

Gender-sensitive agricultural interventions as tool for mitigating HIV and AIDS

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Conventional AIDS interventions aimed at raising awareness remain barely effective in sub-Saharan Africa, arguably because structural underlying causes of the pandemic inhibit people, especially poor women, to live up to the promulgated behavior changes. A different approach is urgently needed, one that does address the underlying causes. While much scientific attention is directed at identifying and mitigating the devastating impacts of AIDS, little attention is directed towards understanding and addressing the drivers of the pandemic. In this paper poverty, food insecurity and gender inequality are identified as key facilitators of the pandemic. It is suggested that more secure livelihoods for women could help to prevent hazardous survival sex and exploitative gendered power relations that increase their risk of becoming infected with and spreading HIV. Improved agricultural technologies can diminish rural food insecurity, and, if well targeted, diminish gender inequality. However, the uptake of modern agricultural information is – just like the uptake of AIDS information – generally low among poor rural women. To increase effectiveness, innovations need to be relevant and communication methods appropriate for the target group – those most susceptible to infection – and within the specific context.

[HIV susceptibility and prevention, women smallholder farmers, agricultural interventions, Sub-Saharan Africa, anthropology]

Since the beginning of the global pandemic, AIDS has been considered a medical problem by both policymakers and the worldwide public (Collins and Rau 2000; Kalipeni et al. 2004). As no vaccine or cure are found yet, HIV prevention efforts focus primarily on changing individual behavior through awareness creation (Airhihenbuwa and Oregon 2000; Collins and Rau 2000; Freudenthal 2001). However, in Africa many of these interventions have failed and still fail: countless surveys on people's knowledge, attitudes and practices conducted since the mid-1980s to the present day, show that there is little correlation between increased knowledge of HIV and AIDS, and changes in high-risk behavior (Freudenthal 2001; Ngwira et al. 2001; Nguyen and Stovel 2004; Schoepf 2001). Meanwhile, the number of people living with and dying of HIV and AIDS continues to rise dramatically¹ (UNAIDS 2006). A different, more

informed and contextualized approach to HIV and AIDS is urgently needed (Bie 2001; Collins and Rau 2000; FARA 2004).

Contextualizing the AIDS pandemic reveals that it has struck most severely in nations with economies in crisis: of all HIV-infected people worldwide 95 percent live in developing countries (UNAIDS 2006). The hardest hit region globally is sub-Saharan Africa, inhabited by little over 10 percent of the world population, but home to two thirds of all HIV-infected people (*idem*). Although infection rates are still highest in the urban areas, they increase fastest in the rural areas, where most of sub-Saharan Africa's extreme poor live. Increasingly, poverty and AIDS appear to be intertwined phenomena (Bryceson et al. 2004; CHGA 2004; Collins and Rau 2000; Drimie 2002; Farmer 1998; Freudenthal 2001; Marcus 1993; Parker et al. 2000; UNAIDS 2006; WFP 2004). AIDS is thus not simply a medical health problem equally threatening all human beings. Its uneven distribution calls for an in-depth understanding of the dynamics that facilitate the spread of HIV.

Studies in the field of rural poverty and AIDS have so far mainly focused on identifying the impacts of the pandemic on agriculture, generally concluding that food insecurity increases as a result (De Waal and Tumushabe 2003; Drimie and Gandure 2005; FAO 2001, 2003b; Gillespie 2006; HSRC 2003; Jayne et al. 2004; Jooma 2005; Müller 2005a; SADC-FANR 2003). Far less scientific attention has been directed to the reverse relationship, the ways in which food insecurity fuels the pandemic. This lack of attention is unfortunate, because improved awareness and understanding of the dynamics that facilitate the pandemic can reveal potential new areas for intervention.

This paper will elaborate upon the impacts of insecure rural livelihoods on susceptibility to HIV. The focus will be on sub-Saharan Africa as the crises are most urgent here. Furthermore, specific attention will be given to women because in sub-Saharan Africa they have become disproportionately infected with the virus. The analysis will suggest that agricultural interventions may be able to play a critical role in mitigating the spread of HIV – if appropriate and relevant for those most vulnerable to infection. Following, several aspects will be discussed that need consideration if agriculture's potential contribution to mitigating the pandemic is to be realized.

Vicious circle

In the countries most affected by AIDS, the majority of the population resides in the rural areas² and depends on small scale agriculture for their survival. As there is great concern about the impacts that epidemics have and will have on this main source of livelihood, many studies have been conducted to assess these impacts (Drimie and Gandure 2005; FAO 2001; Gillespie 2006; Jayne et al. 2004; Jooma 2005; SADC-FANR 2003; De Waal and Tumushabe 2003). Although the extent to which the impacts are felt in different places and among different households varies, the following impacts have commonly been observed.

First of all, the availability of human labor power is severely hampered, as AIDS attacks mostly those in the productive age groups. The ill and deceased cannot attend

the fields, nor can the (mostly female) family members that nurse the patient. Increased numbers of funerals keep also the healthy villagers from attending to their fields. The time available for farming is thus diminishing, and, because many farmers are weakened, so is the energy input. As agriculture in sub-Saharan Africa is mainly dependent on human labor, food production drastically declines as a result of the AIDS pandemic. Besides a decrease in quantity, the quality of available food may diminish too: to adapt to less labor availability, some households switch to more basic and less varied food production, which can lead to malnutrition (Bryceson et al. 2004; Du Guerny 2002; NAC 2003). Furthermore, to pay for the increased medical and funeral costs, money of savings is used that could otherwise have served to buy agricultural inputs like seeds or fertilizer. When money is not readily available, assets are sold. First the least important, but at a later stage essential agricultural equipment such as draft animals is sold. All these factors combined lead to increased food insecurity. Although difficult to prove decisively, there is general agreement that the famines that have been ravaging eastern and southern Africa the last several years are in part a result of the crippling impacts of AIDS on agriculture (Abamu and Nwanza 2003; FAO 2003a; SADC-FANR 2003).

Because AIDS strikes mostly among prime age adults, the demography of the farming population is profoundly altered as the pandemic matures in the countries of southern Africa (Barnett and Grellier 2003; FAO 2003a; Coon et al. 2007; Qamar 2003). Those responsible for the rural household income and farming activities are increasingly adolescents, the elderly, widowed women, and sick or weakened adults (FAO 1999 in Mutangadura 2000). Another important consequence of the premature deaths of adult farmers entails the loss of farming knowledge from one generation to next (Alumira et al. 2006; FAO 2003a). In their study on the impacts of HIV and AIDS on the inter- and intra-generational information flows among smallholder farmers in Malawi, Alumira et al. (2006) found that over 80 percent of the chronically ill did not transfer seed knowledge to their children. As a result, local agricultural knowledge erodes and many young villagers lack even basic farming skills. Barnett and Grellier (2003) believe that this loss of expertise and experience will in the longer term be more serious than the loss of labor power. As agricultural extension agents are also struck by the disease, formal knowledge transfer services too are weakened (Arrehag et al. 2006; Bryceson et al. 2004).

HIV and AIDS furthermore impact on rural livelihoods by exacerbating both socio-economic and gender inequalities among farmers. Households without any financial buffer may need to sell their livestock, equipment and land when cash is urgently needed. Relatively wealthier households can then buy these assets, which are often sold at desperately low prices. The gap between poor and slightly wealthier thus widens (Barnett and Grellier 2003). Gender inequality is intensified because caring for the sick falls disproportionately on women, in so reducing their time for income generating activities and thus increasing their dependence on men. Furthermore, women are at high risk of losing their ownership of or access to assets, especially land, as traditional laws allow relatives of a deceased husband to confiscate his households properties (FAO 2003a; Jayne et al. 2004; Mutangadura 2005).

And so, AIDS clearly has a devastating impact on rural livelihoods, increasing food insecurity, impoverishment, inequality and vulnerability. At the same time, however, these very same conditions are in turn found to be important drivers the AIDS pandemic. The magnitude of the AIDS pandemic in Sub-Saharan Africa is clearly linked to the inability of a large part of the population to achieve or keep up a sustainable livelihood.

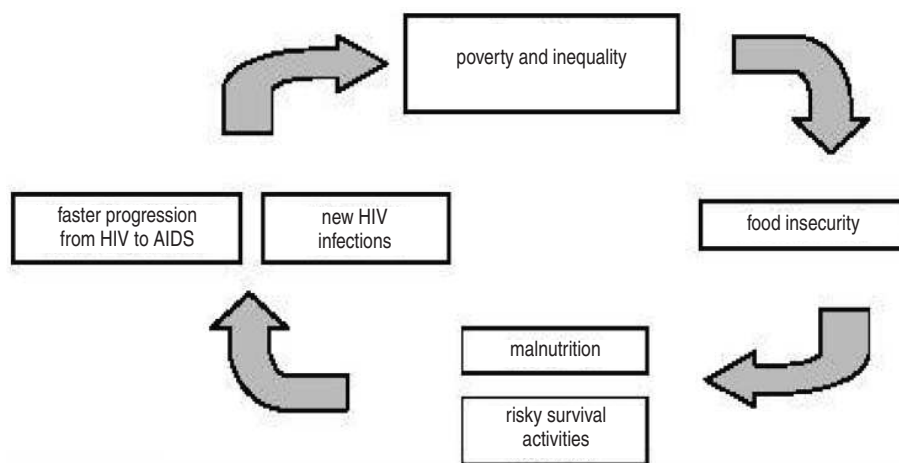
For one thing, malnourished bodies are more susceptible to illnesses and infections, including sexually transmitted ones (and once HIV-infected, the onset of AIDS is likely to be quickened by malnutrition, repeated infection and unsanitary living conditions) (Collins and Rau 2001; FAO 2003a; Gillespie and Kadiyala 2005; Ngwira et al. 2001). Related factors facilitating the spread of AIDS are the little access impoverished people often have to health care and education. Poverty and food insecurity, furthermore, push villagers to resort to practices that increase their chances of contracting and spreading HIV. For example, many – especially men – migrate in search of paid employment (CHGA 2004). The links between mobility and HIV transmission have been well documented (see Collins and Rau 2001: 8-12 for review). Long-distance labor contracts often imply that workers leave behind their families for long periods of time, turning to casual sexual encounters and commercial sex workers for their satisfaction. Both the workers as well as the women providing them with sex often have multiple partners, enhancing the risk of HIV-infection (Bryceson et al. 2004; CHGA 2004; Drimie 2002; Epstein 2002; Freudenthal 2001; Garbus 2003; Marcus 1993; Ngwira et al. 2001). When the workers return home, many bring with them the deadly virus. Concurrently, male migration may push left behind wives to engage in transactional sex to supplement their incomes (Garbus 2003; Marcus 1993). As rural women generally have little or no education, few waged jobs are available to them (Schoepf 1988). Furthermore, for women, access to land, assets or credit is often restricted. For many poor women, having little or no alternative sources of income, exchanging sexual favors for material support serves as a basic survival strategy (elaborated upon in Van den Borne 2005 and Schoepf 1988; mentioned in Bryceson et al. 2004; Collins and Rau 2000; Drimie 2002; Epstein 2002; Freudenthal 2001; Gillespie and Kadiyala 2005; Jayne et al. 2004; Marcus 1993; Rimal et al. 2004; Zuniga 2004).

In Africa HIV is mainly transmitted through unprotected heterosexual intercourse (UNAIDS 2005). Condoms could avoid many new infections, if they would be used. However, condoms often are associated with ‘casual sex’, prostitution, promiscuity, and mistrust, and are therefore perceived as inappropriate in the context of a long-term relationship³ (Bryceson et al. 2004; Marcus 1993; Van den Borne 2005). Many women engaged in transactional survival sex would prefer, and aim for, a lasting relationship (*idem*). In order to turn casual sexual encounters at least into the *form* of a relationship, and so disassociate oneself from disrespectful prostitution and increase one’s chances for the relationship to last, condom use is not brought up. For a woman to demand or even suggest condom use within a relationship would be perceived by her partner as accusing him of infidelity, as proof for her own infidelity or depriving him of sexual pleasure, hence putting her at risk of physical violence or economic abandonment (Garbus 2003; Marcus 1993; Lawson 1999; NAC 2003; Schoepf 1988).

Women in direct need for support do not feel sufficiently empowered to negotiate the conditions under which sex occurs. When immediate survival of self and dependants is in question, the risk of dying from AIDS in the future can seem irrelevant. In a study of low-income women in long-term relationships in India the women expressed their belief that the economic consequences of leaving a relationship that they perceived as risky were far worse than the risk of contracting HIV (Gupta 2000). Marcus (1993) tells of female market traders, cultivators, waitresses and barmaids in Uganda who supplement their income with occasional sex with customers when times are particularly hard, and who rationalized: 'If we fear AIDS, what shall we eat?' (Nakuti et al. 1992, in Marcus 1993: 3). Because of their poverty, many poor women, married and single, knowingly engage in high risk behavior that facilitates the spread of HIV. So, ironically, what used to be a common survival strategy for poor women, now all too often leads them to an early death.

What I have aimed to demonstrate in the above paragraphs is that AIDS and insecure livelihoods are mutually reinforcing. A downward spiral of AIDS and the inability to achieve or keep up a sustainable livelihood is the result, as depicted in Figure 1.

Figure 1 *The vicious circle of insecure livelihoods and AIDS*



Source: FAO 2003a

The upper part of this vicious circle has received extensive scientific attention, as elaborated upon earlier. The lower part, however, depicting food insecurity fuelling the pandemic, has received far less consideration (Loevinsohn and Gillespie 2003; Gillespie and Kadiyala 2005; Ngwira et al. 2001). As Ngwira et al. (2001) comment:

That AIDS affects agricultural development and rural livelihoods is, for most professionals working in the sector, a painful reality, but not really hard to understand. ... However the converse, that agricultural development and rural livelihoods, or their lack, may be

contributing to the spread of HIV, generally proves a much harder nut to get one's teeth around. (Ngwira et al. 2001: 12)

This lack of attention for the ways in which rural livelihoods may facilitate the spread of HIV and vulnerabilities to its impacts is unfortunate, because awareness and understanding of these dynamics may reveal potential new areas for intervention.

New opportunities for intervention

It may be clear by now why conventional AIDS interventions propagating the ABC message (“Abstain, Be faithful or use a Condom”) have not had the desired result in many underdeveloped countries. These recommendations are based on the assumption that women have control over their own sexuality, as well as the sexual activities of their partners – which, unfortunately, most do not. Unfavorable economic, socio-cultural and political conditions put millions of people in increased risk of infection, and whether they are aware of this risk or not, many – especially poor women – simply have few opportunities to decrease their susceptibility.

As poverty and food insecurity are found to be key drivers of the AIDS pandemic in southern Africa, it follows that these need to be addressed in order to bring the pandemic under control and mitigate its devastating impacts. Because most of the extreme poor in Southern Africa (83%) live in the rural areas, and 85 per cent of all poor in this region depend on agriculture for their livelihood (IFAD 2002), investments into agricultural development are of particular importance when trying to alleviate poverty in this region. More secure livelihoods for rural women could help to prevent hazardous survival sex and exploitative power relations that increase their risk of becoming infected with and spreading HIV. Improved agricultural technologies can diminish rural food insecurity, and, if well targeted, diminish gender inequality.

Indeed, a joint mission of the Special Envoy of the United Nations for Humanitarian Needs in Southern Africa and the Special Envoy for HIV/AIDS in 2003 concluded that a “key component in stopping the spread of HIV/AIDS is to improve people’s food security” (FAO 2003a). Others have come to the same conclusions (Gillespie and Kadiyala 2005; Jayne et al. 2004; Kormawa 2005; Müller 2005c; WFP 2003). Jayne et al. (2004) “underscore the central role of agricultural policy in mitigating the spread and impacts of the [AIDS] epidemic” (vii). They elucidate:

The most effective strategic response to the ravages of AIDS in eastern and southern Africa must include policies to promote economic growth and poverty alleviation. Central to both of these are the policies to promote agricultural growth. (Jayne et al. 2004: 21)

Gillespie and Kadiyala (2005) also advocate:

HIV/AIDS prevention is conventionally equated with sex education, condom distribution, and behavioral change. But opening up opportunities for less risky, less susceptible livelihoods also constitutes prevention: for example, diversifying livelihoods to ensure food and nutrition security may preclude the need for an adult to migrate for work and help keep families together. (Gillespie and Kadiyala 2005: 69)

A quote of UNAIDS Director-General Peter Piot even strengthens the case for a focus on agricultural development in this era of AIDS:

Some weeks ago, I was in Malawi and met with a group of women with HIV. As I always do when I meet with people living with AIDS, and other community groups, I asked them what is their highest priority. Their answer was clear and unanimous. Not care, not drugs for treatment, not stigma, but FOOD. (in WFP 2003)

These urgent recommendations to increase food security as strategy for preventing AIDS and mitigating its impacts, however, have yet to be adopted by most policy makers and donors (De Waal and Tumushabe 2003; Haddad and Gillespie 2001; Loevinsohn and Bigman 2001).

In sub-Saharan Africa, women are responsible for most food securing activities. Together they contribute 60 to 80 percent of the labor in both food production for household consumption and for sale (Booth 1999; FAO 1995). Because of their critical role in food production it is argued that women are key to achieving food security and should thus be at the core of any strategy to increase farm production (Arrehag et al. 2006; FAO 2005; Kaaria and Ashbly 2001; Quisumbing et al. 1995; Quisumbing and Meinzen-Dick 2001).

Women should not only be central in food securing interventions, but, many urge, also in the response to HIV and AIDS (Ackermann and de Klerk 2002; Ghosh and Kalipeni 2005; Kormawa 2005; Müller 2005b, 2005c; Mutangadura 2005; Quisumbing and McClafferty 2006; Schoepf 1988; Kar et al. 2003). Structural gender inequality, discussed earlier, puts women at increased risk of HIV infection. As a result, in sub-Saharan Africa women now constitute 59 per cent of all infected, and this share continues to rise (UNAIDS 2006). In her book *Trying to Survive in Times of Poverty and AIDS* (2005) Van den Borne opens with the following quotation:

Unless the underlying struggles of millions to survive in the midst of poverty, powerlessness, and hopelessness are addressed, and the meanings of AIDS understood in the context of gender relations, HIV will continue to spread. (Schoepf 1993 in Van den Borne 2005: 1)

Gillespie and Kadiyala elaborate in their recent book *HIV/AIDS and Food and Nutrition Security: From Evidence to Action* (2005):

The social and economic status of women is one of the most, possibly *the* most, important single factor conditioning the spread of HIV and the ability of households and com-

munities to withstand its impacts. ... By increasing women's access to economic and social resources, such interventions can fundamentally change the economic and social dynamics of gender roles and relationships and, in the long term, protect women as well as men and families in the HIV/AIDS epidemic. (Gillespie and Kadiyala 2005: 72)

In sum, to effectively combat AIDS it is crucial to understand how the pandemic is embedded within specific socio-economic and cultural environments. Using such a livelihood perspective will open up possibilities for broader HIV prevention efforts with increased relevance and effectiveness. Loevinsohn and Gillespie (2003) have developed a useful conceptual framework of HIV and AIDS determinants, their impacts and potential responses from a micro-biological to macro-environmental level (see Appendix 1). This inclusive model visualizes the multi-level embeddedness of HIV and AIDS and so helps to identify opportunities for addressing the pandemic complementary to mere awareness raising.

The multi-level embeddedness of HIV and AIDS urges for a multidisciplinary approach. Rather than merely a medical problem, HIV and AIDS form a development problem and therefore need the attention of not only medical professionals, but professionals from all development fields. As a myriad of interrelated factors facilitate the spread of HIV, the pandemic can not be reversed unless these different development professionals will join their forces, knowledge and experience.

Ineffective agricultural interventions

The case has been made for a focus on agricultural development, especially for poor women farmers, as means for AIDS prevention and mitigation. So far, however, agricultural scientists have paid little attention to non-agricultural factors such as gender inequality and AIDS. This exclusive focus on biophysics is asserted to be one of the main reasons for the lack of any large scale impact of agricultural research on food security in sub-Saharan Africa (FARA 2004; Sumberg and Reece 2004). Bie (2001) argues that:

The steps from the ivory research towers to the African farmers were never built. ... Research centers did not really address real farmers' problems, only perceived them. The lack of progress in improving food security in Africa is in many ways a function of the inability of the research community to ensure its relevance and the dissemination of its research. (Bie 2001: 63-64)

Farmers who benefit most from new technologies are usually those that can afford to experiment and have the financial and human capital to make initial investments. Both agricultural research and extension services mainly focus on commercial farmers (Swaans et al. 2006), while little attention is given to the needs of the most vulnerable groups. This focus on better-endowed farmers partly stems from the assumption that increased income for relatively wealthy farmers would trickle down to poorer farmers. Evidence

shows, however, that this assumption is ungrounded (Stephenson 2003). Other research findings show that higher production levels for some farmers, do, furthermore, bring down the market prices for all, thus decreasing the incomes of poor farmers that have not been able to adopt an innovation (Peacock et al. 2004). This has led to serious critiques claiming that agricultural research and extension services have increased inequalities among farmers (Stephenson 2003; Reece and Sumberg 2004).

Likewise, claims have been made that agricultural interventions in many cases exacerbated inequalities between men and women farmers by further eroding women's economic security and social status (Booth 1999; Bryceson 1995; Doss 1999; Grieco and Apt 1998; Jayne et al. 2006; Kaaria and Ashby 2001; Lewis 2005). Formal agricultural research and extension services mainly target men, assuming that they are the ones doing most of the work outside the household, in so neglecting female farmers, who in southern Africa do most food securing activities (Freeman et al. 2002; Jayne et al. 2006; Mayoux 2002; Müller 2005b). Mayoux (2002) writes:

In many parts of Africa colonialism undermined many indigenous ... women's rights. Male colonial administrators imposed household models and stereotypes of women derived from their own countries. These Western models and stereotypes persisted in the so-called 'development programs' following independence (Rogers 1982). These have not only excluded women through gender discrimination but even further eroded women's traditional rights through their focus on channeling all productive interventions through male 'household heads'; rather than recognizing and supporting women's productive role. (Mayoux 2002: 14)⁴

While men benefit from the new technologies, women are excluded from training and technology transfer activities either because they are not considered as users, or they can not participate because of their heavy workload, illiteracy or other socio-economic or cultural constraints. Here too information was expected to trickle down from men, to whom extension services are directed, to women. And here too, this has been found untrue (Booth 1999). According to Kaaria and Ashby (2001: 2) the assumption that technologies and extension services are "gender-neutral" is a key factor in explaining women's inability to benefit from them. As women are disproportionately affected by the AIDS pandemic, partly because of their low economic insecurity and low social status, effectively targeting them with relevant technologies is ever more urgent (Gillespie and Kadiyala 2005; ICAD 2004; Kim and Watts 2005; Mutangadura 2005).

Women's empowerment efforts

The argument made in the above paragraphs is that since women are found to be most susceptible and vulnerable to HIV and AIDS, agricultural interventions as tool for AIDS mitigation should have a special focus on the needs of resource-poor small-holder women farmers. As described earlier, more secure livelihoods for rural women could help to prevent hazardous survival sex and exploitative power relations that

increase their risk of becoming infected with and spreading HIV. In essence, what is called for are interventions that empower vulnerable women. Indeed, in one of the rare cases in which poor women themselves are asked about their wants, they spoke of economic independence, access to property, knowledge, respect, and a voice in household and community matters and political decision-making (IFAD 2003: 10).

Although the reasoning girding the argument of this paper may differ from earlier ones, the call for women's empowerment⁵ is far from new. Various lessons can be learned from pitfalls encountered in earlier women's empowerment efforts. In societies where men rule, women may not reap the fruits of their input. It has been found, for example, that when a crop traditionally grown by women starts to produce income, it is often taken over by men (Paris et al. 2001). Care in developing a technology in ways that empower women so that they control it is thus essential. Another concern is women's legal rights to assets such as land – or rather the lack of such rights (Booth 1999; ICAD 2004; IFAD 2003; Kaaria and Ashby 2001; Mayoux 2002; Müller 2005c; Quisumbing and Meinzen-Dick 2001). Even though in sub-Saharan Africa women are primarily responsible for food production, land is often owned and controlled by men. Access to land is attained through marriage, which increases the dependence of a woman on her husband's goodwill. Furthermore, as mentioned earlier, many traditional African laws allow relatives of a deceased husband to confiscate his household's properties, including land, thus increasing the vulnerability of widowed women (FAO 2003a; ICAD 2004; Jayne et al. 2004; Mutangadura 2005). Measures to increase women's control over land are therefore an important aspect of strategies to empower rural women.

Thorough gender analysis is thus crucial, including both women's practical day-to-day needs, the root causes of these practical problems (called "strategic" needs by Moser 1987, in Niehof 2002) as well as attention for ways in which powerful gender relations can subvert the impact of resources directed at women (Manuh 1998).

Way forward: anthropology's contribution

This paper started off by emphasizing that conventional AIDS interventions have remained largely ineffective in underdeveloped regions such as sub-Saharan Africa because structural underlying causes of the pandemic inhibit people, especially poor women, to live up to the promulgated behavior changes. Poverty, food insecurity and gender inequality were identified as key facilitators of the pandemic, and consequently as new opportunities for effective intervening. The majority of the people affected by HIV and AIDS as well as the majority of those most vulnerable to infection were found to live in the rural areas of sub-Saharan Africa and depend on small scale agriculture for their survival. Improving their agricultural productivity to increase livelihood security was therefore suggested as a potential strategy for AIDS mitigation.⁶ Simply developing agricultural technologies that increase agricultural productivity is inadequate for improving livelihood security of the poor, however. Scoones (2005: 3) writes that "we cannot assume that good science and technology will inevitably find

its way to needy users, particularly if they are poor and female” (see also Paris et al. 2001). To have an impact on the most vulnerable, innovations need to be relevant within their context and communication methods appropriate. For this, substantial in-depth understanding is required of the specific contexts, (changing) needs, priorities and interests of the various vulnerable target groups.

Anthropologists can make a contribution here, as they are well equipped to reveal the more hidden but possibly crucial socio-cultural dynamics that may underlie low adoption of innovations (Sillitoe 1998). Stoop (2004), conducting a comprehensive analysis of low adoption rates of agricultural research results in West and Central Africa, found that one of the primary causes of these low adoption rates is a gap between “scientific theory” and the “practical, grass root realities of African farming.” Hall and Nahdy (1999) speak of “a significant social, spatial and conceptual gap between agricultural researchers and their clients, particularly small farmers.” Sillitoe (1998) concurs, stating that:

While the aim is to allow local populations to make informed decisions by telling them about alternatives and constraints, extension strategies ... have often fallen short of expectations because they have failed to bridge the distinct knowledge traditions involved. (Sillitoe 1998: 230)

Although by now more appropriate models have been developed (see Nguthi 2007: 7-10 for description), agricultural research and extension services are generally guided by the ‘diffusion of innovations’ model (Rogers 1962), in which modern scientific knowledge is valued over indigenous knowledge of smallholder farmers and as a result ignores the latter. First of all, this may lead to the development of technologies that do not fit well into the knowledge systems of the intended end-users (Biggs and Matsuarts 1999; Hamel 2005; Mfunne and Taylor 2006; Sillitoe 1998). Secondly, the transfer of modern technologies without recognition of indigenous knowledge systems may offend feelings of self-worth among farmers (Marsh 1998; Millar 2004). This too may lead to low adoption rates, perhaps as a form of ‘everyday peasant resistance’ or ‘weapon of the weak’ (Scott 1985) in the face of a powerful exogenous institution.

The anthropological conceptual distinction between emic and etic is useful for analyzing the mentioned ‘gap’ between the information or technology providers and those on the receiving end. The distinction points out that those within a specific community may have a divergent worldview through which they value and interpret than those looking at the community customs and beliefs from a scientific outsiders perspective. Awareness of this divergence leads to the conclusion that, in order to develop interventions that are appropriate within a specific community, understanding the emic perspective of vulnerable population groups is essential. This does not only hold for transmission of messages about improved agricultural technologies, but also health messages including those about HIV and AIDS.

Conventionally, social science research for development is of a quantitative nature. However, on their own, quantitative research methods (i.e. questionnaires, surveys) are found to be insufficiently capable of adequately capturing the complex, multi-dimen-

sional nature of poverty. Anthropology's informal, in-depth, qualitative approaches can help unraveling the socially sensitive nexus between vulnerability, AIDS and agriculture. Anthropologists can thus assist agricultural researchers by providing relevant insights into the perspectives, needs and priorities of vulnerable smallholder farmers, as well as their adoption rationales so as to increase the impact of development interventions. As Sillitoe (1998) emphasizes:

Interdisciplinary work will be central to methodological advances in development research, combining the empathy of social scientists with the technical know-how of natural scientists to tailor interventions to local conditions. (Sillitoe 1998: 231)

Notwithstanding the important contributions that an anthropological approach can make to improving development interventions, the elaborately detailed and complex ('thick') ethnographic descriptions that usually result from anthropological field research are of little use to practical-minded policy makers or technical scientists (Babiker 2005, Hall and Nahdy 1999, Sillitoe 1998; Van der Geest 2006). The challenge for anthropologists wanting to contribute to development lies at making their insights relevant and useful for policy, integrating them into the practice as well as theory of development interventions (Babiker 2005; Stirrat 1998). For this, both the topic of study and form in which findings are presented need consideration.

Already, anthropologists' emphasis on the emic – the perspective of the intended beneficiaries of an intervention – has taken a foothold within development discourse, in the concept of 'participatory' research and extension. This concept generally implies that poor people and not outside agencies or governments should determine development needs, decide how they should be met and manage the process, which would make development appropriate, sustainable and result in self-reliance (Mosse 2003: 11). What is thus essentially called for is a significant change in the relationship between farmers and development professionals, a distancing from scientists and development practitioners who define "what is good" for farmers and try to "convince" them (Lavigne Delville et al. 2001: 5; Chambers and Ghildyal 1985; Selener 2005).

The label 'participatory' is now widely used. This is, however, more often to attract external attention and funding rather than to actually reverse or modify development's hegemony (Cramb 2005; Chambers and Richards 1999; Mosse 2003). There are indeed many difficulties in implementing a truly participatory development project (see Hall and Nahdy 1999; Lavigne Delville et al. 2001; Parpart 2000). Nevertheless, there is a growing amount of literature on how to realize the fundamental change through participatory approaches, to which I refer for further consultation (Chambers 2007; Gonsalves et al. 2005; UPWARD; Swaans et al. 2006).

Conclusion

While it is of undeniable importance to mitigate the devastating impacts of AIDS, this should not overshadow efforts to mitigate the spread of the pandemic itself. To

reverse the downward spiral of AIDS and livelihood insecurity a shift of perspective is needed urgently. More attention has to be directed towards understanding how insecure livelihoods fuel the pandemic by facilitating the spread HIV and accelerating the onset of AIDS. Only when the root causes of the pandemic are recognized and better understood can we start to address them.

The persisting problems faced by underdeveloped regions such as sub-Saharan Africa are often deeply intertwined. The interrelations between insecure livelihoods and HIV and AIDS assessed in this paper are a case in point. Development interventions that aim to address such persistent problems need to take into account these interrelations in order to have any substantial impact. A “new social science research” with strong links between research, policy and implementation is pleaded for. To increase the congruence of development interventions with the complexity of daily life reality, collaboration between multiple natural and social scientific disciplines is vital (Adato and Meinzen-Dick 2002; Bardhan and Ray 2006; Carvalho and White 1997; Collins and Rau 2000; Jayne et al. 2004; Kanbur 2001; Kondowe and Mulera 1999; Maxwell 1998; Sillitoe 1998; Stirrat 1998). Anthropologists can make an essential contribution to improving the livelihoods of destitute people by increasing the relevance and effectiveness of development interventions – if they are willing to take into account the needs of policy makers and program planners.

Notes

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- 1 In sub-Saharan Africa an estimated 2.8 million people became infected with HIV and 2.1 million died due to AIDS in 2006 (UNAIDS 2006).
- 2 Swaziland 33% of population HIV infected, 76% of population in rural area; Lesotho HIV 23%, rural 82%; Zimbabwe HIV 20%, rural 65%; Namibia HIV 20%, rural 67% (FAO 2005; UNAIDS 2006).
- 3 Other mentioned factors for low condom use in Sub-Sahara Africa include fear of the condom remaining in the female body and other possible implications; desirability of fertility; the need for (pregnant) women to receive semen; perceived lower sexual satisfaction; religious pressure against use; rumors about Western countries/national government deliberately spreading fear of sex so as to decrease the African/poor population; or even purposefully infecting condoms with HIV.
- 4 See also Freeman et al. 2002; Jayne et al. 2006; Manuh 1998; Quisumbing and Meinzen-Dick 2001.

- 5 One useful definition of the term empowerment refers to “people taking control over their own lives, gaining the ability to do things, to change and define their own agendas” (Young 1997 in Tallis 2002).
- 6 Which is not to say that agricultural development is the only way forward. For example, diversification of income for the rural poor is another important strategy to increase livelihood security.

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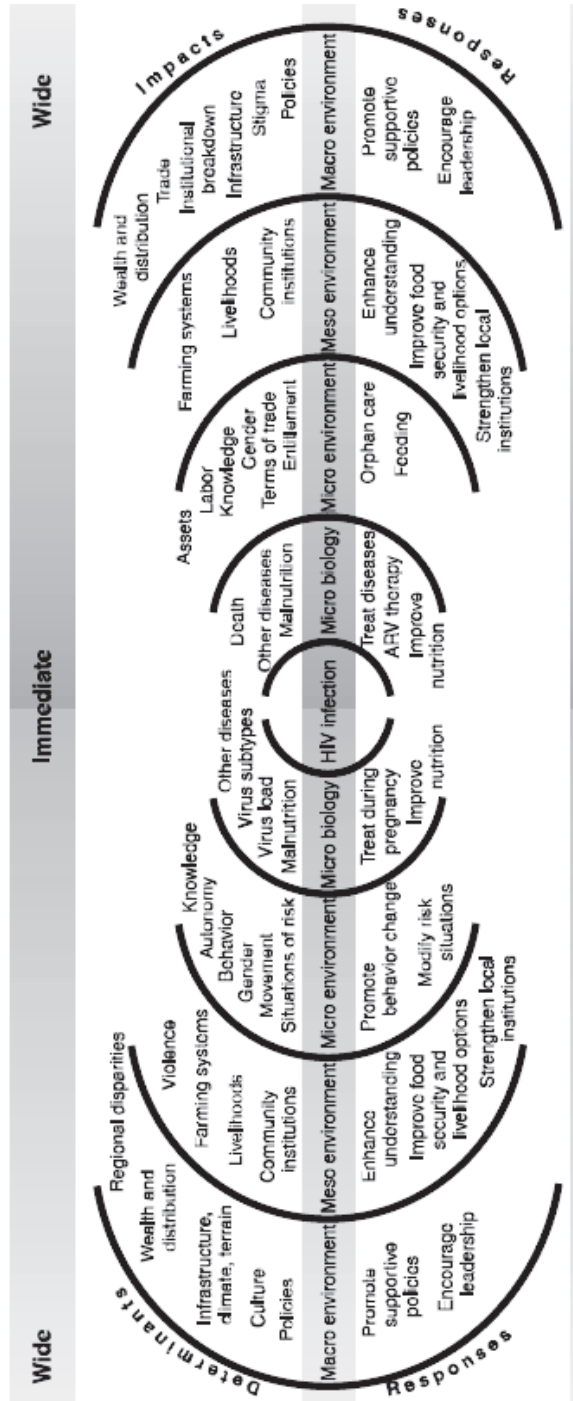
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Appendix 1 HIV/AIDS determinants, impacts and responses



Source: Gillespie & Kadiyala 2005.

