AIDS, Poverty and Inequality: Implications of the Socioecological Medicine Approach for Controlling the HIV/AIDS Pandemic

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ABSTRACT

Southern Africa is experiencing an HIV/AIDS pandemic with devastating effects. In this thesis I suggest why prevention efforts have failed to stem the pandemic. Then I argue that developed countries have a duty to help the developing world fight the HIV/AIDS pandemic. Arguments grounded in justice and in vulnerability are used to reach this conclusion. Next, I suggest that developed countries have not done enough to help. I develop and advocate the Socioecological Medicine Approach as a conceptual framework to help address the HIV/AIDS pandemic. This approach is a useful perspective because it is holistic, embraces web causation, emphasizes interconnectedness, encourages communities to play an active role in responding to the HIV/AIDS pandemic, and encourages humans to adopt a more harmonious place in our environment. The most important conclusion is that HIV/AIDS is a symptom of inequality and poverty, therefore both symptoms and their root causes must be addressed to stem the HIV/AIDS pandemic.

RÉSUMÉ

Le sud de l'Afrique éprouve une pandémie désastreuse du VIH/SIDA. Dans cette thèse je suggère pourquoi les efforts de préventions n'ont pas mis fin á la pandémie. Suite à ceci, j'argumente que les pays développés ont le devoir d'aider les pays en voie de développement à contrer la pandémie du SIDA. Des arguments basés sur la justice et la vulnérabilité sont utilisés afin d'atteindre cette conclusion. Après je suggère que les pays développés n'ont pas suffisamment aidé. Je développe et défend le Modèle de Médecine Socio-écologique comme guide conceptuel pour aider avec la pandémie du SIDA. Ce modèle est une perspective très utile parce qu'il est holistique, adopte la causation « web », met l'emphase sur l'interrelation, encourage les communautés à prendre un rôle actif dans leur combat contre la pandémie du VIH/SIDA, et encourage les gens à adopter une place plus harmonieuse dans leur environnement. La conclusion la plus importante est que le SIDA est un symptôme d'inégalité et de pauvreté, et donc les symptômes et ses causes doivent être adressées afin d'arrêter cette pandémie du VIH/SIDA.

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ABBREVIATIONS

AIDS: Acquired Immunodeficiency Syndrome

HAART: highly active antiretroviral therapy

HIV: Human Immunodeficiency Virus (the retrovirus that causes AIDS)

MDRTB: multidrug-resistant tuberculosis

NGO: Non Governmental Organization

TB: tuberculosis

STD: Sexually Transmitted Disease

US: United States of America

WHO: World Health Organization

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1.1. Introduction

AIDS stalks the world, but of the 40 million people living with HIV/AIDS in 2001, over two thirds of them live in Sub-Saharan Africa (UNAIDS and WHO, 2001). Seventeen million Africans have died from AIDS since the epidemic began in the late 1970's, at least 3.7 million of them were children. An additional 12 million African children have been orphaned by AIDS (UNAIDS, 2001). In the southern-most countries in Africa (Zambia, Zimbabwe, South Africa, Namibia and Botswana), at least 1 in 5 adults (between the ages of 15 and 49) are infected with HIV.[1] In Zimbabwe and Botswana, *over one third* of adults aged 15-49 are infected (UNAIDS and WHO, 2001; UNAIDS, 2002). There is considerable fear that India and China are also precariously perched over a precipice that could lead into a raging epidemic. By looking at the pattern of the distribution of AIDS cases and in considering who is most at risk of contracting HIV, it becomes clear the burden of AIDS is not equally borne. Poor countries, and poor people within wealthy countries, are disproportionately affected by AIDS. And in African countries, more women are infected than men (UNAIDS and WHO, 2001; UNAIDS, 2002). Furthermore, once a person is infected with HIV, there is a striking difference between the prognosis for a "have not" compared to a "have". In a developing country, a person who contracts HIV, left untreated, will be dead within 2 years of the onset of full-blown AIDS (Schoepf, Schoepf, and Millen, 2000, note 178, p. 451). For the average North American (fabulously rich relative to most people in the world), AIDS is a chronic illness that can usually be satisfactorily controlled through highly active antiretroviral therapy (HAART). The difference is between death and life.

[1] The percentages of adults aged 15-49 infected with HIV as of 2001 are as follows: Botswana, 38.8%; Namibia, 22.5%; South Africa, 20.1% (Swaziland, 33.4%); Zambia, 21.5; Zimbabwe, 33.7% (UNAIDS and WHO, 2001; UNAIDS, 2002).

1.1.1. Thesis Structure

This thesis is about the injustices both in the causes and the effects of the HIV/AIDS pandemic, particularly in southern Africa. The issues I will identify raise basic ethical questions concerning the duties we owe those who are vulnerable to us and of justice with respect to the massive inequalities between "have" and "have not" societies. My focus will not be on the theoretical ethical issues but on the practical, brutal realities of the current injustices surrounding the HIV/AIDS pandemic.

The purpose of this introduction is to show that the HIV/AIDS epidemic is having a huge impact and is a source of terrible suffering. Another goal is to identify those most vulnerable to contracting HIV: people who are low on the social ladder because they are poor (socioeconomic inequality) or female (gender inequality), or both. The devastation caused by the HIV/AIDS pandemic is disproportionately borne by the developing world, those least able to fight it. Why haven't prevention efforts been more effective in stemming the epidemic? After all, we have known for 20 years that condoms are highly effective at preventing HIV transmission. Another goal of this section is to offer some reasons for the lack-lustre effect of HIV/AIDS prevention.

A crucial question is: why should we do anything? Do we, in relatively rich, relatively unaffected countries, have a duty to help the millions of poor people being ravaged by AIDS? It is an old question, rehashed every time there is a war or famine or other calamity in far away lands. But it is essential to answer it, because otherwise no aid can reasonably be expected to flow to those in need. The purpose of the second section is to argue that it should flow. It will also argue that we have not done enough to help so far – we have not spent enough money, have not always spent it wisely, and still have no HIV vaccine or anti-HIV topical microbicide to offer.

If we do accept that we should help, then *how* AIDS should be fought is best left to others who are experienced with preventing and treating AIDS in resource poor settings, though some suggestions are offered in the third section. The suggestions are based on an approach inspired by some of the insights of socioecological conceptions of health and of holistic medicine. I will argue that HIV/AIDS is merely a symptom of larger problems and concerns that ought to be addressed. If this argument is true, then is it enough to try to develop solutions to the HIV/AIDS epidemic that treat the symptoms (such as an AIDS

vaccine) without addressing the underlying cause, which is inequality? I will argue that *both* symptomatic treatment and preventative measures that address the underlying causes that increase a person or population's vulnerability to HIV/AIDS are morally and medically required. I will also discuss the implications of interconnectedness, encouraging communities to play an active role in their healing, and how AIDS prevention and treatment relates to restoring a more harmonious place for humanity in our environment.

1.2. Biological Background and Implications: Transmission and Prevention of HIV/AIDS

The Human Immunodeficiency Virus (HIV) is the retrovirus that causes Acquired Immunodeficiency Syndrome (AIDS). HIV is transmitted through certain bodily fluids – blood, semen and vaginal secretions (but not saliva), hence the modes of transmission all involve the contact of an infected person's bodily fluid with someone else's. The most common modes of transmission are sexual intercourse (heterosexual or homosexual), mother to child (either in utero, during birth, or through the breast milk), sharing needles between intravenous (IV) drug users, and blood transfusions (in areas where there are unscreened or poorly screened blood banks). Other ways are less common, such as when medical professionals are accidentally exposed by pricking themselves with needles used on AIDS patients, or cut themselves while performing surgery on someone with AIDS. In Africa, at least 80% of the transmission of HIV is through heterosexual intercourse, mother to child transmission accounts for between 5 to 15 %, and contaminated blood accounts for most of the rest of the infections (Bassett and Mhloyi, 1991; Mhalu and Lyamuya, 1996).

The old saying "an ounce of prevention is worth a pound of cure" is especially true for AIDS. There is no cure for AIDS, though it can be managed through anti-retroviral therapy "cocktails", such as highly active anti-retroviral therapy (HAART) (Cameron, 2000; Nieuwkerk, Gisolf, Colebunders, et al., 2000). However, HAART, and the health and hope it brings, is a luxury for those in the developed world. Few developing countries (the countries hardest hit and most in need of treatment) can afford

to treat their AIDS patients with it. Globally, only 10% of patients with HIV have access to HAART (Thomas, 1998; Cameron, 2000; Attaran and Gillespie-White, 2001).

Preventing HIV infection depends on which transmission route(s) a person may be exposed to. Besides complete abstinence or strict fidelity between HIV negative partners, properly used male latex condoms are still the most effective way to prevent the sexual transmission of HIV (Parazzini, Cavalieri, Naldi, et al., 1995; de Zoysa, Elias, and Bentley, 1998; Sibanda, 2000). Male condoms represent a "travelling technology" that is practical - it is not difficult to learn how to use them, and when used properly, their failure rate is very low. In North America, the advocated strategy is to always use condoms *unless* both partners in a faithfully monogamous relationship have been tested and do not have HIV (or are virgins with no other risk factors)(Parazzini, Cavalieri, Naldi, et al., 1995; Anonymous, 1997). There are also female condoms, but they share some barriers to their use with male condoms, and still tend to be more expensive than male condoms (Kaler, 2001).

Intravenous (IV) drug users can protect themselves by not sharing needles, or, if they must share, boiling the needles for each user. For blood transfusions, blood donor agencies must carefully screen the samples they receive to make sure no recipients are given HIV infected blood. For medical professionals treating known or suspected HIV positive patients, using the proper protective gear and being extremely careful are about all they can do. It is hoped that within a few years, we may have a vaccine against HIV (which would be effective regardless of the transmission route) or a topical microbicide (to curb sexual transmission). These potential prevention strategies will be considered in section 2.4.1.

The key points to draw out of how HIV transmission can currently be prevented is that a person could become infected because of his or her lifestyle choices, or in a way that was entirely beyond his or her control. However, the line between these categories – getting AIDS through risky behaviour versus by bad luck – is fuzzy. It is quite clear that a child who contracts HIV/AIDS from his or her mother played no role in the infection process. The same is true of a person who contracts HIV/AIDS from a blood transfusion, or a faithful spouse who is infected by an unfaithful spouse, or a health professional who is infected at work.

On the other hand, people sometimes make choices that they know will put them at risk. We may think that a competent adult fully aware of the risk of HIV/AIDS having unprotected sex with multiple partners is someone who is engaging in risky, even irresponsible behaviour. Or can we? If it is a woman, we can only assume she is acting irresponsibly if she is actually able to either insist on condom use or to not have multiple partners to begin with. In some developing countries, women are not able to negotiate condom use or find other means to sustain themselves economically other than being dependant upon a man (or men) or through prostitution (Bassett and Mhloyi, 1991; Sibanda, 2000; Kaler, 2001; Bassett, 2001). And for both men and women, what good is knowledge if one cannot afford to act on it? Specifically, people may know that using condoms will help protect them from contracting AIDS, but if condoms are either unavailable in their area, or are prohibitively expensive, then they will not be able to use them. Even when free condoms are distributed, access can be an issue depending on where and when the condoms are made available, and who distributes them (Gausset, 2001). For example, in communities where premarital sex is frowned upon, how likely is it that an unmarried teenage girl will try to obtain condoms from the male village elder in charge of dispensing them? Very unlikely.

1.3. Why prevention efforts have not stemmed the pandemic

We have seen the statistics in 1.1. – the pandemic is running wild in many places, it seems to be picking up momentum, giving an ominous, paralysing feeling that it will keep inexorably claiming ever more victims. Yet when we reflect for a moment, it should strike us how odd it is that the infection rate is increasing rather than decreasing. Though lethal, we saw in section 1.2. that HIV is *not* terribly infectious. This is not a disease a person catches through casual contact. Bodily fluids (other than saliva) must be exchanged, and even then, infection is unlikely (Downs and de Vincenzi, 1996). In Africa and the Caribbean, sexual intercourse and mother-to-child are the main transmission routes, and we know how to reduce the risk of HIV transmission through these routes. Although mother-to-child transmission could not be prevented until anti-retroviral therapy was developed in 1994, and was not feasible in most developing

countries until a cheaper, shorter course form of the regimen was introduced in 1998 (Bassett, 2001), as stated previously, we have known for 20 years that properly used condoms are highly effective in preventing the sexual HIV transmission. Abstinence or mutual fidelity in a relationship between HIV negative people is even more effective. Condoms are cheap, low-tech, easy to use, and help prevent other STDs (thus reducing another risk factor for HIV transmission). So what's the problem?

The facile answer would be that people do not like using condoms, will not abstain from sex, and keep having unprotected sex with partners of unknown (or known) HIV status. It is true that there are barriers to using condoms which are virtually universal (Gausset, 2001) - they are perceived to reduce sexual pleasure, to "interrupt" sex, they are a male controlled method, and they require adequate partner communication about sex (which is a notorious difficulty). These barriers can be particularly acute in some African communities. However, one should look at the broader social context in southern Africa (Bassett and Mhloyi, 1991; Farmer, 1999, ; Schoepf, Schoepf, and Millen, 2000, 91-125; Sibanda, 2000; Susser and Stein, 2000; Benatar, 2002). For example, Susser and Stein (2000) identify "widespread poverty and unemployment, particularly among women; a history of men's crossing national boundaries in battles for independence or other military actions; social disasters; and the increase in intra-African economic exchanges, which are based on colonial patterns of production reinforced by uneven regional investment in the global economy" as factors that are "heavily incriminated in the spread of HIV/AIDS in Africa." They question the value of advice to be monogamous in these circumstances. "Polygyny has been the rule in many African societies and is still common in many. In addition, the involuntary migration associated with men's employment away from home, experienced by almost all families in rural and semirural areas, is associated almost inevitably with casual and extramarital encounters, and not only for the men" (Susser and Stein, 2000).

This consequence of colonialism is called the "two-legged" family, where most married southern African couples do not live together, with the women and children spending most of the year in rural areas and men working in cities. Sibanda (2000) explains that in Zimbabwe, for example, the traditional "marital contract" meant the husband would supply financially for his wife and children, but did not imply male

fidelity. Separating a married man from his family further increases the likelihood of him having girlfriends and having sex with commercial sex workers and hence contracting HIV, which he can then bring home to his wife, and the rural community (Sibanda, 2000). "As a result of these factors, extramarital sex is frequent among men and widely tolerated, if not enjoyed, by women," state Susser and Stein (2000).

Women also may have multiple boyfriends or informal husbands or may accept gifts in exchange for sex. As in other parts of Africa, the exchange of sex for money or other goods falls into a broad range of arrangements, many of which are not socially constructed to be prostitution (Bassett and Mhloyi, 1991). Women who live apart from their husbands or are divorced may supplement their low incomes through these types of liaisons. They may also be forced to exchange sex for job security (Bassett and Mhloyi, 1991). In combination with a general inability to insist on condom use, these behaviours contribute to the AIDS epidemic and are fuelled by women's historic economic dependency on men and a dearth of alternative strategies to combat poverty (sex is the one sure money-maker they have) (Kesby, 2000).

To think that the sexual predilections of individuals is the driving force behind the pandemic is to miss the point. There are larger forces at work that determine first, who is at risk of contracting HIV, and second, what he or she can actually do to reduce his or her risk.

1.3.1. The Vulnerable

Those low on the social ladder are more at risk of contracting HIV and have a poorer prognosis (Schoepf, Schoepf & Millen, 2000, note 178, p. 451). Poverty, socioeconomic inequality, and gender inequality each individually make individuals and populations more vulnerable to HIV/AIDS. But these factors rarely act alone. They tend to be intertwined together such that their negatively synergistic effect is devastatingly potent. This is why poor, young women are the most vulnerable to HIV. The following analysis seeks to consider each of these factors.

1.3.1.1. Poverty and Socioeconomic Inequality

Poverty and socioeconomic inequality should not be confused, though they are closely related. Poverty means, quite literally, to be poor, to lack adequate resources. For statistical purposes, poverty is usual measured by establishing (a somewhat arbitrary) *poverty line*. People whose income falls below this line are called *absolutely poor*, or in deprivation. The World Bank has set the line for absolute poverty at $1 per day, as measured by purchasing power parity.[2] By this definition, 1.3 Billion people are absolutely poor. If the line were set at $2 per day, the number would be 3 Billion – half the world's population (Gershman and Irwin, 2000, p. 15). Relative poverty, on the other hand, is poverty as measured against the standard of living of another group; often, it is measured against the standard of living of wealthier people in the same country. Thus relative poverty is one of the measures of socioeconomic inequality. But there can be socioeconomic inequality without those on the low end of the comparison being impoverished. For example, in the fabulously wealthy United States, there has been an alarming widening in the gap between the income of workers and management. As of 1999, the average CEO of a major company made two hundred times what the average factory worker made per year (this disparity is five-fold greater than it was 30 years ago) (Farmer, 1999, p. 15-16). However, the average factory worker is unlikely to be impoverished, especially not compared to those living in developing countries. Just being poor can pose a serious threat to one's health. But it is when great disparities in wealth sit shoulder to shoulder, as in many of the huge cities around the world, that one finds correspondingly great disparities in health (Farmer, 1999, p. 15, 265).

According to Farmer (1999, p. 12), studies compiled since the twelfth century have shown that the poor are sicker than the nonpoor and that this holds true in both rich and poor countries. Dutton and Levin write:

> One of the most striking features of the relationship between [socioeconomic status] and health is its pervasiveness over time. This relationship is found in virtually every measure of health status: age-adjusted mortality for all causes of death as well as specific causes, the severity of acute disease and the incidence of severe infectious conditions, the prevalence and severity of nearly every chronic

[2] "Purchasing power parity is defined as the number of units of a country's currency required to buy the same amount of goods and services in the domestic market as one dollar would by in the United States." (Gershman and Irwin, 2000, note 14, p. 429.)

disease, and measures of disability and restricted activity. (Dutton and Levin, 1989, p.31).

How does poverty lead to ill health? Ryan, (1971, p. 163), writing about the US poor, puts it bluntly: "The facts are plain: their health is bad. The cause is plain: health costs money, and they don't have money." Farmer (1999, p. 13) argues that over the many years since this statement was made, we have learned that the relationship between poverty and health is more complicated: "poverty and other social inequalities come to alter disease distribution and sickness trajectories through innumerable and complicated mechanisms."

The effects of poverty on efforts to halt the AIDS epidemic are direct and multiple. Some resource poor countries cannot even afford to distribute condoms to their populations, nor supply the antiretroviral drugs that will prevent mother to child transmission, nor provide basic health care to combat other STDs (Bassett, 2001). Where these products and services are available, but are not free, an impoverished person may need to choose between buying food for his or her family, or buying condoms and medical care. It is clear food (the lack of which will cause imminent death) will trump AIDS prevention (the lack of which *could* cause death in the nebulous future), especially if poverty has further reduced the likelihood that public service announcements or other sources of information about HIV/AIDS have reached the poor person in question. As we shall see, poverty has an even harsher impact on the ability of women to protect themselves from HIV due to their further economic disadvantage in most resource poor areas. A specific obstacle for female condoms, for example, is that even the subsidized price is 4-10 times that of male condoms (Kaler, 2001). It will be interesting to see what vaginal microbicides will cost.

Not only does poverty thwart AIDS prevention strategies, AIDS itself causes poverty. This forms a pernicious circle where AIDS generates the very condition, poverty, that helps fuel its rampage. This is an example of circular causation, where what can be labelled a "cause" and what an "effect" is not clear cut, because causes and effects influence each other (see section 3.3.2.). The epidemic is having a profound impact on growth, income and poverty:

> It is estimated that the annual per capita growth in half the countries of sub-Saharan Africa is falling by 0.5–1.2% as a direct result of AIDS. By 2010, per capita GDP in some of the hardest hit countries may drop by 8% and per capita consumption may fall even farther. Calculations show that heavily affected countries could lose more than 20% of their GDP by 2020. Companies of all types face higher costs in training, insurance, benefits, absenteeism and illness." (UNAIDS and WHO, 2001, p.7)

Then there are all the cases of the individuals and families impoverished as a consequence of AIDS, the stories of individuals that cumulatively make for the lost percentage points in GDP. "An index of existing social and economic injustices, the epidemic is driving a ruthless cycle of impoverishment. People at all income levels are vulnerable to the economic impact of HIV/AIDS, but the poor suffer most acutely."(UNAIDS and WHO, 2001, p.7)

The past two decades of economic hardships in sub-Saharan Africa have left three-quarters of its people surviving on less than US$2 a day. The burden of the HIV/AIDS epidemic is making the situation that much more arduous. "Typically, this impoverished majority has limited access to social and health services, especially in countries where public services have been cut back and where privatized services are unaffordable" (UNAIDS and WHO, 2001, p.7). Affected households cope by reducing their food consumption and other basic expenditures, and tend to sell assets in an effort to cover the costs of health care and funerals (UNAIDS and WHO, 2001, p.8). In Botswana, adult (aged 15-49) HIV prevalence is at 39%, and 25% of households there will lose an income earner within the next 10 years. It is anticipated this will lead to a rapid increase in the number of very poor and destitute families. In the poorest quarter of households, per capita household income is expected to fall by 13%, while every income earner in this category can expect to take on four more dependents as a result of HIV/AIDS (Joint UNAIDS and WHO, 2001, p.7).

Seven million farm workers have died from AIDS-related causes since 1985 and 16 million more are expected to die in the next 20 years. Agricultural output—especially of staple products—cannot be sustained in such circumstances. The prospect of widespread food shortages and hunger is real. Some 20% of rural families in Burkina Faso are

estimated to have reduced their agricultural work or even abandoned their farms because of AIDS. Similarly, rural households in Thailand are seeing their agricultural output shrink by half. Almost everywhere, the extra burdens of care and work are deflected onto women—especially the young and the elderly (see below) (UNAIDS and WHO, 2001, p.8).

1.3.1.2. Gender Inequality

As stressed above, it is the combination of the many facets of inequality and poverty that make people most vulnerable to infectious diseases, like HIV/AIDS, as well as other negative consequences. For women in some societies in southern Africa, their low social status flows from a combination of gender and socioeconomic inequality and poverty. Where gender inequality exists, the negative effects on women's health are accentuated by socioeconomic inequality. For example, many southern African women are economically dependent on men. Therefore, with respect to condom use, cultural barriers to women being able to negotiate with men are reinforced and worsened when a woman depends on the man for her survival. It puts her at a serious disadvantage as the significantly weaker party in the negotiation.

African women are well aware of the connection between the lack of economic opportunities for women and hence their economic dependence on men and their difficulties in negotiating safer sex. "The women were explicit about economic needs and said that the best method they could imagine for preventing HIV in the settlement was to provide work for women." (Susser and Stein, 2000). They reasoned that if they had jobs, they could refuse to have sex with men who would not use condoms. They thought they should be able to avoid unprotected sex with multiple partners. "Poverty makes prostitutes of us," stated women in the study (Susser and Stein, 2000).

Nor is this a phenomenon of the developing world only. "Most U.S. women at high risk of HIV infection are already aware that condoms can prevent transmission," writes Farmer (2000, p. 84), "but many of these women are unable to insist that condoms be used because their precarious situations often force poor women to rely on men. For example, a study conducted among African American women in Los Angeles showed

that couples in which the woman depended on her male partner for rent money were less likely to use condoms than couples in which the woman had no such dependence."[3]

Biological and social factors combine to make young women particularly vulnerable to HIV/AIDS. It is thought that HIV is more easily transmitted from men to women than from women to men. Studies in developed countries found men were 2-3 times more likely to transmit HIV to women than vice versa (Downs and de Vincenzi, 1996).[4] The risk is even greater for a young, physiologically immature women who engages in intercourse with an HIV-infected partner (Bulterys, Chao, Habimana, et al., 1994; Stephenson Joan, 2003). On the social side, young people in general are vulnerable to the older generation, since they tend to be less wealthy and less experienced, may have commitments they have to fulfill to older relatives, and may be subject to traditional deference to elders. The younger generation is also vulnerable to the choices made by the previous generation. It is another sort of subtle inequality. This additional lowering in bargaining power is a serious concern since in southern Africa younger and younger women are being sought out by older men as sexual partners since the men believe (falsely, given the statistics) that younger women are less likely to be infected with HIV. The older men are less likely to use condoms with younger women selected for this reason (Laga, Schwärtlander, Pisani, et al., 2001). "The skewed balance of power in relationships between older men and younger girls makes it exceptionally difficult for girls themselves to negotiate safer sex in these relationships"(Laga, 2001; see also Stephenson, 2003).

Consistent with their vulnerability, young southern African women have a high incidence of HIV/AIDS, especially when compared to male counterparts of the same age. In a mining town in South Africa, 34% of women aged 14-24 were HIV positive, compared to only 9% of men 14-24 years (Auvert, Ballard, Campbell, et al., 2001). (And women aged 24 had a staggering infection rate of 67%!). This is consistent with finding from other places in Africa from the late 1990's that HIV prevalence was 2-8 times

[3] The study Farmer refers to was Wyatt, GE. Transaction Sex and HIV Risks: A Woman's Choice? Presented at the HIV Infection in Women: setting a New Agenda, 22-24 February 1995, Washington, D.C. Abstract WA1-1. The paper does not appear to have been subsequently published.
[4] This conclusion is also supported by data from Auvert et al., 2001.

greater in women aged 15-19 than men aged 15-19 (Laga, Schwärtlander, Pisani, et al., 2001; Buve, Carael, Hayes, et al., 2001). To make matters worse:

> Although they are exceptionally vulnerable to the epidemic, millions of young African women are dangerously ignorant about HIV/AIDS. According to UNICEF, more than 70% of adolescent girls (aged 15–19) in Somalia and more than 40% in Guinea Bissau and Sierra Leone, for instance, have never heard of AIDS. In countries such as Kenya and the United Republic of Tanzania, more than 40% of adolescent girls harbour serious misconceptions about how the virus is transmitted. (UNAIDS and WHO, 2001, p. 18)

The above points to how multiple factors can constrain the ability of disadvantaged people to protect themselves. Why were these women so ill informed? Was it because their country was too poor to provide effective HIV prevention education? Was there HIV prevention education provided, but not to young women because of Church interference, discrimination against young women, or simply government ignorance of the needs of these women?

As mentioned in section 1.3.1.1., another facet of women's low status and their traditional role is that caring for family members who fall sick due to AIDS usually falls to female family members. Women also bear the brunt of trying to make up for lost income when a wage earner becomes ill. When the time comes to pull children out of school to care for sick relatives or to assume other family responsibilities, girls are more likely than boys to be removed from school. This jeopardizes the girls' education and future prospects. In Swaziland, school enrolment is reported to have fallen by 36% due to AIDS, with girls most affected. Enabling young people—especially girls—to attend school and, hopefully, complete their education, is essential. South Africa and Malawi's universal free primary education systems point the way. Programs to provide girls with second-chance schooling are another option (Joint UNAIDS and WHO, 2001, p.8).

1.3.1.3. Other Factors

There are other factors that fuel the epidemic, which will be briefly identified here. One is religious interference. Sibanda (2000) explained that the powerful church lobby in Zimbabwe, headed by the Roman Catholic Church, had always railed against distributing condoms to teenagers or having sex education in schools. It views these

AIDS prevention strategies as tantamount to government endorsement of pre-marital sex. In addition to the ban on the compassionate use of condoms, officials of the Catholic Church have repeatedly tried to cast doubt on the effectiveness of condoms in fighting AIDS and to have tried to prevent their distribution. In Kenya, when the government belatedly declared that the AIDS epidemic was a crisis, Catholic Bishop John Njue propagated false scientific information by claiming that condoms are to blame for the spread of AIDS. Once AIDS was declared a national emergency in the country and the government officially embraced the use of condoms to curb the epidemic (over the loud objections of the Catholic church) a member of the Kenyan Parliament called the church "the greatest impediment in the fight against HIV/AIDS"(Miller P, 2002). In 1996, Cardinal Maurice Otunga, Kenya's leading Roman Catholic church official, burned boxes of condoms and safer sex literature in Nairobi. In 2001, health officials in Zambia withdrew a hard-hitting anti-AIDS campaign that urged safer sex and condom use after the church complained that it promoted promiscuity (Miller P, 2002).

Until 1996, the Catholic Church in Namibia was accused of contributing to silence and stigmatization about AIDS, and many religious leaders opposed the distribution of condoms. AIDS counsellors said they believed many religious leaders initially opposed the governments program to distribute condoms and made effective prevention difficult, but, rank and file members did not always do this (Susser and Stein, 2000). Indeed, Namibia is now an example of how religious groups can effectively help fight AIDS. Catholic AIDS Action (CAA), founded in 1998 by Sr. Raphaela Haendler, M.D., used a simple and unique plan to fight AIDS: they overlaid a balanced network of treatment and education services on the wide-reaching infrastructure of the Roman Catholic church. One quarter of Namibians are Catholic, so this was an ideal way to reach people. Trained volunteers deliver services through 91 parishes, 15 hospitals, and 37 schools and hostels. CAA serves both Catholics and non-Catholics (Namibian Catholic Bishops Conference, 2001; National Episcopal AIDS Coalition (NEAC), 2002). Their successful approach will be discussed in section 3.4.

Denial that AIDS was a serious problem and that there would be an impending catastrophe also contributed to fuelling the pandemic. Though inexcusable, the denial in

Africa was understandable given that the Western media popularized the notion of AIDS as a disease of "the dark continent", and made wild claims that it was rapacious African sexuality that spread the virus. The release of an authorative report on South Africa's HIV infection rate, spearheaded by Nelson Mandela, has finally put an end to the South African governments denial of AIDS (The Economist, 2002). Government denial is not a solely African phenomenon. In the Caribbean, denial has also been a problem, in part because many its countries' economies depend so heavily on tourism, and revealing an HIV epidemic could hurt this industry (Gonzalez, 2003). With respect to Haiti, sensationalistic claims that AIDS was spread there by voodoo, and the US media's (false) portrayal of Haiti as the source to blame for the US AIDS epidemic, was perceived (accurately) as a cultural attack (Farmer, 1999, p. 95-97). The response was defensive, and contributed to denial. China also denied its impending HIV/AIDS crisis at first, since it was perceived as a national embarrassment(Journal News Service, 2002).

1.3.2. Prevention and the exaggeration of personal agency

The issue noted at the end of section 1.2 of how much agency competent adults have depending on their circumstances leads us to consider another reason prevention efforts may be faltering: what Paul Farmer calls "the exaggeration of personal agency" (Farmer, 1999, p.9). Briefly, this term means that the ability of a person to control a given outcome (her health or safety, for example) is exaggerated, while external forces that may constrain and undermine the person's personal agency are ignored or minimized. The main damage this kind of thinking does is that it focuses on the wrong thing (what the person ought to do to achieve X) instead of on what will have far more effect on whether the person achieves X or not (external forces such as war, poverty or gender inequality). Falling into the trap of exaggerating personal agency means concentrating on the snowflake instead of on the blizzard.

This faulty analysis can come up with ineffective solutions, interventions that don't help improve the situation. This could mean the failure of economic or environmental initiatives, but for the moment we are most interested on when it means a failure of

interventions to improve health and prevent disease. To understand the rural Haitian epidemic, for example, Farmer argues:

> we must move beyond the concept of "risk groups" to consider the interplay between human agency and the powerful forces that constrain it, focusing especially on those activities that promote or retard the spread of HIV. In Haiti, the most powerful of these forces have been inequality, deepening poverty and political dislocations, which have together conspired to hasten the spread of HIV. (Farmer, 1999, p. 128)

Farmer, a physician and anthropologist who spends half the year at the Clinique Bon Sauveur in rural Haiti, has been critical of the much of the anthropological research on and analysis of AIDS:

> [M]uch of anthropological analysis focuses overmuch (or exclusively) on local factors and local actors, which risks exaggerating the agency of the poor and marginalized. Constraints on the agency of individual actors should be brought into stark relief so that preventative efforts do not come to grief, as they have to date. To explore the relation between personal agency and supraindividual structures – once the central problematic of social theory – we need to link our ethnography to systemic analyses that are informed by history, political economy, and a critical epidemiology. It is not possible to explain the strikingly patterned distribution of HIV by referring exclusively to attitude, cognition, or affect. Fine-grained psychological portraits and rich ethnography are never more than part of the AIDS story. (Farmer, 1999, p. 148-9)

Farmer hints that exaggerating personal agency may not just be a mistake made by well-meaning doctors, humanitarians, governmental representatives, etc., seeking to fight the AIDS epidemic. It can also be a deliberate tactic benefiting powerful agendas. Farmer writes that

> the myths and mystifications that surround AIDS and slow research often serve powerful interests. If, in Haiti and in parts of Africa, economic policies (for example, structural-adjustment programs) and political upheaval are somehow related to HIV transmission, who benefits when attention is focused largely or solely on 'unruly sexuality' or alleged 'promiscuity'? The lasting influence of myths and immodest claims has helped to mask the effect of social inequalities on the distribution of HIV and AIDS outcomes. (1999, p. 149)

Similarly:

> The general ineffectiveness of AIDS prevention programs in Africa does not just stem from a lack of funding, but from an unwillingness to look beyond simplistic approaches that focus on the peculiarities of individual sexual behaviour rather

> than the social, economic, and political contingencies which make certain social groups such as commercial sex workers vulnerable. (Kalipeni, 2000)

A striking example of inappropriately exaggerating personal agency, and the negative consequences this mistake can have on prevention efforts, is recounted by Farmer (1999, p. 85). A study was conducted in Los Angeles of African American and Latina women aged 18-75, recruited through homeless shelters or drug-treatment programs (Nyamathi, Bennett, Leake, et al., 1993). All of the women had histories of using drugs, being the sexual partner of an IV drug user, being homeless, or having a STD. Some had been sex-workers, some had had multiple sexual partners. The study found that a high proportion of the women understood how AIDS was transmitted and how to prevent this transmission, but were not acting on this information. Farmer claims the authors' interpretation of their findings was not consistent with their data: "These findings suggest the need for culturally sensitive education programs that cover common problems relating to drug use and unprotected sex and, in addition, offer sessions for women of different ethnic groups to address problematic areas of concern" (Nyamathi, Bennett, Leake, et al., 1993). Claiming that "culturally sensitive education programs" have a large role to play in protecting poor women from HIV suggests the problem is, contrary to their own data, that the women were ill-informed about HIV prevention, therefore, the way to reduce HIV transmission is through more education. "Through this cognitivist legerdemain, we have expediently moved the locus of the problem – and thus the focus of the interventions – away from certain features of an inegalitarian society and toward the women deemed 'at risk'. The problem is with the women; thus, the interventions should change the women." (Farmer, 1999, p. 86).

Farmer argues this mistaken focus deflects attention away from the real engines of the AIDS pandemic (such as inequality and poverty) (Farmer, 1999, p. 86). It also may explain some of the failures of HIV prevention programs. Money is being spent on education, but there is often no program analysis to see if the education worked – i.e., that the information was not only retained, but was actually *acted on*, resulting in a reduction in HIV infection rates. All the education in the world will not help a person protect herself or himself if she or he cannot act on the information. It is ironic that much of HIV prevention programs in southern Africa have been targeted at young pregnant women –

precisely those who are least likely to be able to apply what they have learned about HIV transmission. Women tend to be targeted for dissemination of information on HIV/AIDS because they go to health services more, especially when pregnant. However, this does not justify neglecting the education of men. Since the sexual proclivities of men are behind the increase in AIDS cases in women, and since southern African women often have little control in sexual relationships, it is imperative that men be involved in efforts to increase HIV/AIDS prevention behaviour (Benatar, 1993; Sibanda, 2000; Kesby, 2000). Interventions with men work quite well (Deen, Redd, and Harris, 1999; Gausset, 2001). It may seem to cost more to direct information to men, but surely money is better spent educating men as opposed to exclusively educating those who can't act on the information.

In cultures where women have little control over their reproductive and sexual lives, it is still important to educate them about how to reduce their risk of contracting HIV. However, these interventions must be complemented by interventions that target men to be effective. This is also why it is important to have systems in place to monitor how effective prevention interventions are. It is not enough to see if participants retain the information they have learned. What is more important is to see if they act on the information, and whether the incidence of new infections declines in the community where the intervention was applied. If not, then this is an opportunity to adjust the intervention until it has a positive effect on reducing the incidence of HIV.

Though narrow cost-benefit analysis has been used (some argue, abused) to argue against providing treatment, for example (see section 2.4.2.), cost-benefit analysis does make sense for evaluating the impact of preventative interventions. There is no point in wasting money on preventative interventions that don't work. Since AIDS prevention and treatment is massively underfunded in many resource-poor areas, it is important to get the most out of money directed towards prevention. While, as we shall see in section 3.2.1, the ultimate goal should be to ensure everyone has the agency to act on HIV prevention information (which in many settings would require empowering women), in the meantime, targeting those who are able to act will benefit the whole community.

2. Helping the Developing World Fight the HIV/AIDS Epidemic

In section 1, we saw how desperate the AIDS pandemic situation is in Africa. We also saw that unfortunately, overall, prevention efforts have not been successful enough to contain or even slow the pandemic.[5] The amount of human suffering is appalling and mind-numbing. To many, this alone – alleviating suffering and preventing premature death – would be reason enough for why relatively rich, developed countries should invest in helping developing countries (such as some southern African and Caribbean countries), to fight their respective HIV/AIDS epidemics. However, clearly this has not been reason enough to effect the actual flow of enough cash and effort into HIV prevention and treatment.

Therefore, a fundamental ethical consideration to address is: why should we care? Why should the developed world try to help the developing world fight AIDS? Some have argued we must do all it takes to help stop the epidemic purely on prudential grounds. The argument is that if we do not intervene to stop AIDS, we will be endangering ourselves. The danger identified may be economic (because the economic chaos wrought locally by AIDS will have a global impact) (Benatar, 2002), military (the destability caused by AIDS may increase conflict in developing states which may spill out to affect us as well, which is why then US president Clinton declared HIV/AIDS to be a security threat to the industrialized world) (Benatar, 2002), or to public health (if infection rates remain high in developing countries, then they will serve as reservoirs for HIV/AIDS that will continue to bring the disease to the developed world through emigration and travel). In the wake of the 11 September 2001 terrorist attacks on the United States, it is not unreasonable to also fear that such gross disparities in infection rates and prognosis of persons with HIV/AIDS between the rich and poor could result in further hostility towards the developed world. The disparity could serve to fuel hatred and thus violence against the developed world (Benatar, Daar, and Singer, 2003; Benatar, 2002).

The common theme of all these fears is that despite the Western tendency to live and think as if our own particular nation exists in splendid isolation from all others, the

[5] See section 3.4. for some successful prevention strategies that are exceptions to this discouraging trend.

world is actually an extremely interconnected place. Just as every human depends on the intricate and complex web of ecosystems all over the planet, so are all countries bound to each other through economic, political and epidemiological ties. As Paul Farmer has so eloquently argued, what happens in Haiti *does* impact what happens in North America (Farmer, 1999, p. 124-5). Humans may preoccupy themselves with political borders, but disease causing organisms do not respect these borders, and neither do the ecosystems that sustain us all.

This prudential argument – save the developing world from HIV/AIDS in order to protect ourselves - is practical, and may be good for convincing otherwise unmoved people in developed countries to help the less fortunate. It is also valuable in that it brings home how interconnected our world is, and the importance of this insight cannot be overstated (see section 3.3.1.). However, we should not be satisfied with the prudential argument on its own, but only as part of a multi-pronged ethical attack on complacency. For surely even if we would reap absolutely no benefit from it, if we are able to, we ought to help prevent the suffering caused by AIDS. This may be an obvious insight to some, but as a key foundation to all arguments in this thesis, it must be carefully argued. I will argue for helping the developing world through two complementary routes: first, with arguments grounded in justice, and second, through arguments grounded in vulnerability. But first, since both arguments flow from the historical and current contexts that caused the manifestation of the HIV/AIDS pandemic, we shall consider these contexts.

2.1. Historical Sources of Current Inequality

"Africa's past has stamped itself deeply on Africa's present."

Jared Diamond, *Guns, Germs and Steel*, p.397

When the cultures of Europe and Sub-Saharan Africa collided in the late 1400s, it was clearly Europeans who dominated. It was Europeans who came to Sub-Saharan Africa, not vice versa, and who conquered all the indigenous societies they encountered, despite fierce and valiant resistance from some of these societies (Diamond, 1999, p.397). It was Europeans who colonized Africa and who benefited enormously from the

resources they appropriated from Africa (Benatar, Daar, and Singer, 2003; Sibanda, 2000; Benatar, 2001; Benatar, 2002). Why was this the outcome of this cultural collision, rather than Africans colonizing Europe?

The reason 15th century Europeans dominated was because they had at least three distinct advantages over 15th century Sub-Saharan Africans: they had much more modern technology (including guns), widespread literacy, and the political organization required for sustaining expensive programs of exploration and conquest (Diamond, 1999, p.398). These three advantages were the eventual fruits of food production. By comparison to Eurasia, the advent of food production in Sub-Saharan Africa was delayed, therefore the benefits that flow from food production (such as technological innovation, writing and complex political organization) had not yet manifested.

Why was the onset of food production delayed in Sub-Sahara Africa? After all, Africa had a huge head start over Eurasia as the sole cradle of human evolution for millions of years, and is believed to be the source of anatomically modern humans, who then migrated all over the world. However, in comparison to Eurasia, Africa had few domesticable indigenous plant and animal species, much less arable land for food production, and has a north-south axis, which retards the spread of food production and inventions (Diamond, 1999, p.398). Let us look, briefly, at each of these factors.

It may seem surprising that Africa, renowned as *the* continent of big mammals, did not have any animals amendable to domestication. To be domesticable, an animal must be relatively docile, submissive to humans, cheap to feed, immune to local diseases, grow rapidly, and breed well in captivity. Very few wild animals fit these strict criteria (Diamond, 1999, p.157-175). Large mammals in particular are important to domesticate since they can be used to pull ploughs (like horses and oxen) – far more efficient than ploughing by hand – or for warfare (the horse revolutionized warfare). Of the 148 large mammalian candidates for domestication[6], almost half were found in Eurasia. Of these 72 species, 13 (18%) were domesticated (such as cows sheep, goats, horses and pigs). Only 1 of the 24 candidates from the Americas was domesticated. None of Africa's 51

[6] A "candidate" was defined as a species of terrestrial, herbivorous or omnivorous wild animal that on average weighed more than 45 kg (100 lbs) (Diamond, 1999, p. 162).

species were domesticated, even in modern in times[7] (Diamond, 1999, p. 162). All domestic animals now found in Africa come from Eurasia, with the possible exception of a few from North Africa. This meant that domestic animals did not reach Sub-Saharan Africa until thousands of years after they began to be utilized by emerging Eurasian civilizations (Diamond, 1999, p. 398).

Sub-Saharan Africa was not blessed with as many domesticable plants as Eurasia, either. The Sahel, Ethiopia and West Africa yielded a few native crops, but not as many as in Eurasia. Due to this paucity of wild starting material, even Africa's earliest agriculture seems to have begun several thousand years later than it did in the Fertile Crescent (Diamond, 1999, p. 399).

Clearly, Eurasia had the head start on Sub-Saharan Africa with respect to food production. Eurasia also has twice the area that Africa does. More land means more biodiversity, which gave Europeans more wild species as the raw materials for domestication, as evidenced in the above two paragraphs. All other things being equal, more land means more people (today Eurasia's population is 4 billion, compared to only 700 million in Africa), and more people mean more competing societies, which helps to drive innovation and a faster pace of development (Diamond, 1999, p. 399).

On top of the relative dearth of domesticable species and lack of arable land to grow or pasture them on, Africa's main axis is north-south (like the Americas), compared to Eurasia's east-west. This makes a difference for the development of food production and subsequent innovation because when one moves along this north-south axis, one traverses zones that differ greatly in climate, habitat, rainfall, day length and the diseases that can afflict crops and livestock. This impedes the diffusion of domestic species acquired in one part of Africa to another. Furthermore, the Sahara desert imposes a major geographic barrier between North Africa and Sub-Saharan Africa. In contrast, when the diffusion takes place between societies at the same latitude, as it did in Eurasia, these societies enjoy similar day lengths and climates. This makes the flow of domestic

[7] Even in antiquity, many African species were *tamed*, but this is not the same as domestication, where a species is selectively bred by humans. Zebras and water buffalo seem the natural equivalents of horses and oxen; unfortunately, they are nasty, aggressive and dangerous relative to their more congenial Eurasian counterparts. Many other species breed poorly in captivity, or are too high-strung, difficult to feed, etc.

crops and animals relatively easy, even between societies thousands of kilometres apart (Diamond, 1999, p. 399).

Some specific effects of Africa's north-south axis on the flow of crops are as follows. The Mediterranean crops that became staples in Egypt did not reach the equally suitable Mediterranean climate of Cape Good Hope until they were brought there by European colonists in 1652. These crops require winter rains and seasonal variation in day length, so they did not spread south of the Sudan where they encountered summer rain and little seasonal variation in day length. Similarly, the Sahel crops relied upon by the Bantu were adapted to summer rains and no seasonal variation in day length, and so could not grow on the Cape. This is why the Bantu did not displace the indigenous Khoisan people in this region as they had further north, and why agriculture did not become established in the region until European colonization. Bananas and other tropical Asian crops that are so well suited to Africa's climate could not get there over land routes. They did not arrive until 1000 AD or so, when large-scale boat traffic began across the Indian Ocean (Diamond, 1999, p. 400).

The north-south axis also influenced the flow of domestic animals from northern to southern Africa, where there were no large mammals suitable for domestication. While crops met the formidable barrier of the Sahara, livestock met the equally formidable barrier of Equatorial Africa's tsetse fly zone. Tsetse flies carry trypanosomes that wild African animals are resistant too, but are devastating to livestock. The horse, which revolutionized warfare in Egypt soon after its arrival in 1800 B.C., did not cross the Sahara to drive the rise of West African cavalry until the first millennium A.D., and they never spread south through the tsetse fly zone. Once cattle, sheep and goats reached the northern edge of the Serengeti in the third millennium B.C., it took another 2000 years for them to reach southern Africa (Diamond, 1999, p. 400).

The spread of technology and innovation also was impeded by the north-south axis. For example, pottery was recorded in the Sudan and Sahara in 8000 B.C. and did not reach the Cape until A.D. 1. Writing was developed in Egypt by 3000 B.C., and appears to have been brought to Ethiopia soon after, possibly from Arabia, but it did not reach the rest of Africa until brought by Arabian or European colonists (Diamond, 1999, p. 400).

The preceding discussion supports Diamond's main point, that European colonization of Africa and the Americas had nothing to do with differences intrinsic to European, African and Native American people themselves. "Rather, it was due to accidents of geography and biogeography – in particular, to the continent's different areas, axes, and suites of wild plant and animal species. That is, the different historical trajectories of Africa and Europe stem ultimately from differences in real estate," (Diamond, 1999, p. 401). That the gross disparities we see today in wealth and health are based largely on chance – where one's ancestors found themselves – makes arguments based on justice all the more compelling for why we should help people in developing countries fight HIV/AIDS.

2.2. Arguments Grounded in Justice

A simple definition of justice is "each getting what he or she is due" (Hooker, 1999, 456-7). Justice is the fair, equitable and appropriate treatment of persons based on what they are due or owed. "A holder of a valid claim based in justice has a right, and therefore is due something. An injustice involves a wrongful act or omission that denies people benefits to which they have a right or distributes burdens unfairly," (Beauchamp and Childress, 2001, p.226). There are many types of justice; the one most germane with respect to the HIV/AIDS pandemic is *Distributive Justice*, which concerns the fair, equitable and appropriate distribution of benefits and burdens by justified norms that structure the terms of social cooperation. These benefits and burdens include property, resources, taxation, privileges, and opportunities. Broadly defined, distributive justice refers to the distribution of all rights and responsibilities in society, including civil and political rights. Distributive justice becomes an issue under conditions of scarcity (a pressing problem given our planet's limited resources required by a burgeoning human population) and competition to obtain benefits or avoid burdens (Beauchamp and Childress, 2001, p. 226).

Two main questions particularly relevant to whether developed countries should assist developing countries afflicted by HIV/AIDS are: 1) How can and should this fair

distribution be achieved? 2) Can a theory of distributive justice extend to the international (macro) level, or is it restricted to the national/society (meso) level?[8]

The first question, how to achieve the fair distribution of benefits and burdens, is a huge topic, about which many theses could be written. Different conceptions of what constitutes the fair distribution of resources can be traced to competing material principles of justice. "All public and institutional policies based on distributive justice ultimately derive from the acceptance (or rejection) of some material principles and some procedures for specifying, refining, or balancing them, and many disputes over the right policy or distribution spring from rival, or at the least alternative, starting points with different material principles," (Beauchamp and Childress, 2001, p. 228). Beauchamp and Childress (2001, p.228) identify six valid candidates for material principles of distributive justice: to each person an equal share, to each person according to need, to effort[9], to contribution (to society), to merit, or to free-market exchanges. With respect to distribution based on need, this does not mean just any need, rather, it refers to *fundamental needs*, those needs that if unfulfilled, it would harm or detrimentally affect a person in a fundamental way (such as malnutrition, bodily injury, or nondisclosure of critical information).

When formulating public policies that distribute benefits and burdens, we can accept one, all or some of these principles. Beauchamp and Childress (2001, p. 228) suggest that each could be considered a prima facie obligation whose weight must be assessed in the particular context where they are applicable. Societies use each of these principles for determining public policy. For example, unemployment insurance, welfare and many health care programs are distributed according to need. Jobs and promotions in many sectors tend to be awarded on the basis of merit. The higher incomes of some are often encouraged on grounds of free-market wage scales (witness the grossly bloated salaries of some North American athletes), and, less frequently (unfortunately), on merit (such as superior effort in the form of overtime), or potential social contribution. At least

[8] The different levels of moral concern are explained in section 3.1.3. In brief, there is the *micro* level, the level of interpersonal morality, usually concerned with the physician-patient relationship; the *meso* level, the level of civic morality, which situates the individual within her or his community; and the *macro* level, the ethics of international relations.

[9] It appears superfluous to have effort and merit as separate categories. In my opinion, gauging a person or group's effort is a criterion used to help determine merit. Therefore, I would drop effort as a candidate since this category is subsumed under merit.

in theory, basic education is distributed to every citizen, an example of distributing an equal share to each person. The Canadian healthcare system also provides healthcare to each citizen, another example of distribution by equal share. Conflicts between these principles are a challenge, and problems arise in prioritizing and balancing them (Beauchamp and Childress, p. 228-9).

Balancing the principles is facilitated by using a framework or theory. There are several contending theories of justice. Utilitarian theories emphasize a mixture of the above distributive principles in order to maximize public utility. Libertarian theories emphasize rights to social and economic liberties, therefore opting for the free-market as the distributive principle. Communitarian theories stress the principles and practices of justice that have evolved through tradition in a community. Egalitarian theories emphasize equal access to the resources in life that every rational person values (Beauchamp and Childress, p.230).

My goal is to argue that benefits and burdens have not been and are not being distributed fairly, and that this should be rectified. How are they currently distributed? At the level of nations, especially in developed nations, examples were given above of how each of the distributive principles tends to be used. However, at the global level, benefits and burdens seem overwhelmingly distributed according to the free-market. Indeed, Benatar (2002) argues that

> Globalization is a popular term used to refer to a phase in history characterized by the impact of a neo-liberal economic system in which free market considerations are seemingly closely associated with the propagation of democracy and human rights. However, in reality over-emphasis on the market has somewhat eclipsed considerations of democracy and social justice.

Benatar (2002) goes on to question whether the flourishing of democracy or propagation of a coherent human rights agenda can truly be features of a world "in which economic globalization is perversely imposing a set of ideas and beliefs that favour market transactions above all other values." His scepticism is echoed by Tangwa (2000), who lauds modern Western medicine for its effectiveness based in the scientific method, "[b]ut Western medicine and medical technologies, like Western culture and technology in general, have the fatal weakness of being driven by apparently morally blind economic forces and interests." It is also echoed by Farmer (2001): "Antiviral therapy and complex

antituberculosis therapies are not considered cost effective [in resource poor settings] in an era in which money is worshipped so ardently that it is difficult to attack market logic without being called misguided or irresponsible."

Benefits certainly are not distributed by need – in far too many case, those who need the most have the least (Benatar, Daar, and Singer, 2003;Gershman and Irwin, 2000, p. 13-14; Farmer, 1999, p. 271-2,). If benefits (and burdens) were distributed by need, there would be far more money flowing to assist developing countries, and third world debt would already have been forgiven. As it stands, "[f]rom 1982-1990 the "South" received US$927 million in aid, grants, trade credits, direct private investment and loans...but the "South" paid out US$1.3 trillion in interest and principal on debt (excluding royalties, dividends, repatriated capital and underpriced raw materials)" (Alberta Council for Global Cooperation, 2002).[10] At least ideally, the millions in aid sent to developing countries *is* being distributed by need. However, the amount of resources being distributed in this way is dwarfed by the amount of resources being distributed by the free market. Globally, resources are not (generally) distributed by merit, since we saw from 2.1. that European advantage was largely due to historic good luck with the starting materials available to their ancestors. In other words, the European colonization and exploitation of Africa and the Americas was not "deserved" - it was not the result of anything relatively meritorious about European themselves.[11] The distribution is also not based on social contribution, since it would surely benefit everyone to make the distribution more equitable since this ought to reduce the global instability Benatar (2002) warns of.

The distribution is certainly not based on each person getting an equal share. Seventy-nine percent of the world's population lives in developing countries, and only 15% of the world's population controls 85 % of the world's wealth (Human Development

[10] Canada has taken a laudable stance on this issue. It is also one of the few countries with the distinction of unilaterally forgiving all of its Official Development Assistance (ODA) debts to the Highly Indebted Poor Countries (HIPC). In 1986, Canada became one of the first countries to provide only grants (instead of loans) in our aid programme. Since that time, Canada has forgiven over Cdn$1.2 billion in ODA debts (Fellah, 2001)

[11] This is not to say that Africans should not accept some responsibility for the state they are in. As Benatar (2002) writes: "Poor governance, corruption, internal exploitation, nepotism, tribalism, authoritarianism, military rule and overpopulation through patriarchal attitudes and disempowerment of women have all contributed to [Africa's] sad state. However, to be fair these shortcomings must be seen in the context of powerful external disruptive forces acting over several centuries to impede progress in Africa".

Report, 2001). A truly shocking statistic comes from the 1998 annual report of the United Nations Development Programme (UNDP). It calculated that it would take less than four percent of the combined wealth of the 225 richest individuals in the world to achieve and maintain access to basic education, basic health care, reproductive health care, sufficient food, safe water and adequate sanitation for every person on our planet. It also found that in the late 1990s the wealth of the 3 richest individuals exceeded the combined annual GDP of the 48 least developed countries (UNDP, 1998, p.30, 37, 50).

How can we rectify the above injustice in the global distribution of benefits and burdens? I favour an egalitarian theory of justice that uses an utilitarian approach for very circumscribed aspects of health care allotment (see below). Strict utilitarian theories on their own are worrisome because they can lead to sacrificing the well being of the most vulnerable people – the very people I argue deserve more resources – if this would maximize utility overall. This seems unlikely to occur with respect to the HIV/AIDS pandemic, since the number of people living in poverty and suffering ill health due to the worldwide disparities in wealth so dwarfs the number of people living privileged existences in developed countries that maximal utility would surely entail alleviating the suffering of the masses. Still, sacrificing the vulnerable could be the unhappy result with respect to other health issues, and as we shall see in 2.3, protecting the vulnerable is a principle I will defend.

The main problem with communitarian theories is that they are, by definition, stuck at the meso level of ethics, the level of the community. This means they lack the ability to argue for a more equitable distribution of goods and burdens globally. The only way around this would be to argue there is a global community. Though a nice way to promote solidarity, this would be stretching the meaning of "community" too far and too thin (see the following section for more definitions of community). It would also be completely at odds with the intent of communitarian theories, which is to have resources distributed according to each community's morals and traditions. It celebrates differences, while the cobbling together of a world community would seek an unlikely consensus. Even if the communitarian theories could be plausibly applied at the macro level of international ethics, these theories are backward looking (to tradition), while we need forward looking ideas. A theory based in tradition is more likely to suffer from

stagnating in the status quo. The status quo allows millions to suffer and die completely preventable deaths. I am no fan of the status quo, and so prefer a theory that encourages people to re-evaluate their traditions and moral norms. An over-reliance on tradition to inform current public policy also means that the oppressed are likely to remain that way as long as it is traditional for them to be oppressed. While it is clearly important to empower women in order to staunch the HIV/AIDS pandemic (see section 3.2.1. & 2), this may buck against tradition. Communitarianism, like ethical relativism[12], can be used to keep oppressors in power and the oppressed oppressed.

Libertarian theories are the least appealing. The current distribution of resources is a result of libertarian style distribution – by the free market. Relying on the free market thus far has resulted in the gross inequalities in wealth and health described in section 1.3.1.1. It seems unlikely the distribution of resources will improve under free-markets, since the trend under free markets so far has been that the rich have gotten richer and the poor, poorer {Gershman and Irwin, 2000, p.13-14, Benatar, Daar and Singer, 2003). The current worldwide disparities in wealth and health can hardly be called equitable. One problem with libertarianism is that it assumes everyone starts off on equal footing, therefore those who deserve the most benefits and least burdens earn them because they work harder, are smarter, etc. As we saw from section 2.1., this idea is ludicrous. We do not all start on an equal footing. The current inequalities in distribution of goods and burdens resulted largely from chance – where our ancestors found themselves. Another problem is the reliance on fair procedures to ensure fair distribution, rather than on substantive outcomes. Again, this idea is suspect since empirical evidence shows that allegedly fair procedures have resulted in the current unfair distribution of wealth.

Though not perfect, qualified egalitarian theories of justice are the most promising for righting the current wrongs. Rawls's theory of justice is the pre-eminent contemporary example of a theory of justice. This brings us to the second question – can meso level theories of justice be applied at the macro (global) level? Though geared towards the meso level of ethics, a Rawlsian style theory of justice can be extended to the

[12] Ethical relativism is useful in curbing hubris when dealing with other cultures. However, as Farmer (1999,p.9, 34-36) points out, it can be conflated with structural violence. That is, poverty can be inaccurately perceived as cultural difference.

macro level of ethics. Indeed, Rawls did include one's nationality as one of the morally arbitrary facts that should be denied people behind the veil of ignorance (Rawls,1971, sec 58). My qualified egalitarian theory of justice would distribute fundamental needs (such as food, shelter and healthcare) and other important needs (like education) by access to equal share, emergency assistance and social security services by need, and other non-essential resources (like luxury items) by merit and the free market. So there would be a hierarchy of needs, and the resources at each level of need would be distributed according to the respective material principle of justice. The main goal of distribution would be to ensure that every human being would have the resources necessary to satisfy the basic requirements of the socioecological definition of health (see 3.1.2.). Every human would need basic nutrition, basic health care (immunization, treatment of illnesses, reproductive services, etc.; more expensive and risky procedures would be another matter), basic civil and political rights and personal security. That every human being should have these needs met is a goal of human rights.

It is undeniable that the current distribution of benefits and burdens is unequal. It is also clear that we could use an egalitarian theory of justice, like the one above, to try to redress these inequalities. However, does this mean we are actually morally required to do so? There are at least two partial ways we can argue that justice requires us to act to redress global inequalities. First, on the grounds of restitution, the idea being that today's rich nations are rich largely because they exploited poor countries in the past. Colonial powers did not give a fair return for the resources they extracted from their former colonies. The trade policies of some transnational corporations are still considered exploitative. It is also useful to recall that not only have benefits been unfairly appropriated by rich nations, but burdens have been imposed on developing countries, as well. Exporting toxic waste or using cheaper (and more polluting) technology in foreign production plants are examples of this.

The argument to provide aid (and hence help with the HIV/AIDS pandemic) based on making reparations is powerful, but it does not go very far. Some thorny questions are: How do we determine what is a "fair return" for the resources that were extracted from developing countries in the past? Are current people liable for past wrongs? These questions can be overcome to some degree by focusing on continuing

patterns of power politics embedded in ongoing trade relations. But the key problem is this argument does not justify *systematic* aid from the rich to the poor, since some poor people and nations have never been exploited, and some rich people and nations never were abusers (Goodin, 1985, p. 159-60). In other words, if the current distribution of benefits and burdens had happened purely by chance, and no one had made any effort to unfairly exploit anyone else, then the rich would have no reason, based on this argument, to provide aid to needy people.

Let us turn to a second ground for international redistribution of benefits and burdens based on justice: the premise that no one has a *moral* claim on purely natural resources. The idea is that natural resources are not the result of individuals' past actions, therefore, no one can have any greater moral claim to natural resources than anyone else (Goodin, 1985, p. 160). Attractive though it is, the problem is that though people certainly do not *create* natural resources, some people have *done* something to pre-existing natural resource to make them useful to humans. In those cases it is wrong to say the person has *done nothing* and for that reason has no entitlement at all to the resource (Goodin, 1985, p. 161). The idea would be to put the value of all unimproved resources into an international kitty and divide it up equally among all humans (an egalitarian theory of justice). But before doing that, there would need to be a scheme to weigh how much of the value of the resource was based on its unimproved state, and how much on what a person did to it. This could be difficult to determine, and difficult to implement (Goodin, 1985, p. 161).

From the above, there are arguments based on justice that serve as positive arguments for developed countries to provide aid to developing countries in general, and to help them fight HIV/AIDS in particular. But they are only partial arguments. For example, if we rely on arguments based on restitution, then a wealthy country like Canada can get off the hook with respect to helping fight AIDS in Africa since we did not exploit African countries (or, at least, not on the level that England or France did).

Can justice offer a more complete argument for redistribution? If, for argument's sake, we take a libertarian view on the current distribution of resources, we could agree that the current distribution is unequal, but deny that it is *unfair*. If so, then we can only invoke the above two arguments, and they *are* only partial. However, I think it is correct

to reject the libertarian view and argue that the current distribution *is* unfair because it is largely due to chance. Overall, resources have not been allocated based on the merit or desert of individuals or communities. We can also see that there are many people whose fundamental needs are not being met. If we agree that everyone, at the very least, ought to have his or her fundamental needs met, then those who are suffering a lack are not getting what they are due. Therefore, it is entirely proper to call the current inequalities in health and wealth unjust, and we are obligated to try to redress this injustice. Though it is not, for instance, Canada's fault that Africa doesn't have the resources to fight the epidemic on its own, since it is unfair that southern Africa is in this position, we can use the egalitarian theory of justice to argue for fairer patterns of distribution. But even if we were to claim that justice does not require us to redress worldwide inequalities, the arguments from vulnerability outlined below do.

2.3. Arguments Grounded in Vulnerability

Once again, the question is, are rich countries morally obligated to assist poor ones? The standard argument against providing aid to developing countries is the notion that "charity begins at home". But as Goodin (1985) puts it so well "morally, it should not end there." To address this argument against aiding foreigners, we should consider Goodin's main thesis from *Protecting the Vulnerable: A Reanalysis of Our Social Responsibilities.* Most people believe that the special responsibilities they have towards family members, friends, clients and fellow citizens are strong moral claims. These special duties may seem so strong that we tend to think they override any positive duties we may have to aid others in general. Traditionally, the moral basis of these special responsibilities is that they are self-assumed. Goodin's main thesis is that these special duties are *not* based on these responsibilities being self-assumed, but rather on the vulnerability of the potential beneficiary. He shows that his vulnerability model explains the source of our special duties far better than a model based on self-assumed obligations. For example, we may choose our spouse, but we do not choose our parents or siblings, so any special duties we owe parents and siblings are not well explained by claiming we chose to have these duties towards them. There are many more people who are vulnerable to our choices and actions, both individually and collectively, than we have

chosen to make commitments to. He argues that we have the same strong responsibilities to these people as we do to the ones we usually identify as having strong claims on us. One of his main concerns is "the way in which special responsibilities tend to run roughshod over our general duties to aid unspecified others" (Goodin, 1985, p. 16). His objection is how narrowly these duties are usually defined. "I do not deny that we have special duties toward family, friends, clients, compatriots and so forth. Nor do I deny that those duties are particularly compelling ones. I do deny that that conventional catalog exhausts the category of people who are morally entitled to special protection from us" (Goodin, 1985, p. 205). This vulnerability model provides grounds for broader notions of interpersonal, intergenerational, environmental, and, most germane for our purposes, international responsibilities.

To return to the notion that charity begins at home, the idea is that "[a]ny moral duties we may have with respect to foreigners are allegedly overridden by our stronger special responsibilities to our compatriots. These, in turn, are ordinarily predicated on the values of 'community'," (Goodin, 1985, p. 154). "Community" can be a rather fuzzy term (Farmer, 1999, p.42). Communities have been traditionally regarded essentially as clubs, so members control the community's composition by deciding who to include and who to exclude. One way of defining a community is as a "moral community", or, "community of principle": a group of people who acknowledge reciprocal rights and duties with respect to one another. Defined as such, the claim can be made that foreigners have no rights or duties with respect to one another. However, legal rights and moral duties *do* cross national boundaries. And we can make foreigners part of own community, in a sense, by offering them aid. Indeed, when offering aid to another country, it is often with the understanding that this may establish bonds of reciprocal caring. Ottawa's Tulip Festival is a prime example – in gratitude for assistance rendered to Holland during World War II, Holland still, over *50 years* later, sends tulip bulbs to Ottawa. Therefore, to argue that we have no duty to provide aid to foreigners because they are not part of our community is a conveniently self-fulfilling prophecy (Goodin, 1985, p. 158). The circular argument would be that in order to deny aid to a developing country, one has only to deny aid to that country. That way, they cannot become part of the potential donor country's community.

Another definition of community is "a cooperative venture for mutual advantage", and is connected with the Rawlsian-Humean analysis (Goodin, 1985, p. 158). This definition provides another counterargument to the above, because the widespread foreign trade in our tremendously economically interconnected world is proof enough that community and the consequent moral obligations extend beyond national boundaries. The problem is that this definition can leave very poor nations and very poor people within any nation unprotected since they have nothing of value to trade with anyone else (Geertz, 1977). This is tantamount to inviting the rich to evade their moral responsibilities by withdrawing trading relations with the poor, and hence their consequent community status. Another problem with conceiving of community in this way is that it could be construed to imply that a government cannot give foreign aid for purely altruistic purposes. This is because to give the aid truly altruistically would mean community members would not benefit, therefore the government would not be furthering the goal of mutual advantage. The model of obligations as self-assumed re-emerges at this point to try to justify the enormous international differences between rich and poor (Goodin, 1985, p.156). It is an inadequate defence, given that the premise of self assumed obligation is false and the model from vulnerability fits reality better.

Another argument against honouring our duties to aid general others is that this could threaten to destroy those values that our special duties are supposed to serve. However, Beitz (1979, p. 157-58) argues that there is no reason to believe that the simple redistribution of primary goods, the requirement of applying Rawlsian distributive principles to the whole world, would seriously undermine local community feelings and values. Goodin (1985, p. 156) argues this point is plausible because most of us would agree that there is a difference between giving money (or some other primary good) and giving affection, for example. Indeed, the fact that it may mean more to a person in need to be given money by a friend than by a stranger is precisely because of the affection the gift from a friend represents. Goodin acknowledges the value of loyalty for preserving community values, which is why he concedes that some priority must be given to special duties owed members of one's own community over general duties.

These weaknesses mean that community as "a cooperative venture for mutual advantage" cannot serve as a positive argument for foreign aid, but is useful as a negative

argument to show that it is wrong to reject foreign aid outright. It also follows that rich countries should not pass burdens on to unseen others, as Benatar (2002) decries.

It appears that many of the arguments against foreign aid can be met. But what about positive arguments *for* assisting developing countries? In the section on justice, we saw two partial arguments for redistribution grounded in justice (either to make reparations or because there can be no moral claims to unimproved natural resources) as well as a more complete argument based on the premise that the current distribution of benefits and burdens is not only unequal, but is indeed unjust and therefore should be amended.

Goodin (1985, p. 161) believes that to argue for more systematic international transfers between the rich to the poor, we need to "fall back on a more general duty of humanity, by which our duties to give foreign assistance are traced directly to the vulnerability of needy foreigners to our actions and choice, and to that alone."

The most compelling argument along these lines was developed by Singer (1972), in reference to the 1971 famine in Bengal. He argued for the principle that "if it is in our power to prevent something bad from happening, without thereby sacrificing anything of comparable moral importance, we ought, morally, to do it" (Singer, 1972). To illustrate his point, Singer draws an analogy between the starving famine victims and a drowning child: "if I am walking past a shallow pond and see a child drowning in it, I ought to wade in and pull the child out. This will mean getting my clothes muddy, but this is insignificant, while the death of the child would presumably be a very bad thing" (Singer, 1972). To move the analogy from the drowning child to starving Bengalis, Singer (1972) clarifies that his principle

> firstly, [takes] no account of proximity or distance. It makes no moral difference whether the person I can help is a neighbor's child ten yards from me or a Bengali whose name I shall never know, ten thousand miles away. Secondly, the principle makes no distinction between cases in which I am the only person who could possibly do anything and cases in which I am just one among millions in the same position.

In order to apply Singer's principle, we need to show several things. First, that we are in a position to render the appropriate assistance required by those in distress. Second, that we can render the assistance without "sacrificing anything of comparable

moral importance", i.e., "without causing anything else comparably bad to happen, or doing something that is wrong in itself, or failing to promote some moral good, comparable in significance to the bad thing that we can prevent" (Singer, 1972). And third, in order to explicitly use Goodin's vulnerability model, we should also add that those in distress are vulnerable to our actions. I think the case can certainly be made that developed countries should assist African and Caribbean countries stricken by the HIV/AIDS epidemic because we do have the resources to help avert a bad outcome (more suffering and death due to an escalating pandemic), we can find ways to do so without causing an equally bad outcome, and developing countries certainly are vulnerable to the actions of richer nations.

With respect to averting an equally bad outcome, obviously it would not do for a country to give so much that it became impoverished itself, for instance, and its citizens suffered as a result. This has been a concern, for some fret over the shear magnitude of what we would have to give in order to relieve the more general problem of poverty. For example: "we would...each be morally required to give up our entire way of life and devote ourselves full time to the amelioration of world poverty, disease and overpopulation" (Fishkin, 1982,p. 75). Goodin's mild rejoinder to this is that it is not clear that our "community attachments" should depend at all on our wealth or material possessions (1985, p. 157). My more vitriolic reply is that losing some aspects of our way of life may be a good thing, given how shallow, materialistic and selfish the West has become. These aspects of our way of life don't merit preserving, especially if they are maintained at the cost of unseen, exploited people in other countries (Benatar, 2002).[13]

A related objection to Singer is the "drop in the bucket argument". The argument is that my donation to Oxfam, for example, makes no significant difference to overall world poverty. Therefore it makes no moral difference whether I make it or not (Goodin, 1985, p. 163). In response, Singer (1979, p. 170) and Glover (1975) rightly argue the

[13] The other argument is that we have been sold a lie – that we *need* consumer goods in order to be happy. Indeed, some would argue the treadmill many people live on – working to make enough money to buy things that are supposed to make them happy, but the happiness is short lived, so they need more and more and on and on – will not only *not* make us happy, it will make us sick and miserable as well. Ours is a materialistic, consumerist culture, and it is time we question our values. See Tangwa (2000) and Benatar, Daar and Singer (2003) for their criticism of the Western obsession with money.

donation certainly makes a world of difference to the one or a few persons rescued from grinding poverty. But Goodin is leery of the merits of individual attempts to render aid to distant people in distress. He writes that the problem with one-on-one style aid programs, such as adopt-a-child type programs, is that they neglect the larger economic and social context of the aided individual, and so can do as much harm as good to the putative beneficiary as well as to those around her or him. He stresses the need for comprehensive, well-integrated schemes, which is beyond the capability of individuals to provide. It may even be, he claims, beyond the ability of charities and even national governments to supply these schemes (Goodin, 1985, p. 163).

Singer's drowning child example has been criticized because it has been pointed out that a better analogy would be a child drowning at a crowded beach, where the moral agent is just one of the many people who could save the child, instead of the only person there to help. Singer addresses this by pointing out that though there may be a psychological difference between being the only person who can help and being one of many who could, because one may feel less guilty for not helping if other people are also not helping, it does not make a difference morally. "Should I consider that I am less obliged to pull the drowning child out of the pond if on looking around I see other people, no further away than I am, who have also noticed the child but are doing nothing? One has only to ask this question to see the absurdity of the view that numbers lessen obligation" (Singer, 1972). Goodin adds that each person is equally "on the hook" until someone acts to help the child (Goodin, 1985, 162, and, especially, chapter 5).

Another attack is to argue that proximity between the potential saviour and the victim *does* matter. Singer defends not taking proximity into account: "If we accept any principle of impartiality, universalizability, equality, or whatever, we cannot discriminate against someone merely because he is far away from us". Goodin explains the objection that proximity does matter may be grounded in our dislike of morality to be arbitrary – there are many needy strangers, and we can't help each one, so how do we choose? Instead, it may be tempting to just help people you know, since there are far fewer of them so you don't have to choose between them. But he argues we shouldn't let arbitrariness bother us, first, because it is better to be arbitrary in fulfilling duties than to fail to fulfil the duties altogether, and second, because who we know, ie, who we happen

to meet in our life, is, at least morally, arbitrary (Goodin, 1985, p.162). But, Goodin does think our duties to aid distant people is a collective duty rather than an individual one. In part, this is because although modern communication technology makes it much easier for individuals to get accurate information about distant others and how to help them, he still thinks national governments and other collective organizations are in a better position than individuals to collect the relevant information necessary to arrange for provision of what the needy actually need. It is also because the coordination of collective efforts are better left to governments and organizations to "better overcome all the standard practical obstacles to effective international assistance" (Goodin, 1985, 165-6). This does not exempt individuals from their responsibility to render assistance. It simply modifies what they should do. Goodin thinks the primary role of individuals should be to take political action to get our governments to organize, finance, apply and maintain the multilateral interventions that will help developing countries.[14]

An obstacle that remains is the "disincentive effect." (Richards, 1971, p. 139). The concern is that if we really equalized the distribution of benefits and burdens, then this would reduce our global output and make things worse for everyone, and the poor would have nothing to strive for. Of course, the rich should not purposely try to do this. Goodin's response is that we may have to take the delict of the wealthy as given and find ways to discharge common responsibilities without them. Perhaps, for example, we could send expertises to developing countries so they would be less vulnerable to blackmail by the rich elite (Goodin, 1985, p.166).

In the end, the only way Goodin (1985, p.167) thinks we could excuse the rich from their duties to the poor is a peculiar variant of "ought implies can". The idea is it makes no sense to say people ought to do what they cannot do. So the claim is that if it is not psychologically possible for the rich to give as much as they morally should to the poor, then we cannot morally require them to. In other words, to expect them to give their proper share and give up their second luxury SUV, for example, would be a supererogatory act, not a morally obligatory act. But the powerful rejoinders are first,

[14]But, as Singer (1979, p. 180) argues, though we may accomplish more by campaigning than by making donations, why not do both? As stated above, this means you practice what you preach. However, I suppose the decision of whether or not one makes a donation depends on whether one is as leery as Goodin about the effectiveness of such donations. This is a question for another time.

human psychology is not static, and second, "what it is possible for a man to do and what he is likely to do are both...very greatly influenced by what people around him are doing and expecting him to do" (Singer, 1972). Therefore, if our society truly made an effort to think globally and become less materialistic, our norms would change such that redistributing resources more justly would not appear to be an unreasonable, and hence undoable, act.

To summarize the argument for helping fight HIV/AIDS in developing countries: it is abundantly clear that benefits and burdens are unequally distributed worldwide, and that this inequality has resulted in the patterned distribution of HIV/AIDS with those low on the socioeconomic ladder being most vulnerable to infection. On the grounds of justice, some specific instances of these disparities should be remedied by the ex-colonial powers who profited from the exploitation of their colonies, and by any countries or multinationals who are continuing to employ exploitative trading practices. The idea that no one has a moral claim on unimproved natural resources, along with the fact that it was historic vagaries of chance that determined who ended up with a disproportionate amount of these resources, prove that not only is the current distribution of resources unequal, it is also unfair. Therefore, we ought to remedy this injustice. However, even if it were proven that the distribution was not unjust, we can argue that because developing countries are vulnerable to the actions of developed countries, we ought to protect them and assist them. In this specific case, this means we ought to help them to fight the HIV/AIDS pandemic.

2.4. How Much Have We "Helped" So Far?

> If he should observe that the inequalities of wealth and opportunity are excessive – that the rich are too rich and too few and the poor too poor and too many – he knows that the body politic of that particular community is not well. However the majority of men are conscious or unconscious hypocrites; they are far more afraid of the publication of evil than of evil itself, and if they enjoy privileges which would not bear scrutiny they prefer darkness to light. Such people are very apt to mistake their own selfish interests for those of the community, to resent the diagnosis of a disease on which they have managed to thrive, and to browbeat the physician who exposes the evil and attempts to cure it.
>
> - Sarton G. Quetelet. *Isis* 1935; 65(6) 24, quoted as endpiece of BMJ, 2002, 324:345.

Having established that we ought to do something to help developing countries control their HIV/AIDS epidemics, the question is, how are we doing? If we have already done plenty to help, then my thesis can end here.[15] If not, then we can turn to recommendations of what would be beneficial things to do. The following shows that our efforts so far do leave much to be desired.

2.4.1. The Lack of an Effective AIDS Vaccine or Microbicide

One of the great hopes for stopping the HIV/AIDS pandemic is to develop an HIV vaccine to immunize people from the infection, and perhaps to even treat those who have already become infected. Though we shall see in section 3.2.2. that I do not think searching for a vaccine alone suffices to treat the multiple dimensions of the HIV/AIDS pandemic, I agree it is an extremely important goal. While researching the current state of HIV vaccine research in 2002, I began to notice that the vast majority of the papers I came across were about research on the HIV clades (commonly called "strains") that affect people in developed countries, not on the clades of HIV that are afflicting Africans.

Briefly, HIV, the human immunodeficiency virus, is a retrovirus with a particular knack for mutating rapidly, thus making it even more difficult for the human immune system to develop resistance to it (Weiss, 2001). There are two main types of HIV: HIV-1, which originated in chimpanzees and HIV-2, which originated in the sooty mangabey. HIV-2 affects very few people. HIV-1 is further subdivided into groups and clades. HIV-1 groups N and O stayed close to the initial cross-species transfer site in Africa, but group M dispersed widely and diversified into the clades (or subtypes) we know as A-H. Clade B colonized the Americas, C is the most common in Africa (A is also present), and E went east as far as Thailand and is common there (Weiss, 2001). While there are some indications that the newer vaccines may be effective across the clades, this is still uncertain and was less likely with earlier vaccines. Therefore, if developing a vaccine to protect vulnerable people in developing areas, especially in southern Africa, the hardest hit area, was really the goal of the millions spent in research so far, we would expect that the majority of the research would have been on the clades found in Africa, namely, clades C and A. And we would expect that a significant number of the trials would have

[15] notice the remaining pages are not blank...

been conducted in Africa. To find out what was actually being done with respect to HIV vaccine research, I went to http://www.iavi.org/ and did a search on all putative vaccines that had ever been tested in clinical trials in any phase (so the search included phase I, II and III). Tables 1 and 2 summarize my findings.

Table 1. Percentages of HIV vaccine trials conducted or ongoing on each of HIV-1 type M, clades A through E and where the trials were located.

	Number out of 101 trials	Percentage
Number of trials conducted in Africa	3	3%
Percentage of world-wide HIV/AIDS cases in Africa	-	75%
Number of trials on HIV-1 clade A	6	6%
Number of trials on HIV-1 clade B	82	81%
Number of trials on HIV-1 clade B & E	8	8%
Number of trials on HIV-1 clade E	1	1%
Number of trials on HIV-1 clade C	0	0
Number of trials on HIV-1 clade D	0	0
Number of 'multivalent' trials*	2	2%
Unclear which clade intended for/ not mentioned	3	3%

(*derived from 15 HIV-1 strains; see AVG 017 and 023. AVEG 023 also includes HIV- 1B vaccine only)

Table 2. Percentages of HIV vaccines based on HIV-1 type M, clades A through E

Number of vaccines based on	Number out of 47 vaccines	Percentage
HIV-1 clade A	2	4%
HIV-1 clade B	35	74%
HIV-1 clade B & E	3	6%
HIV-1 clade E	3	6%
HIV-1 clade C	0	0
HIV-1 clade D	0	0
Number of 'multivalent' trials*	3	6%
Unclear which clade intended for/ not mentioned	1	2%

According to my data, there are no vaccines being developed against the most common HIV clade in Africa, C, and hence no trials have been conducted for this clade. Only 4 % of the vaccines are against clade A, representing 6% of trials. Unless any of the other vaccines are effective across the clades, there are no vaccines in the pipeline that will benefit the majority of Africans at this time. In contrast, clade B, the one that

affects North Americans, people who already have access to effective treatment for AIDS that is unavailable to most Africans, represents 81% of clinical trials and 74% of the putative vaccines. The combination trials of Clade B and E represent the phase III trials that are also occurring in developed countries as well as Thailand. There is hope that vaccines developed against HIV-1 clade B may also work against other strains, but this may be overly optimistic given that HIV-1 envelope proteins can differ greatly (Gaschen, Taylor, Yusim, et al., 2002). These data emphasize a wearily disturbing trend – those who have the most just keep getting more.

But not only has the focus of the HIV vaccine research been disturbing, so has the pace. Cohen's book *Shots in the Dark: The Wayward Search for an AIDS Vaccine*, reveals the lack of a truly urgent and concerted effort to find a vaccine against AIDS. Cohen notes that one particularly strong factor that contributed to this inertia was the lack of financial interest from large pharmaceutical companies. After all, they could make more profits from *one* star drug than from the entire vaccine market. Thus, large pharmaceutical companies were more concerned with *appearing* to be "racing" to find a vaccine (to maintain good public relations), when in reality they weren't truly dedicated to this goal (Cohen, 2001). Microbicides have met similar problems. Despite over 15 years of urgent calls for an effective vaginal microbicide, research has inched forward (Richardson, 2002). Though it is impossible to prove that had more effort been put into developing HIV vaccines or anti-HIV microbicides we would have something to show for it by now, the case is very strong that more could have been done, and that more still needs to be done.

2.4.2. The Lack of Effort to Bring Treatment to the Poor

Another front where developed countries have been failing in the global fight against AIDS is with respect to treatment. Ninety percent of those with AIDS still have no access to HAART (highly active anti-retroviral therapy) (Thomas, 1998; Cameron, 2000; Attaran and Gillespie-White, 2001). This is depressing, but there are some positive trends – Brazil is doing very well at treating its people and the cost of treatment keeps dropping, for many reasons. Still, last year two studies published in the Lancet essentially argued it was not cost-effective to treat AIDS in Africa, that the money should be spent

on prevention instead (Creese, Floyd, Alban, et al., 2003; Marseille, Hofman, and Kahn, 2003). The error in this kind of thinking is not just that it is a narrow perspective to only consider economics, but also that it assumes that this is a zero sum game where money spent on treatment reduces the amount of money that could have been better spent on prevention. But time and again, it has been proven that AIDS prevention and treatment are mutually reinforcing. First, because the promise of treatment gets people to come in and get tested (it is not surprising that people are reluctant to be tested when a positive result is equivalent to a death sentence – some would rather not know, which could put others at risk), second, it provides a medium to distribute prevention interventions, and third, treatment does reduce the viral load in those with AIDS, making them less infective even if they do not, or cannot, practice safer sex (or safer injecting practices). Of course, many criticized the studies I just mentioned: "Treatment and prevention are inextricably linked; offering treatment strengthens prevention measures, and prevention is less effective without treatment. Cost effectiveness alone is a misguided way to justify one over the other. Social and economic benefits are vast: children saved from being orphaned, and longer life means people can contribute to society" (Goemaere, Ford, and Benatar, 2002). And Peter Piot, Director of UNAIDS and co-authors similarly wrote:

> Prevention can help to avert such threats in the indeterminate future. However, people, societies, economies, and nations are at risk now because of premature deaths of those already infected. Only treatment can change that trajectory. Countries with the greatest infection rates are at disproportionate risk, making treatment there even more urgent.
>
> The economic justification for HAART is its leverage effect on HIV prevention and its potential to secure the future against disabling social and economic ills. Prioritization is not an issue of lives today over lives tomorrow; the quality of the future depends crucially on the quality of life today. (Piot, Zewdie, and Tümen, 2002)

Those criticizing a narrow cost-benefit analysis as a means to devise policies for managing the HIV/AIDS pandemic could have gone a step even further, and attacked narrow economic analyses of the "price" of helping developing countries, period.

2.4.3. More Evidence of Lack of Effort

Another criticism of developed countries is the "bleed and leave" type trials that have been conducted in developing countries. Exploitative research practices are just as repugnant as exploitative economic policies, and should not be tolerated. Another example of injustice with respect to research has been the lack of research on the diseases that affect people in developing countries. People in developing countries carry 90% of the disease burden, but only 10% of the money spent on research globally is spent on researching the diseases that afflict them (Benatar, Daar, and Singer, 2003).

Another critique from Benatar is the lack of *application* of existing knowledge. Dr. Benatar explained that the developing world does not, in general, need research on new therapies, since many of the health problems afflicting the developing world could be solved or at least greatly helped by applying existing technologies (Benatar, 2003). There is a tendency for researchers and funding bodies to be obsessed with gaining knew knowledge. But far more important to the millions suffering from preventable or curable disease is that there be research to ensure the most effective and efficient administration of interventions that we already know work, and the political will, financial support and mobilization of qualified people to provide these interventions. Most of the deaths of children under age 5 are due to diarrhoeal diseases, the vast majority of which are entirely preventable through better sanitation, or curable through antibiotics and re-hydration. These are low-tech, well known, cheap methods. And perhaps that's part of the problem – they aren't "sexy", innovative and groundbreaking treatments, so they don't generate enough interest.

Finally, one of my biggest concerns is the lack of concerted effort to treat the cause, not just the symptom, of HIV/AIDS. This concern will be detailed in section 3.2.

The purpose of section one was to illustrate the dire situation in Africa. The purpose of this second section was first, to argue that developed countries have a duty to help the developing world fight the HIV/AIDS pandemic, and second, to show that we have not done enough to help. The goal of the following third section is to use the Socioecological Medicine Model to inform considerations of what developed countries ought to do to help against HIV/AIDS.

3. The Socioecological Medicine Approach and the HIV/AIDS Epidemic

The main purpose of the previous section was to argue that we, the developed world, *should* expend considerably more effort and money on fighting the HIV/AIDS epidemic in the developing world. This argument in itself is not terribly controversial: former Canadian Prime Minister, Jean Chrétien, who hosted the 2002 G-8 summit at Kananaskis, Alberta, championed the New Partnership for African Development (NEPAD). Modelled on the Marshall Plan that rebuilt Europe after World War II, it aims to triple economic growth, and reduce poverty by half (CBC, 2002). It also recommends accelerated debt relief, increases in development aid and better trade terms (CNN, 2002). It was met with a lukewarm response, but at least the intent was good, and it shows that Africa is on the agenda of the G-8. Then, on 28 January 2003, in his State of the Union address, US President George W. Bush announced he would ask Congress for $10 billion in new funds over the next five years to help fight the AIDS pandemic in Africa and the Caribbean. Another $5 billion will be re-allocated from existing programs (Nolen, 2003). Though critics note that most of the funds are not going to the beleaguered Global Fund to Fight AIDS, Tuberculosis and Malaria, which has been struggling to raise enough money to achieve its mandate (Nolen, 2003, A9), it is still a landmark promise. Why the sudden change of heart, after relative indifference to Africa's crisis?

According to *The Globe and Mail*, in the six months leading up to the announcement, Bush heard from many quarters about AIDS in Africa. His treasury secretary, spiritual counsellor, most trusted security advisers and his Republican colleagues all urged him to make the generous pledge. Not least of these influences was his then treasury secretary, Paul O'Neill. In June 2002, O'Neill visited Africa, where he saw the suffering and devastation first hand (Nolen, 2003, A1). Upon his return, he was able to communicate to Bush that they were "on the wrong side of this issue". In July 2003, Bush went for a five day tour of Africa and witnessed this same devastation and suffering, and reaffirmed his pledge to help (Bush, 2003). The extent of the suffering is perhaps the most eloquent and effective argument for doing something about HIV/AIDS in the developing world. I have hoped to provide arguments to both explain this intuition and to give it moral force.

If we accept that we are morally obligated to do something, then we must turn to the question of *what* we should do. The specifics of what kind of public health and development measures should be implemented are better left to those in these respective fields. What I would like to do is develop and advocate the "Socioecological Medicine Approach" as a conceptual tool for thinking about the HIV/AIDS pandemic that may be useful for arguing for certain kinds of interventions.

3.1. Definitions and Clarifications

I hope the approach described below may act as a useful and fruitful perspective on the HIV/AIDS epidemic. The management of an individual patient is like a microcosm of how global human health can be managed. The Gaia hypothesis about earth, where the global ecosystem is conceptualized as a "superorganism"[16], is instructive for shifting the analysis from the archetypical individual patient to conceptualizing humanity as a whole as a sort of "superpatient". There is a Western, biomedical approach to health care (also referred to as "allopathic medicine", and "conventional medicine"), and a more holistic, complementary approach. It is unfair to both approaches to pretend that there is a sharp divide between them. But for the purpose of developing my model, I will at times exaggerate the differences between the two approaches. Definitions and clarifications are as follows.

3.1.1. The Many Facets of "Medicine"

In this work, the term *biomedicine* refers to the standard, conventional and empirically based medicine that tends to be practiced in Western, developed countries. Though health promotion, disease prevention and treatment are all goals of biomedicine, treatment still tends to predominate. Treatment may involve the familiar pharmacological interventions and surgery, as well as diet, exercise and stress management. Then there are many other kinds of traditional or recently developed

[16] Bacteria species are also sometimes conceptualized collectively as a "superorganism", to help explain why they are so effective at adapting to host resistance and to antibiotics. Instead of viewing each species of bacteria as discrete, they are viewed as temporary manifestations of the diversity of a global swarm of bacteria which is contiguous. This makes a lot of sense for bacteria, since plasmids can be exchanged between species. (See Markos, 1995; Mathieu and Sonea, 1995; Sonea and Mathieu, 2001)

healing methods that fall under the terms *alternative*, *complementary* or *holistic* medicine. These terms overlap, but their meanings and connotations show marked though subtle differences. The term *alternative medicine* tends to convey the sense that the therapeutic strategy in question is being used as an alternative to biomedicine. An archetypical example would be a terminally ill cancer patient refusing chemotherapy and surgery in favour of a homeopathic remedy. The term *complementary medicine*, which encompasses the same therapeutic strategies as alternative medicine, tends to convey the idea of the therapeutic strategy being used in *conjunction with* biomedicine. For example, a cancer patient may opt for chemotherapy and surgery, and see an Ayurvedic nutritionist and a massage therapist as well. "Alternative medicine" sounds like, and may be perceived as, a threat to biomedicine, while "complementary medicine" sounds like it is meant to work with biomedicine, to complement it, as the name suggests (Snyder and Lindquist, 2001; National Center for Complementary and Alternative Medicine (NCCAM), 2003). While the two terms are often used interchangeably, there seems to be a marked shift from using the term "alternative medicine" to using the term "complementary medicine". I think this reflects a shift in the Complementary/Alternative health community from perceiving themselves in an adversarial role against biomedicine to accepting that both perspectives are valid and that non-biomedically based therapies can and often should be used in conjunction with biomedical therapies. It may also reflect physicians recognizing and accepting that their patients are increasingly seeking complementary care (Snyder and Lindquist, 2001; Bell, Caspi, Schwartz, et al., 2002).

The term *Holistic Medicine*, which has inspired many elements of the conceptual framework I hope will prove useful for analyzing the HIV/AIDS pandemic, goes even further than the term complementary medicine, for the concept explicitly entails drawing from both complementary medicine and biomedicine. *Holism* (also more logically but less frequently spelled *wholism*), is defined in philosophy as "any of a wide variety of theses that in one way or another affirm the equal or greater reality or the explanatory necessity of the whole of some system in relation to its parts," (Addis, 1999, 390-1). Sometimes, a person may use the term "holistic" with respect to a therapy as a synonym for "alternative". As we saw above, this implies choosing a complementary/alternative therapy over a biomedical therapy, but this is not the usual way the term is used, and is

certainly not the meaning I wish to imply. When used in the context of "holistic" concepts of health or in the above term "holistic medicine", the term means that the whole person and whole situation is being taken into account, that a "big picture" view is being taken. The American Board of Holistic Medicine (ABHM) and American Holistic Medical Association (AHMA) define "Holistic Medicine" as "the art and science of healing that addresses the whole person - body, mind, and spirit. The practice of holistic medicine integrates conventional and complementary therapies to promote optimal health and to prevent and treat disease" (American Board of Holistic Medicine (ABHM), 2003; American Holistic Medical Association (AHMA), 2003). Another author explains that when the term "holistic" is applied to illness, "it is called holistic medicine and includes a number of factors, such as 1) dealing with the root cause of an illness, 2) increasing patient involvement, and 3) considering both conventional (allopathic) and complementary (alternative) therapies"(Walter, 2003). When I use the term "holistic" in this work, that is what I am attempting to convey – a broad perspective that looks at the whole picture and keeps peeling back the layers of causes, like the layers of an onion. Just as holistic medicine seeks to treat the whole person, I hope we will move towards treating the whole population of people who already are or potentially could be affected by HIV/AIDS. In other words, I hope the approach will help encourage effective and compassionate care for those already infected and help prevent others from becoming infected by reducing their vulnerability to HIV transmission.

3.1.2. Health as a Means, Not an End

What is health? To begin, disease is an abnormal, medically defined change in the structure or function of the human body, while illness (or sickness) is an individual's subjective experience of disease and consequent inability to function normally in social roles (Shah, 1998,), p. 2). Biomedicine has been moving away from the traditional definition of health as merely the absence of disease. This is due in part to a near consensus that Descartes' dualism is false – the mind and body do not function in strange isolation of each other (Snyder and Lindquist, 2001). Rather, they are interconnected, which is why stress and other psychosocial factors can impact on an individual's health. For example, Shah (1998, p. 1) writes that "[h]ealth is multidimensional: it is not merely

the presence or absence of disease but also has social, psychological, and cultural determinants and consequences." The World Health Organization (WHO) was the first to acknowledge this multidimensional nature of health with the following 1948 definition: "A complete state of physical, mental and social well-being and not merely the absence of illness"(Culyer, 1983,). WHO has been moving in an even broader, more holistic direction with what Shah (1998, p. 1) calls its "socioecological" definition of health that recognizes the inextricable links between the individual and her or his environment. Thus, health is defined as: "The ability to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. Health is therefore a resource for everyday life, not the objective of living. Health is a positive concept emphasizing social and personal resources, as well as physical capacities"(Canadian Public Health Association and WHO, 1986,).

This socioecological definition of health underlies my Socioecological Medicine Approach. It strengthens the argument that only treating the catastrophic fallout of the HIV/AIDS epidemic, with better anti-HIV drugs or vaccines and microbicides, is not enough, for all this does is satisfy the minimalist requisite of an absence of disease. To truly improve the health of those at risk of HIV/AIDS, we must reduce the vulnerability that puts them at risk of AIDS, other diseases, and other negative consequences in the first place (see 3.2.1.).

3.1.3. Incorporating Justice: The Levels of Moral Concern in Biomedical Ethics

For my approach to do the work I want it to, it must also be just. Otherwise, it cannot argue as powerfully for spending more on the treatment and prevention of HIV/AIDS in economically disadvantaged populations. In section 2.2., I argued we should do more to help because this is the just thing to do. Again, a simple definition of justice is "each getting what he or she is due" (Hooker, 1999, 456-7), p. 456).

The reason I want to add justice to my approach is because both biomedicine and holistic medicine have not tended to make sure access to the resources necessary for health was fair. There are several levels of moral concern with respect to biomedical ethics. There is the *micro* level, the level of interpersonal morality, usually concerned with the physician-patient relationship and the rights and duties peculiar to it. At this

level, basic human needs can be identified as self-determination for those considered to be rational and autonomous, and respect for human dignity (Benatar, 2002). There is the *meso* level, the level of civic morality, which situates the individual within her or his community and considers such things as public health, the management of resources and the common good. At this level, human needs extend to requirements for order and justice within the community. Such considerations necessarily impact on the physician-patient relationship. The interaction of these two levels also brings about perennial questions of how to strike a balance between the rights and needs of individuals and the common good of societies. Finally, there is the *macro* level, the ethics of international relations. Here, human need extends to encompass requirements for security and a safe environment. At this level, the individual is conceived of as an autonomous individual sharing equal rights with all other citizens of our world, "in a relationship of interdependence in which the rights of some should not be acquired at the expense of the rights of even distant others" (Benatar, 2002, p. 172).

My concern with both biomedical and holistic healers is that they, and their respective organizations, tend to focus on the individual patient, and allow others to deal with the problems of distributing resources. In other words, they seem stuck at the micro level of biomedical ethics, with some forays into the meso level realm of civic morality in the form of debates on resource allocation. Indeed, public debate in Canada tends to stick to these levels, with much coverage granted to debates on access to new technologies, organ transplants, etc. Holistic medicine also tends to concern itself with individuals and how they can optimize their own health, with some articles appearing that argue for coverage of holistic therapies (which would increase access to these therapies) or make recommendations for dietary, spiritual and occupational changes that could make our society healthier. This emphasis on the micro level is not surprising in such an individualistic society. However, as Benatar (2002, p.172) warns: "[t]here is also a need to go beyond advocacy for rights to include consideration of duties necessary for rights to be widely satisfied. Lack of attention to civic responsibilities allows individuals and powerful groups to place their own needs above those of all others – and thwarts the achievement of such goals as universal access to health care...and curbing the spread of infectious disease."

3.1.4. What's in a Name?

I wanted the just international distribution of resources to be an intrinsic part of my model. Therefore, it is fitting that though I think there is much to learn from both holistic and biomedical approaches to health, I have chosen to name my framework the "Socioecological Medicine Approach". Given the influence and inspiration drawn from holistic medicine, I had considered naming the model the "Holistic Medicine Approach". However, due in part to pragmatic concerns from colleagues that the term "holistic" may undermine my model's chance of meeting a receptive audience, I chose to use the term "Socioecological" instead. Indeed, Farmer (1999, p. 96) describes a similar unease with using the term "holistic" to describe his perspective: "I found a perspective – which might be termed "biosocial" rather than the fuzzy, now New Age term "holistic" – that has since served me well." The term "holistic" actually has a thoroughly scholarly pedigree, and is a concept particularly important in the philosophy of science. However, Farmer is right that to most readers, the term suffers from connotations of New Age flakiness. Fortunately, "Socioecological" is better suited to my perspective, anyway, since the "ecological" part of the name conjures connotations of ecological systems and the many links that circulate resources, the raw materials of life, between individuals and communities, while "socio" links it to the idea that for humans, social factors affect this flow of resources, which in turn impacts health.[17] The model advocates redistributing resources more fairly, such that vulnerable populations may be made less vulnerable.

Now that we are clear about the terms used in this work, we will consider how the Socioecological Medicine Approach offers a perspective that may help with the fight against HIV/AIDS in the following sections. Why has holistic medicine been so influential to my framework? An approach inspired by holistic medicine seemed natural since only the lucky few benefit from all that biomedicine has to offer (less than 10% of those with HIV/AIDS have access to HAART (Thomas, 1998; Cameron, 2000; Attaran and Gillespie-White, 2001), many don't even receive medicines for the opportunistic

[17] In dealing with "the whole person", holistic medicine also seeks to address the patient's spiritual needs. This aspect of holistic medicine does not really carry over to a concept of socioecological medicine, and that is fine. I have no quarrel with taking a patient's spiritual state into account when attempting to heal them, but my model is solidly secular and I will leave religious/spiritual constructions and responses to the HIV/AIDS pandemic to others.

infections resulting from a compromised immune system). The rest rely on traditional medicine and folk remedies to try to ease the myriad symptoms of HIV/AIDS. But even in the West, complementary therapies are sought out by patients, often to try to combat the toxic side effects of HAART, or simply to improve over-all well being. And before there were effective antiretrovirals, Western patients depended on holistic medicine even more.

Why is this approach a helpful perspective? I will argue it is because it can be used to push for ethical and effective ways of dealing with the epidemic. The idea is to take some of the characteristics and insights of holistic medicine that tend to be applied to individuals (the micro level) and apply them at the macro level of managing the HIV/AIDS pandemic. In a manner reminiscent of the Gaia hypothesis (where the entire earth is viewed as a superorganism), I will use the holistic management of a patient threatened by disease as an analogy for managing the global human population, threatened with pandemic disease. The following characteristics of the model will be considered. 1) It is holistic, because it looks at the whole situation and seeks solutions to help stem the epidemic that are both short-term, primarily biomedical in origin (such as getting treatment to more people and encouraging the development of anti HIV/AIDS vaccines and microbicides) and longer-term, more sociological in origin (such as promoting interventions that will reduce gender and socio-economic inequality). In other words, the approach argues that both symptoms and their root causes should be addressed. It embraces web causation where causes and effects (symptoms) influence and interact with each other in a complex system, as opposed to linear causation; see section 3.2.), and emphasizes interconnectedness. 2) The patient plays an active role in her or his care, just as I would want communities to. 3) It encourages adopting a more harmonious place in our environment (so it may help prevent new epidemics from developing).

3.2. Holistic: Treating Causes as Well as Symptoms

One of the underlying premises for my analysis has been that AIDS is merely one of the newest symptoms of larger problems, namely, Inequality and Poverty. People who

are particularly vulnerable to HIV/AIDS are rarely vulnerable to it alone – they are generally also vulnerable to other STDs, to tuberculosis and other non-sexually transmitted diseases, to malnutrition and starvation, to violence, and, of course, to poverty. The vulnerability works at both the local and global levels. Persons are especially vulnerable to HIV/AIDS and other scourges because they occupy the lower rungs in their own society. Countries are particularly likely to have a high incidence of HIV/AIDS and other calamities if they occupy the lower rungs in the world society, i.e., if they are a developing country. Therefore it follows that if these inequalities could somehow be relieved, the incidence of HIV/AIDS and other indices of suffering would be reduced.

Like biomedicine, holistic medicine seeks to promote health and to prevent and treat disease. However, holistic medicine emphasizes disease prevention and health promotion more than biomedicine (albeit at the individual level). There is a continuum running from optimal health, to satisfactory health, to a pre-symptomatic or mildly symptomatic state, to disease manifestation. Once the threshold has been crossed and disease is manifest, the continuum continues from mild morbidity and/or disability, to severe morbidity and/or disability, to death. It is possible to intervene at many points in the continuum. It is common sense that intervening too late – such as when the patient's symptoms are so severe he is hovering between life and death – is generally a lousy plan, though sometimes a disease progresses so rapidly there is no choice except for a very late stage intervention, and sometimes these interventions do work. However, most conditions respond more favourably to early treatment. But to invoke the old axiom once again, "an ounce of prevention is worth a pound of cure". Preventing disease means intervening further upstream – before a disease manifests – to spare patients and the community they inhabit from the negative consequences of specific diseases. Considerable effort, albeit to often disappointing effect, has been put into preventing HIV/AIDS (see section 1.3.). Health promotion intervenes even further upstream, encouraging people to achieve optimal health so they will be less susceptible to any kind of disease.

While it may be common sense that early treatment is preferable to last minute treatment, interventions even further upstream – in the form of disease prevention and

health promotion – have not been the traditional focus of biomedical health care providers. Biomedicine has been primarily concerned with diagnosing and treating existing disease in individuals (Bunker, Frazier, and Mosteller, 1995). Until recently, the quality and quantity of health care offered by health care providers in hospitals (such as doctors and nurses) was widely believed to be the chief factor determining the health of the population they served. This reflects the pre-eminence of the biomedical model of health (Shah, 1998, p. 6). Indeed, by most accounts modern biomedicine has resulted in remarkable improvement in the world's health. We now have the knowledge and technology to eradicate almost all nutritional deficiencies and infectious diseases. WHO's 1998 annual report, which commemorated WHO's 50th anniversary, celebrated the many health successes over the last half century. For example, the average worldwide life expectancy increased from 48 years in 1955 to 66 years in 1998. Worldwide infant mortality has dropped from 148 per 1000 live births in 1955 to 59 per 1000 live births in 1998. And child mortality has decreased: 21 million children died before their fifth birthday in 1955, compared to 11 million in 1998 (World Health Organization (WHO), 1998).

However, these aggregate numbers do not reflect the unequal distribution of advances in health, nor does biomedicine deserve all the credit for overall global improvement in health. Take the diseases that were once the doom of so many: tuberculosis, cholera, and malaria. Tuberculosis and cholera were the leading causes of death in western societies in the early 1900's. The incidence of both diseases began to decline long before the advent of effective therapy. Improvements in sanitation and in general living conditions were much more important than medical interventions in reducing the mortality due to these scourges (Shah, 1998, p. 6).

Malaria, often thought of today as a "tropical disease", was once a significant problem far closer to home. Many medical historians agree that malaria was the most important disease in the mid 19th century United States (Farmer 1999, p.40-1). Approximately one million soldiers were afflicted with malaria during the US civil war (Garrett, 2003,). In the 1920s, when the population of the 12 southernmost states was about 25 million, the region had around one million cases of malaria per year. The decline of malaria in the US was "due only in part to measures aimed directly against it,

but more to agricultural development and to other factors some of which are still not clear." (Levine, 1964,), p.3). Farmer (1999, p. 41) argues one factor was clear enough, though little discussed in the literature: the reduction in poverty in the US, which brought about improved housing, land drainage, mosquito repellents and nets, and electric fans. These non-medical interventions, brought about by a reduction in poverty, are effective in preventing malaria, and are still beyond the reach of those most at risk of contracting malaria. Indeed, malaria, and many other "tropical" diseases, is bounded more by socio-economic status than by latitude. In Haiti, for example, Farmer's patient's with malaria "are almost exclusively those living in poverty. None have electricity; none take prophylaxis; many have lost kin to malaria," (Farmer, 1999, p.41).

Another strike against biomedicine taking all the credit for advances in health is that tuberculosis and malaria continue to be the leading causes of death in the world – even though both are completely curable (Farmer, 1999, ; Farmer, 2001).[18] Indeed, as Farmer (Farmer, 2001) puts it "epidemics of treatable infectious diseases should remind us that although science has revolutionized medicine, we still need a plan for ensuring equal access to care." Effective therapies or preventative vaccines alone are not enough to ensure that the diseases they target will be eradicated or controlled. *They must be administered to those who need them.* The tragedy of today's world is that those who need the fruits of modern biomedicine the most are precisely those who, by and large, are not getting them (Benatar, Daar, and Singer, 2003; Millen, Irwin, and Kim, 2000, 3-10; Farmer, 2001; Benatar, 2002, p.3-9). But as Farmer (1999, p.14, emphasis in original) argues so eloquently, "*fundamentally social forces and processes come to be embodied as biological events.*" AIDS, like other infectious disease pandemics, is the biological embodiment of inequality and poverty (social forces). While it is true that "with effective clinical interventions, we can often hope to efface the embodied manifestations of social inequalities," (Farmer, 1999, p.15), and that this is a laudable and important goal, it is not enough. Farmer (1999, p.15) hits the nail squarely on the head when he continues with "[n]evertheless, we must remember that effacing the inequality of outcomes is not the same as eliminating the underlying forces of inequality itself," (Farmer, 1999, p.15).

[18] Though multidrug-resistant tuberculosis (MDRTB) can be difficult to cure, with early detection and long, multiple drug regimen of second and third line drugs, it can be argued that every case of MDRTB *is* potentially curable (Farmer, 1999; Farmer, 2001),Farmer, 1999, p.30-4)

And herein lies one of the great strengths of the Socioecological Medicine Approach – unlike the standard biomedical approach, which focuses on effacing the biological manifestation of social inequality, the Socioecological Medicine Approach seeks to accomplish this AND intervene further upstream, at the level of the "underlying forces of inequality". To treat a patient holistically entails determining *why* they have become sick. The holistic view is that the condition is but a symptom of an underlying imbalance that has made the patient vulnerable to his current affliction. The type of symptom(s) manifested in the patient, as well as his history, interpersonal relationships, job, values, attitudes, etc., are all clues to why he is exhibiting a particular symptom. The goal is to relieve the current condition (a short-term goal), and to address whatever it is that is making the patient vulnerable to this condition (a long-term goal).

We can apply the same approach to the AIDS pandemic, using clues appropriate to the macro level of the worldwide human population. Who is most vulnerable to HIV/AIDS? The marginalized, the poor, generally, those low on the social ladder. In sections 1.3. and 2.1, we narrowed our gaze a bit to southern Africa, and asked why the pandemic was particularly acute there. There were many factors – deepening poverty with many causes, historic and contemporary. The causal chain goes all the way back to the resources available to ancestral Africans compared to Europeans, and then to the colonial times when natural resources were extracted from Africa and the profits pocketed by the colonial powers, the social disruption colonialism has caused (such as the "two legged family"), the crushing debt most African countries acquired after independence, the economic despair and losses in health incurred by structural adjustment programs, corruption and nepotism in African governments (Benatar, Daar, and Singer, 2003; Diamond, 1997; Schoepf, Schoepf, and Millen, 2000, 91-125), and droughts (which cannot be considered as an accident of nature alone, since desertification and droughts are a result of humans writing overdrafts on their land (Leopold, 1966,). With respect to HIV/AIDS, poverty thwarts efforts to stem the epidemic and makes people more vulnerable to the exploitative factors (such as subsistence sex work) that make them vulnerable to HIV/AIDS. Gender inequality makes women more vulnerable. Though the low status of women in many African cultures is at least in part due to this being their traditional lot, their position has been further undermined by global forces that

have made Africa so poor. And denial of the problem in the early stages of the epidemic in many African countries played a role in fanning the pandemic as well.

Since the HIV/AIDS pandemic is a symptom of inequality and poverty (Benatar (2002) calls it a sign of global instability), poverty and inequality will have to be redressed to eliminate this scourge. Even if AIDS could be cured tomorrow, this does not remove the incentive to address inequality and poverty, because AIDS is but one of their manifestations. But I am not arguing against current HIV prevention methods and treatment, nor against research to find a vaccine or microbicide against HIV or better treatment for AIDS. These are important *short term* goals. Redressing inequality and poverty are longer term goals. Just as we would not leave a patient to suffer excruciating pain while we occupy ourselves with contemplating her case history to determine how best to help her avoid the condition recurring, so we should not abandon millions to their suffering from AIDS while we work to redress the disparities in the allocation of resources in the world.

A shorter-term priority with respect to the HIV/AIDS pandemic is treating AIDS with HAART in poor settings, thus establishing treatment for those who have been excluded so far. This not only will alleviate suffering, it will also improve prevention (Farmer, 2001; Goemaere, Ford, and Benatar, 2002; Piot, Zewdie, and Tümen, 2002). How can we distribute treatment more equitably? A whole other thesis could be written on that. Some ideas put forward have been: a) Make the AIDS drugs generic; b) Negotiate with pharmaceutical companies to the make the drugs affordable in poor countries; c) Offer assistance to poor countries to pay for treatment.

Other examples of short term goals to help stem the pandemic include: 1) Invest more in getting anti-HIV vaccines or microbicides. 2) Try to increase AIDS prevention, such as promoting male condom use, especially by appealing to those who have the power to make this choice. In many African societies, this means men must be targeted more by condom promotion interventions (a longer term strategy, as we shall see, would be to try to increase the ability of those currently disempowered – many women and children in southern Africa, for example - to make autonomous decisions). 3) Make a truly concerted effort to achieve an HIV vaccine or anti-HIV microbicide. 4) Promote the only female controlled HIV prevention method – the female condom. 5) Needle

exchanges for IV drug users, and prevention efforts targeted at preventing transmission from mostly male users to female sexual partners.

The above will help those already suffering due to AIDS, or who are at increased risk of contracting it. Treating the root problem – inequality - is a longer-term objective that is broader in scope, to complement the above short-term measures targeted specifically at AIDS. This would entail interventions that are further upstream than even things like an HIV/AIDS vaccine, because the idea is to prevent people from reaching the point where such protection would be needed. I argue that the socioecological medicine model is an ethical way to approach the epidemic because by treating causes and symptoms, it should be more effective for stemming the HIV/AIDS pandemic and will help reduce other negative consequences of inequality, such as violence, depression, and other forms of morbidity and mortality. An example of an inequality that will need to be redressed is gender inequality.

3.2.1. Case in point: Gender Inequality

The low social status and economic dependency of women in some developing countries immediately comes to mind as an inequality that, if lessened, would help reduce the incidence of AIDS (in the women themselves and consequently in children and men, too), along with improving the quality of life of these women (Susser and Stein, 2000; Kalipeni, 2000). Certainly, as we saw in section 1.3.1.2., young poor women are more at risk of contracting HIV/AIDS in southern Africa than their male counterparts (Laga, Schwärtlander, Pisani, et al., 2001; Buve, Carael, Hayes, et al., 2001), and than their female counterparts in developed countries (UNAIDS and WHO, 2001).

Though southern African women tend to have a lower social status than men, which impedes their ability to negotiate the use of male condoms, for example, it is important to remember the region is not monolithic. For example, Susser and Stein (2000) found quite a range of agency in their study on community receptiveness to the female condom. Women in a rural village in South Africa embodied the stereotype of the submissive, passive southern African woman. In contrast, women and men from the Ju/'hoansi tribe, an egalitarian hunter-gatherer tribe first contacted 30 years ago that has since become sedentary, confirmed that sexual relations between the sexes were

negotiations between equals. If a woman requested that her partner use a condom and he refused, she would simply refuse to have sex with him. Between these extremes were the women in a settlement north of Durban, South Africa, and at two sites in Namibia, who were well informed about HIV/AIDS and were vocal in front of men, but did not believe a woman could ask her man to use male condoms, even if she had good reason to fear he may be infected with HIV. They did, however, think they could and would use the female condom, and urged the researchers to help them obtain them. Both men and women explained men in these communities would not object to a woman using her own female condom because it would be considered hers, and to be used upon her body, over which she has autonomy (Susser and Stein, 2000).

In Kaler's (2001) study of the ambiguity of the female condom as a marker of "women's empowerment", the ambiguity stemmed from the different ways "women's empowerment" can be interpreted. She found at least 3 ways it is defined. The first two definitions correspond with Maxine Molyneux's description of strategic vs. practical gender interests. Practical gender interests are those that meet the needs and responsibilities that are assigned to women as a consequence of them being gendered female (like trying to be good mothers and wives). On the other hand, strategic gender interests try to challenge and destabilize existing beliefs about the gender roles that assign these needs and responsibilities by pushing for an altered social contract between men and women that would radically change the experiences of each gender.

To illustrate the distinction between these kinds of interests, consider a germane example: women in a patriarchal southern African community pushing for an AIDS vaccine so that the status quo (male control of their sexuality) could continue but they would be protected from this specific terrible consequence. Seeking protection from HIV/AIDS is an example of a practical gender interest. In contrast, women pushing for empowerment to gain sexual autonomy would be an example of them working for strategic gender interests. Another example: a practical gender interest would be that sterile razors be used for genital cutting, compared to a strategic gender interest that would question the practice itself. As we shall see later, practical gender interests tend to coincide with shorter-term priorities, and tend to be easier to achieve (an exception being an HIV vaccine, which has proven difficult to achieve), and strategic gender interests

tend to coincide with longer-term priorities. This is because it tends to take longer to change social norms to achieve a strategic interest than it does to say, distribute free, sterile razor blades. What strategic gender interests will accomplish (eventually) tend to be more beneficial for women than what practical gender interests will achieve. But since they tend to take longer to achieve, this means the best strategy is to work for both kinds of interests simultaneously. That way, women are shielded from the worst aspects of their condition until broader changes can be brought about.

The first version of empowerment, paralleling strategic gender interests, is that women are endowed with certain rights in their reproductive activities, and these rights should be enhanced by technologies that enable women to be autonomous (thus appealing to human rights). The second version of empowerment, paralleling practical gender interests (which Kaler (2001) calls "blunting the sharp edges of heterosexuality"), focuses on material, instrumental properties (in Kaler's study, of the female condom), and how these properties enable women to avoid the worst aspects of heterosexual relations. This paints a bleak picture of relations between the genders as inherently and inevitably conflictual, marred by mistrust, suspicion, and violence. For example, a positive aspect of the female condom was thought to be the possibility it could be inserted if a woman feared she may be raped – by a drunk husband, or if she had to take the last cab home from work. Though she would still be raped, at least the female condom would allow her to escape some consequences of rape – STDs such as AIDS, and unwanted pregnancy. There was also the possibility it could be used secretly, without having to negotiate with a male partner. It is interesting that in the West, the female condom was a marketing failure in part because it represented an unwelcome shift from men, with male condoms, being responsible for contraception and STD protection, back to women being solely responsible for the consequences of sex. But in many southern African countries, it was exactly this shift that women wanted, so that they could protect themselves.[19]

Unlike the first two definitions articulate by men and women as a good thing, the final definition of "women's empowerment" defines a zero-sum game where gains to

[19] This reflects the different state of gender roles in the much of the West compared to much of southern Africa. In the West, women can negotiate condom use and trust that their male partners will oblige responsibly. In southern Africa, many women cannot negotiate the use of condoms, and even if their partners use them, they fear he may compromise its effectiveness (such as making holes in them) (Kaler, 2001).

women are considered to be losses to men. One can see that if this is the way men understand women's empowerment, and they believe female condoms contribute to this empowerment, then they will not respond well to them. Indeed, all kinds of rumours swirl around the female condom – that the lubricant is laced with HIV, that women could use it to collect semen for witchcraft, etc. Some distributors also informed women that burning the used condom was a hygienic way to dispose of it. However, there is a local belief in some communities in Kenya, for instance, that burning a man's semen is an attack on the man's fertility and on his potential future children (Kaler, 2001). When the men heard about this advice it understandably made them even more resistant to the female condom, and many threatened violence if women tried to use it without them knowing, which is exactly what some women wanted to do (and some succeeded). (This is further evidence for why it is so important to try to understand a culture very well before intervening and then to involve the community with the program.) This last interpretation of "women's empowerment" is an obstacle to the use of female condoms, and to female controlled contraceptive and STD protection devices in general, reminiscent of the reaction when the contraceptive pill and Depo-Provera injections were introduced into this community (Kaler, 2001).

Since it is the sexual proclivities of men that are behind the increase in AIDS cases in women, and since southern African women often have little control in sexual relationships, it is imperative that men be involved in efforts to increase HIV/AIDS prevention behaviour (Benatar, 1993; Sibanda, 2000; Kesby, 2000). Interventions with men work quite well (Deen, Redd, and Harris, 1999; Gausset, 2001), especially when self-protection is emphasized (Deen, Redd, and Harris, 1999). Targeting southern African men to alter their sexual behaviour in order to protect themselves from HIV (and thus, protect their female partners and the children of their partners), is an example of working for a practical gender interest. So is trying to increase access to STD treatment, and ensuring universal access to antenatal antiretrovirals to prevent mother to child transmission of HIV. These strategies would help protect women and children from one specific manifestation of inequality - HIV/AIDS - but would not change the underlying vulnerability that made them vulnerable to HIV/AIDS in the first place. Therefore, they

would still be vulnerable to other negative consequences of inequality, such as other diseases, malnutrition, exploitation, and physical and sexual abuse.

A strategic effort would be for patriarchal cultures to redefine what it means to be a man so that it does not have to entail women's subjugation, and men can come to not feel threatened at the thought of women becoming empowered. This would entail interpreting "empowerment" in one of the first two ways (ideally the first) so that relations between the sexes are not viewed as a zero-sum game. Instead, the idea of "power with" as opposed to "power over" could be the new paradigm to encourage men and women to view women's empowerment as a positive goal that will improve health and well-being for everyone in a society . Indeed, countries that don't promote gender equality have slower economic growth and more poverty (Development Assistance Committee, 2002, p. 3). Some social norms would also need to change. For example, not only is frequent sexual activity with more than one woman required to be a "real" man in some southern African countries, STDs are also not viewed as stigmatizing for men, but rather are considered a rite of passage: "A bull is not a bull without his scars" (Bassett and Mhloyi, 1991; Sibanda, 2000). This attitude means the risk of contracting STDs is not a compelling incentive for men to use condoms.[20] Challenging these norms would be a step towards rendering gender relations more equitable in certain southern African communities.

3.2.2. Effacing the Embodied Manifestation of Inequality is Not Enough

[It is] the great error of reformers and philanthropists...to nibble at the consequences of unjust power, instead of redressing the injustice itself.

JS Mill, 1848, *Principles of political economy*, bk. 5, chap. 11, sec. 9

I think it is useful to appropriate Molyneux's terms "practical gender interests" and "strategic gender interests" and apply them to inequality in general, not just gender inequality. Replace "gender" with "equality", and you have "practical equality interests"

[20] Nothing I read so far mentioned this, but I speculate that though frequent sexual activity may be a traditional requirement to be a "real" man in southern Africa, I doubt considering the contraction of a STD as a rite of passage was. Rather, I suspect this positive view of STDs is a recent development since now STDs are curable. Before treatment became available, infected men would have suffered from debility and possible reproductive dysfunction, neither of which would enhance a man's masculinity. Nor are lesions appealing to potential female sexual partners. And some STDs like Syphilis would have been fatal before biomedicine found a cure. Death and sterility are hardly positive traits for a southern African male.

and "strategic equality interests". The short term priorities identified at the end of 3.2. that aim to "efface the embodied manifestations of social inequalities", to quote Farmer (1999, p. 15) again, are examples of practical equality interests of those low on the social ladder. Longer term goals of reducing poverty, empowering women[21], and redressing the gross disparities in wealth – to attempt to "eliminat[e] the underlying forces of inequality itself" (Farmer, 1999, p.15) – are strategic equality interests.

In *Infections and Inequalities*, Paul Farmer describes his book's conclusion as "as much a warning as a plea. The further entrenchment of social inequality has dire implications in a time of rapid advancement in science and technology. If I am correct, the plagues of our times require as 'co-factors' such inequalities – that is, steep grades of inequality fuel the persistence or emergence of epidemic disease. Greater access to effective medical services is but a necessary first step in staunching these epidemics" (1999, p. 17). What Farmer is saying here is that underlying causes, the strategic equality interests, must be addressed, but in the meantime, we can at least help vulnerable people avoid one of the worst consequences of inequality – death and morbidity due to infectious disease – a practical equality interest.

Similarly, my argument is that *it is not enough to strive for practical equality interests*. Many commentators write of an HIV vaccine or anti-HIV microbicide as our only real hope to stop this pandemic. There is a tendency to make these biomedical solutions seem like silver bullets – biomedicine once again rescuing the world from infectious disease. An AIDS vaccine would indeed protect those low on the social ladder from AIDS, thus mitigating one of the worst consequences of their low social position. But an AIDS vaccine would not protect them from the other negative consequences of low socio-economic status (such as a new disease, or an old standby, like TB), nor would it change the underlying inequality that keeps some people poor. As Benatar, Daar and Singer (2003) warn: "These extremes of poverty and wealth are dehumanizing, both for those who live in poverty and for those who make it possible and even necessary for the poor to do so. If the underlying causes of these disparities are ignored, and merely

[21] Empowerment in the strategic sense, of course! For example, this could mean striving to assist women in gaining control of their sexual and reproductive lives. Or helping to reduce their economic dependency on men by establishing more economic opportunities for women.

medical and biological approaches are adopted to address inequalities in health, success in improving global health will be very limited."

Therefore, the most ethical thing to do would be to also address root causes (inequality and poverty), not only to help fight AIDS, but because of the other benefits this would bring. As stated in section 3.2.1 about practical vs. strategic gender interests, the best strategy is to work on both types of interests simultaneously, so that while we wait for the fruits to be borne of strategic equality interests, people are shielded from the worst aspects of inequality by the provision of practical equality interests.

The socioecological medicine approach argues that AIDS is but one manifestation of inequality and poverty. It is also neither the first, nor, I fear, the last such manifestation. War, for example, is another manifestation (Stewart, 2002; Holdstock and Jarquin, 2002). What underpins my argument that the most ethical approach to the HIV/AIDS pandemic is to not only treat AIDS and prevent HIV transmission (with the weapons at hand and with those in development), but also to address the underlying root causes of HIV/AIDS is the belief that even if we could eliminate the HIV/AIDS pandemic tomorrow, many of those who would be spared from AIDS would be doomed to some other misery. Those who are most vulnerable to AIDS are also most vulnerable to other diseases and other forms of suffering. For example, women who are at risk of contracting HIV are also more likely to have experienced partner violence (Maman, Mbwambo, Hogan, et al., 2002). As one founder of an AIDS support group for women explained: "For some women, HIV is the first major disaster in their lives. For many more, AIDS is just one more problem on top of many others"(Denison, 1995).

This is not a novel idea with respect to AIDS. For example, in June 2001 the United Nations General Assembly Special Session on HIV/AIDS set in place a framework for national and international accountability in the fight against the HIV/AIDS epidemic. "Each government pledged to pursue a series of many benchmark targets relating to prevention, care, support and treatment, impact alleviation, and children orphaned and made vulnerable by HIV/AIDS, as part of a comprehensive AIDS response." (UNAIDS and WHO, 2001, p.4) One of the targets was:

> By 2003, to have in place strategies that begin to address the factors that make individuals particularly vulnerable to HIV infection, including under-development, economic insecurity, poverty, lack of empowerment of women, lack

> of education, social exclusion, illiteracy, discrimination, lack of information and/or commodities for self-protection, and all types of sexual exploitation of women, girls and boys (UNAIDS and WHO, 2001, p.5).

On the other hand, while redressing inequalities in the long run will do more to help relieve human suffering, this will take time. That is why my argument that we should treat the causes of the HIV/AIDS pandemic by addressing inequality and poverty should in no way be construed to mean that the symptoms of inequality and poverty – in this case, HIV/AIDS – should not be treated with the effective medicines we have. There are already millions of people living with HIV/AIDS right now, and millions more who would become infected before efforts to remedy inequality and poverty could take effect, even if these efforts could somehow, miraculously, start tomorrow. These people, many of whom have already been wronged by circumstance, should not be wronged again by being forgotten if efforts were to shift exclusively to preventing others from sharing their fate. Once again, my point is that *both* causes and symptoms should be addressed, but that so far, the fight against the HIV/AIDS pandemic has concentrated too much on treating symptoms, in spite of the above Joint UNAIDS and WHO statement made in 2001. The most compassionate and ethical strategy is to treat symptomatic suffering (like the infections caused by AIDS) as a short term goal that corresponds with the practical equality interest biomedicine is so well designed for: treating and preventing specific infectious diseases. Simultaneously, efforts should be made to redress the cause, the inequality that makes people vulnerable to HIV/AIDS, as a longer term goal that corresponds with a strategic equality interest. By working on both practical and strategic equality interests we can alleviate suffering now and, eventually, reduce the other symptoms of inequality and poverty, such as over-population, violence against women, and environmental degradation.

I will clarify here that I am not advocating using complementary therapies as substitutes for effective biomedical interventions. Farmer (1999, p. 259) warns of this danger, and vehemently argues against using ineffective folk remedies to treat TB, for example, instead of drugs we know will help. Folk remedies as an adjunct to help soothe symptoms is fine, but he argues, and I agree, that we shouldn't use culture as an excuse for providing substandard care.

3.3. Holistic: Emphasizing Interconnectedness

Another characteristic of the socioecological medicine model is that it emphasizes interconnectedness. This stems both from the holistic nature of the approach and from ecological concepts that are reflected in the very term "socioecological". At the micro level of the patient, holistic medicine seeks to understand why the patient is prone first to getting sick at all, and second, to the particular types of illnesses that tend to plague him or her. A premise of holistic medicine is that the mind and body are connected, and that each human's health is influenced by interpersonal interactions and interactions with our environment (this does not just refer to the negative impact pollution has on us, but what we see, hear, touch, smell each day, and the food we consume, the most intimate interaction we have with our external environment). Western biomedicine is also beginning to accept that the mind/body dualism is false (Snyder and Lindquist, 2001), and that emotions, social support and relations, and the larger forces of economics, war, and social structure, all influence the health of individuals and populations. The interconnectedness is also historic, as argued in section 2.2., because much of the wealth Western Nations enjoy was wrenched from what we now call the developing world

At the macro level, like the holistic worldview, the Socioecological Medicine Approach conceives of an individual human as situated within larger and larger spheres of relationships and interactions. There is the individual in relation to herself, in relation to her family and friends, in relation to fellow community members through mainly economic interactions, such as purchasing food and through work, and in relation to even more distant humans through international trade, politics, and the arts. From the ecological perspective, the interconnectedness extends beyond other humans to include the other life forms we share the planet with. Some view us as part of a complex, global superorganism, Gaia. We are linked to other humans not only through a myriad of economic links, but also through a myriad of microbial links, from the first essential bacteria we obtain from our mother's milk that establishes part of our personal ecosystem, our internal flora, to the dangerous, disease causing microbes that are circulated worldwide, such as the flu, SARS, and HIV/AIDS. We are linked to the land,

to the flora and fauna that comprise it: to the rain that nourishes the plants, to the living soil that sustains them, and ultimately to our sun, the source of all the energy that allows the flourishing of the global ecosystem.

Some of these links we are far more aware of than others. Of course we think about our close relationships to friends and family. We may think of our interactions with neighbours and other community members, such as our local grocer, the regular employees at our local postal outlet or stores. Sometimes we may think about what goes on in other parts of our own country, sometimes the news rouses us to think about people in distant lands. However, we tend to avoid thinking about the thousands of faceless, nameless others that we depend on for our food, shelter and clothing. Just one snapshot of a typical North American stop at the mall is all it takes to reveal the staggering number of links there are: a person dressed in blue jeans made from cotton grown in Egypt, stitched together in a sweatshop in Malaysia, wearing a watch made in Germany with an inset diamond from South Africa, packing a cell phone made in China, buys bananas grown in Honduras, an avocado from Mexico, and some locally baked bread.

The lack of awareness of where many of the things we use and eat daily come from is unfortunate in itself. But even more disturbing is that this lack of awareness also means few of the people enjoying an extremely privileged life in North America realize first, how enormously privileged they are, and second, how distant others may have been exploited or short-changed in the manufacture or farming of the products we buy. The dizzying selection of things we can buy is but one indication of our privileged position in the world. That they come from all over the world is another. That so much of it is ridiculously cheap is a biting indictment of how developed nations and multinational corporations are able to keep prices low for the benefit of rich consumers in developed nations at the expense of the poor, the workers and farmers labouring long hours at low wages in developing countries.

Similarly, many Westerners have become oblivious to our many essential links to our ecosystem, to the global ecological community comprised by so many local ecological communities. With the exception of gardeners and farmers, most people buy their food from the grocery store, and often it is so processed it hardly resembles the fruit, vegetable, grain or animal it came from. Most humans live in large cities where it is easy

to lose sight of the ecosystem that sustains us. Like the ease with which we ignore the exploitation of distant people, so, too, we ignore the exploitation and destruction of distant (even not so distant) ecosystems.[22]

Though they may be out of sight and all to often, out of mind, these links to other humans and other members of our global ecosystem are important. Thinking about these links is necessary to engage in the ethics of international relations, the macro level of ethics, advocated by Benatar (2002) as the level at which we need to think in order to address the HIV/AIDS crisis effectively. For example, Caribbean countries most economically dependent on the US were the ones that had the highest incidence of HIV early in the pandemic (Farmer, 1999, p. 124-5).

To elaborate on what the preferable conception of an individual should be at the macro level of ethics, it should be "that of an autonomous individual sharing equal rights with all other citizens in the world, in a relationship of interdependence in which the rights of some should not be acquired at the expense of the rights of even distant others. The level of complexity here [at the macro level] is much greater because of the way in which the foreign policies of some countries may covertly enhance the lives of their own citizens through exploitation of unseen persons elsewhere," (Benatar, 2002, p. 172).

Why should we think beyond the confines of the micro level of ethics, even beyond the meso level? This is actually a reformulation of the question I attempted to answer in section 2: why should we care? As I hinted there, the prudential reasons why the developed world should care about the suffering, deprivations and diseases of the developing world are related to the inherent interconnectedness of our world. I did not concentrate on the prudential argument for fighting HIV/AIDS at that time because the more compelling arguments, grounded in justice and in the vulnerability model, do not require prudential considerations to make them work. The world always was interconnected from the ecological point of view – global ocean currents affect temperature and climate in distant locales, Saharan sand blows across the Atlantic onto North American shores, many bird species migrate thousands of kilometres from the high North to the South, the rain that falls on us and nourishes our crops came from water that

[22] It would be interesting to see a study that calculates how much biomass has been appropriated from the developing world and brought to the developed world, and whether it at least ended up enriching our soil, or was utterly wasted.

evaporated off the pacific ocean, off a lake in Siberia, off the sweat on the brow of child dying from AIDS in Zimbabwe, and off the endless tears shed by his mother. But now the world has become an even more interconnected place:

> Modern communication, transport, methods of money exchange, the creation of nuclear and other weapons of mass destruction and the emergence of new infectious diseases have shrunk distances and differences in many senses, and created common global risks. In this context, and with a deeper understanding of the impact of historical forces on shaping the wealth and health of nations, we need to appreciate how we are all implicated in the lives of others, and that it is increasingly impossible to hide with credibility behind the barrier of physical distance while billions of people live impoverished lives (Benatar, 2002, p. 173).

Similarly, Farmer also writes of the threat of new and recrudescent infectious diseases – and that microbes do not respect political borders. "The dynamics of disease emergence are not captured by nation-by-nation analyses any more than the diseases are contained by national boundaries, which are themselves emerging entities" (Farmer, 1999, p.42-43).[23] Interconnectedness with respect to infectious disease is not a new idea; Farmer quotes Budd, a physician who wrote that in 1874 London, no one could consider themselves immune to Typhoid fever:

> This disease not seldom attacks the rich, but it thrives among the poor. But by reason of our common humanity we are all, whether rich or poor, more nearly related here than we are apt to think. The members of the great human family are, in fact, bound together by a thousand secret ties, of whose existence the world in general little dreams. And he that was never yet connected with his poorer neighbour, by deeds of charity or love, may one day find, when it is too late, that he is connected with him by a bond which may bring them both, at once, to a common grave." (Budd, 1931,), p. 174-5)

Farmer claims that these no-longer so secret ties still exist "despite all the barriers our age has set up to separate them," (Farmer, 2000, p.xiv). The common grave, the final destination of many different disease paths, also still exists.

Coping with both new and recrudescent infectious disease may require fresh insights:

> New infectious diseases such as HIV/AIDS, the recrudescence of tuberculosis and malaria in multi-resistant forms, ecological degradation, escalating ethnic conflict and persistent poverty and hunger in the midst of plenty are all signs of an

[23] He adds: "Most of the world's nations are, after all, twentieth century creations, which might also give pause to those buying the two-worlds myth" (Farmer, 1999, p.43).

> increasingly unstable world at the end of a period of major progress.... At this time in history when the dark side of progress is becoming so obvious, old ways of "linear thinking" about progress, in particular when it is defined only in economic terms, are becoming obsolete. (Benatar, 2002)

Benatar's call for shifting from linear thinking to systems thinking brings us to another aspect of the Socioecological Medicine Approach: that it embraces circular causation.

3.3.1. Embracing Circular Causation, Pushing for Web Causation

Closely related to the idea that factors that influence economics and health are interconnected is the idea that "causes" and "effects" both influence each other. This is circular (or systemic) causation. Biomedicine (and Western society in general) tends to dwell on linear causation, the familiar idea that A (the cause) causes B (the effect). In contrast, systemic causation holds that A (the "cause") influences B (the "effect"), which in turn influences A. In other words, while linear causation flows in only one direction (A causing B, for example), circular (systemic) causation holds that A and B mutually influence each other. Indeed, this type of causation blurs the distinction between causes and effects. For example, perhaps a patient suffers from a rash when she is experiencing stress. But the rash also serves as a source of stress for the patient. Therefore, the rash (the "effect") also influences the patient's stress (the "cause"). Similarly, the relationship between AIDS and poverty we saw in section 1.3.1.1. is an excellent example of circular causation. Poverty increases a person or population's risk of contracting HIV/AIDS, and those who contract HIV/AIDS, as well as their dependents, are at an increased risk of becoming more impoverished. For example, a Zambian man supports his poor family through mining. He frequents commercial sex workers during his long absences from home. He has heard of HIV/AIDS, but does not think it could happen to him, and can afford to pay for sex without condoms. He contracts HIV/AIDS. He becomes too sick to work, so his family loses his income, is saddled with his increased health care costs, and finally, by the costs for his funeral. Even though she fears she may contract HIV/AIDS from her husband, his wife cannot negotiate condom use with him. Another child is born who is very sickly, and her medical costs add up, as

well. His daughters are pulled out of school one by one to care for their sick family members. Within a year, the mother also becomes ill. The end result: the family breaks down, with the male orphans selling trinkets on the street, and some of the daughters, whose education was sacrificed to care for sick family members, resort to subsistence sex work, and contract HIV/AIDS. In this story, poverty caused AIDS in the father in part because of the type of work he had to choose to support his family, and once he and other family members became sick, a domino effect ensued which made the family even more impoverished, and put the next generation, in particular, his daughters, at risk of contracting HIV/AIDS.

But as even this simple example suggests, poverty and AIDS really don't exist as an isolated, albeit mutually influencing, dyad. It was not poverty alone that caused the man in the story to contract HIV/AIDS. Gender inequality meant he was socially sanctioned in his pursuit of extra-marital sex, and both gender and socio-economic inequality meant he was able to obtain unprotected sex, and then to infect his wife, who was unable to negotiate condom use with him. Gender inequality also determined that his daughters were more at risk of contracting HIV/AIDS since they, and not his sons, had their education sacrificed, and had more limited economic options to begin with, as well. Therefore, this story in particular, and the AIDS pandemic more generally, would be even better understood in terms of a complex and interconnected conception of causation called *web causation.* Web causation looks, diagrammatically, a lot like a food web, where the dyads of A and B are intermeshed in a web of other "causes" and "effects", as opposed to a food chain, which looks like a serial set of circular causation dyads.

Single line thinking is simpler and more appealing to many people. It is consistent with the Western tendency to think there should be a pill to fix whatever ails us. Sore throat? Take an antibiotic. Depression? Take Prozac. Headache? Take aspirin. AIDS pandemic? Find a cure or a vaccine. But even something as straightforward as an ear infection, for example, which can be cured with an antibiotic, is not so straightforward. The infectrion *was* "caused" by a bacterial infection, but many other people would have been exposed to the same strain of bacteria without contracting the infection. The patient had to be susceptible to the infection in order for him to

actually get the earache. Perhaps he was experiencing job related stress, which negatively impacted his immune system. Perhaps the long hours at work also caused him to eat hurried, unhealthy meals, further lowering his resistance. There are probably many other factors as well, such as his genetic background, interpersonal relationships, etc., that impact his health, just as we would expect given the socioecological definition of health from section 3.1.2. The narrow focus of linear causation tells us that a certain strain of bacteria caused the patient's earache, and the earache can be cured with an antibiotic. But if that is the end of the intervention – a prescription for an antibiotic – then the same illness, or some other illness, may manifest itself later because other "causes" of the patient's condition have not been addressed.

Similarly, if we rely on the narrow focus of linear causation for explaining and containing the AIDS pandemic, then we risk focusing on strategies that only treat AIDS the disease, rather than on tackling the inequality that causes AIDS and other medical and social ills. If we have learned anything at all from the tuberculosis pandemic, it should be that even a highly effective and cheap cure would not ensure that the AIDS pandemic would be brought under control. But even if it did, like the above example of the stressed patient with an ear infection, there would still be a disturbingly vast stressed and undernourished number of people ripe for some other pandemic of infectious disease or other negative outcome.

Other examples of facile solutions for AIDS are some of the early attempts to dump free condoms onto cultures that were not yet ready to actually use them, and the consistent targeting of pregnant southern African women for AIDS prevention interventions. It must have seemed very sensible to target pregnant women with AIDS prevention messages (see section 1.3.2.), since they are easily accessed through their use of prenatal medical services. But when we look at their vulnerability to AIDS in terms of web causation, it would be clear that ignorance about the facts of AIDS transmission is but one of the factors that put them at risk of HIV/AIDS, and was probably not one of the more important factors, either. To achieve a practical equality goal, men should be the ones targeted by AIDS prevention messages since they are far more likely to be able to act on the information than women. To achieve a strategic equality goal, interventions to

improve women's economic options and reduce their economic dependency on men would be more helpful then yet more AIDS education.

Indeed, thinking in terms of web causation allows us to avoid the outcome I argued against in section 3.2.2. – of effacing the embodied manifestations of inequality without doing anything to eliminate the inequality in the first place. Thinking in terms of web causation is part and parcel of the "big picture view" I advocated in 3.2., where instead of dissecting HIV/AIDS under a reductionist magnifying glass, I advocated situating the pandemic in the broader, international context of inequality, poverty and the myriad links between the rich and the poor.

Though times may be changing, it still seems that the philosophy or world view underpinning holistic medicine is more likely to engage in circular/systemic causation in helping patients than biomedicine is. This is another reason why I wanted my model to be based on holistic medicine rather than biomedicine alone, because it is abundantly clear that the HIV virus, wily though it may be, is but one of many "causes" of the HIV/AIDS pandemic. Therefore, systemic causation, at the least, is a more constructive way to analyze the pandemic. However, I am not sure that holistic medicine, at least as practiced in the West, goes far enough. Just as holistic medicine (and biomedicine) tends to get stuck at the micro level of the individual, rather than engaging in the meso and macro levels of community and international health discourses, respectively, so, too, holistic medicine may tend to get stuck at the level of systemic causation. Fortunately, it only takes a bit of nudging to go from systemic to web causation, since once one accepts the premise that causes and effects can be mutually influential, it is not much of a leap to integrate cause/effect dyads into web type schemas with multiple, interacting causes and effects. This is the level of complexity that is required to accurately understand and ultimately control the HIV/AIDS pandemic.

3.4. Promoting the Active Role of Local Communities in Confronting HIV/AIDS

Holistic medicine enlists the patient to play an active, vital role in her own healing. In contrast, the traditional biomedical model tends to entail a patient consulting a health

"expert" who then tells the patient how to solve her health problem. The patient's role tends to be passive. Indeed, this is what some Westerners want! As mentioned in the above section (3.3.), our culture has resulted in many people who simply want to go to the doctor and have the doctor prescribe a pill that will solve their problem[24]. Exercise and better nutrition would alleviate many conditions, but this is not what many patients want to hear. They don't want to change their lifestyle, they just want an easy to swallow pill to do the job for them.

My suggestion is that the patient as an active participant in the healing process is a paradigm that is more typical of holistic medicine. This is another reason why this analogy is useful when thinking about the HIV/AIDS pandemic. Once again, my aim is to apply this micro level insight gleaned from managing individual patients to the macro level of managing the HIV/AIDS pandemic. Involving the patient in the healing process, rather than healing being something that is done to him or her, will be more likely to result in the patient enjoying better health and relief from whatever prompted them to seek out health care. Similarly, involving local community members in communities affected by HIV/AIDS in the process of managing the epidemic should be more likely to result in programs that actually succeed in lowering the incidence of HIV/AIDS.

As with many of my recommendations, arguing for extensive community involvement in the development and implementation of HIV/AIDS prevention and treatment initiatives is nothing new, and is already being done. What the Socioecological Medicine Model does is grant a new angle for arguing for community involvement by using the analogy of patient involvement. Just as a passive attitude on the part of an individual patient may compromise his healing process, so a passive role for a community with respect to HIV/AIDS prevention and treatment interventions may compromise the effectiveness of the intervention. In other words, just as exercising one's personal agency should help a patient's healing process, so, too, should a community exercising its agency in the development and implementation of HIV/AIDS prevention and treatment programs be more likely to improve the positive impact of these programs.

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[24] This traditional passivity is changing. For example, the North American AIDS community has been very active in demanding treatment, as have other patient-organizations. However, there is still a tendency to demand biomedical treatment, without necessarily focusing on health promotion or disease prevention through lifestyle changes.

In order to relieve the suffering caused by HIV/AIDS, we need effective interventions. Therefore, if community involvement will make an intervention more likely to succeed, this means the most ethical way to proceed is to ensure that communities play an active role in their healing.

It seems simple common sense that interventions are more likely to work in local communities if the community itself is involved in designing and implementing the programs. First, because it means cultural obstacles or considerations concerning the messages and services offered can be addressed, and the program be tailored to the local community's needs. Second, because the active role community members must play means they, and the community in general, are more likely to care about the program they design and will want it to succeed. Instead of the feelings of resistance and apathy an externally imposed intervention can engender, community members may feel proud of interventions they have designed and have invested their time in. The intervention will be *theirs*, and this sense of ownership will bode well for the program. As the HIV/AIDS prevention or treatment program starts to accumulate successes, a sense of achievement and ability may extend to other community projects, boosting the well being of the community even further. That community involvement increases the likelihood of an intervention's success has been proven for development projects in general and for AIDS prevention and treatment programs in particular (Choritz, 2002).

Signs that the HIV/AIDS pandemic is still becoming more and more rampant are very disturbing, especially since it forces us to consider how ineffective prevention efforts have been thus far for the infection rate to continue to rise. Though the overall picture of HIV prevention programs has been dismal, there are some developments that give reason to hope: awareness campaigns and prevention programs can help curb new infections. A South African intiative, called *loveLife*, combines sexual health education with popular culture to promote HIV/AIDS prevention in a way that appeals to adolescents. *LoveLife*, begun in 1999, and other efforts targeted at young people appear to be having a positive impact: HIV prevalence in South African teenagers has declined from 21% in 1998 to 15.4 % in 2001, a reduction by over 25% (Stephenson Joan, 2003). Uganda has also been successful in curbing new infections in many parts of the country (Stephenson Joan, 2003). The "*My Future is My Choice*" program in Namibia is another

example. Namibia is a small, sparsely populated southern African country with little in the way of a health care infrastructure. Due to its low profile, it often misses out an international aid, even though its HIV infection rate is 20% and it has the absolute highest percentage of AIDS orphans. Catholic AIDS Action (CAA), founded in 1998 by Sr. Raphaela Haendler, M.D., sought to fill this void. They used a simple and unique plan: they overlaid a balanced network of treatment and education services on the wide-reaching infrastructure of the Roman Catholic Church. One quarter of Namibians are Catholic, so this was an ideal way to reach people. Trained volunteers deliver services through 91 parishes, 15 hospitals, and 37 schools and hostels. CAA serves both Catholics and non-Catholics (National Episcopal AIDS Coalition (NEAC), 2002). Catholic AIDS Action incorporates AIDS-education and prevention into all of its work. In co-operation with UNICEF, CAA runs a ten-session behavioural-change course across the country called "*My Future is My Choice*" in local schools, hostels, community-centres, and churches. Since 1999, CAA has reached over 8000 adolescents. A follow-up study on the *"My Future is My Choice"* course showed that participants who were not yet sexually active when they took the course tended to postpone the onset of sexual activity by at least a year, and those who did become sexually active tended to practice "safer sex" (including the use of condoms)(Stanton, Li, Kahihuata, et al., 1998). A key point to note is that the version of the course that CAA teaches has been modified to *emphasize* Christian values, but it does not exclude secular teachings (hence it includes the preventative benefit of condoms)(Namibian Catholic Bishops Conference, 2001). Other prevention programs include youth camps, week-end retreats, outreach-activities, regular radio interviews, and the development and distribution of AIDS-information and prevention literature in different languages. In 2001, CAA also introduced a more extensive prevention program called "stepping stones", which involves all stakeholders in the community (Namibian Catholic Bishops Conference, 2001). The ABCD slogan (South Africa has a similar ABC slogan) demonstrates CAA's approach: ""A" is for Abstinence before marriage, "B" is for Be faithful within marriage. But if you cannot do either of these, then "C" is for Condom, because otherwise, "D" is for Death." Catholic AIDS Action wants people to uphold the Catholic ideal, but understands that this may not be possible, and so informs people how to protect themselves when they cannot abstain

or be monogamous. CAA is widely admired and lauded (National Episcopal AIDS Coalition (NEAC), 2002). It is especially reassuring that an organization with strong motivation to deliver its own agenda (i.e., not including condoms in its prevention message) instead chose to involve the local community and develop programs that reflected local realities, rather than Catholic ideals. Community involvement is surely a key factor in the success of CAA's programs.

Pushing to increase the agency of local communities also, indirectly, reinforces the argument for increasing women's agency. Both women and men need to be represented by community members in order to ensure the success of HIV/AIDS interventions. This means women should be encouraged to play an active role in their community's decision making; in some places, this has not been women's traditional role. Ignorance about HIV transmission is certainly a huge concern, especially with respect to young women. As we saw in section 1.3.1.2., one of the targets fixed at the UN General Assembly Special Session on HIV/AIDS in June 2001 was to ensure that at least 90% of young men and women should, by 2005, have the information, education and services they need to defend themselves against HIV infection. As in other regions of the world, most countries in sub-Saharan Africa are a considerable way from fulfilling that pledge (Joint UNAIDS and WHO, 2001, p. 18). This shows how important education is to protect oneself from HIV; but education is not enough. One has to be able to act on the information.

Local community members ought to be consulted about how to help people, especially poor women, to be able to act on HIV/AIDS information. As we saw in section 3.2.1., local women often know what will help them avoid contracting HIV/AIDS. To repeat the findings of Susser and Stein (2000): "The women were explicit about economic needs and said that the best method they could imagine for preventing HIV in the settlement was to provide work for women." These women wanted funding for a candle-factory; in a settlement with no electricity, this promised to be highly profitable. Susser and Stein (2000) also found that, as in Mexico, Senegal and Costa Rica, women in many places in southern Africa saw female condoms as a real option they could use to protect themselves from HIV/AIDS. But they knew they would need to take political action, probably in the form of collective organizations, in order to get them.

They did not think women's needs would be recognized or understood by their government (Susser and Stein, 2000). In some places, the women had experience in improving their lives and that of their community through collective action to obtain, for example, a sewing factory that provided income for local women (Susser and Stein, 2000). These examples support the general idea that just as increasing individual women's agency will help individual women protect themselves from HIV/AIDS, so, too, will increased community agency (in the form of active community participation in HIV/AIDS interventions) help communities protect themselves from HIV/AIDS.

There is a caveat about arguing for community agency. There is nothing wrong with underlining personal agency, but it is unfair to use personal responsibility as a basis for assigning blame while simultaneously denying those who are being blamed the opportunity to exert agency in their lives (Farmer, 1999, p. 84). This is exaggerating personal agency, discussed in 1.3.2. It would be just as unfair to exaggerate community agency. This is particularly a concern with a model based largely on holistic medicine, since this is one of the disadvantages of some complementary therapies. The intent is good – to make the patient feel she has the power to heal herself. But the result can be terrible if patient is made to feel guilty or responsible for not getting better. What is intended as empowerment can end up as victim blaming. This is a risk that must be kept in mind when the Socioecological Medicine Model is applied at the meso level of community and the macro level of the global pandemic.

3.5. Adopting a Harmonious Place in our Environment

Are HIV/AIDS and environment issues related? I think so, and that we must integrate protecting the environment with stemming the HIV/AIDS epidemic. Holistic Medicine tends to consider the context individuals find themselves in – their interpersonal relationships and their physical environment. Similarly, the Socioecological Medicine Approach encourages an integrative, "big picture" perspective that seeks root causes for illness, and seeks to redress theses root causes. We can keep peeling back more layers from the onion. Inequality is certainly a key factor in the HIV/AIDS epidemic. But where did Inequality come from? From section 2.1., we saw

that the geographic location of the founding members of our current societies determined to a large degree which cultures predominate today, who is rich and who is poor. Where people happened to find themselves, was of course, an accident of history. What Diamond does a thorough job of arguing is that it is not the intrinsic abilities of people in the various societies that make up our global human community that determined today's skewed distribution of resources. Rather, it was the environment our ancestors found themselves in, the resources they had access too (domesticable animals and plants, for example) that determined who exploited agriculture, who adopted writing, who became industrialized first. This in itself proves how essential our environment is to our health and well-being.

Does spending money on environmental conservation mean there will be less money available in a given area for HIV/AIDS prevention and treatment programs? Certainly, it would be damaging to both HIV/AIDS prevention efforts and environmental conservation if one were to construct things such that you could only have one or the other. For example, one could reason that since there is only a finite amount of money available to use to aid, say, country X, then one will have to pick either to fight HIV/AIDS in X or to fight environmental degradation. But this is to look at the situation as if it were a zero-sum game. Fortunately, as with many alleged "either/or" dilemmas, it is not.

Consider promoting condom use as an example. Even if an aid organization were to pitch condom use solely as a means of preventing AIDS, increased condom use could potentially lower the birth rate. This, of course, helps the environment since every human, even the poorest, who use so few resources compared to gluttonous North Americans, uses up natural resources. If a local population's growth is slowed or even reversed, this takes the pressure off local natural resources and reduces the need to convert more natural habitat into farmland or settlements. In the short term, slowing population growth helps to ease up on the use of local natural resources. In the long term, it helps prevent poverty caused 1) by abusing the land, and 2) when a family has more children than it can support, and so the children end up malnourished and /or with

their education compromised[25]. As we have seen in sections 1.3.1.1. and 3.3.2., HIV/AIDS and poverty form a vicious loop, and so preventing AIDS helps prevent poverty, which in turn helps the environment since people do not have to destroy their natural resources out of desperation.

To return to country X, let us say it is decided promoting condom use may be a good strategy, given this country's specific characteristics, to contain a mushrooming AIDS epidemic. Let us suppose the country is also rapidly losing its natural habitat to convert it into farmland to feed a burgeoning population, and that existing farmland is becoming more impoverished from "writing overdrafts"[26] on the land. When the condom promotion campaign is planned, if the promoters think only of solving the AIDS crisis, then the public announcements may run something along the lines of "Use condoms to protect yourself from AIDS". Since people have good reason to protect themselves from a deadly disease, this may encourage those who can obtain and negotiate the use of condoms to do so. This is a tall order for some groups, such as low-income women in societies where women's status is low. So the public announcements may try to deal with these barriers in several ways. Perhaps by encouraging men to protect themselves with the intention that this will be good for women, too. Or, they could try to encourage women to be more assertive, by appealing to their desire for greater equality, or (a classic, unfair strategy) by admonishing them to protect their unborn children from death and suffering caused by AIDS[27].

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[25] Providing children with enough food and education also ensures they have a better shot at protecting themselves from contracting HIV/AIDS since they may escape from poverty. It is especially likely to benefit girls, since it may allow them to avoid resorting to subsistence sex work. One AIDS prevention strategy can help prevent AIDS in different ways.

[26] This term, from Aldo Leopold's *A Sand County Almanac* (Leopold, 1966,), draws an analogy between managing a bank account and managing the land. If you keep withdrawing money without depositing any back in to your bank account, you will eventually have nothing. If biomass keeps being taken out of the land without any being put back, the land becomes impoverished and unproductive.

[27] This is generally a terribly unjust, manipulative strategy because it pretends that the women themselves are solely responsible for the health and life of their unborn children. This ignores the responsibility the father may have, especially if he is the sole income earner, and that her society may have towards her and her child. If the mother's government has run the country such that she is unable to give her child an ideal prenatal environment, due to famine or because her only way to support herself is through prostitution, it is patently unfair to then turn around and blame her if her child becomes ill. This strategy is an example of exaggerating agency (see 1.3.2.) and of shouldering the majority of a responsibility onto someone who has a minority of the power to accomplish the goal (in this case, a healthy baby). The pregnant woman is the easiest person to put the burden on because of her obvious proximity to the child and precisely because she has less power than her husband or government. Unfortunately, even well-meaning people sometimes do

There are many strategies that could be used to try to encourage condom use based solely on tackling AIDS. But there is a whole other avenue that opens up if organizers were to simultaneously put out a message that condom use will help the local environment and hence the local people. Messages could also be put out explaining the dangers of overpopulation to the local and global environment. People could be asked to think about how their individual choices – whether to use a condom to prevent pregnancy or not, for one – impacts not only on their lives, but on other people's lives, and on future generations as well. They could be told about desertification, pollution, etc, all made worse by overpopulation. If their society is strongly pronatalistic, as some African societies are, they could be asked to question if the worth of their life is really primarily based on whether they have children, and on how many. Though some forms of ethical relativism argue there are no shared values, it seems unlikely that there are many human beings who do not long to live a meaningful life. The human need for meaning may be almost as basic as the need for food, water and shelter, and is a good candidate for as a value shared across cultures. Where the cultural differences arise is *how* to live a meaningful life. Therefore, if cultural norms dictate that a woman's worth, for example, is based primarily on how many children she has, this is the kind of norm that can be challenged both through HIV prevention interventions and through environmental protection interventions.

People could be encouraged not only to think of the damage overpopulation does to the world, but the damage they can do to themselves and loved ones if they persist in having children despite the risk of AIDS. Is having a child worth risking one's life for? Is it worth the risk of having a child who may suffer and die of AIDS? Some of the most harrowing images reaching us from Africa are those of mothers keeping loving vigil over tiny, emaciated toddlers dying without hope or help. Interestingly, there are no images of fathers keeping such vigils. However, Bassettt and Mhloyi (1991) write that "[f]athers as well as mothers suffer when their children become sick or, though seemingly well, carry a death sentence in their small bodies. For all the hardships of womanhood in Africa, there is no doubt that children are universally cherished. To protect their future may be

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what is easier rather than what is right, and telling a pregnant Zambian woman to use condoms to protect her baby is easier than addressing the social inequalities that make it so unlikely she can comply.

the strongest incentive in the campaign to reduce HIV transmission." Protecting the environment is also essential to protect the future of children.

It is a delicate thing to suggest reproductive mores need changing, but if proponents within the society itself think social attitudes need to change, this can be added to public messages. Indeed, there is evidence from Susser and Stein's work that women would like to limit the size of their families, but lack the agency to use currently available contraceptive methods (like male condoms), or lack contraceptive methods that allow them to circumvent male control: "One woman said 'Tell the minister [of health] to bring the female condom quickly...If it should have come before, we would have limited our families more easily.'" It has also been shown time and again that educating women means they have fewer children, and women use contraception when they can – either because they have the agency, or because the method (such as the birth control pill and Depo-Provera injections) do not require them to consult men (Kaler, 2001).

Another indication that African communities might respond well to combining environmental preservation with HIV/AIDS interventions is that adopting a harmonious place in our environment is consistent with some African societies' worldview. For example:

> I have described [the African] world view elsewhere as eco-bio-communitarian, implying that there are plastic walls between as well as interdependence among human beings, superhuman spirits, nonhuman animals, plants, and inanimate objects...Within this world view, transmigration, reincarnation, transformation, and transmutation, within and across species, are believed to be possible. Such possibilities have consequences for how human beings regard what we may call the other items of the furniture of the universe, especially other living species. In effect, the line separating human beings from the other ontological entities that populate the world, in the African world view, is neither hard and fast nor straight and clear. (Tangwa, 2000)

Integrating AIDS prevention with environmental protection may synergistically help both causes. Perhaps a person is not moved by warnings about overpopulation, but the desire to protect one's own life and that of loved ones will convince them to use condoms. Or vice versa. Promoting condom use is but one example. Assisting a community with sustainable development will help reduce poverty (and hence AIDS) *and* reduce the use of local resources. So when arguing for such an intervention, all

arguments should be used – that the intervention will reduce poverty and AIDS, and that it will protect the environment.

The suggestion of integrating fighting AIDS with conservation brings us right back to the beginning, to the cradle of AIDS. It is believed HIV-1 made the leap between chimpanzees and humans in the depths of the jungle of eastern equatorial Africa (Hahn, Shaw, De Cock, et al., 2000; Sharp, Bailes, Chaudhuri, et al., 2001). People pushed deeper and deeper into this hotbed for disease to work on logging concessions. Most of the workers were fed on bushmeat, and it is thought these interactions between hunters and hunted, cooks and consumers, allowed HIV/AIDS to jump into a new host: us (Peeters, Courgnaud, Abela, et al., 2002). And we are surely a most serendipitous host for a virus to find itself in. Not only is humanity one of the most numerous species on the planet, humans are globe-trotting, gregarious and, as I have argued, hugely unequal in health and socio-economic status. These are fertile grounds for selfish virus genes to flourish and replicate wildly[28].

Nor is AIDS the only example of habitat destruction being linked to the emergence of fatal infectious disease. Human environmental changes, such as environmentally detrimental changes in local land use, are largely responsible for the emergence of zoonoses, thus the threats these diseases pose to biodiversity and human health represent yet another consequence of anthropogenic influence on ecosystems (Patz, Graczyk, Geller, et al., 2000; Daszak, Cunningham, and Hyatt, 2001; Ludwig, Kraus, Allwinn, et al., 2003). Raising our gaze from the village to the big picture, if we want to try to reduce the likelihood of virulent pathogens emerging, then we should try to find ways to live more harmoniously with our environment. Though it is hard for us to believe, we may have to accept that there are some areas we should not develop. Again, the two pronged attack is that 1) these areas should be preserved because they, and the species they contain, are valuable within their own right, and 2) because some of these places are hotbeds for producing vicious, virulent diseases, we should keep out of them for prudential reasons. Since preventing AIDS often means changing sexual practices, it is not a stretch to encourage these practices to change also in the name of reducing the

[28] Here I am making reference to Richard Dawkin's *The Selfish Gene* (Dawkins, 1989,). This theory explains well why a virus would "want" to move into a lucrative host, like the human species. (See also Weiss, 2001).

birth rate and hence buying us more time to achieve a "soft" as opposed to a "hard" landing with our current environmental crisis.

We cannot go on expanding indefinitely, since we have only the finite resources of this one blue planet to sustain us. Though hardly worth addressing since the likelihood is so remote, the Star Trek type solution of colonizing other planets is not feasible.[29] Indeed, even if it *were* feasible to do this, to actually go colonize another planet because of damaging our own is the ultimate hubris, an unforgivable and childish act. What right would we have to go wreck another planet if we can't even take care of our own? In any case, it is best to avoid ever being tempted to leave our home by taking better care of it. We may think we have escaped the usual limitations nature places on population size and its consumption of resources, but this is an illusion. Aldo Leopold's (1966) concept of writing overdrafts on the land is actually an even farther-reaching phenomenon – we have been writing overdrafts on our air and oceans as well. And it is starting to catch up with us, in the form of morbidity and mortality in polluted cities like Mexico caused by air pollution, and in the accumulation of toxins, hormones and antibiotics in our food. Like other species, our health is suffering as a consequence. But most of these health effects are slow to act and easy to ignore. AIDS is not.

AIDS and other emerging diseases can therefore be interpreted as early warning signs that how we interact with the natural world does directly and indirectly affect our health. We can argue purely hypothetically that we should be protecting more habitat and biodiversity. As was the case with arguments for why the developed world should help the developing one fight AIDS, there are "noble" as well as prudential reasons why it is wrong to allow environmental degradation. The noble reasons are many: because other species have a right to exist, because future generations should be able to enjoy the natural world we are taking for granted, etc. The outbreak of AIDS is the prudential reason snatched out of the hypothetical and playing out as we speak: because our own survival as a species depends on it.

The Socioecological Medicine Approach encourages us to adopt a harmonious place within our environment. If we make serious efforts to have a healthier relationship

[29] For a thorough account of why colonizing another planet is not feasible, see Lawrence M. Krauss (1995) *The Physics of Star Trek*. New York: Basic Books.

with our environment, we will also improve the health and well-being of members of our own species. AIDS is here and must be dealt with. Preventing the emergence of yet another devastating scourge and the suffering and death it would entail hinges on how well we heed the warning sign AIDS represents.

4. Summary and Conclusions

The HIV/AIDS pandemic is a terrible scourge, particularly in southern Africa. Prevention efforts and treatment have thus far failed to bring the pandemic under control. Developed countries should do more to help southern Africa and other developing areas to fight the pandemic. They should do this both because it is the just thing to do, and because they have a duty to do so, grounded in the developing world's vulnerability to the developed world. The Socioecological Medicine Approach that I develop is a useful conceptual framework for analyzing the HIV/AIDS pandemic and ways to fight it. The approach is a useful perspective because it is holistic, embraces web causation, emphasizes interconnectedness, encourages communities to play an active role in responding to the HIV/AIDS pandemic, and encourages humans to adopt a more harmonious place in our environment. The most important conclusion bolstered by the Socioecological Medicine Approach is that HIV/AIDS is a symptom of inequality and poverty, therefore both symptoms and their root causes must be addressed to stem the HIV/AIDS pandemic. It is not enough to efface the embodied manifestation of inequality; the most ethical thing to do is to encourage both short term interventions to alleviate suffering caused by AIDS and longer term interventions that will help make people less vulnerable to AIDS and other diseases and will reduce the likelihood new epidemics will emerge.

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