

Etic and emic perspectives on HIV/AIDS impacts on rural livelihoods and agricultural practice in Sub-Saharan Africa

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Abstract

Using an HIV/AIDS lens in looking at developments in rural livelihoods and agricultural practice reveals a diversity of critical impacts of the epidemic. Still, in most of the countries hardest-hit by HIV/AIDS the agricultural sector lacks adequate policies and programmes to deal with the crisis. This paper examines the results of research about HIV/AIDS impacts on rural livelihoods and agricultural practice in Sub-Saharan Africa that was carried out during the past five years. Most of the researchers concerned are affiliated with Wageningen University. A number of them contributed as authors to the present special issue. In the review and synthesis presented in this paper both an etic and an emic perspective are used. The etic picture is one of mixed evidence regarding the livelihood effects of HIV/AIDS. Eliciting the views of people living with HIV/AIDS (the emic perspective) revealed continuity between notions of health of the human body and health of crops and the natural environment. This is particularly relevant for the practice and language of extension services and the effectiveness of approaches used by organizations – governmental and non-governmental – that try to mitigate the impacts the epidemic has on farmers and rural livelihoods.

Additional keywords: cultural embeddedness, farming, health, poverty

Introduction

In 1992, Barnett and Blaikie published a study on the impact of HIV/AIDS in Uganda. In a telling figure they show how in nine years time a relatively well-to-do farming household that produced for own consumption and for the market (coffee), using own and hired labour, was reduced to near destitution by HIV/AIDS. In the end, the household consists only of the surviving orphans who desperately try to subsist by growing some food crops and hiring-out their labour. The farm is reduced to a small, manageable plot on which they grow some annual crops; the rest of the land is impoverished and taken

over by weeds (Barnett & Blaikie, 1992). The study of Rugalema (1999) in Bukoba District, Tanzania, was the first comprehensive micro-level study. It showed how HIV/AIDS morbidity and mortality affect the composition and resource base of farming households, with critical effects on their farming systems and livelihoods. Since these seminal studies were published much research on HIV/AIDS impacts on rural livelihoods and farming practices has been conducted, most of it diagnostic in nature and addressing specific aspects (see Müller, 2004, and Wiegers, 2008, this issue, for overviews).

Reviewing the growing body of evidence about the impacts of HIV/AIDS on farming systems and rural livelihoods, Loevinsohn & Gillespie (2003) plead for using an 'HIV/AIDS lens' as a tool to fine-tune policies that aim at mitigating the effects of HIV/AIDS on the agricultural sector and supporting and developing this sector, which is so crucial for rural development and food security in Africa. Applying an HIV/AIDS lens to agricultural policies is what Wiegers (2008, this issue) did. She shows that in six of the nine most-affected African countries, the Ministry of Agriculture did not develop a strategy at all. In three countries, Botswana, Malawi, and Tanzania, the ministries of agriculture did develop a strategy for the sector, since 2002, 2003, and 2006, respectively. Priority areas include support to vulnerable households and groups (orphans) as well as training and counselling on HIV/AIDS, and – to a lesser extent – impact research and developing labour-saving technologies. Food and nutrition security is a focal concern in all three strategies.

However, implementation seems to be problematic and in the case of Tanzania no budget for implementation was allocated (Wiegers, 2008, this issue). Clearly, though developing a strategy is a necessary first step, strategies only work if there are enough resources to enable their implementation. The lack of resources, however, is not the only problem. Underlying the inability of governments of the most affected countries to develop effective strategies and appropriate policies is the issue of untangling a myriad of problems relating to HIV/AIDS impacts and finding strategic entry points for mitigating them.

The phrase 'HIV/AIDS impacts' has been loosely used above. It is a key phrase in the literature on HIV/AIDS in Sub-Saharan Africa. However, the concept of impact is problematic in several ways. First, it implies a temporal perspective; impacts become visible over time and are difficult to measure in cross-sectional studies (Wiegers, 2008). Apart from the logistic impediments to longitudinal studies, this raises the question of the time frame that should be used for a proper assessment of AIDS impacts. The nature of the epidemic itself is here a complicating factor. Unlike a natural disaster that strikes at a certain moment or the more or less predictable pattern of seasonal food insecurity (Davies, 1993), Barnett (1992), referring to its epidemiological features, has called the HIV/AIDS epidemic a 'creeping disaster'. Baylies (2002) called it a 'long wave disaster' that unfolds in stages. Resilience may still be high at first but declines as affected households are forced to sell assets to cater for their needs and have less people they can call on for help.

The scope of the disaster at a given time and place thus depends on the number of people infected, the number of people displaying the first signs of HIV infection (suffering from so-called opportunistic infections, loss of weight), and the subsequent course of the illness, as influenced by whether or not medication (antiretroviral drugs) is taken and the general condition (nutritional status) of the infected person. The adjective 'creeping' (see above) refers more specifically to the fact that between infection and

onset of full-blown AIDS there is a time laps of six to eight years and that – in the absence of wide-scale testing – nobody knows who might be infected. Given this epidemiological pattern some communities may have high HIV-infection rates without yet experiencing the impacts of AIDS morbidity and mortality, while in other communities prevalence rates may have substantially dropped but former high prevalence has led to high numbers of orphan households and households headed by grandmothers. Hence, appropriateness and effectiveness of interventions to mitigate impacts will depend on what kind of impacts (the stage of the epidemic) a community is experiencing at the time of the intervention.

A second problematic issue is the interaction between HIV/AIDS and poverty. Barnett & Whiteside (2002) discuss the difficulties of disentangling AIDS effects from the effects of other African crises ensuing from structural adjustment policies, long-term food insecurity, environmental change, the absence of a green revolution, and the crisis of state legitimacy. Stillwaggon (2006) points to the environment of poverty in which HIV/AIDS thrives and the correlation between the prevalence of HIV/AIDS and other poverty-fuelled infectious diseases. Nombo (2007) found in her study that poverty makes people more vulnerable to HIV infection and less able to cope with AIDS. The farmers in the community where she did her research had lost access to nearby farmland as a consequence of the privatization of the sugar plantation and had to resort to distant farming, which severely diminished their income from farming and led to splitting up of families. In such a situation, desperate women and girls may resort to risky sex for money or food. Karuhanga Beraho (2008) found poor HIV/AIDS-affected banana-farming households in Uganda to have significantly lower levels of expenditures than non-affected poor households. The evidence reveals the existence of a devastating triad comprised of poverty, HIV/AIDS and food insecurity that mutually reinforce one another and trap households in a downward spiral of destitution. The combined effects of HIV/AIDS and poverty on food security led De Waal (2003) to predict the emergence of a new variant of famine.

The problem of disentangling HIV/AIDS effects from other poverty-related effects – referred to by Murphy *et al.* (2005: 270) as the problem of ‘*inadequate attribution*’ – poses great methodological and conceptual challenges. These may be overcome by using a longitudinal approach (e.g., Gebreselassie *et al.*, 2008, this issue; Seeley *et al.*, 2008), by systematically comparing HIV/AIDS-affected and non-affected households (e.g., Nguthi, 2007; Fagbemissi & Price, 2008, this issue), or by systematic comparison in combination with retrospective questioning (Nombo, 2007; Karuhanga Beraho, 2008).

The problem of attribution gives rise to another question about the meaning and measurement of the concept of impact. Impacts as measured by researchers may differ from impacts as felt and perceived by the population and persons affected. There is what we could call an etic and an emic side to impacts. The concepts of etic and emic originate from the linguistic concepts of phonetic and phonemic but were given a new meaning and application in anthropology. The anthropologist Harris defined emic and etic as follows:

“Emic statements refer to the logico-empirical system whose phenomenal distinctions [...] are built up out of contrasts and discriminations, significant, meaningful, real, accurate, or in some other fashion regarded as appropriate by the actors themselves [...]. Etic statements depend upon the phenomenal distinctions judged appropriate by the community of scientific observers.” (Harris, 1968: 571, 575)

It has to be noted that researchers who elicit and document people's own views and indigenous models, and draw conclusions from them, subsequently construct their own etic picture. Such a picture is not an unmisted reflection of reality – it never is – and it is subject to scrutiny by the scientific peers. So when we use the term etic picture in this paper we are referring to such etic-informed researchers' constructs.

Most of the literature on the etic side of AIDS focuses on the etic etiology of HIV and AIDS, on etic explanations of why some people get infected and others not, and on how people signify AIDS symptoms. The study by Farmer (1994) in Haiti is a good example of such an approach, but also Nombo (2007) pays attention to etic aspects, especially with regard to the perceived relationship between HIV/AIDS and witchcraft. The etic picture of AIDS impacts is about how people perceive these impacts, how they attribute the cause of certain trends and events to HIV/AIDS, and how these perceptions and etic attribution are linked to their worldview and own (indigenous) knowledge systems.

In this paper we will limit ourselves to looking at impacts on livelihoods and agricultural practices at the community and household level. We will apply an etic and etic 'HIV/AIDS lens' to reviewing the results of recent research, particularly research carried out by researchers affiliated with Wageningen University as reported in this issue of the journal and elsewhere. In two ways we hope to bring the discussion on HIV/AIDS impacts on rural livelihoods and agricultural practices in Sub-Saharan Africa a step further. First, subsumed under the heading 'the etic-informed picture', we will show that HIV/AIDS impacts on agriculture, livelihoods, and the biophysical environment at the micro level are diverse and context-specific. This also applies to the implications of HIV/AIDS impacts on human capital for the variety of actors engaged in agriculture and their performance. Second, since little is known about how people in high-prevalence rural communities link AIDS to changes in soil fertility and crop yields, the evidence on this will be discussed in a number of papers in this special issue. This is done in the section called 'the etic-informed picture'.

The paper is set up as follows. The first part investigates the etic evidence on impacts of HIV/AIDS on rural livelihoods, agricultural practices, and the actors involved. The second part presents the etic picture that emerges from the reviewed research. It places HIV/AIDS impacts in the context of those aspects of the environment that are relevant and significant to farmers – soil, crops, and pests – and looks at the perceived linkages and their cultural embeddedness. The paper ends with a conclusion.

The etic-informed picture: impacts, practices and actors

Impacts on land and rural livelihoods: mixed evidence

As explained above, measuring impacts of HIV/AIDS is difficult because of the inherent temporal dimension and the synergy between effects of HIV/AIDS and the effects of other factors and circumstances that prevail in poor rural communities in Sub-Saharan Africa. In the evidence on impacts we find that several levels can be discerned. First, there is the macro level, where the pandemic manifests itself most sharply in the deterioro-

ration of human capital. Demographic figures picture rising mortality rates and declining life expectancy, unfavourable shifts in the age structure of heavily affected populations, and increasing numbers of orphans (Haacker, 2004). Progress made in school enrolment rates comes to a standstill, especially for girls (Kakuru, 2006), and the loss of well-educated and skilled people affects the functioning of important institutions like educational and extension services (Müller, 2005; Nguthi, 2007).

On another level we find the evidence of HIV/AIDS impacts on households, livelihoods, and communities. In micro-level studies that use a livelihood framework HIV/AIDS impacts are assessed by looking at their effects on the five types of capital that are part of the framework: human, natural, financial, physical and social capital (see, for example, Nguthi & Niehof, 2008, this issue). Also at this level the effects of HIV and AIDS on human capital stand out most clearly. In terms of the dependency ratio at household level and gender, age, and marital status of the household head, affected households are worse off than non-affected households (e.g., Karuhanga Beraho, 2008). Affected households divert labour from agriculture because of AIDS-related illness and death of adult household members (see also Misiko, 2008, this issue).

Personal knowledge and experience form another type of human capital. In a context of high HIV/AIDS prevalence, because of the illness and death of their parents, increasing numbers of children have to take on farming responsibilities, while they may not be sufficiently equipped to do so (Haddad & Gillespie, 2001; Loevinsohn & Gillespie, 2003; Karuhanga Beraho, 2008). However, in the paper by Fagbemissi & Price (2008, this issue) the assumptions about the agricultural knowledge gap of child-farmers do not apply. Fagbemissi & Price found orphaned children to be more knowledgeable than non-orphaned children, although double orphans less so than orphans who lost only one parent. Apparently, the effects of HIV/AIDS on farming knowledge through loss of intergenerational transfer of knowledge are not so straightforward.

The effects of HIV/AIDS on social capital are less easily visible. Though also depending on the indicators used to measure social capital, evidence shows AIDS to make 'holes in social safety nets' (Baylies, 2002; Nombo, 2007). Because of stigmatization and declining household income, for affected households it is more difficult to access community groups and organizations than for households that are not affected. Whereas this effect can be very pronounced (Nombo, 2007; Nombo & Niehof, 2008), Nguthi & Niehof (2008, this issue) found no significant difference between affected and non-affected households' membership of community organizations, although for affected households it is notably more difficult to participate in credit-and-savings groups. The latter findings prove the point made above that different ways of measuring social capital may yield different outcomes.

Since AIDS tends to deplete the resources of affected households, leads to loss of household income, and exerts pressure on household expenditures (medical costs), the effects on financial and physical (material assets) can be presumed to be negative. So-called distress sales of assets are reported in several places in the literature, though sale of productive assets – such as land – tends to be avoided as long as possible. At this point, however, the evidence becomes somewhat ambiguous. Although the effects mentioned above are documented in all micro-level studies on HIV/AIDS impacts, often a comparison between affected and non-affected households in terms of poverty does not yield

significant differences. In their quantitative analysis Seeley *et al.* (2008) did not find affected households to be significantly poorer. Nguthi (2007) found no significant effect of HIV/AIDS status on farming household type, while the typology included vulnerability indicators. Nombo (2007) did not find a significant effect of HIV/AIDS on food security status. Karuhanga Beraho (2008) found a significant negative effect of HIV/AIDS status on per capita household expenditures only for the cluster of poor households.

We could venture the following explanations. First, the hardest-hit households dissolve. These households do not cope but disappear. This may bias the quantitative results in a longitudinal study such as that of Seeley *et al.* (2008). As Barnett & Whiteside (2002) suggested, traditional impact research paints too a positive picture of households' coping ability, because dissolved households that were not able to cope are not included. Second, the interaction between poverty and HIV/AIDS leads to an increase of poverty. In a situation of wide-spread poverty-affected households will not be much different from non-affected households.

Shifting practices in land use, cropping, and farm management

Although (access to) land as natural capital is a livelihood asset, we will discuss it in this section. Land and environmental quality will not be directly affected by HIV/AIDS but indirectly, through human agency. As is evidenced by the papers in this issue and by the other literature, especially the impacts of HIV/AIDS on human capital (see above) will determine how HIV/AIDS affects cropping patterns, land use and land quality. An interesting example is provided by a study of indirect HIV/AIDS effects on deforestation in southern Zambia (Frank & Unruh, 2008). In this case the effect is positive. In a situation of high out-migration, entailing an increased risk of HIV-infection – as the people themselves acknowledge – there is increasing uncertainty created by migrants who return sick and die, and by an increasing number of widows who do not know whether they are infected. In this situation the primary concern is the future security of the children, and the strategy of 'offspring and forest security' becomes a more powerful and community endorsed household strategy than the 'clearing to claim' strategy. The results show that this leads to a decline of claims on the forest and reallocation of forest land. It is a very interesting case, showing the interplay among high HIV/AIDS prevalence, cultural values relating to the position of widows, the rights of children and the claims on forest land, and human agency.

HIV/AIDS can, however, interface with natural resources and environmental quality in a very unsustainable manner. The research results of Challe & Struik (2008, this issue) illustrate that AIDS orphans in the Southern Highlands of Tanzania are heavily engaged in gathering wild edible orchid tubers to sell on the market rather than for own consumption. Orchids are protected under law, endangered, and their trade is illegal. Their research shows that edible orchids are in decline due to gathering pressure. But it is the high market demand from urban consumers in Zambia that is fuelling the trade. Between 2.2 and 4.1 million orchid tubers (the entire plant is uprooted) are currently annually harvested from the wild in the Tanzanian highlands (Davenport & Ndangalasi, 2003). This way of making a living is not sustainable, neither for the orphans nor for the environment.

The effects of HIV/AIDS on home or kitchen gardens merit special attention. Not only do such gardens increase regional biodiversity (Murphy, 2008), they can also contribute to the dietary diversity and health of HIV-infected persons and through sale of produce add to the household income (Haddad & Gillespie, 2001; Gillespie & Kadiyala, 2005). For these reasons, their quality in terms of management and kind and number of plant species they contain are important. In their paper Akrofi *et al.* (2008, this issue) show that while there were no significant differences in the number of crops cultivated in the field, HIV/AIDS-afflicted female-headed households had significantly more annual crop species and more root and tuber crop species in their home gardens than non-afflicted households for female-headed households, with no significant differences for HIV/AIDS affliction levels amongst dual-headed households. Gebreselassie *et al.* (2008, this issue) also found an increase in the number of species in the home garden of affected households, but a decline in species in field crops. Murphy (2008) found in her study in Western Kenya that, thanks to the work of a local NGO, through 'networks of knowledge' people's awareness about the importance of good nutrition for HIV-infected and AIDS-afflicted people and the nutritional values of kitchen gardens had in fact increased. She adds that "*AIDS has had a modest positive influence on several individual gardens over recent years*" (Murphy, 2008: 155).

Apart from influencing biodiversity in home gardens, HIV/AIDS may also affect cropping patterns in the fields. Misiko (2008, this issue) notes that millet and sorghum get abandoned in favour of maize because processing and preparing these food crops for consumption is more time- and labour-intensive than is the case with maize. There is some evidence in the literature (Nguthi, 2007) of replacement of cash crops by food crops in areas with high HIV/AIDS prevalence. This applies especially to cash crops that require high inputs in terms of labour and money. Coffee plantations, for example, may be neglected or even abandoned altogether for this reason (Barnett & Blaikie, 1992; Nguthi, 2007). Apart from the issue of inputs that people can no longer afford, in highly affected communities food security becomes a major concern, inducing households to prioritize food crops over cash crops in the allocation of their scarce resources.

Good farm management is crucial for achieving optimal productivity and maintaining soil fertility. Farm management is affected by HIV/AIDS through its effects on human capital and human agency. These effects are not always negative, as is illustrated by the example of the knowledge of the orphans in the paper by Fagbemissi & Price (2008, this issue). The case of Esteri in the paper by Misiko (2008, this issue) shows, however, that soil fertility management becomes problematic in an AIDS-afflicted household when the surviving adult is overburdened with work and the means to buy inputs or hire labour are not available. Sharecropping-out fields may offer a solution for the labour constraint in some cases (Gebreselassie *et al.*, 2008, this issue). Yet, in her study of HIV/AIDS impacts on banana-farming households Karuhanga Beraho (2008) found affected households to use significantly more soil conservation methods and clean planting materials than non-affected households, while – at the same time – they have less access to extension services. This seemingly contradictory evidence of HIV/AIDS impacts on farm management proves the contextuality of choices that actors make in a situation of constrained options and pressing needs. Planting soya bean to enhance soil fertility in the study area of Misiko (2008, this issue) was proposed to the local farmers but did not appeal to them. Their preferred solution would be to be given a cow.

The changing stage and its actors

In rural areas in Sub-Saharan Africa with a high prevalence of HIV/AIDS the households that make up rural communities are changing in composition and headship. Of course, households are never fixed units and resemble what Hareven (1982) once called 'revolving stages', where actors come on stage and leave it throughout the household's life course. For several reasons, however, HIV/AIDS increases the speed of revolving. One reason is AIDS-related mortality. A second one is increased movement of people (migration), which is linked to HIV/AIDS in two ways. First, migrants are more than non-migrants exposed to risk of HIV-infection (e.g., Nguthi & Niehof, 2008, this issue). Second, once sick, migrants tend to come back to their rural place of origin. The inter-household movements generated by the care needs of people suffering from AIDS (Nombo, 2007; Du Preez & Niehof, 2008) are the third reason. This situation of flux has consequences for the continuity of farm management, the availability and division of labour on the farm, and – ultimately – agricultural production.

HIV/AIDS also increases female headship of households. Although in most hard-hit countries, for reasons that we will not go into now, prevalence rates are higher among women than among men (Haacker, 2004): widowers tend to remarry whereas widows do not (Karuhanga Beraho, 2008). Hence, the proportions and numbers of female-headed households increase (Wiegiers, 2008). Male labour out-migration already increased women's share in agricultural labour in many parts of Sub-Saharan Africa. Spring (2000) estimates women's share in the supply of agricultural labour in Kenya, for example, at 70 to 75%. HIV/AIDS reinforces this trend of feminization of agriculture. It prompted Mr. Kofi Anan in his address to Wageningen University at the opening of the academic year on 1 September 2008, to consequently refer to the African farmer as 'she'. Because of the gendered division of labour in farming households, the effects of a female versus a male adult death differ with consequences for crop cultivation and income generation (Yamano & Jayne, 2004; Akrofi *et al.* 2008, this issue; Gebreselassie *et al.*, 2008, this issue).

A category of actors in agriculture that gained prominence in the wake of the HIV/AIDS epidemic is that of orphans. Forced by circumstances AIDS-orphans have to take on their deceased parents' tasks and responsibilities in farming. Although some of them are doing surprisingly well (e.g., Fagbemissi & Price, 2008, this issue), they do so often at the expense of their education and future (Kakuru, 2006; Karuhanga Beraho, 2008). Moreover, they are faced with lack of cash, compelling them to hire-out their labour, and the land may be taken from them by the extended family.

The emic-informed picture: perceptions and meanings

Discourse of disease and metaphors of misery

The use of metaphors is a common phenomenon across cultures. Metaphors reflect both a common reality yet by their very nature modify reality. A metaphor is figurative and equates (something is something). The use of metaphors in everyday language adjoining farming is widespread. Metaphors coupling farming with other phenomena are based on

selected attributes. A few examples are: to blossom, to flower, to ripen, to sow, to harvest, to plough, or to be fertile or barren. Such examples include: 'ideas bearing fruit', 'sowing seeds of discontent', and 'cultivating fertile young minds'. The language people use reflects the perspectives they hold. Importantly, however, there is a feedback loop in that language also influences how we view a given phenomenon.

The essayist Susan Sontag (2001) in her non-fiction writings on tuberculosis and cancer in 1978 and ten years later HIV/AIDS illustrates the accusatory power metaphors used in talking about illnesses can have. The negative language can have an impact on public perceptions and the individuals who have these illnesses. Importantly for the ill, stigma, self-blame, hopelessness, social isolation and exclusion can result. The work of Sontag is now a classic in illness narratives and has inspired both empirical research in the area of metaphor and discourse in the context of HIV and AIDS and the exposure of how language can work to justify discrimination and stigma (Schoepf, 2001; Sherwin, 2001; Valdez, 2001; Hanne & Hawken, 2007). Such stigma can result in evictions from their homes, loss of family support and thus a desire to keep their HIV status secret (Mill, 2001).

The power of metaphors has also been acknowledged by people living with AIDS in western/northern countries and their activism to construct a counter discourse that is positive, affirming, and empowering (Whittaker, 1992). The importance of metaphors in the health/healing narrative is also receiving attention in western medical clinical practice (Mabeck & Olesen, 1997; Coulehan, 2003). As Coulehan, a medical doctor, states: "*Patients understand their illnesses in a narrative way whether their physicians realize it or not. If this is so, and if physicians ignore or devalue narrative, then health care is bound to suffer*" (Coulehan, 2003: 87). Metaphors in agriculture and natural resource management are of growing analytical interest as well. They give us insight not only into how people talk about nature and farming, but also into problems and policy (Nerlich, 2004; Allen, 2007; Keulartz, 2007).

The link between illness and farming in discourse and metaphor construction has been less explored, but nonetheless forms an important arena from which we can gain insight. In 1996 the United Nations Development Programme on HIV discussed its language policy. A crucial component of the approach was to use language of human development and peace rather than war. In other words: to use a discourse that was optimistic and empowering (Parnell *et al.*, 1996). Those in the health sector and health science community have been prone to use a metaphor system of war. Such terms as 'fight' (the fight against AIDS), 'war' and 'win' (winning the war on AIDS), 'targets', and 'victims' predominate. More positive metaphors have come from the realm of agriculture, from the UNDP HIV programme where partners reinforce attitudes of care, nurture and planting seeds of hope.

How rural communities talk about individuals infected with the HIV/AIDS virus can tell us something about how HIV/AIDS is viewed as well as how people view selected aspects of farming and nature. Githinji (2008, this issue) focuses on the ethno-cognitive connections between HIV/AIDS and banana plants in the context of Bahaya agriculture in Tanzania. Among the Bahaya, HIV/AIDS is referred to as *ekiuka*, which is the same term they use for crop pests that destroy bananas, a critical livelihood food in decline. *Ekiuka* causes the banana plant to rot from the inside out and fall over. The visual effect

of the banana plant rotting from inside out is made a metaphor for HIV/AIDS as Githinji quotes an informant: “*the insect moved from the banana crop and attacked us [human beings]*” (Githinji, 2008, this issue). In both, the case of HIV/AIDS and banana, there is a sense of hopelessness and powerlessness in the “rotting from the inside out”. For the people in Bahaya, the long-term decline and ultimate devastation of the banana as a vital livelihood resource and the human body’s demise due to HIV/AIDS can be equated. It seems impossible to save either. This is also clearly a signal of hopelessness in being able to cure HIV/AIDS as well as banana crops of the hidden invader.

The conceptualization of HIV/AIDS as a ‘hidden invader’ surfaces elsewhere. The case study of Mill in Ghana (2001) as well as that of Githinji in Tanzania (2008, this issue) illustrate contrasting attitudes of the HIV/AIDS-afflicted and non-afflicted, yet both being grounded in fear and stigma. Women in Mill’s (2001) Ghana study who are HIV/AIDS patients are desperate to hide their infection status by taking drugs so they will not lose weight and be visible as infected in their homes and community for fear of denigration and discrimination. In Githinji’s study, community members state they did not like people to take drugs to hide their wasting and thus their AIDS-condition. Tim Allen’s work among the Azande of Sudan illustrates the fear of the hidden: “*Witches, like HIV positive people, may look like everyone else, but are secretly killing those around them.*” (Allen, 2007: 359)

Witchcraft, illness and calamity in humans and crops

Witchcraft has long been studied in Africa as part of the ethno-medical systems that exist among various cultures (Evans-Pritchard, 1937; Foster, 1976; Gillies, 1976; Pool, 1994; Allen, 2007). Recent research on HIV/AIDS has also highlighted witchcraft as one of the features used to explain why infection occurs (Anderson, 2002; Allen, 2007; Nombo, 2007). The reasoning lies at the boundary of naturalistic disease theories and personalistic theories. Naturalistic theories (including scientific medicine and plant pathology) explain illness in impersonal systematic terms. These theories include natural causes where causal agents are to be found in the natural, physical world (virus, insect). Personalistic disease theories blame illness on sorcerers, witches, ghosts, ancestral spirits and the evil eye. Both naturalistic and personalistic disease theories apply to human health and illness and crop health and illness. We use the term boundary because, as noted by Pool (1994) and earlier stated in the widely cited work of Evans-Pritchard (1937), belief in witchcraft does not contradict naturalistic understandings. Most importantly, witchcraft comes into play when there is serious misfortune, such as in the case of HIV/AIDS infection and crop failure.

Witchcraft as a causal factor can co-exist with naturalistic causation. Witchcraft, however, is the additional factor. Whereas one knows that HIV/AIDS is a virus transmitted by unprotected sex and this is how one got infected – the reason why *you* in particular got the virus was witchcraft. Evans-Pritchard (1937) elaborates a hunting metaphor to describe this and a further elaboration is provided by Pool (1994). Among the Azande, the hunter who spears the animal first as well as the hunter who spears the animal second are both considered to have killed the animal. This is similar to the relationship between natural and magical causes of injury: “*If a person is killed by a wild animal, then the animal is the*

first spear and witchcraft the second, and together they killed the person" (Evans-Pritchard, 1937: 73–74 in Pool, 1994: 5–6). Ultimately, *why you* as an individual are sick from HIV/AIDS and your neighbour is not or *why you*, as opposed to other farmers, are experiencing crop failure due to a pest infestation when your neighbours are not, is not only because there is a virus in your body or insects in your field, it is because of the 'second spear' of witchcraft. Why you as an individual are being visited by these catastrophes becomes comprehensible through the lens of personalistic disease theories.

The interface of human health and the health of not only crops but also the agricultural resource base is illustrated in the paper by Misiko (2008, this issue). He states: "*There is a very close link between the perception of human health and 'health' of the soil. If the owner is sick or is 'bewitched' one of the symptoms is low soil fertility or crop productivity. Land and human welfare are thus intricately linked with one affecting the other...*" Ultimately, the boundaries of health and illness, people and crops, blend and merge in multiple ways.

Conclusions

The review of recent research that is presented in this paper reveals several, sometimes at first glance, contradictory patterns and trends in the etic picture of HIV/AIDS impacts on rural livelihoods and agricultural practice in Sub-Saharan Africa. We will reflect on some of them. These reflections are not presumed to be definite conclusions or the 'final word', rather they should be considered as starting points for formulating new hypotheses.

First, households living with HIV and AIDS are not always poorer than households that are not afflicted, in spite of the well-documented negative consequences of HIV/AIDS for household resources and assets. This could be explained by: first, the inadequacy of methodologies in capturing the longitudinal welfare effects of HIV/AIDS affliction, and, second, by the interaction between poverty and HIV/AIDS that leads to widespread deprivation, with afflicted households not being much poorer than non-afflicted households.

The evidence on the impacts of HIV/AIDS on social and human capital, important because these are critical to human agency in agricultural production, likewise presents an ambiguous picture. The visibility of effects on social capital seems, at least partially, to depend on the indicators selected for measurement. When the number of memberships in community groups is used as an indicator, affected and non-affected households may not differ significantly, but when the type of group and the role of the informal social networks are taken into account significant differences appear. While the way HIV/AIDS depletes human capital is well documented in the literature, the research reported in this issue shows that AIDS orphans can do better than their non-orphaned peers in terms of knowledge about crops and pests. Perhaps this is because to orphans such knowledge is crucial for their survival and one of the few sources of capital they could build.

The consequences of HIV/AIDS affliction for soil fertility and cropping patterns reveal diverse effects as well. Soil fertility management becomes too heavy a burden for farmers, especially women, of afflicted households when needed inputs in terms of labour and money have to compete with the demands posed by caring for AIDS sufferers. On the other hand, possibly because of the same rationale as AIDS-orphans who have to make sure they have the knowledge they need for survival (see above), among banana

farmers in Uganda HIV/AIDS-affected households proved to do significantly more on soil conservation than non-affected households.

The gendered nature of HIV/AIDS impacts and responses is revealed in most of the papers of this issue. A case in point is the kitchen/home garden. Traditionally a women's domain, these gardens have the potential to both enhance the nutritional value of the daily menu of affected and poor households and to increase household income. The findings reported in this issue point to kitchen/home gardens as a promising entry point for interventions aiming at supporting affected and women-headed households.

The above implies that it is exceedingly difficult to formulate blanket recommendations for solutions to all problems caused by HIV/AIDS impacts, especially since these are entangled with poverty and other factors that increase people's vulnerability. Policies and programmes should invest in baskets of options that are context-specific, sensitive to gender and age differentials, and based on sound research.

The papers in this issue testify to the need for an approach that combines etic assessment and elicitation of emic views for tackling the multiple manifestations of HIV/AIDS as linked to agriculture and livelihood. Attention for the emic picture allows for hearing the voices of the people living with HIV and AIDS and will reveal the agency people exercise in trying to overcome their problems and the motivations that inspire them, which could inform policymakers and civil society about the kind of assistance they need. An initiative to integrate moral and practical support for women of HIV/AIDS-affected households in rural KwaZulu-Natal with strengthening their livelihoods by increasing horticultural production made use of the 'Farmer Life School' (FLS) approach. As documented by the researcher, who worked in close collaboration with the NGO carrying out the programme, the participatory and holistic FLS methodology brought to light the diversity of problems the women were experiencing and provided the basis for shaping the assistance (Swaans, 2008).

The observed continuity in people's thinking about health and illness of the human body, crops, the natural environment and the social environment is a point to be noted. It could imply that the approaches and language used by development organizations and in agricultural extension would be more effective if this continuity were taken into account.

In an era where the HIV/AIDS epidemic in Sub-Saharan Africa is seriously affecting the agricultural labour force and is jeopardizing the food and nutrition security of large numbers of people there is an urgent need for intelligent and emic-informed policies and programmes, as well for the means needed to implement them. Given the weakness of the agricultural sector and governance failures in the hardest-hit African countries, civil society should (and in many cases does) play an important role. However, there is still a long way to go, and time is running out. By doing sound research that yields relevant data and insights, researchers can shed light on the still poorly understood linkages between HIV/AIDS, agriculture and rural livelihoods *and* the emic perspectives on these linkages.

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