

Wealth, Health, HIV and the Economics of Hope¹

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Introduction

The links between health and economics have gained increasing recognition in recent years. Public health crises such as SARS (Sudden Acute Respiratory Syndrome), an easily transmissible respiratory infection, and BSE (Bovine Spongiform Encephalopathy), a disease associated with systemic failures in the food industry,⁴ have raised awareness that pestilence can hurt pockets. At the same time, continued and increasing ill health in the poorest parts of the world has heightened interest in the poverty-disease nexus among international donors, policy-makers, business and civil society.

The strength of the association between wealth and health is well established in the academic literature. People living in countries with higher incomes tend to be healthier and have longer life expectancy than those living in poorer regions. Wealth gives people better access to better health care, stronger knowledge about healthful and harmful activities, and is generally associated with employment that poses fewer risks to mind and body. In a widely cited study of the wealth to health link, Pritchett and Summers (1996) found that income growth accounted for 40 per cent of differential mortality improvements between countries.⁵ This is not necessarily a continuing positive relationship. In certain cultural and economic settings where food production and consumption become part of the commodity economy, there is growing evidence that wealth and greater disposable income can result in obesity and other eating-related diseases such as diabetes.⁶

More recently, the reverse link – from health to wealth – has also received attention. Good health can promote economic development through a number of channels, beginning very early in life. Healthy children are better able than their unhealthy peers to attend school and to learn effectively while in school. Strong cognitive abilities acquired at school are associated with increased productivity as people enter the workforce.⁷ Healthy adults suffer less frequent absences from work, are more productive, and earn higher wages than less

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⁴ Packer, R. (2006): *The Politics of BSE*. Palgrave Macmillan, London

⁵ L. Pritchett, LH Summers (1996): *Wealthier is Healthier*. *Journal of Human Resources* 31 (4): 842-68

⁶ R Wallace and D Wallace, (2005): *Structured Psychosocial Stress and the US Obesity Epidemic*, *Journal of Biological Systems*, Vol. 13, No. 4, pp. 363-84; P Bjorntorp, (2001), *Do stress reactions cause abdominal obesity and comorbidities?*, *Obes Rev Vol 2*:pp. 73–86; G Chrousos, (2000), *The role of stress and hypothalamic-pituitary-adrenal axis in the pathogenesis of the metabolic syndrome: neuro-endocrine and target tissue-related causes*, *Int J Obes Relat Metab Disord 2* (Suppl): pp. S50–S55.

⁷ DE Bloom, D Canning, M Weston (2005): "The Value of Vaccination," *World Economics*, Vol. 6(3): pp 15-39.

healthy individuals.⁸ And in old age, the healthy consume fewer public resources and place a smaller burden on those of working-age.⁹

Calculations by Bloom and Canning (2000) suggest that if two countries are compared whose only difference is that one has a five-year advantage in life expectancy (life expectancy reflects health status), the healthier country's economy will grow 0.3-0.5 per cent faster.¹⁰ The World Health Organisation's Commission on Macroeconomics and Health, meanwhile, argued that, "The burden of disease stands as a stark barrier to economic growth and therefore must be addressed frontally and centrally in any comprehensive development strategy."¹¹

There is no simple relationship between poverty and AIDS¹². Sixty-two per cent of those infected with the virus live in the world's poorest region, Sub-Saharan Africa, which is home to only 10 per cent of the world's population.¹³ The poor may be more susceptible to HIV infection due to lack of education, general poor health and weak access to health services. They may also be forced by financial and other pressures into livelihood strategies, for example labour migration, which lend themselves to multiple and/or concurrent sexual partners.¹⁴ Conversely, relative wealth enables men to visit sex workers and makes them more mobile (mobility is an important risk factor for HIV). While poverty undoubtedly plays a role in transmission and progression of the disease, the causal relationships are complex, having to do with social, economic and cultural inequalities as much as with stark impoverishment. It is very likely, for example, that circumstances where social and economic change is rapid and where societies face times of sharp and extended transition (as in the case of Russia and China) constitute risk environments where inequality gradients become suddenly steeper.¹⁵ Interventions must engage with these complexities.

HIV/AIDS casts a new light on the importance of the reverse relationship, from health to economies. Unlike most infectious diseases, HIV/AIDS primarily affects people of working age. It therefore has the potential to erode labour forces, damage businesses and plunge families, and even communities, into poverty. These effects may well truncate people's orientation toward the future, reducing the time perspective within which they operate - in other words, reducing hope.

⁸ TP Schultz (2002): Wage Gains Associated with Height as a Form of Human Capital. American Economic Review, Papers and Proceedings. May.

⁹ For more detailed discussion of the links from health to wealth, see for example DE Bloom and D Canning (2003): "The Health and Poverty of Nations: From Theory to Practice," Journal of Human Development, Vol. 7, pp 47-71

¹⁰ DE Bloom, D Canning (2000): The Health and Wealth of Nations. Science, Vol. 287: 1207-1208.

¹¹ Commission on Macroeconomics and Health (2001): Macroeconomics and Health: Investing in Health for Economic Development.

¹² The complexities of this relationship are examined in greater detail in : T. Barnett, T. and D Topouzis, HIV/AIDS and Rural Poverty, paper presented at PEGNet Conference, Researchers Meet Practitioners, Berlin, 6-7 September, 2007.

¹³ UNAIDS (2006): AIDS Epidemic Update 2006. UNAIDS, Geneva.

¹⁴ H Epstein (2007) The Invisible Cure: Africa, the West, and the Fight Against AIDS, Farrar, Strauss and Giroux, New York

¹⁵ T Barnett and A Whiteside, (2006), AIDS in the 21st Century: disease and globalisation, London and New York, Palgrave Macmillan, chapter 5.

This paper takes a practical look at the association between HIV/AIDS and economies. Part 1 assesses research suggesting a link and finds that, although there is some evidence that AIDS can affect economies, the correlation between economic status and HIV infection is not linear and varies between and within countries. This indicates factors other than wealth are important in explaining differential HIV prevalence, and in part 2 we look at the potential of happiness economics to explain infection rates. Unlike standard contemporary economic analysis, the study of happiness incorporates non-monetary values, and may therefore help fill some of the gaps in our understanding of HIV transmission.

The study of hope is the subject of part 3 of the paper. This is an alternative way of looking at the problem. Hope is directly linked to the future inasmuch as it determines the value people place on that future. Those with high hopes in life and who place a high value on the future are likely to make different decisions and adopt different behaviours to those without long-term goals. In an adverse risk environment where life is unpredictable, the future is discounted.¹⁶ Individual and communal levels of hope may vary, with consequent impacts on HIV transmission. HIV/AIDS in turn may reduce hope and thereby reduce societies' future well-being.

In the final section, we outline some economic interventions for HIV/AIDS that are designed to strengthen hope and reduce transmission. We present four case studies where livelihood focused programmes have had positive impacts on health in general and HIV/AIDS in particular.

One: Economics and HIV/AIDS: The Evidence

The impact of AIDS on economies

Thirty years into the epidemic, we are still not clear as to the effects of HIV/AIDS on macro-economies and their constituent units. The evidence points in both directions.¹⁷ Various methods have been used to test the macroeconomic impacts of HIV/AIDS. The parameters measured include medical care costs, lost earnings, productivity effects and the impact of illness and premature death on savings and investment.

An early study of 51 countries found that by 1992 HIV/AIDS had not had a statistically significant effect on per capita income growth since it emerged around 1980.¹⁸ Over (1992) found that economic growth in 30 African countries would be 0.56-1.47 per cent lower

¹⁶ T Barnett and P Blaikie (1992) AIDS in Africa: its present and future impact, Belhaven London, chapter 8.

¹⁷ For two careful analyses which arrive at very different conclusions, see: C Bell, S Devarajan and H Gersbach (2004): Thinking About the Long-Run Economic Costs of AIDS. In M Haacker (ed.) (2004): The Macroeconomics of HIV/AIDS. Washington DC. International Monetary Fund; A Young, (2005), The Gift of the Dying: The Tragedy of Aids and the Welfare of Future African Generations, The Quarterly Journal of Economics, Vol 120 No 2, pp. 423-466; for an empirical study examining the complexities of outcomes in rural Africa, see: Yamano, T. & Jayne, T. S. (2004). Measuring the Impact of Working-Age Adult Mortality on Small Scale Farm Households in Kenya World Development, 32(1), 91-119.

¹⁸ DE Bloom and A Mahal (1997): Does the AIDS Epidemic Threaten Economic Growth? Journal of Econometrics 77(1): 105-24.

because of the effect of the disease on the labour force and capital accumulation.¹⁹ A review of the literature by Barnett and Whiteside (2002) found that, “AIDS causes economies to grow more slowly,” and that, “the predicted order of magnitude has remained consistently in the range 0.5-1.0 per cent lower per year than in the absence of the disease. In no case has it been predicted that economies will actually contract. The impact on per capita incomes is uncertain.”²⁰

The impacts of AIDS on businesses are also far from clear. Low-level and long-term macroeconomic damage may have limited effects on the private sector by destabilising the business environment. Firms that pay for the health care and funeral costs of their employees will suffer direct economic losses if HIV/AIDS ravages the workforce. As workers fall sick and die, valuable knowledge and skills are lost, productivity declines, and companies need to invest in recruiting and training new staff.

Not all companies will suffer. HIV/AIDS may benefit firms in some sectors, such as the pharmaceutical and funeral industries. Most firms in countries with very low HIV prevalence are unlikely to experience significant impacts. Even in hard-hit settings, many of which have a surplus of labour in the formal economy, firms with a high proportion of unskilled employees may find sick workers easier to replace than will those losing skilled staff, (some evidence suggests it is not the most educated senior managers who are most difficult to replace: rather it is the skilled artisans and craftspeople or individuals operating or maintaining critical pieces of machinery in integrated production processes²¹).

Research on business impacts is limited to small-scale studies and a handful of surveys of business leaders' opinions, of which some examples follow. The effect of the disease on the labour force appears to be increasing business costs for some firms in hard hit areas, albeit not to any great extent:

- A 2002 study of six companies in South Africa and Botswana predicted that in each of the next ten years HIV/AIDS would impose additional costs of between 0.4 per cent and 5.9 per cent of the wage bill.²²

¹⁹ M Over (1992): Macroeconomic impact of AIDS in Sub-Saharan Africa. Africa Technical Department, Population, Health, and Nutrition Division, Technical Working Paper No. 3 (Washington DC) (June).

²⁰ Tony Barnett and Alan Whiteside (2002): AIDS in the Twenty-First Century. Palgrave Macmillan, New York: 289.

²¹ M Haslwimmer, (1994). The Social and Economic Impact of HIV/AIDS on Nakambala Sugar Estate. FAO, AGSP, January. This report forms part of Barnett, T., 1994, The Effects Of HIV/AIDS On Farming Systems And Rural Livelihoods In Uganda, Tanzania And Zambia, A Summary Analysis of Case Studies from research carried out in the period July-September 1993, FAO Project TSS/1 RAF/92/TO/A, Overseas Development Group, University of East Anglia for the FAO, Rome, Food and Agriculture Organisation of the United Nations; T Barnett, Tsetsele Fantan, Bekezela Mbakile and Alan Whiteside, (2002), The private sector responds to the epidemic: Debswana - a global benchmark, UNAIDS, Geneva, Switzerland.

²² S Rosen, J Simon, W MacLeod, M Fox, DM Thea, JR Vincent (2003): AIDS is Your Business. Harvard Business Review, Vol 81, No 1, February.

- In an annual World Economic Forum survey of over 10,000 business leaders worldwide, 24 per cent of respondents in 2006 reported that the virus was affecting business operations. In Sub-Saharan Africa, 62 per cent of businesses report impacts. 49 per cent of respondents expect impacts in the next five years.²³
- In a survey of 1,006 South African firms conducted by the South African Business Coalition on HIV/AIDS (SABCOHA), 24 per cent of respondents reported that recruitment and training costs had increased as a result of HIV/AIDS.²⁴

Households may also experience financial impacts. Those in which wage earners fall sick not only lose an income, they also have to cope with medical expenses and may forfeit additional income if family members have to take time off work to care for the sick. In the longer term, if investments in children's schooling have to be diverted to AIDS care or if children leave school to look after ill relatives, households' future prospects become bleaker. It becomes easier to fall into poverty and harder to escape.

HIV/AIDS can place great pressure on household finances. One study in Zambia found that disposable income fell by over 80 per cent in two-thirds of the 333 AIDS-affected households studied. AIDS deaths, moreover, were linked to reduced household food consumption, with poor households suffering the most severe impacts.²⁵ In rural Thailand, UNAIDS suggests that 15 per cent of families removed children from school after the disease hit,²⁶ while recent survey based work on this topic in that country shows that AIDS has profound and complex effects on rural poverty.²⁷

Household studies have several limitations. Barnett and Whiteside (2002) observe that they are largely limited to rural African households and do not incorporate those that have already disappeared as a result of the epidemic.²⁸ Moreover, most are based on small samples and do not take account of long-term effects on human capital development, or of the impact on inter-household relationships. It is possible, therefore, that some studies underestimate the damage caused. But in addition to possible under-estimation of effect, recent rigorous work suggests the impact of HIV/AIDS-related mortality and morbidity on rural societies is more complex and multifaceted than was previously thought to be the case.²⁹ In other words, HIV/AIDS does affect household welfare but the distribution of these effects between households in poor countries remains poorly understood.

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²³ DE Bloom, L Reddy Bloom, M Weston (2007): HIV/AIDS and Business: A Growing Threat. World Economic Forum, Geneva, forthcoming.

²⁴ South African Business Coalition on HIV/AIDS: "The Impact of HIV/AIDS on Business in South Africa." SABCOHA 2004

²⁵ N Nampanya-Serpell (2000): Social and Economic Risk Factors for HIV/AIDS Affected Families in Zambia. In International AIDS Economics Network AIDS and Economics Symposium, Durban, South Africa, July 7-8.

²⁶ UNAIDS (2000): Epidemiological Fact Sheet: Thailand. UNAIDS, Geneva.

²⁷ S Kongsin The Economic Impact of HIV/AIDS Morbidity on Households in Upper-North Thailand: Phayao case study (2001), PhD thesis, London School of Hygiene and Tropical Medicine.

²⁸ Barnett and Whiteside (2002) op. cit.: 191-2.

²⁹ Yamano, T. & Jayne, T. S. (2004): Measuring the Impact of Working-Age Adult Mortality on Small Scale Farm Households in Kenya World Development, 32(1), 91-119.

There are several possible reasons why an individual's economic status may affect the risk of HIV infection. In the early stages of the epidemic, it appeared that wealthy men were more susceptible, possibly due to their greater mobility and ability to pay for commercial sex. Botswana and South Africa have the highest HIV infection rates in Africa yet are among the continent's richest countries. In the early stages of Brazil's epidemic, moreover, people with secondary or tertiary schooling accounted for three-quarters of new infections.³⁰

As the epidemic progresses, however, there is evidence that the wealthy learn to protect themselves against the disease, which then becomes more prevalent among poorer populations. As Brazil's epidemic matured in the 1990s, the proportion of infections accounted for by secondary- and tertiary-educated individuals fell from three-quarters to one-third.³¹ Salinas and Haacker (2006) found in studies in Ghana and Kenya that people just above the poverty line are most likely to be hit by HIV/AIDS, which renders them vulnerable to falling into poverty.³² Across countries, both high per capita incomes and low incidence of poverty are strongly correlated with reduced HIV prevalence.³³

It is difficult to ascertain the direction of these links, as it is likely that AIDS is causing as well as resulting from poverty. Many other infectious diseases, however, hit the poor hardest, and the intuitive case for a link from poverty to AIDS is strong. The poor often live in areas that are out of reach of health services, including services that provide information on diseases such as HIV/AIDS. Poor, uneducated women lack the power to insist that their partners use condoms, even when the latter can afford them. As we will see in part three, moreover, poor people's reduced hope for the future may make them more likely to engage in behaviour that places them at risk of infection.

Income inequality may also be important in determining HIV prevalence.³⁴ Inequality has been found to influence overall health – for example, a classic study of the British civil service found that those male civil servants who had remained in the lower grades of the service had a mortality rate several times higher than those in senior positions, and that each level of the hierarchy had better health than the level below it.³⁵ It may also influence AIDS. Income inequality at the national level can lead to increased migration, as rural workers move to cities or industrial centres. By disrupting families and communities and

³⁰ RG Parker (1998): *Historic Overview of Brazil's AIDS Programmes and Review of the World Bank AIDS Project*. Arlington, VA: Family Health International/AIDSAP.

³¹ Parker (1998) op cit.

³² Salinas, G. and Haacker, M. (2006): *HIV/AIDS: The Impact on Poverty and Inequality*. IMF Working Paper 06/126. Washington.

³³ DE Bloom, River Path Associates, Jaypee Sevilla (2002): *Health, Wealth, AIDS and Poverty*. Asian Development Bank, September.

³⁴ Other forms of social inequality, which can in some circumstances become sexualised, are also likely to be important to prevalence. We discuss the impact of gender inequality in particular in section 4. See J Appleton, (2000), 'At my age I should be sitting under that tree': the impact of AIDS on Tanzanian lakeshore communities, *Gender & Development*, Volume 8, Issue 2, pp 19 – 27; E Kissling, Allison EH, Seeley JA, Russell S, Bachmann M, Musgrave SD, Heck S.(2005) Fisherfolk are among groups most at risk of HIV: cross-country analysis of prevalence and numbers infected, *AIDS*, 18;19(17):1939-46.

³⁵ Marmot MG, Davey-Smith G, Stansfeld SA et al (1991): Health inequalities among British civil servants: the Whitehall II study. *Lancet* 337 1387-1393.

exposing men to sex workers, this can increase the risk of HIV transmission. Cross-country evidence suggests income inequality is correlated with HIV prevalence at a global level.³⁶

Summary

The links between AIDS and the formal economy are complex. Severe economic damage appears to be limited to the household level, with the effect of the disease on per capita incomes unclear. The link in the opposite direction – from poverty to AIDS – is also far from clear-cut, although this may be growing stronger as the epidemic matures. It is evident that factors other than wealth, including but not limited to income inequality, are important to HIV prevalence and it is likely that there are impacts of the disease, notably on social reproduction, which are not covered by traditional analysis. In the next two sections of the paper, we look at how different approaches shed a new light on the problem.

Two: The Economics of Happiness

The limits of traditional analysis

Traditional economic analysis of HIV/AIDS focuses largely on the direct links between income and HIV infection. It does not generally address the wider set of circumstances in which decisions are made that put people at risk of HIV infection. Standard economic analysis of the disease's impacts is also too limited. By looking only at the narrow economic effects in the short-term, it omits several factors that may ultimately have a much greater effect on societies and, indeed, economies.

The first of these is non-market labour inputs. The value of women's work, for example, is rarely taken into account, even when it can be measured economically by comparing it to similar work performed as a standard market transaction. Domestic work may be severely affected by HIV/AIDS but is not usually measured by economists.³⁷

The effect of the virus on communities is also difficult for economists to measure. Cost-effectiveness and cost-benefit analyses, the most common tools for assessing the cost of HIV/AIDS in relation to the value of interventions to curtail it, look at the impact on individuals or households. They do not consider how entire communities can be damaged by the disease. The stigma surrounding the virus can leave certain sections of society ostracised, with negative impacts on social cohesion. The deaths of working-age people can leave communities without their leaders and problem-solvers, and the social capital that helps communities confront threats as a group is weakened.

Linked to this is the effect on social reproduction. The latter refers to the way societies reproduce patterns – be they ideas, customs, social structures, or ways of interacting generally or working with others over generations. The morbidity and mortality resulting

³⁶ Bloom et al (2002) op cit.

³⁷ N Folbre, (2001), *The Invisible Heart: Economics and Family Values*. The New Press, New York.; Folbre, N. & Bittman, M., (2004), *Family Time: the social organization of care*. Routledge, Taylor and Francis Group, London and New York.

from HIV/AIDS can adversely affect these processes. The death of a mother or father, or both, means many of life's lessons may not be passed on to children. If that mother or father is also an active member of a community (or a country) and its key institutions,³⁸ the impacts will spread widely throughout society as a whole.³⁹ Very little is known about the effects of AIDS on the non-formal, non-monetised economy of social reproduction. However, limited research suggests some of the greatest and longer-term effects of the epidemic may be found here.⁴⁰

Long-term costs such as these are rarely included in traditional analysis of the impacts of HIV/AIDS. Economics cannot fully explain HIV prevalence, and it cannot cover the entirety of the pathogen's effects. Studies of the economics of happiness have garnered increasing attention in recent years and this new approach may help fill some of the gaps in our understanding of HIV/AIDS.

The study of happiness

In the last few centuries, governments across the world have placed enormous emphasis on improving incomes as a means to promote well-being. Many have had great success in making their countries richer, but people's sense of well-being has not kept pace with economic advances. In the United States, for example, where average incomes have more than doubled in the past 50 years, self-reported happiness levels have risen only very slightly, and the proportion of people who report being "very happy" has remained steady. In Britain, Japan and continental Europe the story is similar.⁴¹ Beyond a certain income level, increased wealth appears to have only very small impacts on well-being and other things become more important.

The economist Richard Layard has described happiness as "our overall motivational device". Those things that make us happy, he argues – such as sex, food and love – are vital to our survival as a species. Conversely, that which makes us unhappy often poses dangers.⁴² Others have pointed to the role of happiness as a factor in human evolution.⁴³

Happiness may also be important to the struggle against HIV/AIDS. Happiness is associated with improved physical health and a greater ability to recover from illness. Depression, on the other hand, weakens the immune system, thus potentially increasing vulnerability to infections.⁴⁴ Richard Layard has identified seven factors that are key to happiness: "our family relationships, our financial situation, our work, our community and

³⁸ P Strand, K Matlosa, A Strode, K Chirambo, HIV/AIDS and Democratic Governance in South Africa: Illustrating the Impact on Electoral Processes (2005) Institute for Democracy in South Africa, Pretoria, South Africa.

³⁹ N Nattrass (2004) *The Moral Economy of AIDS in South Africa*, Cambridge University Press, Cambridge, UK

⁴⁰ Mujuru-Mvere, N. N. (2004). Rural women's increasing subordination due to HIV/AIDS in eastern Zimbabwe, unpublished doctoral dissertation, School of Development Studies, University of East Anglia, Norwich, UK; Barnett, T., The Cost of an HIV/AIDS epidemic, *Tropical Medicine and International Health*, March 2004, Vol 9 No. 3, 315-7; Barnett, T., The Cost of an HIV/AIDS epidemic, *Tropical Medicine and International Health*, March 2004, Vol 9 No. 3, 315-7

⁴¹ R Layard (2005): *Happiness: Lessons from a New Science*. Penguin Books. London: 29-31.

⁴² *ibid*: 24

⁴³ Nettle, D. (2005). *Happiness: The science behind your smile*. Oxford University Press, Oxford.

⁴⁴ Layard, *op. cit.*, p. 19

friends, our health, our personal freedom and our personal values.”⁴⁵ The relative importance of these and other factors, of course, may differ between cultures, but all of them may influence susceptibility to infection, and HIV/AIDS in turn may have impacts on each.

Governments’ focus on income growth may have negative repercussions for efforts to tackle the virus. If prevention and treatment interventions are targeted, for example, at the poor with no consideration of the differing risk environments they inhabit, resources will be squandered on people who are not at high risk of infection. Ignoring people in wealthier communities may also prove costly, as South Africa and Botswana have shown. Addressing only the economic impacts of the disease, meanwhile, fails to take account of many important aspects of well-being and leaves societies open to potential but as yet poorly understood long-term effects on social cohesion and reproduction.

Although happiness offers a broader perspective than economic analysis of the impacts of and risk factors for HIV/AIDS, measuring happiness is difficult. Surveys of self-reported happiness between and within countries may suffer from language issues, for example, as the word is understood to mean different things by different cultures. Monitoring brain activity to identify levels of happiness, meanwhile, is costly and impractical for large-scale studies. HIV/AIDS, moreover, is a long wave epidemic whose first effects are felt several years after infection and where long-term impacts are poorly understood.⁴⁶ The desire to avoid infection therefore requires people to value the future enough to adjust their current behaviour. Happiness can obviously make us place a greater value on life, but hope, the subject of the next part of this paper, provides a stronger link with the future.

Three: The Role of Hope

Hope and HIV infection

In times of rapid and/or extended social, cultural and economic disruption, social distinctions, roles, relationships and responsibilities are confused and fluid: people do not have a clear view of the future. Their ability to hope is severely compromised as they are unable to plan in relation to an extended time horizon. Richard Layard, who has had a major impact in raising the profile of the study of happiness, has also acknowledged the importance to well-being of hope. “We could not be happy without setting ourselves goals,” he asserts. “Prod any happy person and you will find a project.”⁴⁷

To have such goals, of course, you need hope. Hope is not just about optimism for the future, but also about making and enacting realistic plans to attain future objectives. Snyder (1996) has defined hope as, “goal-directed thinking in which the person appraises his or her

⁴⁵ *ibid*: 63.

⁴⁶ Bell, Clive, Bruhns, Ramona and Gersbach, Hans, "Economic Growth, Education, and AIDS in Kenya: A Long-Run Analysis" (October 1, 2006). World Bank Policy Research Working Paper No. 4025 Available at SSRN: <http://ssrn.com/abstract=935174>

⁴⁷ Layard, *op. cit.* p. 73

perceived capability to produce workable routes to goals...as well as the potential to initiate and sustain movement along the pathways."⁴⁸

Hope for the future can therefore have strong impacts on behaviour in the present. Snyder et al (1991) explain, "The person who is hopeful or envisions the possibility of a positive future is more apt to engage in activities directed towards that future...In contrast, those persons who have no hope and view the future negatively are less apt to engage in positive behaviour."⁴⁹

The effects of hope on behaviour can have long-lasting repercussions for well-being.⁵⁰ A study comparing children's answers to a series of questions about their hopes for the future with their subsequent scores in a basic skills test found a significant positive correlation between high hopes for the future and high test scores.⁵¹ Hope also appears to affect health. The unemployed experience higher levels of mental distress than the employed, regardless of wealth, possibly because of an absence of hope.⁵² Laboratory evidence suggests that goal-directed thinking increases self-esteem and reduces emotions related to depression.⁵³ The civil servants studied by Marmot et al (1991) (who were certainly not desperately poor) were in a position of *relatively* low income and low esteem where they had lost hope of advancement to higher levels. It was this position, with advancement in sight but always impossible, which negatively affected their health.⁵⁴ Transferring this insight to a very different environment, in poor countries, those who are desperately poor cope, and sometimes die of poverty. In contrast, those who are just above the poverty line, particularly poor women, may aspire, usually fail and therefore experience hopelessness. It is this structural position which exposes them to individual risk.

The hope environment can influence HIV/AIDS prevalence. People with hope for the future and plans for achieving future goals are less likely to engage in activities that put them at risk of illness or death in the present. In the case of HIV, such behaviours include injecting drug use or risky sexual behaviours. Behaviour change messages are likely to be more effective if those receiving them have hope for the future. Those without hope, by contrast, place a low value on the future. Without future goals, there is little reason to avoid actions that may cause harm in the future but do not do so in the present. People may therefore forfeit future gains in favour of present benefits. Despite the risks involved, for example women facing a daily survival struggle may be forced to exchange sexual favours (possibly without protection) for the economic assistance they and their families need to make it through the week. Men who lack hope for the future may be unwilling to surrender

⁴⁸ CR Snyder (1996): To hope, to lose, and hope again. *Journal of Personal and Interpersonal Loss*, 1, 1-16.

⁴⁹ CR Snyder, C Harris, JR Anderson, SA Holleran, LM Irving, ST Sigmon, L Yoshinobu, J Gibb, C Langelle and P Harney (1991): The Will and the ways: Development and validation of an individual differences measure of hope. *Journal of Personality and Social Psychology*, 60, 570-85.

⁵⁰ Gropman J. (2004): *The Anatomy of Hope*. New York: Random House.

⁵¹ CR Snyder, B Hoza, WE Pelham, M Rapoff, L Ware, M Danovsky, L Highberge, H Rubinstein, KJ Stahl (1997): The Development and Validation of the Children's Hope Scale. *Journal of Pediatric Psychology* Vol 22, No 3: 399-421.

⁵² AE Clark and AJ Oswald (1994): Unhappiness and Unemployment. *Economic Journal*, 104, 648-659.

⁵³ CR Snyder, SC Sympton, FC Ybasco, TF Borders, MA Babyak, RL Higgins (1996): Development and validation of the State Hope Scale. *Journal of Personality and Social Psychology*, 70: 321-335.

⁵⁴ Marmot et al (1991) op cit.

immediate pleasure in return for a far-off future benefit by wearing a condom. People already sick with AIDS may be less likely to adhere to antiretroviral therapy (ART) if they have little to live for, thus risking passing on the virus to others.⁵⁵ And the hope engendered by the availability of ART is likely to encourage people who would previously have seen no benefit to present for HIV counselling and testing. Testing has been shown to reduce risky behaviour in those who test positive, and this may reduce transmission.

There has been little research on the link from hope to HIV/AIDS, but there is one outstanding example suggesting the concept's relevance. The chaos and terror of Idi Amin's rule in Uganda in the 1970s sharply increased social and economic inequality, particularly between men and women, forced many to discount the future and instead focus on day-to-day survival. Disruption of hope may well have contributed to the spread of HIV in the region. A thriving black market grew up to replace the economic system Amin had destroyed, and cross-border smuggling organised by men was rife.⁵⁶ Transport routes are notoriously fertile ground for HIV infection, as traders and truckers spend long periods away from home, sometimes frequenting the bars and brothels that spring up to service them. Gender relations were upended as the men involved in smuggling became wealthier compared to women, and women's dependency on men grew, possibly most among those "not so poor" women with some education whose aspirations were most acutely frustrated⁵⁷. This imbalance "inevitably took on a sexual complexion."⁵⁸ The risk environment was made still more precarious when in 1979 the Tanzanian army crossed the border and overthrew Amin, passing along the same transport routes. Rakai district near the Tanzanian border, where both soldiers and traders spent extended periods, was the site of Africa's first reported cases of HIV/AIDS in 1982. Infection thereafter spread rapidly through Rakai and neighbouring areas.⁵⁹

Clearly, more research is needed to determine the strength of the links from hope to HIV infection. Hope will not explain infection in all population groups – the early infections among men who have sex with men in the US, for example, often occurred amid thriving, energetic communities. It does, however, offer a possible explanation for the links between environment and risk behaviour,⁶⁰ with important implications for policy. Hope is quite straightforward to measure via questionnaires, and it is a concept that individuals, communities and policy-makers can understand and researchers investigate.

⁵⁵ S Bernays, T Rhodes, T Barnett (2007 forthcoming) Hope: a new way to look at the HIV/AIDS Epidemic, AIDS

⁵⁶ T Barnett and P Blaikie, op. cit.

⁵⁷ Smith J.; Nalagoda F.; Wawer M. J.; Serwadda D.; Sewankambo N.; Konde-Lule J.; Lutalo T.; Li C.; Gray R. H, **Education attainment as a predictor of HIV risk in rural Uganda: results from a population-based study**, International Journal of STD & AIDS, Volume 10, Number 7, 1 July 1999 , pp. 452-459 (8)

⁵⁸ Barnett and Whiteside, op. cit., 135

⁵⁹ E Hooper (1999): The River: A Journey back to the Source of HIV and AIDS. London: Allen Lane/Penguin Press; D Serwadda, N Sewankambo, A Lwegaba, J Carswell et al (1985): Slim Disease: A New Disease in Uganda and its Association with HTLV-III Infection. Lancet, 2(2): 849-52.

⁶⁰ Glass T, McAtee M. Behavioral science at the cross roads in public health: extending the horizons, envisioning the future. Social Science and Medicine 2006, 62:1650-1671.

Snyder and his co-authors (1991, 1997) developed separate “hope scales” to assess levels of hope in children and adults.⁶¹ Both include questions measuring what Snyder calls “pathways thinking” (that is, the ability to devise paths towards future goals) and “agency” (the ability to initiate practical actions that help one embark on these paths). Snyder has validated these scales in a United States setting that does not relate to HIV/AIDS. He found that the agency and pathways measures were closely correlated and remained quite stable when re-tested. It will be important to validate similar scales in a developing-world setting. Measures on the children’s hope scale, with multiple choice answers ranging from “none of the time” to “all of the time”, were as follows:

1. I think I am doing pretty well.
2. I can think of many ways to get the things in life that are most important to me.
3. I am doing just as well as other kids my age.
4. When I have a problem, I can come up with lots of ways to solve it.
5. I think the things I have done in the past will help me in the future.
6. Even when I want others to quit, I know that I can find ways to solve the problem.

Measures, 1, 3 and 5 relate to agency, and measures 2, 4 and 6 to pathways thinking. Once levels of hope have been identified, it may then be possible to find out why some people lack hope. Establishing the obstacles to future-directed thinking and actions will help policy-makers clear a path to the future, with potentially beneficial impacts on many aspects of quality of life.

In an HIV/AIDS context, surveys of hope may help pinpoint the groups most vulnerable to infection, which can then be targeted with prevention and treatment efforts. The association with hope also implies that a broader approach to HIV prevention is needed – one which addresses the wide range of structural/contextual factors that promote or reduce hope. At present, most interventions aimed at preventing HIV infection attempt to alter individual behaviour, such as promotion of condom use and abstinence. Such interventions operate on the clinical dose-response model. They rarely take account of the broader, structural factors that determine such behaviours. As we have discussed, hope is likely to play a key role in influencing risk decisions, and whether or not one has hope depends on a range of factors, including but not limited to those listed by Layard above. Importantly, individuals and communities themselves can easily identify impediments to hope and thereby engage in the improvement of their health and their societies.

Clearly, many governments in poor countries where AIDS is a problem are already working to improve structural conditions – poverty reduction, transport and communication improvements, water and sanitation, and education, for example, are worthwhile goals with or without HIV/AIDS. This raises the question of how those working to tackle HIV/AIDS can

⁶¹ Snyder et al (1991) op cit; Snyder et al (1997) op cit

add value in influencing the broader environment, particularly given that their resources are limited and that some of those resources will continue to be directed at individual behaviour change efforts.

Some structural changes can have negative impacts on HIV/AIDS. Improving transportation links, for example, allows for greater mobility, which can be a risk factor for infection. Poverty reduction, too, gives people a larger disposable income and may enable them to afford to visit sex workers. These changes may also have positive effects, of course, as increased wealth is generally associated with improved health. It may be that those tackling HIV/AIDS could influence policy-makers to consider the potential negative side effects of structural changes on HIV transmission. Structural factors such as improved gender relations, women's education, reduced discrimination against sexual minorities and health system reform are also likely candidates for those working on HIV to advocate for. More research is needed in order to establish where the latter can have greatest value – determining an optimal balance between individual and structural interventions, and determining which structural areas to target are complex questions that have so far received little attention. It may be that a focus on hope as a bridge between structural conditions and individual behaviour will help to address some of these issues, particularly if it is recognised that “poverty reduction” may indeed remove significant population fractions from “poverty” (however defined) while accommodating increased inequality which frustrates hope and aspiration.⁶²

The impact of HIV/AIDS on hope

Many factors influence hope. Security, economic circumstances, the work environment, and family and community cohesion are some of the most obvious. Health is another. HIV/AIDS can destroy hope, resulting in vicious spirals that damage societies and lead to further HIV infections.

In an environment where HIV/AIDS makes long-term prospects precarious, the incentives to save are reduced, leaving families less secure financially and societies with fewer resources for investment in economic activities. Motivation to invest may also decline. Freire (2000) has estimated that saving as a proportion of GDP in South Africa will fall by 14 per cent by 2010 as a result of HIV/AIDS.⁶³

⁶² Uganda between 1992 and 2006 is a case in point. Official “poverty reduction” has doubtless been dramatic. The proportion of the population living below the poverty line declined from: 56% in 1992 to 44% in 1997, to 35% in 2000, to 31% in 2007. And Government is reportedly on track to reducing poverty to 10% or less by 2017, and to reducing by half proportion of people in extreme poverty by 2015. However, at the same time as these achievements, *there is evidence of increased inequality*. Consumption gains have been inequitably distributed, Thus, the richest decile has experienced the largest rise in living standards - real consumption increased by 20% since 1997, whereas consumption of poorest decile grew by only 8% over the same period.

⁶³ S Freire (2002): Impact of AIDS on Saving Behaviour in South Africa. Paper presented at the IAEN Symposium on the Economics of HIV/AIDS in Developing Countries, Barcelona, July 6-7.

AIDS mortality and morbidity may also discourage families from investing in human capital.⁶⁴ If the disease diminishes parents' hope that their children will reach adulthood, spending scant resources on their education will become less attractive, with long-term negative effects on children's life prospects. Birdsall and Hamoudi (2004) have found that lower parental life expectancy is associated with reduced primary school enrolment and fewer years of schooling.⁶⁵ Parents may also decide to have more children to compensate for the higher risk of a child dying, meaning resources have to be spread more thinly between children, thereby reducing the education and health care received by each child.

Perhaps the greatest impact of AIDS on hope and the prospects of setting and achieving goals is felt by orphans. Bell, Devarajan and Gersbach (2004) have forecast that by 2010 19 per cent of South African children will have lost both parents. Just 29 per cent will have both parents surviving.⁶⁶ Children orphaned by AIDS suffer higher rates of depression than other children and have lower self-esteem.⁶⁷ As well as the emotional damage which makes people less likely to formulate goals, orphans also lack the means to achieve their objectives. Human capital among orphans is weaker than among non-orphans. A study in Indonesia found orphans less prepared for life,⁶⁸ while a detailed ethnographic study of orphaned children in Botswana demonstrates the multiple disabling traumas experienced by orphans of the epidemic in that country.⁶⁹

From a policy point of view, families affected by AIDS may need more persuading than others to continue to save and invest in their children's education. Financial incentives may be required in these circumstances. A strong focus on orphans is also urgently needed. The psychological trauma experienced by AIDS orphans can compromise their hope for the future and imperil their subsequent integration into society. Counselling and treatment could help limit these impacts, and orphans will also need assistance in mapping out and working towards goals.

Four: Economic Interventions for HIV/AIDS

Existing interventions to prevent and treat HIV/AIDS emphasise individual behaviour. The ABC approach to prevention ("Abstain, Be faithful, Condomise"), for example, encourages people to alter their sexual practices.⁷⁰ Antiretroviral therapy requires individuals to follow

⁶⁴ M Haacker (2004): HIV/AIDS: The Impact on the Social Fabric and the Economy. In M Haacker (ed.) (2004): The Macroeconomics of HIV/AIDS. Washington DC. International Monetary Fund: 41-95.

⁶⁵ N Birdsall and A Hamoudi (2004): AIDS and the Accumulation and Utilization of Human Capital in Africa. In M Haacker (ed.) (2004): The Macroeconomics of HIV/AIDS. Washington DC. International Monetary Fund: 134-66.

⁶⁶ C Bell, S Devarajan and H Gersbach (2004): *op. cit.* p. 115

⁶⁷ See, for example, J Stein, (2003): Sorrow makes Children of us all: A Literature Review on the Psycho-Social Impact of HIV/AIDS on Children. CSSR Working Paper No 47, University of Cape Town, Centre for Social Research; B Forsyth, L Damour, S Nagier (1999): The psychological effects of parental human immunodeficiency virus infection on uninfected children. *Archives of Pediatric and Adolescent Medicine*, 150: 1015-1020; S Kirya (1996): AIDS-related parental death and its effect on orphaned children's self-esteem and sociability at school. XI International Conference on AIDS, Vancouver, July.

⁶⁸ PJ Gertler, D Levine, S Martinez (2003): The Presence and Presents of Parents: DO Parents Matter for more than their Money? Berkeley, California: University of California at Berkeley.

⁶⁹ M Daniel (2005). Hidden wounds: orphanhood, expediency and cultural silence in Botswana., PhD dissertation, University of East Anglia. Norwich.

⁷⁰ C Collins, TJ Coates, J Curran (2007): Moving Beyond the Alphabet Soup of HIV Prevention. *AIDS*, forthcoming.

strict dosage routines. These measures require that people have hope for the future and goals to aim for. They do not by themselves alter the structural environment that strengthens hope, so their long-term benefits are likely to be limited unless they are complemented by interventions with broader aims.

One of the factors likely to influence hope is wealth, or the possibility of achieving it. There is an extensive literature showing how economic incentives can contribute to improvements in other areas of health, such as drug dependency or alcoholism. In the United States, for example, contingency management approaches to treating stimulant abusers, which provide money to cocaine and methamphetamine users in return for regular clean urine samples, have been found to reduce stimulant use.⁷¹ Some drug users have reported that having something to strive for and being successful and receiving a reward for it – an unusual experience for many of them - was a key influence on their decisions about whether to use drugs during the study period. Similar research in the area of HIV/AIDS is more limited, but here we present four case studies showing the positive impact of economic interventions.

The IMAGE study, South Africa⁷²

The Intervention with Microfinance for AIDS and Gender Equity (IMAGE) study in South Africa assessed how an economic intervention can reduce HIV transmission by unblocking a path towards future goals. This study adds to what is at present a very thin literature on how microfinance can reduce HIV transmission.⁷³

Intimate-partner violence is an important risk factor for HIV, and one in four South African women reports being a victim of such violence.⁷⁴ The IMAGE study, a randomised controlled trial that ran from June 2001 to March 2005, assessed the impact on the risk environment of a microfinance scheme that also included gender and HIV training. Microfinance has been a boom industry in the developing world in recent years, with millions of poor families given both hope of a better future and a means to achieve their goals. Women in particular have benefited from such schemes.⁷⁵

⁷¹ Rawson, R.A., McCann, M.J., Flammio, F., Shoptaw, S., Miotto, K., Reiber, C., & Ling, W. (2006). A comparison of contingency management and cognitive-behavioral approaches for stimulant-dependent individuals. *Addiction*, 101, 267-274; Michael Prendergast, Deborah Podus, John Finney, Lisa Greenwell, John Roll (2006): Contingency management for treatment of substance use disorders: a meta-analysis *Addiction* 101 (11), 1546–1560.

⁷² PM Pronyk, JR Hargreaves, JC Kim, LA Morison, G Phetla, C Watts, J Busza, JDH Porter (2006): Effect of a structural intervention for the prevention of intimate-partner violence and HIV in rural South Africa: a cluster randomised trial. *Lancet*; 368: 1973-83.

⁷³ A study in Kenya, for example, found that female sex workers who enrolled in microfinance programs reduced their average number of partners and experienced declines in sexually-transmitted diseases. Costigan A, Odek WO, Ngugi EN, Onoko M, Moses S, Plummer FA. Income generation for sex workers in Nairobi, Kenya: business uptake and behavioural change [Abstract MoPeF4129]. XIV International Conference on AIDS, Barcelona, Spain, July 7-12, 2002.

⁷⁴ R Jewkes, J Levin, L Penn-Kekana (2002): Risk factors for domestic violence: findings from a South African cross-sectional study. *Soc Sci Med*; 55: 1603-17; KL Dunkle, RK Jewkes, HC Brown, GE Gray, JA McIntyre, SD Harlow (2005): Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa. *Lancet*; 363: 1415-21.

⁷⁵ N Goldberg (2005): Microfinance systems: taking stock of what we know. Washington DC. Grameen Foundation.

The IMAGE programme was targeted at poor women in South Africa's rural Limpopo province, an area much affected by male labour migration to South Africa's industrial heartland. The scheme involved small loans combined with participatory learning activities which women attended every two weeks. Loans were used mainly for retail or tailoring businesses.⁷⁶

The impacts on hope were substantial. Ninety per cent of women in the intervention group reported that the programme had significantly improved their lives. Women enrolled in the programme were more likely to participate in social groups and collective action, and felt a greater sense of community solidarity during crises.⁷⁷

The increased hope led to some improvements in health. Although there was no effect on HIV incidence or unprotected sex, intimate-partner violence decreased by 55 per cent in the intervention group relative to the control group over a two-year period.⁷⁸ It may be that the changes in the hope environment will eventually have effects on HIV transmission, although this is as yet uncertain as such effects could be expected to become evident over a period longer than that of the research project.

South African pensions and health⁷⁹

A pension system has existed in South Africa for many decades, albeit with unequal payments between different ethnic groups. After the end of the apartheid government, there was a dramatic increase in the public pension paid to the African, Indian and Coloured elderly. In a very short period,⁸⁰ the number of public pension recipients increased from 50,000 to over 1.5 million South Africans. From the perspective of most families in South Africa, this pension represents a sizable amount of money. It is more than double the median income per capita of black South Africans. With the expansion of the pension system, there was - almost overnight - a dramatic change in the economic resources available to a very large number of South African households. This offered poor households in particular greater economic security and the possibility of investing in goal-directed activities.

Case (2001) measured the impact of the pension on household health status. In households that pooled their income, pensions protected the health of household members by maintaining nutrition, improving living conditions and reducing stress. Having a pensioner who shared his or her funds with the household was associated with an increase in children's height - a robust indicator of subsequent health; a reduced likelihood of adults skipping meals; and lower rates of depression.⁸¹ It is not clear whether the program strengthened hope, but its impact on reducing depression suggests it may have been one of the channels via which it improved health.

⁷⁶ Pronyk et al (2006) op cit: 1973.

⁷⁷ *ibid*: 1979.

⁷⁸ *ibid*: 1981.

⁷⁹ Anne Case (2001): Does Money Protect Health Status? Evidence from South African Pensions. NBER Working Paper 8495, Cambridge, MA, October.

⁸⁰ We are grateful to Alan Whiteside for drawing our attention to the sudden nature of this change and its implications.

⁸¹ *ibid*

The Child Support Grant, South Africa⁸²

First implemented in 1998, South Africa's Child Support Grant (CSG) aims to assist very poor households in bringing up children. After passing a means test, families received R100 per month (the sum has since increased) for each child below the age of seven. On average the grant makes up one-third of a recipient household's income, so it clearly has potential to reduce stress and increase a family's investment in the human capital of its children.⁸³

Seventy-nine per cent of recipients reported that the grant had made it easier to look after their children.⁸⁴ Further cost-effectiveness analysis indicates that orphan support in South African communities is most effectively implemented when underpinned by welfare grants.⁸⁵ A study in the province of KwaZulu-Natal, meanwhile, found that poor children receiving the CSG were significantly more likely to be enrolled in school at the ages of six and seven than their siblings who were too old to benefit from it.⁸⁶ Education has a strong association with improved health, so it is possible that the CSG will have some health impact. Whether this will extend to reduced HIV transmission or stronger adherence to AIDS treatment is not yet known, however.⁸⁷

The PROGRESA programme, Mexico⁸⁸

Mexico's PROGRESA scheme, which provides economic assistance to poor families if they participate in health programmes, adopts a similar approach to the IMAGE project described above. Its main aim is to improve child health and education, but it has also had positive effects on adults.

In order to receive cash transfers, families had to make regular preventive health care visits, including prenatal care for mothers, immunization for young children and preventive checkups for adults. Young children and pregnant and lactating women had to take regular nutritional supplements, and adults had to attend education programmes covering health, hygiene and nutrition.⁸⁹

The results of a two-year randomised controlled trial suggest the programme had strong positive impacts on health. The incidence of illness among children in the programme was reduced by 23 per cent and their height – an indicator of health status - increased by 1-4 per cent.⁹⁰ The daily activities of adults enrolled in PROGRESA were significantly less likely

⁸² Community Agency for Social Enquiry (2000): Phasing in the Child Support Grant: A Social Impact Study. Department of Welfare, South Africa, July.

⁸³ *Ibid*: 3

⁸⁴ *Ibid*: 3

⁸⁵ C Desmond and J Gow, (2001) The Cost-Effectiveness of Six Models of Care for Orphan and Vulnerable Children in South Africa, HEARD, University of KwaZulu Natal, prepared for UNICEF, Pretoria.

⁸⁶ A Case, V Hosegood and F Lund (2005): The reach and impact of Child Support Grants: evidence from KwaZulu-Natal. *Development Southern Africa*, 22(4), p467-482

⁸⁷ DE Bloom (2005): Education and Public Health: Mutual Challenges Worldwide. *Comparative Education Review*, Vol. 49, pp. 437-451.

⁸⁸ P Gertler, S Boyce (2001): An Experiment in Incentive-Based Welfare: The Impact of PROGRESA on Health in Mexico. Berkeley: University of California Press.

⁸⁹ *Ibid*: 5-6

⁹⁰ *Ibid*: 15-16

to be impeded by illness than those of un-enrolled adults. The programme also improved the health of those aged 50 or over.

Conclusions and recommendations

We have seen that the relationship between economic structures and processes and the HIV/AIDS epidemic still remains poorly understood thirty years into the epidemic.⁹¹ What is also clear but less frequently stated is that efforts to achieve effective behavioural change have had mixed results, and in many countries have largely failed. A major flaw in many of these efforts has been the assumption that necessary changes in sexual behaviours are *individual* responses to “doses” of prevention interventions. In fact, increasing evidence suggests that behavioural changes cannot be dissociated from their social, economic and cultural contexts, which may govern whether any such dose is effective.⁹²

In recent years, some donors have begun to acknowledge the importance of these contexts and of “structural interventions” to alter them. This new line of thinking recognises that while it is not clear that HIV epidemics are directly caused by poverty, they are closely related to the complex and diverse social, economic and cultural inequalities found in human societies. While behaviour change assumes mainly individual responsibility and action as risk behaviours, structural interventions assume that the environment regulates the risk faced by individuals. It is environments that are risky, not merely individuals’ behaviours.

We can briefly summarise the recommendations of this paper as follows:

Policy Recommendations

From the perspective of policy strategy, we should move away from simplistic perspectives focused on individual behaviour change and recognise that the environments within which transmission and effects occur must be taken into account. Continuing to act as though these environments are immune to interventions is costly. We have argued that a key component in creating a risk environment is the relative absence of hope for large numbers of people. Where people have little hope and little aspiration, they discount the longer-term future and take risks to survive in the present and very near future. That may be a significant variable in the epidemiological processes we are seeing in the case of the rapid and wide spread of HIV in Africa and other poor and disrupted regions of the world.

Structural interventions may be an important way of introducing hope into the lives of those who currently can expect little. Security, stability, expectations of seeing the birth of grandchildren and their coming to adulthood, expectations of seeing a small enterprise grow bigger or a tree crop plantation come to maturity - these are all signs and indicators of hope that can have vital impacts on decisions and behaviours. In the longer term, creating

⁹¹ These relationships are currently being examined in more detail by Tony Barnett and Daphne Topouzis in association with a team from the University of Kiel in Germany.

⁹² T Barnett & J Parkhurst (2005) Sex, Abstinence and Behaviour Change, *Lancet Infectious Diseases* Volume 5, September, pp 2-5; H Epstein, *op. cit.*; E Stillwaggon (2006) *AIDS and the Ecology of Poverty*, Oxford University Press, Oxford and New York; Glass and McAtee *op. cit.*

and agitating for conditions such as these for more people is crucial if hope is to be raised as a weapon against HIV/AIDS.

Programmatic Recommendations

Considered programmatically, there are two inter-related strategic paths. Programmatic interventions most amenable to immediate funding and returns to investment in the medium term are those that extend the realistic aspirational decision horizons of individuals and communities.⁹³ We do not yet have a great deal of experience in developing programmes for structural interventions. However, welfare support systems of various kinds, ranging from cash support (as in the case of pensions and child support schemes) are undoubtedly one type of intervention that may serve to increase hope. Microfinance and assertiveness and gender training targeted in particular at women may also be potentially useful interventions.

In each case, these programmes seek to increase hope, extend personal and communal planning horizons and thus add value to the future in circumstances where otherwise people have every reason to discount it. It is important, however, to ensure that these and similar economic interventions reach those who need them, and that their effectiveness in strengthening hope and reducing HIV transmission is monitored on a long-term basis. In resource-constrained environments such as are found in many areas affected by AIDS, risks that uptake of such programs will be limited to those not at risk of infection, or to those with high education levels and therefore awareness of programmes' existence, must be factored in to programme design.

Research Recommendations

We need to know much more about the social and economic distributional effects of the HIV/AIDS epidemic in poor countries.⁹⁴ We also need to understand more about the role of differential hope in combination with social and economic inequalities in shaping diverse HIV epidemics around the world.⁹⁵ Studies measuring levels of hope and comparing them to HIV prevalence will provide some indicator of the strength of the link between the two without being able to pinpoint causality. Studies asking individuals about the role of hope in influencing their sexual behaviour may also produce interesting results.

Much more research is also needed to assess the impact of structural interventions on HIV transmission. The four cases we have presented offer some promise, but if economic programmes are to become a mainstay of HIV prevention, many more such studies will be necessary. Questions also remain as to how far those working on AIDS should go in advocating for broad structural changes, given that many governments are endeavouring to implement these changes anyway and that the resources available for HIV/AIDS activists

⁹³ In the context of a long wave epidemic like HIV/AIDS, the medium term is probably in the range of five to fifteen years.

⁹⁴ A research project on this subject is currently in progress in cooperation with a team from the University of Kiel, Germany.

⁹⁵ Some initial work on this question is currently being undertaken in Malawi by a team from Oxford Policy Management .

are limited. Finding areas where an HIV/AIDS perspective on broad structural change can add value will be vital, and decisions about the proportion of resources and energy that should be devoted to structural interventions versus behavioural change programmes will require a solid evidence base.