programmes, but of reliable and adequate data to use to develop the programmes. The GPA does collate global information on HIV/AIDS and produces regular press releases. GPA also publishes, quarterly, Global AIDS News in order to maintain levels of publicity and awareness. More recently both the WHO and GPA have set up home pages on the world-wide web making country statistics easily available and accessible. World AIDS Day efforts (1st December) are also co-ordinated by GPA.[62]

This data collection has a large role to play in the Global Programme as evidenced by the relative speed of acknowledgement of the need for global statistics given the potential implications of HIV/AIDS. WHO is respected and trusted by most governments around the world and is, therefore, in the best position to ask for, and collate, global statistics on AIDS. Nevertheless there are flaws in this globally co-ordinated collection system. Data collection is achieved at a number of levels and at each level there is room for loss, miscalculation and reporting inaccuracies. The global statistics quoted are often based upon fragmented and incomplete data sets which have altered as they have passed up the hierarchy of collection (see Figure 5.1).

The local scale represents primary data collection, the quality of which varies according to the degree of sensitivity of the questions, or the reliability of medical testing. The selection of the sample, who collects the data, under what conditions and restrictions and

[62]It should also be noted at this stage that information is not entirely uni-directional. There is a need for feedback by WHO in order to co-ordinate future requirements and comparisons.

for what ends is also of great importance in determining the quality of data produced. This information is then fed into secondary regional sources where there is further scope for a loss of reliability, and then on to national statistics. National statistics are problematic, given that they are based on regional level data, which in turn is based on a small number of local level studies. Aggregate national level data, therefore, are based on a non-representative sample of local case studies. Further misrepresentation may occur at this stage because of the impact of population mobility both internally and externally over time. At this national level, there is most likely to be the 'political creativity' with statistics cited by Barnett and Blaikie (1992). The problem is that the available data are not random in statistical terms *but* biased. Methodologies for data collection and planning that use and accommodate indigenous political systems must, therefore, be developed (Hunter, 1990).

It is understandable that by the time statistics reach the global programme in Geneva at the secondary data collection point, the time lag both between collection, collation and publishing *and* between HIV infection and AIDS, means that the figures may be inaccurate. This temporal and spatial element in terms of delay is particularly important when attempting to extrapolate trends. Nevertheless these statistics are the most reliable and extensive statistics available.

African Political Response

As has already been established, present attitudes to HIV/AIDS in Africa are difficult to define. There is still considerable reluctance to openly acknowledge AIDS in more than a few isolated African nations, such as Uganda. Indeed one of the best African data sets is from Uganda but its limitations should be acknowledged[63]. It should also be recognised that although there is a good data set it does not necessarily mean that it is the only, or

[63]The dangers of labelling Uganda as being an area of particularly high HIV incidence could result in the withdrawal of the Ugandan government's co-operation and willingness to allow researchers into the country. The success of research in Uganda has been extremely valuable and has been able to show certain spatial elements to the disease, which include twin centres in the North and South of the country, underline the truck/transport route element of spread, together with that of the civil war, and show cyclical elements related to nutrition and the inadequacies of cropping systems in certain areas (Smallman-Raynor et al, 1992; Barnett and Blaikie, 1992).

worst, country in Africa for HIV/AIDS. The former director of WHO's Global Programme on AIDS identified three stages of response in a developing world context: denial, reluctant acceptance, and constructive engagement (Williams, 1990). Stage one is characterised by the desire to minimise the problem. Political leaders and policy makers in Africa, for example, dismissed HIV/AIDS as a problem for others; 'foreign countries', or marginal sections of their own population. As the numbers of internal cases increased, and a need to respond was felt, the second stage of acknowledgement occurred, and some HIV/AIDS control activities, such as blood screening, began. The final stage involves the open acknowledgement of the problem and action against it.[64]

Recent evidence suggests that the denial stance is no longer as widespread, since the potential for help and aid targeted toward alleviating the problem has now been recognised. By 1992, African leaders had begun to initiate a concerted unified effort towards AIDS prevention after a summit meeting, in Dakar, Senegal, of the Organisation of African Unity; the intention was to develop a consolidated joint plan for Africa by the end of 1994 (WHO, GAN, 1992 no.3). Countries like Kenya, while previously opposed to western research, are increasingly becoming involved in projects in collaboration with NGOs and the WHO. The Kenyan government is taking a more open approach to discussion of HIV/AIDS within the local media and is investing in national AIDS programmes, most importantly the National AIDS Control Programme.

This official recognition of HIV/AIDS as a problem is demonstrated by improved data collection techniques. In 1993 an entire chapter of the Kenyan government's demographic and health survey was devoted to data collected on the 'Knowledge of AIDS'. Whilst the report makes some bold and misinformed statements about the disease,[65] the importance of data collection must not be underestimated. In Kenya, data are collected annually from

[64]The indicative factor of acknowledgement in Zambia, for example, was when the President announced the death of one of his sons from the disease (Williams, 1990). One of the problems with such a decisive factor bringing on this final stage is the 'fear' approach which it encourages within the media.

[65]The first paragraph of the report states that when AIDS was first introduced to Kenya in the late 1970's it was generally confined to special groups such as prostitutes and hence did not pose an immediate threat to the rest of the population (Central Bureau of Statistics (Kenya) 1993).

13 sites throughout the country as part of the sentinel surveillance system. These figures are then adjusted to be representative of the total population. Further data were collected in the demographic health survey. The survey targeted over 8000 households throughout Kenya and questioned men and women on various health and demographic issues. Respondents were questioned on whether they had ever heard of AIDS and the source of their knowledge. They were then asked how the disease was transmitted and how the transmission could be prevented. A selection of the data collected is shown in Table 5.1. It appears that the majority of respondents were aware that sexual intercourse is the principal mode of transmission. Few people were unable to suggest at least one other mode of transmission (those not included in the adapted table were, shaving/razors, injections, circumcision, mother to child, and blood transfusions). The widest source of information about HIV/AIDS reported was the radio, this is important for education programmes as they may be able to target public information through this means rather than more costly methods. The number of respondents who had misconceptions about modes of transmission (these included handshaking, kissing, touching dead people, sharing clothes and eating utensils) was, however, disconcertingly high (varying between 14% and 60%). Most people were aware that those who were apparently healthy could be infected with HIV. It is perhaps also interesting to note that female awareness appears to be lower than male and, more worryingly, that females in the youngest age category (15 - 19 years old) have a lower knowledge or understanding of HIV/AIDS than the next age group.[66]

In spite of this apparent increased acknowledgement and awareness of HIV/AIDS within African nations, such as Kenya, there is still considerable mistrust of western intentions and fear of jeopardising income-generating opportunities by openly admitting to an HIV/AIDS problem (Richardson, 1987). The data that are readily available such as that discussed above must be considered in this context, and perhaps not be taken entirely at face value. The mistrust of many African nations is perhaps not surprising since

[66]Younger females were interviewed than males because of the tendency for women to become sexually active earlier, or be seen as 'AIDS free' by older men, as discussed in Chapter Three.

organisations such as the WHO continue to single them out for the medical testing of drugs.[67] The impact of structural adjustment, and continuing internal warfare, has brought a movement away from financial emphasis on general health issues (see Chapter Four) (Seidel, 1993). This has meant that, not only have populations as a whole become more vulnerable to illness and economic insecurity, but that there is decreased funding for general health projects. The potential affects of HIV/AIDS within this environment is intensified due to an already weak and susceptible population, in terms of both health, and economic security. Whilst acknowledgement of AIDS is a first and vital stage in control and prevention, finance must also be made available and action taken by African nations in order to tackle the problem.

Knowledge of HIV/AIDS in Kenya

Male		**Mode of Transmission**		**Largest Mis-conception**	**Widest source of information**
Age	Ever heard of AIDS? (%)	Sexual Intercourse	Don't know	Mosquito bites	Radio
20 - 24	100	97.0			
35 - 39	98.7	96.5	3.2		
50 - 54	96.1	91.8	7.9		
Residence					
Urban	99.7	97.1	2.5	51.5	90.6
Rural	98.9	95.7	3.3	61.4	87.0
Education					
No Education	94.8	90.4	9.6		
Secondary +	99.6	98.3	1.2		
Total	**99.1**	**96.1**	**3.1**	**59.0**	**87.9**
Female					
15 - 19	98.0	87.2	9.6		
20 - 24	98.4	93.2	5.5		
35 - 39	97.5	88.4	10.2		
45 - 49	94.4	82.3	14.2		
Residence					
Urban	99.2	93.6	5.1	39.3	78.7
Rural	97.5	89.6	8.3	58.6	64.2
Education					
No Education	92.0	80.0	18.2		
Secondary +	99.6	97.5	1.2		
Total	**97.8**	**90.3**	**7.7**	**55.1**	**66.8**

Table 5.1 (adapted from the Kenyan Central Bureau of Statistics, 1993)

[67]These regions are singled out often because of more lax, testing regulations and laws and because many African countries are keen to encourage WHO money into the country.

Modelling Approaches and Problems

Once adequate, reliable and relevant data have been collected, models are then used to identify areas where projects may be of greatest benefit. When modelling of HIV/AIDS first began in the late 1980s, there was even less understanding of the epidemiology of the disease. Uncertainties existed concerning the extent of progression of HIV to AIDS, the incubation period, the extent of infectiousness throughout HIV infection, the vertical and horizontal transmission from mother to child, the importance of co-factors such as STDs, and the relative male/female transmission rates. These uncertainties, combined with unknown rates of varying sexual practices, made modelling difficult. The initial basic models tended to ignore the fact that HIV/AIDS was population specific since the tendency was to deal with total populations. Early models have been shown to be inaccurate. This inaccuracy has been further compounded by the social and political problems of denial, inaccurate diagnosis and reporting inefficiencies (Anderson et al, 1988).

Changing definitions have made comparison between early data and present information difficult. The Centre for Disease Control (CDC), for example, has altered its definitions for different changes in the disease progression, as medical information has increased. Sudden apparent increases in AIDS may be accounted for by a change in the medical definition of at what point HIV becomes AIDS, rather than an actual increase in AIDS cases in real terms (WHO, GAN, 1992 no.4). In order to try to standardise information collection, and to allow cross-national and cultural comparability, the GPA have now developed a model survey instrument providing guidance on research methodology and fieldwork limitations (Schopper et al, 1993).

It is important to establish first, what needs to be modelled and second, which variables are critical for basic modelling to take place. In terms of the former, one area of great concern has been how HIV/AIDS will affect population structures. The problems of HIV/AIDS could, as previously discussed, have severe implications for population structure. Indeed Caldwell et al (1989:225) have suggested a new demographic transition

will occur in the developing world driven primarily by HIV/AIDS. In this case the effect of HIV/AIDS on the demographic structure of a country will be determined by the balance between population reproduction rates and death rates. Related to this is the issue of infection rates. Anderson and May (1992) have shown through their modelling that HIV, and hence AIDS, increases faster over time in a compound interest fashion. Assuming exponential growth, with a doubling time of three years, it would take 30 years for the prevalence of HIV infection to change from 1000th of a % to a detectable level of 1%, but only three years to increase from 10 to 20%. The reproductive rate of the infection and the number of people infected by each HIV+ person, is determined by a number of factors: the number of new sexual partners since infection (without the use of preventative contraception); the frequency of intercourse; and the duration and degree of infectiousness. Finally, for sexually transmitted disease, the degree of heterogeneity in sexual activity within a given population is also an important factor, in order to prevent dangerous generalisations about an area in which there are fundamental differences of behaviour (Doll, 1987).

Any modelling is beset with problems surrounding assumptions and generalisations. In terms of modelling HIV/AIDS, the former problem is magnified given the incomplete knowledge of the disease. As has been established HIV/AIDS as a disease remains as yet very poorly understood and there are many uncertainties which are not just confined to the developing world. In terms of the latter, models are often based on specific case studies which are often chosen because of extraordinary factors,[68] making generalisation dangerous. HIV/AIDS is a pandemic and as its horizons have widened and increasingly included more disparate parts of the world, so the possibility of a panacea has faded.

It is also difficult to predict the constantly changing genetic variability of the virus. Its long and staged incubation period means equation or comparison with other diseases

[68] For example, to use Mombasa as a research location which has a disproportionately high Muslim community, high tourist rates and is relatively urbanised compared to the predominantly rural Kenya, could alter the statistical relevance to a survey being based there and then extrapolated onto the rest of the country.

using traditional models is difficult. Constant changes in medical knowledge require constant changes in clinical rules for recognition, making comparison between data sets particularly difficult. Long term planning, coping mechanisms and acknowledgement of HIV/AIDS will probably have to be based, therefore, on predictive or assumptive modelling.

While predictions are important, not least to allow risk analysis, communication, planning and education to be developed and targeted at vulnerable groups as quickly as possible, it is necessary to accept their limitations and inadequacies. Statistics about seroprevalence rates[69] tend to be most useful, however, those which are available tend to have been taken from a non-representative sample. That is, those who have been tested are often groups in identifiably high risk groups, for example truck drivers, sex workers and blood donors. One increasingly tested group, however, can provide more representative data: pregnant women. Since all pregnant women are obviously sexually active, they provide a representative cross sample of susceptible members of the population, given that the sexual histories and socio-economic backgrounds of pregnant women are diverse.[70]

While the testing of pregnant women may bring some data improvements, for longitudinal modelling purposes, the demographic impact of HIV/AIDS would best be predicted from a national seroprevalence survey. There are a number of problems with such an exercise, it would be both prohibitively costly, requiring investment in reliable laboratory testing, and would represent an intrusion into the sensitive area of variable human sexual behaviour. Barnett and Blaikie (1992) have identified further problems with such a scheme: mis-diagnosis, for example, through possible repetition because of enforced hospital and doctor confidentiality; the possibility of political 'creativity' with figures; and under reporting to prevent 'bad' publicity. In an area where there is limited

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[69] Seroprevalence: " The rate of HIV infection in a population, usually given as the percentage of a sample of people from whom blood has been taken and who have been found to be HIV+, or, in the case of a whole country, as the number of people who are HIV+ per million of the whole population" (Barnett and Blaikie, 1992:38).

[70] Although there is vertical mother to child transmission this group can be identified through a sexually active female, allowing a definition of the limited target population.

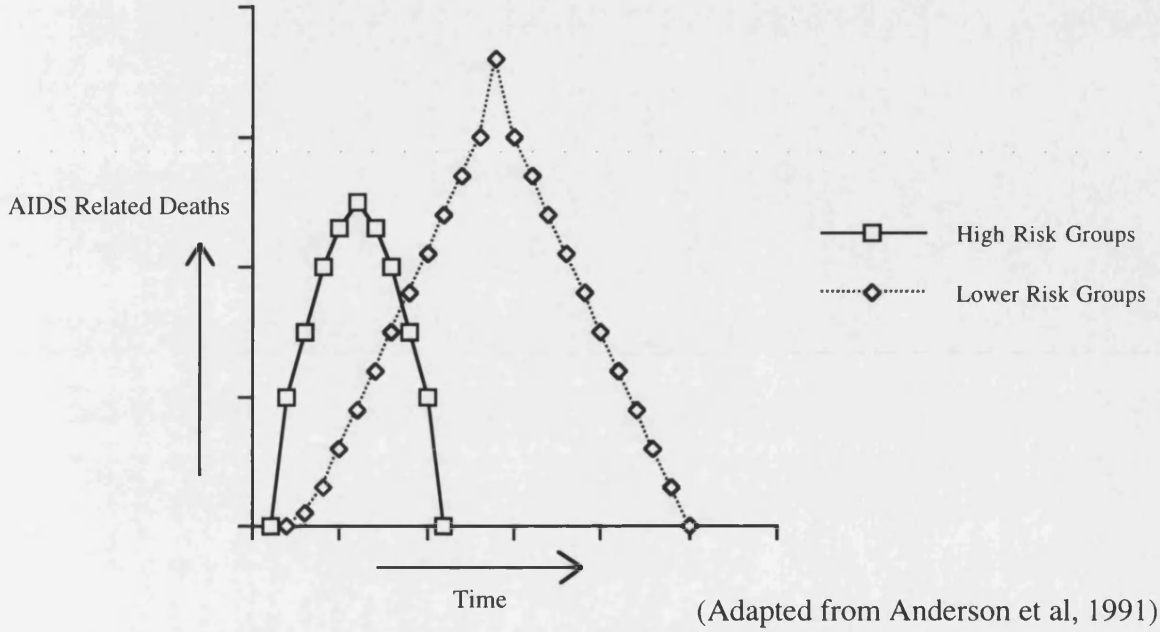
finance for health as a whole, and even less for specific diseases, there is a difficult ethical trade-off between long term aims and short term results by diverting funds. A central question must be whether to spend the limited resources on treating those currently infected, or to concentrate on establishing future incidence and patterns of infection.

The main problems relating to data accuracy may be summarised as: the short period of time that the disease has been around to study (only 15-20 years); the lack of contemporary analogous pandemics upon which to base estimates of its parameters; a distinct lack of academic knowledge or understanding of sexual practices or partner change, particularly in a cross-cultural context; the relationship of these different sexual practices to transmission; the rate of transmission, from infection with HIV, to death from full blown AIDS; and the relative co-factors which affect this, such as STDs. Finally there is a changing degree of infectiousness throughout the period of infection (Chin and Mann, 1989).

Present models have suggested that HIV may stem from a small number of highly sexually active individuals, these individuals being both more likely to acquire HIV, and to transmit it amongst a similar group. The number of these individuals within any given community will thus define the initial rate of spread. This, of course, implies that some categorisation of 'high' and 'low' sexual activity is possible. It is to be remembered that such terms are not only value laden but also very difficult to define, particularly for use in mathematical modelling. As a guide, sex workers may be classed as 'high' activity, whereas wives would be in a 'low' activity group, thus the greater number of sex workers in a community the greater the rate of spread. However, as May and Anderson (1992) have pointed out, mixing between sexual groups within a given population, that is 'high' activity groups mixing with 'medium' or 'low' groups, may mean that HIV/AIDS is likely to spread more rapidly and widely amongst the population. If married men (medium) have unprotected sexual relations with both sex workers (high) and their wives (low) then there is a greater chance of the disease disseminating more quickly through the population.

It is suggested that such mixing between the three categories, with those in the medium group having sexual intercourse with those in both high and low groups, will result in a multiple peaked epidemic (Figure 5.2). The result will not only be a quickly reached peak in high activity groups, but also a slower but greater epidemic in lower activity groups. With no mixing between groups, those in high activity groups would be eliminated from the population relatively quickly (May and Anderson, 1992).

Multiple Peaked Epidemic



(Adapted from Anderson et al, 1991)

Figure 5.2

This raises a number of questions. If AIDS-induced mortality reduces the number of highly active women, such as prostitutes, will this in turn reduce the rates of contact between these women and the medium group of men, or will women previously categorised as low activity change their behaviour to meet the unfulfilled demand? That is, female recruits to prostitution may offset the loses to AIDS given the difficult socio-economic situation of African women. The extent to which this happens may depend largely upon the effectiveness of education campaigns (May and Anderson, 1992).

Applying available data to simple models based on such assumptions[71] suggest that Africa could conceivably see a reversal in population growth rates, that is negative population growth (Caldwell et al, 1989). One danger with such models is that the high activity groups (prostitutes and their clients) are seen to have initiated the epidemic. 'Blame' is laid on this small group of people much in the same way as homosexuals have been singled out for 'blame' in Europe and the USA. The prejudice of scientists (social or medical) in establishing 'causes' and effects through modelling, by emphasising the importance of a particular minority group must be acknowledged.

One further consideration is that knowledge of HIV, its transmission and its relationship to AIDS, is often limited or misconceived (Adamchak et al, 1990). The need for, and use of, forms of data collection which account for human behaviour and understanding must be recognised. Emphasis on research design and data set inadequacy has been questioned (Kearnes and Joseph, 1993), in favour of research stemming from the relationship between disease and health care. Undoubtedly, this intersection between people and places and socio-economic processes and their impact on health are important, however, this itself cannot be analysed in context without adequate and reliable data, which complicates the argument. One way around this problem of accounting for human interaction and a lack of data, aside from the increasingly complex mathematical and computerised models being developed, is the 'Delphi' approach used by WHO since 1988. 'Delphi' involves setting a number of 'experts' (in different fields relating to the subject) the task of considering various scenarios and then collating their conclusions (Smallman-Raynor et al, 1992). This is a particularly attractive approach from the social science angle in the light of such a lack of reliable statistical data.

In recent years dramatic improvements have been made in model development. Models are now able to account for factors such as the long term nature of HIV/AIDS, the externalities (social/economic/cultural) affecting its spread, together with other random ill

[71]Other factors have also included men taking on younger wives in the belief that they are AIDS free, which might alter the generational and fertility demographic impact.

defined variables. However, these theoretical developments have outpaced the data available given the problems of collection. Modelling predictions are only as good as the data available. Essentially it is easier to predict the long term course of a pandemic, than the short term, due to the increasing quantity and quality of data available over time. This is particularly relevant to HIV/AIDS because of the long incubation period when an infected person is assymptomatic. There is little doubt that;

> "patterns of sexual behaviour, attitudes towards and beliefs about sexuality exhibit considerable variation across the continent and within regional, ethnic, religious and socio-economic parameters. This has both implications for understanding the pattern of sexual transmission and major consequences for AIDS prevention programmes. In particular it underlines the need for careful qualitative research, including further literature based work, to precede any kind of intervention in order to ensure that target groups are given appropriate messages." (Standing and Kisehka, 1990: iv)

The lack of co-operation between national and international researchers must also be noted. An apt example is the long running debate over who discovered the virus in the first instance, French or US scientists, an issue which escalated to such proportions as to require political agreement between Presidents Mitterand and Reagan. The reluctance to publish or share data between governments and western researchers is thus a contributory factor to data discrepancies. Moreover:

> "There also exist mutually suspicious relations between Western 'commando' style scientists who use African case material to further their careers rather than to assist in developing indigenous capabilities and highly sensitive national officials, who feel themselves to be patronised and cynically manipulated." (Barnett and Blaikie, 1992:16).

Although denial by governments is not as prevalent now as at the onset of the disease, the fear of the economic consequences of admitting to the extent of the problem, or at least subjecting themselves to extensive investigation and possibly high estimated HIV/AIDS counts, is still evident and should also be recognised.

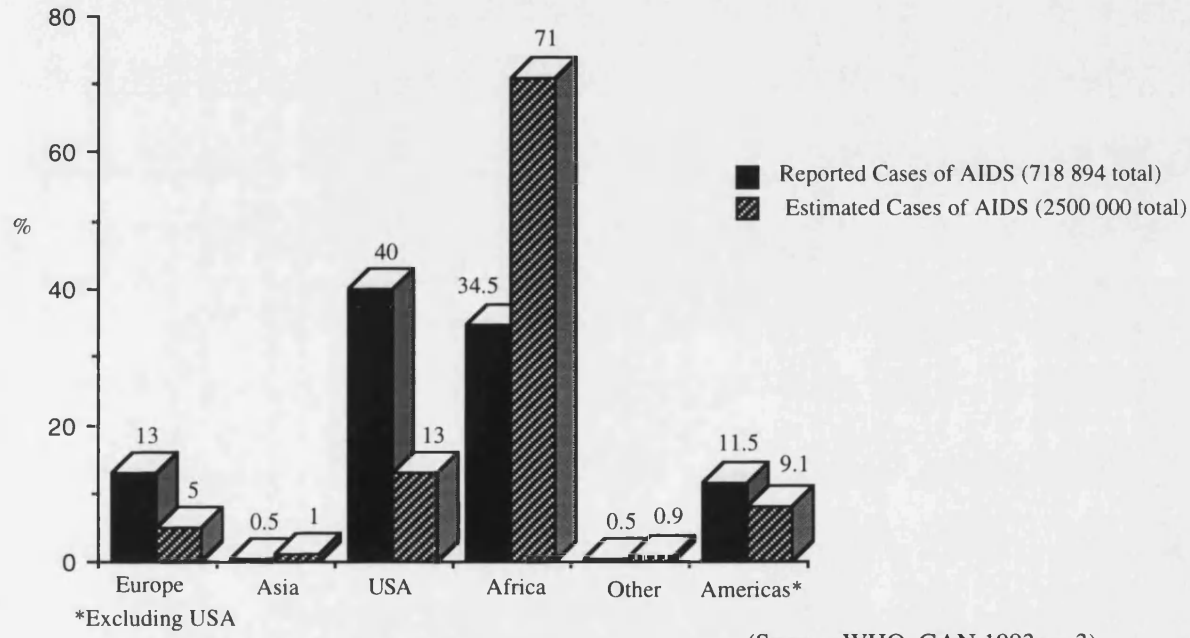
In spite of the difficulties presented about data collection, modelling and making realistic predictions for the immediate future, those which have been made have been useful in instigating campaigns and behavioural change. The example of the London homosexual community is instructive. Here action was taken based on predictions and the spread

decreased following targeted education campaigns (Doll, 1987). Risk communication is vital here since there is not only the need for education, but also a need to ensure a receptive and suitably prepared audience for the campaign. An interesting dilemma with regard to such education is that of timing and perception. If, for example, an education campaign is instigated when there already exists a large number of HIV+ people, these people will still die from the disease thus apparently negating the effect of the campaign. The subsequent generation subjected to the campaign, (assuming it had been successful), will, however, be healthy yet the campaign may have been terminated (because it appeared to have had no effect). Whilst the campaign may appear to have been of no use, its termination will in fact mean those not involved in it may once again contract HIV and the cycle will recommence.

Modelling appears to show that, even where levels of HIV are low in the population, education and prevention programmes have a disproportionately greater effect on the spread of HIV in the community at the earlier stages. It is easier to target small specific high risk groups before the disease spreads into the wider, less easily identified groups. This point is particularly important to governments of countries where HIV/AIDS has yet to reach epidemic proportions. Reviewing model predictions from countries where the epidemic has taken hold, may persuade the governments of countries where this is not the case to reduce the emphasis on more obvious immediate health issues, in order to curb a major long term epidemic. The importance of developing further, social and economic studies which incorporate not only medical data but the extensive variety of other factors which affect the development of HIV/AIDS must not be underestimated. The study of risk in terms of perception and communication, at all levels is critical to reducing the impact of this disease. The question, 'why worry about something which will kill me in 10 years time when I don't know where the next meal is coming from?' (Chirimuuta and Chirimuuta, 1989) can be seen to be as relevant at a national and international level as at the household level, as there becomes an unfortunate and difficult trade off between long and short term gains.

One final consideration within this section on data and modelling is the comparison of estimated and reported cases of AIDS around the world (see Figure 2.3). Figure 5.3 shows 1993 WHO statistics on estimated and actual reported cases of AIDS. It is interesting to note that although the USA had the highest actual number of reported cases of AIDS (40%), estimates suggest that this number of cases was actually only 13% of the cumulative world total. The inadequacies of testing and data collection in Africa are emphasised, since it had only 34.5% of reported cases whereas estimates suggest it had 71% of actual global cases of AIDS (WHO, GAN, 1993 no.3).

Reported and Estimated Cumulative Cases of AIDS 1993



(Source: WHO, GAN,1993 no.3)

Figure 5.3

It can be concluded that the present residual variation in HIV/AIDS rates is related as much to data inaccuracies as it is to causal factors. It is conceivable with present data to consider that the demographic structure of many African countries could be altered at basic levels. Present predictive methods have progressed far beyond the capacity of data. The social and ethical as well as practical problems of collecting information must be overcome as soon as possible in order for suitable education and preventative campaigns to be

executed. These should be established within local networks as prevention is, at present, probably the best available weapon against HIV/AIDS.

External Relief Programmes

This final section, while acknowledging the constraints presented in depth within the thesis, is a consideration within the natural hazard framework of a way to study and to tackle HIV/AIDS issues as a way of confronting the 'medicalisation' of HIV/AIDS and the difficulties associated with data, modelling and development. Predictions and forecasts of the type discussed earlier are only of use if they can be communicated to people in a position to instigate risk mitigation. It should not be forgotten that risk reduction does not occur in isolation but necessarily involves a trade off against other basic goals in a situation of limited resources (Royal Society Report, 1992), thus relief and policy have to be considered within the constraints of the economic situation of the individual or the nation. Whilst humanitarian issues like meeting fundamental human needs for survival and emotional recovery dominate the emergency period of a disaster succeeding periods tend to be dominated by economic issues (Cuny, 1983). With HIV/AIDS the emergency period is very difficult to define, the economic implications of losing a work force may take some time to become apparent and at the time they are identified the cause may be attributed elsewhere, amongst a background of economic problems.

There are essentially four options available to external forces or public policy makers. First, there is information and communication. Achieving these effectively with diverse audiences, holding different values and frames of reference with respect to HIV/AIDS, is a challenging task due to the availability of culturally linked multiple feedback channels and competing messages and interpretation. Importantly *trust* in the communicator is vital if any sort of action is to be taken (Royal Society Report, 1992; Horlick-Jones and Jones, 1993). Second, there is the deployment of resources. Third, the scope for laying down laws and regulations and fourth, there is direct forced action, although it should be noted

that HIV/AIDS is very difficult to police considering the mechanisms of spread in the vast majority of cases (Lewis et al, 1989).

Whatever option is taken, it is important to realise that such relief programs are essentially an economic or social system imposed on a community that has been affected by a disaster. It is imperative, therefore, that any disaster interveners trying to implement a relief program identify any indigenous coping mechanisms as a resource to use rather than to disregard.[72] These mechanisms will often have a pre-defined role in society and account for any cultural anomalies not recognised by external policy makers. Relief programs could damage or reduce the effectiveness of coping mechanisms without such recognition (Cuny, 1983). Care must be taken that intervention does not disrupt local agencies or inhibit a natural progression towards a positive adjustment. Importation of aid on a massive scale may be seen to act as a disincentive to self reliance (distributing free condoms may act as a short term solution but when free supplies are no longer available it is difficult to persuade populations to buy something which was previously free). If there is no accountability to the 'sufferers', programs may take a paternalistic attitude (Cuny, 1983).

The relationship between levels of risk and economic loss or gain needs to be considered. In making decisions at a societal level about safety, a balance is required between the benefits of safety and the costs of achieving it. If a costless way is available it should obviously be adopted (although with HIV/AIDS world-wide sexual abstinence is unlikely). In general it is possible to reduce risks further by incurring some costs. However if the cost is immense, and the benefit minimal, it is not worthwhile (Cuny, 1983). For example, importing enough condoms for the sexually active population within an African country would, as seen in Chapter Four, be prohibitively expensive. On top of this initial expense there would then be distribution costs and a need for education programmes. There would be no guarantee that the condoms would be used (for social

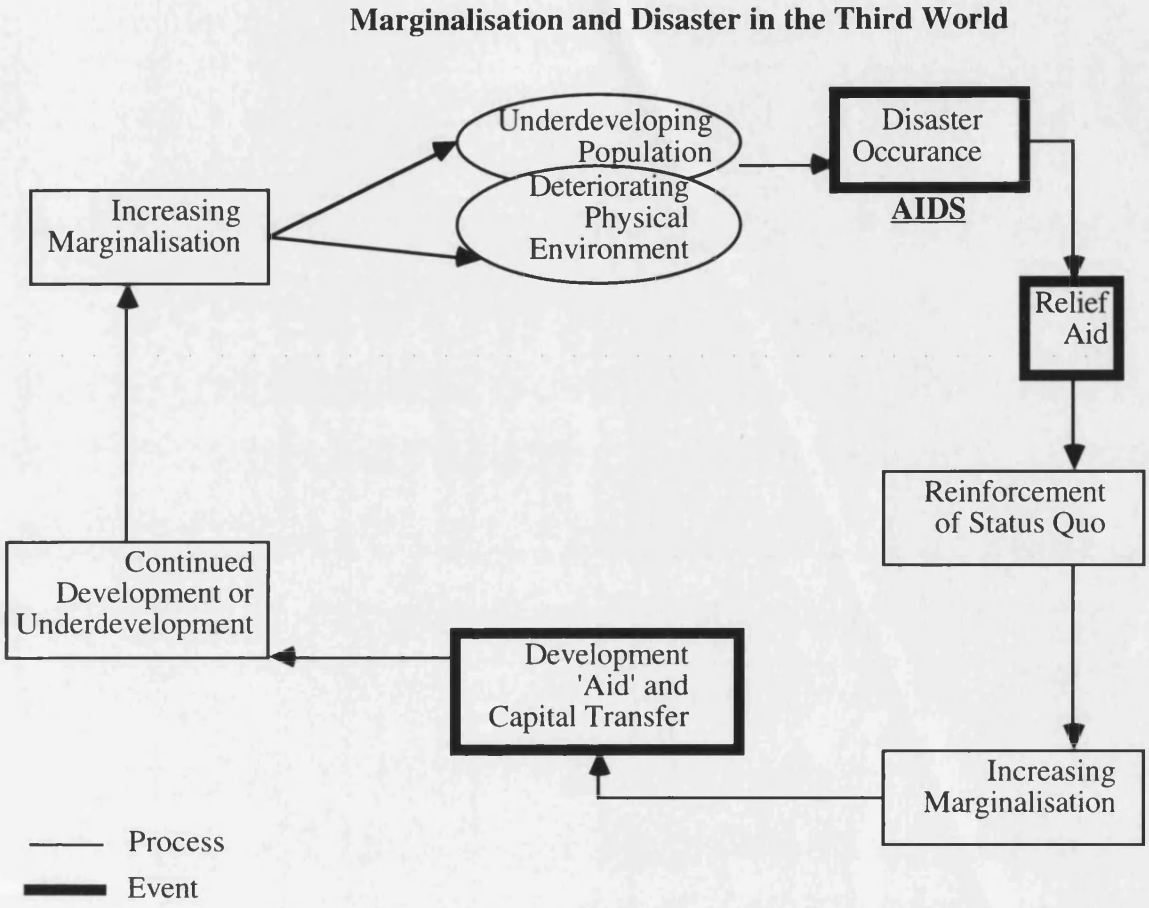
[72]Interveners may be governments at a local, national or international level, or charity workers, sent in for relief programmes or even the military, for example, a UN peacekeeping force

and cultural reasons), nor necessarily used effectively. In economic terms, risks should only be reduced until marginal costs equal marginal benefits. In terms of HIV/AIDS, however, this involves the ethical problem of pricing a human life.

As has been established HIV/AIDS and other natural hazards/disasters are as much development issues as they are natural events. The status of a country's development is important in terms of the effects of HIV/AIDS and relief aid in the long term (Figure 5.4). Although HIV/AIDS undeniably has an immense effect in a developed country, it can be controlled and coped with far more quickly because of established political and economic mechanisms (advertising, medical treatment, educational structures, etc). It is clear that without such sophisticated political and, perhaps more importantly, economic mechanisms available, HIV/AIDS can easily manifest itself as a disaster in a developing nation. Furthermore, where macro-economic issues are already out of the control of the indigenous governments, under SAPs for example, then external aid may simply further reduce the control of governments over their domestic situation. A disaster like HIV/AIDS basically impacts upon the on-going processes of development, highlighting the structural weaknesses with the state and the development process.

The potential which relief projects have to decrease or negate the natural processes of coping with a disaster is illustrated by Figure 5.4. This practice of reducing natural coping may be seen to have started during the eradication of many response systems during colonialism. The present situation, particularly with the advent of HIV/AIDS, may ensure that developing nations remain in a position of social and economic underdevelopment (Kirby, 1990). The power of external agencies and countries, poses a number of questions regarding human rights in terms of access to resources, apparatus for self-fulfilment, freedom and dignity. It also raises the question as to whether or not hazards should be tackled individually or as a dependent of the wider subplot of problems (Mitchell, 1990). It is not just individuals and households that make decisions, take risks and expose themselves to vulnerability. Some environments are also more 'risky' in

terms of the downstream (causal) effects likely to develop as a result of an epidemic disease (Barnett and Blaikie, 1992). It should also be remembered that HIV/AIDS is subject to global forces, reinforced by development agencies such as the World Bank, which themselves may be part of the underlying cause of hazards (Emel and Peet, 1989).



(adapted from Susman, O'Keefe and Wisner, in Emel and Peet, 1989:67)

Figure 5.4

If the scale of the disaster is predetermined only in part by the 'natural' extent and instead to a greater or equal degree by the social and economic status of the affected community, then it stands to reason that a population which is already weak will be more vulnerable, in particular the young and malnourished. Essentially it can be concluded that as countries and their populations develop, economically and politically, they become less vulnerable to natural disasters. Thus organisations concerned with disaster management must also be

concerned with development. This is not without problems, given that the very essence of disaster mitigation is long term planning, but the very essence of poverty is the struggle for day to day existence (Wijkman and Timberlake, 1984).

The practice of hazard control and risk analysis has, in the past, aimed at simplifying the problem of comprehension, how individuals think or behave, and how they can be educated (Kirby, 1990). For the future, different questions need to be addressed, taking into account social and cultural construction, and the impact that external forces, such as public institutions and global policies, have on individual behaviour. It is a stance which does not offer immediate solutions, although this is not to suggest that those in distress are not helped, but that policy is thought through and tailored, not just for short term alleviation of the problem, but for the long term. Plans must also incorporate an understanding of local issues (Kirby, 1990). It is conceivable that disasters may have a positive side, since they can often spur sometimes radical changes within a society as populations help themselves. For example, HIV/AIDS could change attitudes towards male/female child care as husbands are left without wives to run households. Disasters also often precipitate political and economic change in countries (Wijkman and Timberlake, 1984).

One overriding question which remains is the extent to which developed countries would have been involved, and invested in HIV/AIDS research, had it been primarily or exclusively a disease of the developing nations, or had it remained a disease which affected only homosexuals in their own countries (Kirby, 1990). Has so much been invested in HIV/AIDS because the potential disaster has been seen through the eyes of the developing nations? Sontag (1989), maintains that had HIV/AIDS been purely an African disease, however many people were dying, few outside Africa would be concerned. It would be perceived as a 'natural' event, like famine, which periodically scourge the poor, over populated countries; an event expected within the cycle of events in developing countries. In comparison, in the developed world such calamities have always been

perceived as transformative or 'history making', especially so since it initially affected young white knowledgeable men able to articulate and lobby for resources to be devoted to AIDS research. Since HIV/AIDS affects the developed world she continues, it can not be *just* a 'natural disaster'. Sontag (1989) concludes that it is seen in the developed world as the very model of catastrophe that privileged populations believe awaits them. Whilst this view point is perhaps extreme, and deeply cynical of the developed nations' unprecedented concern with a disease, much of it holds true when held up against other diseases which are exclusively African or when considered alongside the 'need' to use African countries as a testing ground for vaccines and drugs. Awareness of this attitude must be maintained, particularly if interest in HIV/AIDS in developing nations is to be maintained when or if a vaccine or cure is found. An expensive vaccine may resolve the problems of the developed world but not those of the developing.

CONCLUSIONS

If one is to consider some overall conclusions from the thesis and its arguments perhaps the starting point should be a return to the initial quote from Michael Merson, the then head of WHO's Global Programme on AIDS. Why should AIDS be singled out for special treatment from the long list of problems facing developing countries? Why should one as yet incurable disease take precedence over all others, in particular those which we have the knowledge to cure? Whilst all diseases should be considered in the context of development, HIV/AIDS, even when in time it becomes normalised within the societies it affects, is exceptional in that it affects those who are the productive and reproductive population, the population which provides a country with its potential to develop. In a developing world context, therefore, HIV/AIDS has the potential to prevent or at least decrease the rapidity of development. It is this which gives it its exclusivity, since most diseases affect the 'traditionally' vulnerable, the old or very young. Too many diseases and development issues have been allowed to be forgotten. The danger with HIV/AIDS is that once it is resolved medically, and no longer a threat to the developed nations, so it could be ignored and allowed to control the development of the developing nations.

In Africa, HIV is primarily, although not exclusively, heterosexually transmitted. As such, data collection for both medical and social research has been hampered by the sensitivity of collection. Nevertheless some research has been carried out, and it is on this that predictions for the future and planning for response must be based. It has been established that presently there is no medical solution to the disease, nor is there likely to be one in the foreseeable future. Furthermore, within an African context the use of a new, and probably expensive, treatment or vaccine is unlikely because, within the confines of an already inadequate medical system, it would be impractical and financially prohibitive. Medicine, and the traditional reliance on science, can be considered only in terms of a potential solution at some point in the future. Social and economic issues, either as creators of a disease environment in which HIV/AIDS can flourish, or as resultant problems of HIV/AIDS, have therefore been the major factors considered within the framework of the thesis.

The main aim has been to establish the predominant social and economic issues which have been both causes and effects of HIV/AIDS, and which need to be incorporated into any effective response to the disease in Africa. These issues have been considered on a number of spatial scales including; individual, local, national and international, in order to determine vulnerability. Establishing who is vulnerable and why, is essential for any understanding of the spread of the disease and developing a response to it.

The role that historical influences have played are important within the initial establishment of vulnerability. This can be seen by using past epidemics to understand present spatial variation and the population-specific nature of HIV/AIDS. The influence that historical factors, such as colonialism, have had on developing nations in terms of increasing their population's susceptibility to disease because of labour, migration and export policies, or the imposition of political systems, has also been seen to be an important factor.

Having established that the legacy left by colonialism increased the vulnerability of developing nations within the global social and economic system, the effects at an individual and national level were considered in order to establish a deeper understanding of the influence of such factors on behaviour. This was considered firstly in terms of social and cultural factors and then economic ones. One group specifically affected by the interaction of social and economic factors are women. This is for a variety of reasons, including their lack of access to work, and their lack of ability to determine the nature of a sexual relationship because of cultural and economic restrictions. Women's role as carers coupled with their reproductive role, also increases their vulnerability to HIV/AIDS. This is further accentuated when economic factors are taken into consideration. Women as sex workers are inevitably susceptible to STD's. If women are economically forced into sex work in order to survive, or to achieve a degree of independence, then responses must not only incorporate the social and cultural factors which dictate their vulnerability, but also the wider scale economic issues which do not offer alternative income sources to these women.

One overriding theme which has become apparent throughout the research is the interlinking nature of the subject of HIV/AIDS within the social science framework. No single factor can be considered exclusively from another. The example of women outlined above shows the interlinked nature of social, cultural and economic factors. Factors such as religion, the social position of women in society, or the reproductive role that they play, coupled with economic factors on both micro and macro scales increases susceptibility. However, just as no single issue is the cause of their susceptibility, so resolving one factor will not be the solution. This underlines the fact that HIV/AIDS, because of the nature of its spread, and the population it affects (which is normally the least vulnerable to disease or disaster) is a development issue as much as it is a medical one.

Having identified the various sections of the population that are vulnerable to HIV/AIDS and the reasons why this is so, the final aim of the thesis, as set out in Chapter One, was

to put forward a means of response. Risk analysis and potential coping mechanisms for HIV/AIDS were considered within a natural disaster framework in order to establish at what point risks should be acted upon and by whom. This raised a number of issues.

First, the extent to which HIV/AIDS is scientifically and medically established and understood should be considered. The question must be posed as to how successful or useful any action can be, be it medical or socio-economic, when an unprecedented problem is still in its infancy. As has already been noted, the practical and financial limitations of a medical solution in Africa are presently too great to be overcome. Other projects, perhaps based on socio-economic solutions may be misplaced, or even damaging, if implementation is based on unsatisfactory data.

Second, there is some debate between the advantages of prevention compared with adaptation. The question must be asked as to whether the costs of trying to prevent a disaster would be greater than the costs of adaptation after the event. Within this context economic trade-offs must be considered. In the case of HIV/AIDS, large scale importation of condoms, medicine and education could be financially crippling for developing countries now, but how much greater would the costs be of losing a large percentage of the reproductive and productive populations and increasing dependency ratios in the future? Furthermore, while there may be an element of normalisation, unlike with many other disasters there is no natural end to HIV/AIDS. Inaction now, and dependency on the presumed benefits of adaptation later, is questionable.

Third, the question is raised as to the global distribution of 'winners' and 'losers'. Issues of 'fairness' between regions and generations must be raised. What right have present generations to ignore the fate of those in the future? What right have developed nations to use their position of economic superiority to insure that they are always 'winners'? (Royal Society Report, 1992).

Projects should take the form of ensuring that there is an awareness of the risk of HIV/AIDS at all levels. Response should be co-ordinated and aimed towards those who are most vulnerable without laying blame. One group which should be particularly targeted is children. Future generations are most likely to be affected by increasing dependency ratios, worsening economic conditions, and changing social structures. Having made HIV/AIDS an issue within the media and having begun data collection and integration of HIV/AIDS within development policy, the importance now is to maintain the momentum and not let funding nor priority decrease. The GPA's funding has consistently been decreased in real terms since 1992, as has that of many development agencies (WHO GAN, 1992 no.1). While HIV/AIDS is still an unknown quantity, its potential to spread and prevent development should not be ignored.

On going health policies and research have shown the value of education, above all, to be the most practical tool in self-help for the developing nations. Health education, once accepted by governments, can be directed towards groups (communities) or individuals and families. Governments can thus facilitate more community involvement in decision making and implementation of health promotion schemes. More importantly, for HIV/AIDS, individuals can be taught their potential for improving health by their own activities particularly in changes of behaviour over time. It has been recognised that education is both more practical and possible than 'realistic health care' (Phillips 1990). This supports the arguments of the thesis. Since there is no formal medical cure for AIDS, and there are established, valued and acknowledged practices of PHC and education, then their expansion should be prioritised. This would have positive implications not only for HIV/AIDS but also, as a side effect, for other health issues.

The basic argument of the thesis has been based around the belief that HIV/AIDS is not wholly or even primarily a medical issue, but a social, economic and developmental one. This statement is not to devalue the role or importance of finding a medical solution, but to urge a re-adjustment of priorities. The role of the social scientist within this essentially

medical field should be recognised, since identification of risk behaviour and risk gradients may allow the promotion of behavioural patterns that will ultimately stabilise the spread of the virus (Adamchack et al, 1990). The focus then would be on preventative not curative (purely medical) measures. From a social science perspective, prevention is the most accessible and realistic weapon presently available against HIV/AIDS, and is likely to remain so within Africa for some time, regardless of medical progress. The adoption of such a stance would, of course, necessitate a redirection of funds from the current medically skewed policies to social research and the development of suitable educational programmes within the context of the specific community at which they are aimed. This overall aim may be best achieved by including a consideration of HIV/AIDS within all existing development projects.

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