

EXPERIENCING VULNERABILITY IN SOUTHERN AFRICA: THE INTERACTION OF MULTIPLE STRESSORS

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INTRODUCTION

The spiral of poverty affecting an increasing proportion of southern Africa's inhabitants is well known. Likewise, general threats to human security and welfare in the region are understood; ranging from climate change, to economies and societies in transition, to the unprecedented spread of HIV. These conditions have been encapsulated in the concept of vulnerability. This concept is commonly used across scientific disciplines and is a common rationale for development and poverty alleviation programmes in the region. For more than a decade, interventions have emphasized sustaining people's access to food; for instance, via food aid and diverse forms of agricultural and horticultural extension programmes and, in South Africa, via social grants.

However, these efforts are proving to be stop-gap measures in the face of societal and environmental change, including HIV/AIDS; hence, the quest now is for more comprehensive interventions under the aegis of sustainable development. Accordingly, the scientific imperative is to go beyond recording the factors that contribute to population vulnerability, and provide a rigorous understanding of their interconnections and the causal links. There is a growing body of knowledge, for example, on the links between poverty and the spread of HIV. However, there are still large gaps in understanding of how and why the intersection and interaction of forces destroy the livelihoods of some while others survive and yet also create opportunities for others to adapt their livelihoods to their benefit. Understanding and distinguishing the effects of HIV/AIDS within this complex set of forces is a key challenge for scientists and policy-makers. Without that knowledge, it is not possible to understand the dynamics and nuances of vulnerability and, hence, to revise interventions as necessary.

This paper presents ongoing work by a network of scientists to develop a 'multi-stressor' framework for explaining the interaction and intersection of stresses that constitute vulnerability.¹ The focus is on results from the first phase of a project conducted at three sites

¹ Multiple stressors can include any changes that manifest as shocks (e.g., floods, job losses, death, etc.) or gradual changes (e.g. land degradation, decline in terms of trade, deterioration and/or restructuring of health care systems).

in southern Africa: a rural settlement in Chikwawa district, Malawi; peri-urban settlements in Amajuba district, Kwazulu-Natal province, South Africa and, in this same province, Warwick Junction (WJ), a large informal traders' market in Durban.² The first phase consisted of micro-level research with 10 participants at each site, and drawing on their experiences to explore the meaning and substance of vulnerability in different contexts. The rationale for a comparative study was that all the participants contend with common stresses of poverty, HIV/AIDS and climate change, and they are part of the segment of the regional population that has resources, including being beneficiaries of practical interventions, to stave off absolute destitution. Furthermore, the sites themselves represent the spectrum of contexts wherein similar stressors interact though they manifest differently.

The question that guided this study design - also the lens through which we examined vulnerability - was: how do parents, act and plan to secure the future of their children in the context of widespread poverty in southern Africa, on the basis of their knowledge of existing threats to family welfare, and their perceptions of what threats their children will face in the future? In other words, parental planning was the means to assess the commonalities and specificities of the many stressors that affect the livelihoods and welfare of a large proportion of southern Africa's population.

The research sites were chosen because they are locations of previous and other, ongoing research in this vein by the authors; hence, there was already a foundation of contextual information as well as relationships and rapport necessary for the type of research conducted in this phase of the project. The aim for the first phase of this project was to identify critical stressors and their interconnections for further investigation and measurement in later phases of the project. The project is inherently iterative by design. For instance, results from this phase have been discussed with participants. In due course, this interaction will inform further practical discussions on how the results might inform revisions in their livelihood strategies. As the project proceeds, results derived from empirical study and interaction with participants will inform discussions on opportunities for community level strategies and as well as provide information for NGOs and government agencies. Details of the project design and results of the first phase are to be found in the site research reports (Casale, 2007a; 2007b; Chanika & Msoma, 2007).

VULNERABILITY AND PARENTAL PLANNING FOR CHILDREN IN SOUTHERN AFRICA

The frequent use of 'vulnerability' to describe threats to human welfare has two foundations in southern Africa. One is a focus on 'livelihoods', emerging in the 1980s, in support of efforts to understand and ameliorate deterioration of food security in the region. The other, more recent, foundation is a focus on the 'impact' of the HIV pandemic. Both of these foundations underpin our work on the multi-stressor framework and the choice of parental planning as a means to examine critically the notion of vulnerability.

² 'Dealing with vulnerability: Parents' efforts to secure the future of their children'. funded by the IFPRI RENEWAL programme. For ease of reference, the project became known as the 'Child future security' project.

There are many definitions of livelihoods, but the one which underpins them is that of Chambers and Conway (1992):

A livelihood comprises the capabilities, assets (including both material and social assets) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resources base.

Households apply livelihood strategies to achieve desired goals or outcomes such as food security. A household's livelihood strategy is determined by the resources and assets that it owns, has access to or controls, and the restrictions created by the institutional environment. A household seeks to adapt its livelihood strategy in response to crises such as conflict, natural disaster or economic shock.

One goal of a livelihood strategy is food security. This term means "secure access by all people at all times to enough food for a healthy, active life" (World Bank 1986). Food security exists in a situation in which people at all times have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life (UN World Food Summit, 1996). Food security, however, is only one of a range of factors that determine why the poor make particular decisions, how they spread risk, and how they balance competing interests. People may choose to go hungry to preserve their assets and future livelihoods. It is misleading to treat food security as a need independent of wider livelihood considerations (Frankenberger *et al*, 2000).

When a household is affected by a shock or a stress, such as a sudden flood that washes away irrigated fields or gradual decline in health, temporary adjustments become necessary for survival. These adjustments are commonly defined as 'coping' strategies. However, scientists and practitioners are aware that many, possibly the majority, of the region's inhabitants are not 'coping' in the sense of being able to make temporary adjustments to their livelihoods and re-establishing, in due course, relative security for themselves and their families. This doubt is a reason for increasing use of the concept of vulnerability and rethinking of a livelihoods framework for analysis.

The prevailing sensibility now is that southern Africa is witnessing an erosion of the social and economic foundations for people's existence. This is a concern, not a fact. Yet it is cause enough for warnings to be posted and summarised in the frequent use of the concept of vulnerability. The HIV pandemic has added impetus to this concern. Over 20% of the population in southern Africa is estimated to be infected by HIV, and life expectancy in the region has plummeted (UNAIDS, 2004). The effects of HIV/AIDS are far-reaching, and are not limited to those who contract the disease; they extend to families, co-workers, businesses, communities, and health care systems. However, the factors that determine vulnerability are not defined by the disease alone. Multiple, interacting processes of social, political and bio-physical change influence the capacity of individuals, households, communities and countries to respond to HIV/AIDS (Naidu *et al*, 2005; Naidu & Harris, 2005). Furthermore, negative outcomes for large numbers of people affect in turn, the context itself; for instance, as more people seek support from governments and/or change livelihoods and uses of natural resources to meet immediate needs. A dynamic cycle results wherein vulnerability is

generated by both exposure to change, by responses to change, and by the outcomes of these processes (Gillespie & Kadiyala, 2005; Leichenko and O'Brien, 2006).

Food insecurity and the spread of HIV are measurable outcomes of these multiple and interacting processes. Food insecurity is linked not only to variable and changing climate conditions, but also to transformations of rural livelihoods brought about by trade liberalisation, privatisation, urbanisation, and conflicts, all of which influence prices, access and entitlements to food (Desanker & Zulu, 2001; Dilley, 2000; Ellis, 2003; Francis, 2002; Ogunseitan 2003). Food insecurity is also linked to the spread of infectious diseases (Andrews & Keegan, 2004; Clark & Qzilbash, 2002; Khan, 2001). Micro-level research on the impacts of HIV/AIDS shows growing levels of impoverishment amongst HIV/AIDS affected households (e.g. Booysen et al, 2002; Floyd et al, 2003; Mushati et al, 2003; research of ICRISAT in Zimbabwe, *pers. com.* J.Alumira).³

Looking ahead, one predictable outcome is the unprecedented number of orphaned children. Already, large numbers of children live with ill adults (Giese et al., 2003). Currently, research is showing different results on whether there are significant differences in the material welfare of orphans and 'non-orphans' (Parikh et al, 2007; May et al., 2006); the insinuation being that in a regional context of increasing poverty, all children suffer. Nonetheless, children living with HIV positive parents face particular challenges, including stigma, guilt, fear and the burden of becoming 'caregivers', as a parent's illness worsens and, ultimately, upon that parent's death, the psychological stress of grief and possibly trauma (Fox, 2002; Jurgensen, 2003; Siegel and Gorey 1994; Stein, 2003).

For parents living with worsening illness and impending death, a painful realisation is the eventual inability to care for their children and to see them grow to maturity. Previous work in western countries shows that children are at a greater risk of long-term negative outcomes if their parents fail to make custody arrangements before they die (Simoni et al., 2000). Children bereaved by sudden, unexpected parental loss demonstrate more negative outcomes than children who are prepared for such a loss (West et al., 1991; Rotheram-Borus et al., 1997). Previous RENEWAL research in developing countries (Adato et al 2005) shows that there are many barriers to this sort of planning. Mothers often lack information, skills, financial resources and tools to plan for their children's future. Research elsewhere also showed that parents may be reluctant to initiate planning because of a sense of guilt, denial of the seriousness of the illness, or fear that others may learn about the diagnosis (American Academy of Pediatrics Committee on Pediatric AIDS 1999). Despite these constraints, Adato et al (2005) argue that parents and their children continue to show resilience to the daily realities and challenges posed by HIV/AIDS.

Such resilience is to be expected in the southern African context where the extended family is a primary social security mechanism. For instance, in principle, no child can be an 'orphan' because biological parenthood is not regarded as the only basis of 'parenting'. Grandparents, in particular, are socially and legally accorded the status of parents. Furthermore, children do not necessarily grow up in the parental home. They may live with various relatives for extended periods of time. In southern Africa, this is a function of the migrant labour system,

³ International Crop Research Institute for Semi-Arid Tropical regions.

the increasing practice of families sustaining rural and urban arms of a household, and, indeed, of the universal practice of children being sent to stay with relatives in periods of family stress or shock. Nonetheless, research is beginning to highlight the burden on these social mechanisms, notably the increasing proportion of grandparents who are caring for large numbers of children as result of death of their own offspring (Chazan, 2005; 2007).

This study affirms the general tenor of findings from other studies in the region. However, at this stage, we cannot draw any conclusions on whether the stresses are creating a vortex of descent into severe impoverishment for a majority of the region's population or that a substantive proportion are, and will be resilient enough to accommodate the diverse threats to their survival. Our purpose here is to highlight the interconnection of the diverse stresses. We use a working model of the 'multiple-stressor' framework to illustrate current conditions at the research sites and the potential for change, positive and negative, in the livelihoods of the inhabitants.

THE MULTIPLE-STRESSOR FRAMEWORK

Consideration of a 'multi-stressor' framework is an outcome of the Southern African Vulnerability Initiative (SAVI).⁴ The SAVI brings together scientists from different disciplines and practitioners involved in monitoring and assessing vulnerability in southern Africa. The preliminary framework continues to be further developed in consultation and collaboration with diverse agencies in southern Africa. The current 'Child Future Security' (CFS) is one example; another is the adaptation of it by Oxfam Australia for planning purposes of their work in Africa (Scott Drimie; *pers. com.*)⁵

The premise of the multi-stressor framework is that a compilation of threats and assessment of their social and environmental effects does not adequately capture the nature of vulnerability and, in particular, does not provide a sound basis for the design and implementation of interventions to enhance human security and welfare. A comprehensive perspective is necessary to understand how climate change, trade liberalisation, HIV/AIDS, conflicts, and other stressors intersect and interact to influence the capacity of individuals,

⁴ The SAVI was initiated by Michael Brklacich, Carleton University, Karen O'Brien, at the time of the Centre for International Climate Research, Oslo (CICERO, and Coleen Vogel, Witwatersrand University. A workshop (Maputo, 2003) where scientists from diverse disciplines broached the issue of vulnerability, led to two further workshops in Cape Town (2004) with the intent to explore further the proposed agenda of SAVI with NGOs, government agencies (e.g. SADC Vulnerability Assessment Committees); and international food aid agencies as well as other scientists in the region. Karen O'Brien presented an outline of the framework. This was elaborated in a presentation (Quinlan, O'Brien and Ziervogel, 2005) at the International Conference on AIDS and Food and Nutrition Security organised by the International Food Policy Research Institute (IFPRI) in 2005. In 2004/5, HEARD in collaboration with Carleton University initiated a study to explore scope for assessment of vulnerability in urban contexts (Chazan, 2005). The current 'child future security' project is also being conducted under the auspices of SAVI and the IFPRI's RENEWAL programme, the latter having been oriented in the same direction as the SAVI and which has commissioned, in the last 4 years, a number of research projects. The SAVI now has a secretariat located in the Department of Geography and Environmental Sciences at Witwatersrand University.

⁵ Scottdrimie@mweb.co.za

households, regions, or social groups to cope with shocks and respond to environmental, social, economic, cultural, and political changes.

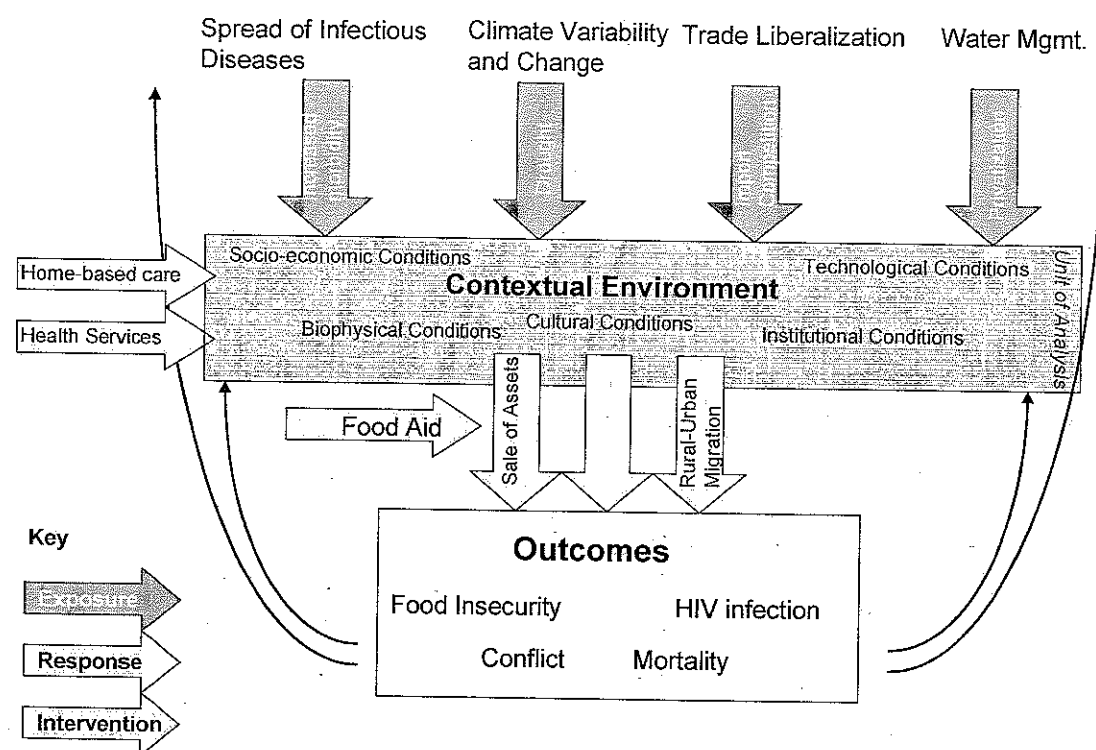
A comprehensive approach should ideally identify who is vulnerable, to what and why, and what can be done to enhance human welfare. To that end, SAVI has identified five criteria for design of an appropriate analytical framework.

1. The framework needs to be driven by a theoretical model of change. In particular, the framework should represent a perspective of disequilibrium and change as a norm, rather than as an anomaly. Such a model must also be time and historically sensitive to differences between shocks, longer term cycles and temporary 'new states of equilibrium.'
2. The framework should focus on how different stressors intersect and interact to influence both outcomes and responses to change.
3. The framework should incorporate how current responses to multiple processes of change can exacerbate or mitigate vulnerability to future changes. In other words, it should address dynamic aspects of vulnerability.
4. The framework should enable interaction between scientists and "practitioners" (individuals or organisations responsible for practical interventions) to produce scientific and strategic knowledge.
5. Related to the point above, the framework needs to resolve the methodological challenge of producing comparable results from detailed empirical research in different locations.

Figure 1 below represents these considerations. The SAVI framework emphasises the role of external interventions, whether they are organised by the international community, regional or national governments, NGOs, or the private sector. Two types of interventions are recognised:

- 1) Those that alter the context and enable a community, household, or social group (i.e. unit of analysis) to respond to changing conditions (e.g. home-based care programmes, skills training);
- 2) Those that attempt to influence outcomes, without actually considering or changing the context (e.g. food aid).

FIGURE 1: The SAVI Multi-stressor framework



The ways that policies and projects influence the context for responding to multiple stressors is a focus within SAVI. The framework is designed to show how cumulative and interacting stresses can undermine the ability to respond to current and future change, thereby perpetuating vulnerability, and how interventions may affect vulnerability, either positively or negatively. In the CFS project, the framework was adapted to include livelihood components instead of the 'contextual environment' because the micro-level nature of the data required a finer expression of those conditions. The following sections discuss the results of applying this framework to our research findings.

APPLICATION OF THE FRAMEWORK

The empirical focus of the study was on how parents plan and act to ensure the welfare of their children. This was the means to draw out their perspectives and experience of key stressors that affected their families' welfare, their responses and how they accommodated government and non-government interventions to ameliorate the known general threats to

human welfare in the region.⁶ Data collection was built around practical questions on health, nutrition and education; they provided the basis on which participants described their livelihoods.⁷ The framework, in turn, was the means to analyse the data from each research site; in essence, to describe the links between external factors threatening lives and livelihoods to which participants were exposed, societal interventions, their responses and the outcomes in terms of the consequences on their lives. Analysis of the data within a common analytical frame enabled comparative analysis to help understand the common (regional) and (local context) specific articulation of different stressors and their outcomes on human welfare. In the sub-sections below, we summarise the findings from each site before presenting the comparative assessment.

Site 1: Amajuba district, KwaZulu-Natal

Fieldwork was carried out in 'townships' located in the Amajuba district, approximately 25km from the town of Newcastle. These townships are peri-urban settlements where there are built up areas as well as open areas (fields and/or vacant land). Homesteads usually have more than one dwelling and are often a combination of different types of structures (mud/stone/wood rondavels; square brick homes with tin roofing). The town of Newcastle is a regional industrial centre as well as the district's agricultural centre. There is a large steel manufacturing plant, several textile/clothing factories, and a cement production factory, and the retail and residential sector of the town is expanding.⁸

Socio-economic and demographic data indicates that there are huge disparities within the district; in particular, high levels of unemployment, poverty and HIV prevalence. The following are some key indicators highlighted in the 2001 Census (Statistics South Africa, 2001): the estimated poverty ratio was 56.8% and unemployment 55%; an estimated 52% of the population had completed Grade 12, whereas only 7% had proceeded to tertiary institutions. The HIV prevalence amongst women visiting antenatal clinics in the Amajuba district was 40% in the Amajuba district in 2001 (DOH, 2003) and, in 2005, it is estimated to be 36,5% (National Dept. Health. 2006).

Figure 2 below is a schematic presentation of the CFS research findings. It distinguishes between the broad societal-level stressors (HIV/AIDS; infectious diseases and labour migration) that reflect changing socio-economic conditions, from the manifestations of them and the specific stressors that the study participants identified as significant in their lives. Figure 2 summarises the analytical basis for assessing the significance of these stressors in the 'Livelihoods' section. The participants' many different explanations of the effects of these stressors on their lives were ordered in terms of what form of resource - 'capital' - was affected. The Figure accommodates the different forms of development and poverty alleviation programmes that exist, by recording 'interventions' that the participants identified

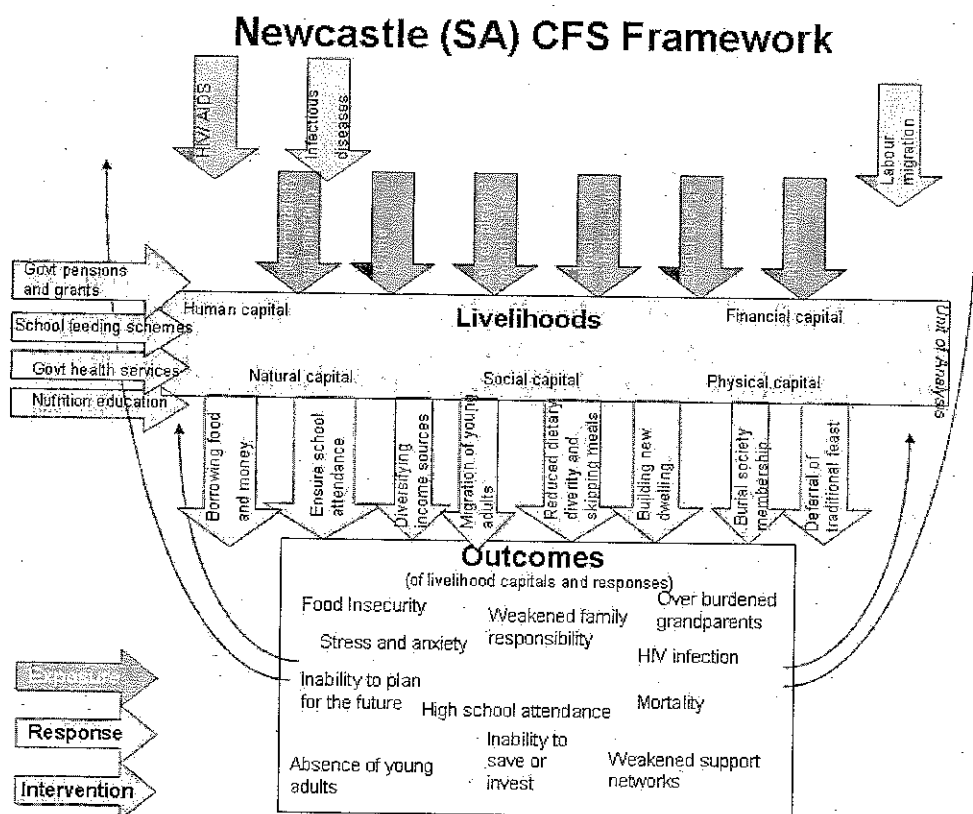
⁶ The experiential research design was adopted because this was the first phase of the project. The aim was to identify rather than measure critical stressors in people's lives.,

⁷ Four interviews were conducted with each participant over a five month period. The first interview schedule, covering general health and socio-economic status of the household was piloted and formed the foundation. Each subsequent interview schedule was compiled on the basis of responses from all sites to the previous schedules and through discussion of the research team.

⁸ The district used to be a coal mining centre but since the mid-1990s, many of the mines have closed.

as being particularly significant. The 'response' arrows summarise the participants' principal plans and actions to sustain their homes and families. The 'outcomes' box summarises the principal negative consequences of this interaction of different stressors and mitigating interventions. These outcomes include factors that the participants are well aware of as well as those that emerged from analysis of the data. The 'feedback' arrows from these 'outcomes' simply indicate the limited benefits of people's efforts to sustain themselves and their families in this context. The outcomes include stresses that further threaten the participants' capacity to continue to sustain their homes and families. In the sub-sections below, we describe the interaction of these dynamics in more detail.

Figure 2: Multiple stressor in Newcastle, South Africa



Capital assets

The key components of respondents' human capital were: children's school enrolment and education, as a result of access to schools and the importance parents place on education; generally good health amongst children (afflicted by minor illnesses but not debilitating; no nutritional diseases reported) and the 'traditional' knowledge (e.g. 'recipes' for natural remedies).

A central element of social capital is reciprocity, which allows households to count on neighbours or family members in times of need. Participants also referred to factors that erode or hinder reciprocal obligations: overstretched household finances, distrust, jealousy, gossip and 'crooking'. Another important asset is the local land tenure system which enables residents to secure land for housing and horticulture. That system exists alongside the formal market (and government subsidised) system whereby residents in the urban areas can secure freehold tenure to properties. For most of our respondents, their land and homes were viewed as their most significant physical assets. The majority of households also have access to basic public services and infrastructure, such as electricity, running water, roads, clinics and schools.

Significant natural assets included the availability of land and water for horticulture (vegetable gardens) and access to wild plants and herbs that are used for traditional remedies.

Families' financial assets were defined by the sources of (household) income; notably, social grants and pensions, remittances from family members working elsewhere, investments in 'stokvels' and funeral insurance schemes and small-scale, informal trading and labour. Also, the ability to pay school fees in instalments was a form of credit that may be considered financial capital.

Stressors

The primary reported stressors were not having enough money to fulfil the family's 'basic' needs. High unemployment amongst adult family members, and the effects of past shocks (e.g. death, illness) were factors reported that caused this stress. Moreover, harsh climatic conditions adversely affected horticulture.

Intergenerational tensions also emerged as a stressor, in terms of working young adult members refusing to support the household and spending money on consumer goods (e.g. 'brand-name' clothing); refusing to take parents' or grandparents' advice (e.g. on not engaging in risky sexual behaviour, getting tested for HIV, not falling pregnant); and being 'lazy' or not wanting to work. Furthermore, there were tensions in situations where adult members (in some cases biological parents) refused to take responsibility for the children living in the household.

HIV/AIDS was entwined in many of these stressors, in some cases generating them (e.g. illness and death) and in others exacerbating their intensity and/or weakening families' abilities to cope (e.g. health-care and funeral-related costs that absorb household resources needed for food and other necessities). Participants reported that the epidemic had widespread effects on local communities but that there was a veil of secrecy, stigma and fear.

For older participants, however, conditions such as arthritis and high blood pressure were reported with concern because they hindered their ability to carry out daily chores and to care for children in their care.

Opportunities

Government interventions such as school feeding schemes, child and foster care grants and public healthcare facilities (local clinics) were viewed as vital means of support. The 'traditional' social system was also highlighted in terms of norms of mutual support, access to local plants and herbs for use in remedies to cure or alleviate ailments and, notably, realised rights to land that can be inherited.

Responses

There was little evidence of longer-term initiatives; participants focused their attentions on the demands of the present. Responses to stressors included borrowing food and money, skipping meals or reducing the quantity and/or variety of food consumed; belonging to a food stokvel.

Several parents were managing to earn additional income by activities such as selling 'muthi', running a tuck-shop, or working as gardeners. Other responses to lack of employment opportunities included migration of (young) adults and doing casual and/or informal work.

However, there was long-term planning with regard to three matters. One was to 'insure' against the costs of death via membership of 'burial societies': formal and informal, co-operative funeral schemes. Respect for and adherence to funereal rites was evident and 'burial societies' are a modern means for people to save funds to cover the significant costs of these rites. However, a problem experienced by people is that dividends from burial societies do not cover all the costs; notably the 'feast' organised in respect to the ancestors and held 6-12 months after the funeral. This ritual can cost as up to a year's income. Consequently, it is not uncommon for people to defer holding this feast; in effect, to trade current liquidity for future 'debt'. The second, is investment in construction of additional dwellings and/or improvement of existing dwellings, with the view of bequeathing the property to the children, was a common strategy. The third, is ensuring school attendance of children, even if this means negotiating the payment of school fees in instalments, on the premise that education represents the key to employment and, therefore, a better future for them.

Outcomes

The common refrain of parents was that they were concerned about the future of their children but lacked resources and opportunities to make and implement substantive plans to safeguard their future. Notably, they regarded saving for or investing in children's education and, ideally, enabling them to receive a tertiary education, but they were also resigned to the fact that they cannot practice these unless their (financial) situation changes.

This resignation was coupled with a belief that their situation would not improve in the future. Whilst the majority of parents foresee continued access to government support (e.g. grants, pensions) and possible improvements in state-funded services and facilities (e.g. roads, schools, houses), there was little faith in the improvement of opportunities for wage employment. In sum, in response to our many questions, they posed the following question: if there isn't enough money available to meet basic day to day needs, how can one hope to invest in the future?

For caregivers that were grandparents, the lack of employment opportunities accentuated their concerns about what would happen to their grand-children when they passed away and also when the grandchildren grew up. The source of this concern was that their households depended on the pensions that the grandparents received and/or social grants for the grand-children. In the absence of job opportunities and means to secure a tertiary education for grand-children, the fear was that their households would succumb to extreme poverty.

Stress and anxiety was one of the outcomes as over-burdened caregivers (mainly grandparents) struggled to meet current household, feared for the future of their dependants, carried out (often physically difficult) chores while suffering ailments of the aged, grappled with the bureaucracy of accessing government support and, in some cases, continued to do income-generating work. Their anxiety was accentuated in some cases, by intergenerational tensions over the behaviour of younger family members.

Absence of biological parents, as a result of death (in most cases) or migration to urban areas, was a key determinant of this situation. Another contributing factor was lack of support, in some cases, from biological parents who were alive due to them not being employed or living elsewhere. Here, the research results reflected complex social dynamics surrounding the issue of parenting. 'Traditional' norms dictate that grandparents are the 'legal' parents of grand children in cases where a daughter is not married, and also of adult, married children who have children but live in their home. Indeed, irrespective of where their married children live, the grandparents are acknowledged 'heads of the family' with responsibility of that status to provide support.

That responsibility means, particularly in contexts of poverty, high unemployment rates and pensions being significant sources of income, that adults may legitimately depend on grandparents to care for them and or their own children. Subtle abuse of this system occurs, for example, in cases where a married daughter has died and the father lives elsewhere but provides no material support for the children. Another abuse is when a brother sends his own children of a partnership to a sister/brother who is occupying the 'family home' which is also the secure physical base (also on the basis of 'traditional' land tenure codes). In the context of HIV/AIDS, inevitably, there are many situations where members of a household are multi-generational and there are children born of various relationships. A much expressed fear amongst those who were de facto parents was, who would 'step in' when they die.

Site 2: Chinkhambi village, Chikwawa district, Malawi

The levels of poverty and food insecurity have increased dramatically in Malawi the last 15 years as a result of three severe droughts in the 1991/92, 1993/94 and 1996/97, coupled with implementation of the liberal economic reforms in the 1994/95 (Mann, 1998; Chinsinga, 2004). The present situation is in stark contrast to that of the late 1980s when the critical food policy problem for Malawi was how to prevent the maize price from collapsing in the wake of prolific production spurred by an increased uptake of hybrid seed and chemical fertilizer technologies [Chilowa, 1998; Orr et al., 2001].

Chikwawa district lies in the southern part of Malawi with a total population of over 362,918 and covers a total area of 4755 Sq Km. Most of the people are engaged in small scale agriculture activities which are rain-fed, labour intensive and require a substantial amount of farming inputs due to land degradation, disasters and higher temperatures prevalent in the area. The district has one of the highest average temperatures in southern Africa. During a normal year the temperatures go up to 42 degrees Celsius during the day. Apart from the Sugar Estates owned by Illovo Group of companies, only a handful of farmers are involved in commercial agriculture (through the sugar schemes). Although the district is just 40km from Blantyre, the commercial capital city of Malawi, Chikwawa district is among the poorest districts in the country

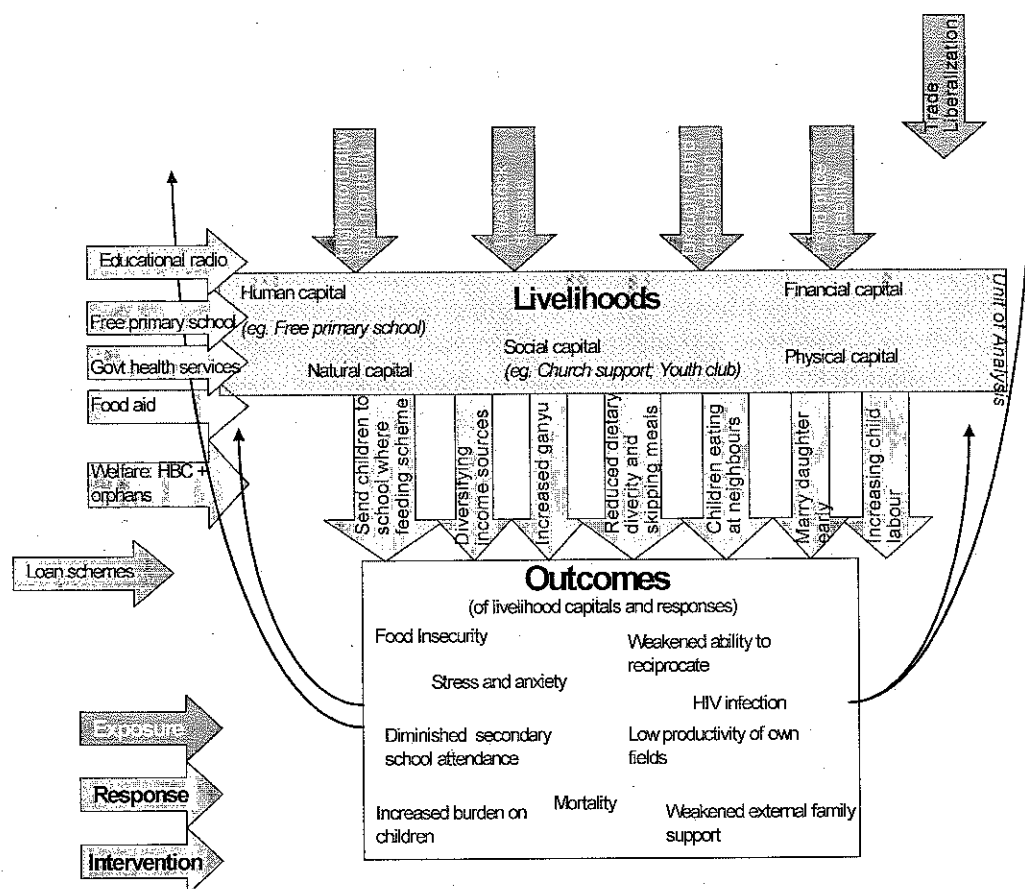
Livelihoods in Chikwawa and Chinkhambi village are in a state of crisis due to frequent droughts, irregular patterns of rainfall and heavy floods and the erosive effects of HIV/AIDS. Figure 3 below summarises the interaction of stressors in this case study. The general tenor of stresses is similar to those identified in Newcastle, South Africa, but they manifest differently. Notably, the study identified children as being particularly overburdened. We discuss the findings in more detail in the following sub-sections.

Stressors

Despite the various interventions in the area, many households are continuously exposed to a range of shock and stress that affect their ability to cope. Key stressors on livelihoods in Chinkhambi include:

- (i) high mortality and morbidity,
- (ii) livestock disease (Chikwawa district speculatively has got one of the highest rates of animal disease in Malawi)
- (iii) drought and land degradation
- (iv) food price variability (prices being affected by national economic shocks)
- (v) lack of labour.
- (vi) loss of livestock and household assets due to theft
- (vii) trade liberalization is a broad exposure at the national level as opposed to impacting on the local level but was not mentioned specifically.

FIGURE 3: Multiple Stressors in Chinkhambi, Malawi



Key interactions of stresses and impact on livelihoods

Livelihoods in Chinkhambi revolve around one core activity which is agriculture. However agriculture in the area is highly dependent rain, is labour intensive, requires substantial farming inputs and is practiced on marginal lands that are continuously exposed to floods thus resulting in low productivity. The particular burden on children stems from the land's low productivity and consequent need for intensive labour investment by households. That burden is increasingly evident as the levels of HIV/AIDS-related mortality and morbidity increase in the resident population.

Residents attempt to mitigate the difficulties of farming by using modern agriculture methods such as planting hybrid seeds and using pesticides and fertilisers. However, crop incomes do not cover the costs of these inputs such that purchases have to be covered by sale of livestock

and/or taking on casual labour (ganyu) jobs on the sugar estates or other people's lands. It is a fragile existence. The sale of livestock diminishes an important household capital asset that is also difficult to accumulate due to the vagaries of disease and theft. Casual employment reduces the labour time necessary to sustain a household's own agricultural production.

Opportunities

There are government, NGO and Church-based programmes in the district to help alleviate the poverty. The key interventions include education radio programmes, particularly around health issues, free government primary school education, school feeding, government health services, reforestation and food aid. Local interventions include community-based organisations that have been formed to assist with orphan care, illness (often HIV/AIDS-related) and youth care.

Responses

Limited scope to generate cash incomes and to accrue cash reserves were a constant refrain amongst the participants. In response, common parental strategies included sending children to schools in adjacent villages where there were feeding programmes, getting their children to work more in the fields or to look after livestock, diversifying income sources through small businesses and seeking casual work more frequently than in the past. Marrying off daughters at a young age was also a strategy, as a way to reduce the number of mouths to feed in a household and, in accord with matrilineal social norms, to attract husband's to the bride's village and thereby increase the pool of labour for agricultural work. Daily strategies included skipping meals and eating less variety of food to offset food shortages.

Outcomes

The notable manifestation of the many stresses on local livelihoods was the increasing burden on children. Children are expected to work on the land and attend school but it was evident that agricultural work to sustain the family was the primary need and that parents were prepared to forego their children's school education when necessary. A manifestation of that burden was indication of relatively high levels and frequency of illness and poor health amongst children. A discernable broad trend was the weakening of local social norms of mutual assistance and support as more households struggle to sustain themselves let alone support those of other family members.

Although most parents interviewed stated that they sometimes thought about the future of their children, their efforts were focused on day-to-day concerns of survival. The sum of their planning lay in a perception that land was the singular available asset available to people in the district and hence, the source of security for future generations.

Site 3: Warwick Junction., Durban, KwaZulu-Natal

'Warwick Junction' is a large, regulated market place located in central Durban around the railway station of that name, and the main bus and taxi terminus (Veldsman, 2006). In 1997 the area was upgraded and provided with new facilities, and is today one of South Africa's

At all three sites, financial constraints were identified as the key challenge as a result of illness and death in the household and lack of employment opportunities. Stated in these terms, the study simply revealed key determinants of poverty. However, this obscures as much about the interaction of these determinants as it reveals.

On the one hand, illness and death within the family did not allude only to the prevalence of HIV and its debilitating erosive effects on family livelihoods and welfare, even though the former was a significant yet tacit point of reference amongst the study participants (HIV/AIDS being generally a taboo subject of discussion). As significant was illness arising from a variety of relatively minor diseases compared to HIV/AIDS, which entailed direct costs for families; frequently in the form of resources expended to treat them and, in particular, reduction of households' capacity to deploy labour. On the other hand, lack of employment opportunities did not refer only to the lack of jobs but also to households not having appropriate labour skills amongst household members. In sum, the underlying indicator of vulnerability was, ironically, the lack of a critical resource of poor populations: labour.

This interaction of health and economic factors varied between the different contexts of this study but with the same outcomes. For instance, WJ trader parents were generating cash incomes daily but, in addition to the challenges of running a business in a competitive market, they were faced with high living costs that are a feature of urban life (e.g. transport, accommodation) and of sustaining rural homes. A consequence of these conditions of existence was traders' susceptibility to hygiene-related illnesses and difficulties with looking after their children's health by being absent from them for long periods of time (week or more).¹³ In the case of Amajuba district, the overtly expressed problem was the household members', specifically young adult children's, lack of sufficient education and/or training to secure jobs in an area that is economically prosperous compared to surrounding districts in the province. Hygiene-related illnesses were also highlighted but, generally, as a feature of the past because of evident improvements in government services.¹⁴

In contrast, evidence from Chikwawa district in Malawi embodied all these elements governing vulnerability in Warwick Junction and Amajuba but as a function of people's dependence on agriculture. In this case, the land base was a secure asset but required labour intensive effort to make it productive. However, deployment of labour in one activity inevitably prevented its deployment in another equally necessary activity to ensure income. For instance, ganyu (piece work) in the formal agricultural sector or informally on other people's fields was a standard means to generate cash incomes but at the cost of reducing investment in their own lands. Children in this context were a critical source of labour for household's own lands but at the cost of affecting their education at school; thus, prefiguring future wage income insecurity voiced in the Amajuba case (children growing up to be illiterate and unskilled). The prevalence of a host of minor, debilitating illnesses reported amongst children suggests that limited labour capacity is being deployed beyond its physical capabilities.

¹³ traders cited bilharzia and 'dirty water' as specific problems.

¹⁴ Health clinic staff in the area confirmed participants' observations that there had been a significant decrease in illnesses cause by dirty water.

The study focused on poor people and so inevitably revealed factors determining their economic marginalisation within broader society. However, bearing in mind that the study focused on that segment which has resources, it also revealed the factors that threaten economic destitution; in short, why that segment of the population is vulnerable. From an economic and, indeed, livelihoods perspective, the determinant of their marginalisation is the limited capacity to deploy labour. However, the study suggests that what defines their vulnerability is the limited capacity to sustain that essential resource; in other words, to maintain household members' health and to enable development of their skills to secure income in changing economic circumstances. X

Comparison of findings from the three sites affirms this conclusion, albeit indirectly. People are well aware of the threats to their welfare and of their options. We refer to the contrasting perceptions between informants from Warwick Junction and the two other research sites. The traders – who nominally were the most economically secure – spoke of relocation as a possibility (though not currently realisable because of financial constraints) in the face of the difficulties of living in town and its effects on their health. Relocation was not seen as an option in Chikwawa or Amajuba where, despite everything, there was acknowledgement that staying put was the best option; in Amajuba, because of improvement in services, and secure tenure of housing and scope to improve it; in Chikwawa, because of land being a secure resource.

Similarly, lack of adequate nutrition was a common finding across all three sites and an overt reference point in people's experiences of their conditions of existence. Specifically, the common outcome was inadequate nutritional diversity and occasional food shortages. However, while financial constraints were identified as the practical cause in people's experience, climatic factors were also an important contributory factor. In the case of residents in Chikwawa district, food insecurity was clearly an ever present phenomenon, as suggested by regular food aid interventions.¹⁵ In this case, the indications were that climatic extremes over a period of time had eroded the land base capacity. Similarly, climatic extremes were identified as contributing to problems experienced by residents in Amajuba district related to horticulture, which was a basis for nutritional diversity in their context. In both locations, the need for irrigation was identified as a necessary (though not always feasible) intervention to counteract the effects of climatic extremes on food production efforts.

In all three cases, there was a seasonal pattern to food insecurity and nutritional diversity. In the Chikwawa and Amajuba locations, the pattern was directly linked to plant growth and harvesting cycles and, indirectly, in the case of the WJ traders whose supply of food and fauna commodities varied with availability. In the latter case, their own nutritional status and diversity depended on earnings from sales, and by limited time they could spend at rural homes to work on land and/or oversee household food production.

With regard to parental planning the common finding was that parents engage mainly in short term planning for their children's future. However, in Malawi, parents have land which is

¹⁵ There is the possibility (not assessable in this study) of increasing dependency on food aid coupled with decrease in commitment to produce food.

seen as a long-term foundation upon which their own and their children's livelihoods will continue. In addition, the social and family ties are seen as the support that will absorb their children physically and emotionally if the parents are no longer there, although the brittleness of these ties is recognised. In South Africa there seems to be greater anxiety than in Malawi about what will happen to their children when a parent dies. This is linked in part to the strong reliance on grants that fall away if a pensioner or the person who applied for the grant passes away. The anxiety may also be due to the weaker social ties that exist among households. In all cases, parents felt they were not able to plan for their children's future.

Nonetheless, at all three sites there were 'safety nets' that these households could and did rely because they had resources to make use of them. We refer to local means of mutual income support: stokvels and burial societies prevalent in South Africa along with government grants and pensions, in Malawi the ganyu labour system and in both countries the bonds of kinship and marriage. The impression - and it can be no more than this - is that households which can 'connect' the different safety nets are less vulnerable than those who cannot. In South Africa for example, pensions and grants along with other income sources enable people to contribute to stokvels and burial societies; make decisions to defer social obligations such as funereal feast; make use of improved public service infrastructure such as clinics; and to support family members at rural homes. However, indications of reduced capacity to sustain and connect these safety nets include the fears expressed by the Newcastle residents about loss of a government grant or pension and the limited involvement of study participants in stokvels and burial societies (Warwick Junction in particular). Likewise, we suggest that Warwick Junction traders' consideration of seeking new trading sites or alternative employment reflects the difficulties of supporting rural homes which are viewed as a fundamental to current and future security, as income fails to match rising costs of living.

One key purpose of these safety nets is to enable households to deploy labour and sustain its reproduction over time. If that labour cannot be deployed then it becomes a liability. In the South African cases, the households were managing to sustain the 'growth' of that labour. However, as the Newcastle informants intimated, the threat to household's future was the limited opportunity to deploy their labour in form of young adults gainfully employed in wage work. In the case of Malawi, keeping the land productive was the critical issue for household security and served by the social system in the form of the matrilineal framework for ensuring rights to, and transfers of labour to use it as well as the practice of ganyu labour. However, the reliance on child labour and marrying off daughters at a young age suggest a system under severe strain. These are 'coping' mechanisms; on the one hand, children working the fields being undesired but necessary to keep abundant land productive; on the other hand, marrying off daughters being a means to reduce household membership to the levels that the labour practices can support. This coping enables households to survive from day to day but at the cost of the future welfare of those children in terms of children growing up in relative ill-health and becoming unskilled, uneducated adults.

In summary, the study revealed similar stressors on household welfare and livelihoods in diverse locations. While the study revealed differences in the way these stressors intersected and interacted, it also revealed three indicators of vulnerability that are possibly common across southern Africa:

1. Household capacity to create, as well as make use of, opportunities to deploy labour;
2. Children growing up with frequent bouts of ill-health
3. Children living with the pervasive threat of a marked deterioration to their material and psychological welfare arising from a 'shock' to household capacity to generate income.

CONCLUSION

This study was an exploratory exercise with ambitious aims. As a scientific study, its purpose was to help develop a rigorous explanation of what vulnerability means. That purpose is in the context of widespread use of this concept by many disciplines to describe the general deterioration of lives and livelihoods in southern Africa. As a study conceived within an 'action research' framework, its purpose was also to develop insights for practical use of the concept of vulnerability. The study used SAVI's nascent theoretical and methodological 'multi-stressor' framework' to combine these different purposes. Furthermore, the study was also an exercise in testing the usefulness of this framework given the exploratory nature of the exercise.

With regard to defining vulnerability, it is appropriate to note that study designs tacitly define its locus and scope. Research which includes household as a unit of study inevitably demarcates a focus on that segment of a population which has some resources and is able, irrespective of assessments of quality of life, to sustain access to and use of those resources. Vulnerability in such research is, in the first instance, a concept to indicate the threat of household disintegration under particular circumstances. That is the basis to indicate thereafter the social and psychological upheavals that occur as people seek to prevent threats becoming reality and the broader ramifications for society if more and more people become destitute. This sets out the boundaries for analytical use of the concept; for instance, in broad terms, it denotes a focus not on 'survivalist' modes of life or extreme poverty but on conditions for, and against social stability.

However, the concept has substantive meaning only when used in assessments of quality of life; in other words in direct reference to the efforts of men, women and children and the difficulties they encounter, in trying to achieve a stable existence. Accordingly, vulnerability is a concept that attempts to define people's experiences. If that is done successfully then the concept has scientific value as a means to grasp the complex relationships between humans and their environments and importantly, to predict outcomes. It also has practical value as a means to specify foci for interventions to improve human welfare.

The scientific challenge is how to measure experience let alone how to substantiate predictions on that basis. The SAVI framework is a provisional template for such analysis and its usefulness was demonstrated by being able to accommodate experiential data and analysis.

People's experiences constituted this study's foundation and focus. The analysis began with definition of stressors according to people's perceptions. The analysis focused thereafter on how people rationalise and explain their efforts, using the latter as the basis for description of past and present outcomes. This application of the framework (seeks to) predicts future outcomes on the basis of how those experiences and outcomes will perpetuate or diminish the stressors on people's lives. The operative feature of those predictions are people's behaviour in terms of how experiences and observable outcomes inform perceptions of the stressors and hence, subsequent responses which, if not substantially different from past behaviour, allows prediction of worsening human welfare but, if different or modifiable by an intervention, allows prediction of improvement to human welfare.

That was the logic of this study. However, as an exploratory exercise, it was not expected to reach the point of measuring experience and predicting outcomes for human welfare in the different localities where the research was conducted. The aim was to show where to focus future research (hence, the study's designation as the first phase of a longer project and an exercise to test the SAVI framework). In particular, the aim was to identify stressors and responses that should be foci for further investigation (e.g. child's health) and to get a purchase on what and where to design instruments to measure experiential data. Below we discuss our conclusions with regard to the study's assessment of vulnerability before commenting on the utility of the SAVI framework and outlining foci for the next phase of the project.

Vulnerability

The findings from the three sites show that that people are well aware of the threats to their welfare and, as significantly, are aware of their limited options to sustain their families and livelihoods. While they are sustaining their families and livelihoods, there is evidence of internal family and household stresses which indicate their vulnerability.

We refer here to the reports from all three sites of general ill-health or, more precisely, frequent bouts of illness amongst family members; highlighted by the illnesses suffered by children of informants in Malawi that is possibly connected to their physical burden of being labourers in fields, and by the sometimes debilitating illnesses amongst WJ traders that is possibly connected to poor conditions of existence in a city environment.

We also refer to the reports of difficulties encountered with feeding and keeping family members. In economic terms, the stress is that of large dependency ratios in households with the implication of large households and lack of opportunity for employment. However, such an assessment does not fully capture the economics of vulnerability. We have suggested that a critical factor is limited capacity to create and to make use of opportunities.

Newcastle was the site where households had relatively abundant resources compared to the other sites, in the sense that there is a prosperous growing local economy and steady improvement in public services ranging from sanitation to health care to access to government grants and pensions. Reports of limited job opportunities for youth, (more precisely for the unskilled and those without work experience) and household reliance on pensions and other

government grants, supports an assessment of the problem in terms of household dependency ratios. However, the primary concern of parents was for the future: the threat to loss of some income, notably of a pension or grant, which would have a dramatic effect on the household economy. In other words, there were opportunities, indeed households had recourse to diverse income sources, but these varied over time and a particularly significant source could disappear for reasons beyond their control (e.g. death of pensioner; child exceeding age for a grant).

Reports from the Malawi site of marrying off daughters at younger ages (with removal of one family member or import of additional adult male labour in form of a husband residing in wife's village) and using children more frequently to work in the fields, reflect parents struggles to manage reduce household dependency ratios. The indications are that many are able to do so and so sustain families and farming. Critical factors were the stresses imposed by these strategies, notably illness amongst children and the future threat to their welfare as a result of going up with little education and hence little opportunity to change their families current mode of existence. In the case of the Warwick Junction traders, regular cash incomes allow them to sustain rural homes where family members can be deployed to maintain farming activities and children can be kept in school. The economic difficulties lay with increasing cash incomes to cover increasing costs of urban trade and living.

The inevitable conclusion, nonetheless, is that families and households were 'coping' in the sense that they were not able to improve their conditions of existence and were living with the constant threat of deterioration to family and individual welfare. The study revealed emerging threats alongside others, notably crime and weakening of family bonds. Perhaps the key indicator of 'coping' was the lack of long term planning by parents. An exception was the continued investment in education of children though, as the Malawi research indicated, the value of sending children to school appears to be questioned by some parents. The other exception was the continued investment in physical assets houses, residential sites and farm land, through which people affirm their rights to land and, in short, 'citizenship' of communities. However, the study findings suggest that parents' investment for the future and for their children are inadequate. The levels of illness amongst children and diverse restrictions on the latter getting sound education are indicators of parents' inability to provide their children with the means and skills to achieve a stable existence. The broader significance of these findings is the illustration of some dynamics of increasing social differentiation, the widening gap between the rich and the poor, in southern Africa.

In view of this conclusion, the study suggests that HIV/AIDS-related research (particularly that on 'orphans and vulnerable children') should have a long term focus. The death or absence of a parent or parents is a 'shock' though it may not materially affect children's welfare in the short term. However, this study suggests that the effects become apparent over time; in broad terms, a generation that potentially has no future.

The SAVI 'multi-stressor' framework

This framework proved useful for guiding research that, in essence, questioned generalisations about the deterioration of lives and livelihoods in southern Africa. The

framework provided a basis to look beyond symptoms of stress be it material poverty or livelihoods. It did so by acknowledging the wide range of factors that shape economies and society in the region, their variable effects over time and in different parts of the region, and the diverse responses of people to them.

The necessary modification was to refine the focus on 'contextual environment'. The study focused on livelihoods and beyond that, on their components, using the concepts of social, physical and human capital to disaggregate the foci of people's responses to diverse stresses. These were relatively crude, yet useful means to order and present 'outcomes'. They were crude in the sense that they do not capture people's experience which is, at root, the focus of the study's critical assessment of the concept of vulnerability. Nonetheless, the use of forms of 'capital' was also a way to serve the applied research aims of the project. In other words, records of experience alone are not particularly useful for designing practical interventions but an assessment in terms of actual, or threat of diminishment of a form of capital (and conversely potential to enhance it) provides a tangible reference point.

The limitations were that the findings were generally negative with less detail on the opportunities and potential within parents' strategies to improve their conditions of existence. That is due to the nature of this study. Inevitably, this phase of the research was on defining threats to human welfare and what vulnerability means. The framework led us in that direction with its directive for analysis to identify 'outcomes'. The framework's rider, to assess the feedback loops from 'outcomes' to 'exposure, to stressors', was a directive that this study could outline but not explore in detail. For instance, further research on how parents have changed their livelihood and parenting strategies would be necessary to understand whether those responses reduced the exposure to, and threats from particular stressors or proved to be ineffective.

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