RETHINKHIV

Perspective Paper

Social Policy: Metaphors and Hope

Tony Barnett

COPENHAGEN CONSENSUS CENTER

RUSH
FUNDING DISRUPTIVE IDEAS AGAINST HIV

First published 2011
Copenhagen Consensus Center
Copenhagen, Denmark
Rush Foundation,
Lausanne, Switzerland

ISBN: 978-87-92795-12-0

Perspective Paper

Social Policy: Metaphors and Hope

Tony Barnett[1]

1 Professor at the London School of Economics & London School of Hygiene and Tropical Medicine

RethinkHIV: The Project

2011 marks the 30-year anniversary since the Centers for Disease Control and Prevention introduced the world to the disease that became known as AIDS. Despite 30 years of increasing knowledge about transmission, prevention, and treatment, and current annual spending of $15 billion, every day around 7,000 people are infected with the HIV virus and two million die each year. The HIV/AIDS epidemic has had its most profound impact in sub- Saharan Africa, which accounts for 70 percent of new worldwide infections and 70 percent of HIV-related deaths, 1.8 million new infections in children each year, and has 14 million AIDS orphans.

Humanitarian organizations warn that the fight against HIV/Aids has slowed, amid a funding shortfall and donor fatigue. Yet HIV is still the biggest killer of women of reproductive age in the world, and of men aged 15-59 in sub-Saharan Africa. Time is ripe for a reassessment of current policy and expenditure.

The Rush Foundation has asked the Copenhagen Consensus Center to commission a group of leading health academics to analyze HIV policy choices and identify the most effective ways to tackle the pandemic across sub-Saharan Africa.

RethinkHIV identifies effective interventions in the fight against HIV/Aids across sub-Saharan Africa. It applies cost-benefit analysis to highlight investments and actions that can make a significant difference.

The Copenhagen Consensus Center has commissioned eighteen research papers by teams of top health economists, epidemiologists, and demographers who examine the cost-effectiveness of a range of responses to HIV/AIDS in sub- Saharan Africa under the following topics:

- Efforts to Prevent Sexual Transmission
- Efforts to Prevent Non-Sexual Transmission
- Treatment and Initiatives to Reduce the Impact of the HIV/AIDS Epidemic
- Research and Development Efforts
- Social Policy Levers
- Initiatives to Strengthen Health Systems

A panel of five eminent economists, including recipients of the Nobel Prize, convenes in the fall of 2011 to carefully consider the research and engage with the authors. The Expert Panel is tasked with answering the question:

If we successfully raised an additional US$10 billion over the next 5 years to combat HIV/AIDS in sub-Saharan Africa, how could it best be spent?

After deliberating in a closed-door meeting, the Nobel Laureate Expert Panel provides their answer, highlighting investments and actions that could be most effective avenues for additional funding. Their findings and reasoning are released in the fall of 2011, and published in full alongside all of the research in a collated volume in 2012.

RethinkHIV will generate global discussion regarding responses to HIV/AIDS in sub-Saharan Africa. To participate in a dialogue on the research and findings within sub-Saharan Africa, a Civil Society Conference and forums for youth are held following the Expert Panel meeting in late 2011.

The Civil Society Conference is a means of creating a dialogue with African civil society and to agree on a set of bold new actionable priorities with society politicians, civil society organizations, influential thought-leaders, and others within sub-Saharan Africa.

It is hoped that the project will motivate donors to direct more money to the investments and actions that are demonstrated to be most effective to curtail the pandemic in sub-Saharan Africa.

All of the research papers, and many different perspectives on priorities can be found online at the project's website:
www.rethinkhiv.com

You are invited to join the dialogue and provide your own perspective on priorities for action in Africa.

The Copenhagen Consensus Center

The Copenhagen Consensus Center is a Danish state-funded think- tank that commissions and promotes research highlighting the most effective responses to global challenges. The Center is led by author Bjorn Lomborg, named 'one of the 100 Top Global Thinkers' by Foreign Policy in 2010, 'one of the world's 75 most influential people of the 21st century' by Esquire in 2008, and 'one of the 50 people who could save the planet' by the Guardian in 2008. The Copenhagen Consensus Center is implementing the project, which follows the format of past projects such as Copenhagen Consensus 2004, Consulta de San José in 2007, Copenhagen Consensus 2008, and Copenhagen Consensus on Climate in 2009.
www.copenhagenconsensus.com

The Rush Foundation

The Rush Foundation, based in Lausanne, is dedicated to providing fast, effective funding for innovative thinking addressing the HIV/AIDS epidemic in sub-Saharan Africa. The Rush Foundation is the sponsor of the project. The Rush Foundation was launched in 2010 to fund sustainable projects in sub-Saharan Africa focused on alleviating the pandemic through innovative thinking, and to shake up the status quo in HIV thinking by spearheading thought leadership projects and debates that will help reframe HIV policy. Among other initiatives, the Rush Foundation is currently designing a grant programme with ActionAid in Africa aimed at generating new, sustainable HIV initiatives on the ground.
www.rushfoundation.org

The Papers

The body of research for RethinkHIV comprises 18 research papers. The series of papers is divided into Assessment Papers and Perspective Papers. Each Assessment Paper outlines the costs and benefits of at least three of the most promising responses, interventions, or investments to HIV/AIDS in Sub-Saharan Africa within the respective category. Each Perspective Paper reviews the assumptions and analyses made within the Assessment Paper. In this way, a range of informed perspectives are provided on the topic.

Contents

Introduction

Development of social policy interventions in response to the HIV/AIDS epidemic has been framed in the language of metaphors. Three critical and often used metaphors have been unexamined. This paper does three things:

a. it examines these key metaphors;
b. it describes how their use obscures some important problems which require working through prior to policy formulation;
c. it suggests a possible diagnostic tool which does away with the need for these metaphors and may offer a way forward to more informed policy development.

Cost benefit and cost effectiveness analysis are used to decide between competing social policy interventions.

The three metaphors to be discussed in Section 1 of the paper have been important in framing the questions to be addressed by cost benefit and cost effectiveness analyses. However, these commonly deployed metaphors disguise the fundamental ignorance with which we approach the problem at hand.

Section 1: Unexamined Metaphors

Natural languages contain metaphors and we use these metaphors so easily and often as part of our everyday thinking and speaking that we may fail to see them as such(Lakoff and Johnson 1980). Metaphors often use the image of the tangible and known to represent something which is less known and tangible.

Metaphorical usage is easily and sometimes carelessly transferred from the realm of everyday discourse to the world of scientific endeavour. In this context it is more precisely described as a "conceptual metaphor".

Metaphors work on the basis that the characteristics of one thing are shared by another. This is the essence of the metaphor as a language technique. When metaphors are used in this way it is important that the implied shared characteristics are indeed common. However, closer examination and reflection may reveal that chosen conceptual metaphors are inappropriate and misleading. This is because they do not adequately describe the object to which the metaphorical comparison is being made.

We often use metaphors in scientific work and we do so without considering them as metaphors – they are "dead metaphors". "Upstream" and "downstream" are dead metaphors. As the basis for scientific work their unconsidered introduction at the stage of conceptualisation, model construction and data selection may have unforeseen consequences and lead to erroneous conclusions. Against this background, we should not omit to notice that even models which are elegantly constructed mathematical artefacts may contain metaphorical thinking the implications of which have not been considered prior to the writing of the mathematical argument.

Leaving metaphors unexamined can have significant negative effects for the scientific status of argument and for the conclusions and recommendations drawn from that argument. Some of

the ways in which this has apparently occurred in Watts et al, 2011, are considered below. In later sections, some modest suggestions are made for an approach based less on metaphor and more on indicators of underlying empirical variables.

The idea of "going upstream": Unexamined metaphor 1

The key metaphor in the Watts et al. paper, is to be found in its title. "Going upstream", is dependent upon an unexamined metaphor, that of a river. While not wishing to venture too far into junior school geography, it is useful to consider some of the implications and difficulties of deploying this metaphor in the context of understanding the structural drivers of an HIV/AIDS epidemic.

Some features of rivers: all rivers are not the same; they rise in different geological, climatic and watershed environments; their rate of fall differs; they differ in volume of water; they may have many different tributary streams; as Heraclitus famously noted, rivers flow and change and therefore you can never step into the same river twice. Insofar as we are concerned with the "upstream" of rivers, which is a metaphor for the "structural drivers" of HIV epidemics, we should pay particular attention to the effects of different upstream characteristics of real rivers on their later course as a way of thinking about the diversity of drivers and their effects. In their introduction to a recent publication on AIDS and Rural Livelihoods, Niehoff et al note the complexity and dynamically changing characteristics of the epidemic stream (Niehof, Rugalema et al. 2010).

Thus, numbers of tributaries, initial water volume, altitude of watersheds of origin, steepness of descent, mineral and chemical load, all of these affect the midstream and ultimately the downstream of a real river. So it is with an HIV epidemic considered as a river. Epidemics and their structural drivers cannot be assumed to be one river. They should instead be thought of as a large number of different rivers, sometimes quite distinct from each other, sometimes having a "family relationship" (Wittgenstein 1953)[1], in their source and therefore in their structural drivers. This idea will be expanded and discussed further when we come to the misplacement of the metaphor of the body.

And of course, the geomorphology and other characteristics of real rivers are altered by their own action over time. Thus, over a period, an epidemic has an effect on its environment. This will be most pronounced in hyperepidemic environments. In addition, other changes in the environment of an epidemic, for example changes in crop prices, in political regimes, in local climatic conditions, and a multitude of other environmental alterations, all of these will ensure that the epidemic and its environment are in a process of interacting and dynamic change over the characteristically long wave of an HIV epidemic, a wave which may be 120 years long (Barnett and Blaikie 1992; Barnett T 2006).

These observations have many implications for thinking about the idea of upstream interventions in the processes of the HIV/AIDS epidemic. Among these are: HIV/AIDS epidemic events are very variable and disaggregation of gross statistics often reveals great diversity within one country or one area of a country. For example, in 2008 Tanzania had a national HIV prevalence rate of 6 per cent of the adult population with regional prevalence ranging from 0.3 per cent in Pemba to 15.7 per cent in Iringa (Tanzania Commission for AIDS (TACAIDS), Zanzibar AIDS Commission (ZAC) et al. 2008 ; Nombo 2010). Such data suggest that the "Tanzanian epidemic" as constructed in

1 Wittgenstein's point was that things which may be thought to be connected by one essential common feature may in fact be connected by a series of overlapping similarities, where no one feature is common to all. Games, which Wittgenstein used to explain the notion, have become the paradigmatic example of a group that is related by family resemblances. The same point may be made about real rivers and also, in this context, epidemics

official sources has many tributaries and headwaters. Given the long period in which HIV has been present in Tanzania, it may be concluded that upstream in Iringa may be rather different from upstream in Pemba. Indeed, while they may form part of the same epidemiological river system, they are perhaps better considered to be discrete rivers with their own watersheds, river basins and "upstreams".

The same is true for many other "national epidemics" and in the quest for apt and effective policy interventions, the different nature of these "upstreams" must be considered in describing the "structural drivers" of each constituent epidemic. Recognition of empirical heterogeneity is probably a more rigorous approach than, as will be argued in what follows, the premature and incorrect homogenisation of structural drivers in relation to diverse sub-national, national and even regional HIV/AIDS epidemics[2]. The assumption of homogeneity has deep roots (another metaphor!) and these can be identified in for example (a) the uniform Global Programme on AIDS (precursor to UNAIDS) short and medium term programmes for all countries with epidemics in the 1990s; (b) the assumption that behavioural change interventions should be the same from one context to another in the same period of the global response to the epidemic. While these were good emergency responses to a new and growing epidemic, they were not cost effective given the diversity of situations into which they were inserted. In particular, they tended to the view that "sexual behaviour" meant one thing when in fact it may mean many things (Barnett and Parkhurst 2005).

The metaphor of a body undergoing treatment: Unexamined metaphor 2

This to the second metaphor, that of the body to be treated by the intervention and whether all patients are the same and therefore always require the same medicine. In other words, policy interventions may not be directly transferable from one socio-cultural-economic situation to another because, for example, what works in Pemba may not work in Iringa and is even less likely to work in Limpopo or Juba, because these are in important respects quite different entities: the patients waiting to receive the proposed the intervention are in fact markedly different from each other.

Discussions of social policy intervention where the intervention is of a very specific type, for example conditional cash transfers, invite us to think about the notion of dose-response. At first sight, this could appear to be a simple statistically based term describing a gradient relationship between a cause and an effect. Most typically the term describes the change in effect on an organism caused by differing levels of exposure (dose) to a stressor (usually a chemical – often a medication) after a certain exposure time. The term may be used to describe the effect on individual human beings or organisms or populations of human beings or other organisms. Here we find ourselves embroiled in a tussle with an unstated metaphor. Generalisations about dose-response derive from the known effects of a stressor on a known body or organism. Where medications are concerned, the assumption is that doses will elicit the same range of responses from the recipient human bodies because of the high level of homogeneity between these bodies. This has been a safe assumption for many medications for many years although the distribution of responses to doses in any population is of course normally distributed, for human bodies are not identical, and some adverse responses are linked to presence or absence of particular genetic markers in certain individuals', for example as in the differential intolerance response to the anti-retroviral Abacavir between patients

2 Here one may think of the annual slide sets which used to be produced by UNAIDS showing the countries of Africa as blocs with shading or colouring according to their supposed "national" seroprevalence. The more recent UNAIDS epidemiological slide sets no longer do this and indeed have for the last few years indicated the range around reported regional prevalence figures. See: http://www.unaids.org/documents/20101123_epislides_core_en.pdf

with different genetic inheritances (Mallal S, Nolan D et al. 2002; Michel, LeVan et al. 2003). If there are distinct differences in dose- response between apparently phenotypically similar human beings, how much greater will be the difference in dose response when the same social policy is applied to extremely different social/cultural/economic entities such as countries, regions, sub-regions, culturally distinct areas of countries, different social groups within a community. To put the point very clearly indeed and to pose it as a question: if we provide conditional cash transfers to keep young women and girls in school in place A will they respond the same as young women and girls in place B?

The assumption that evidence of apparent social policy effectiveness taken from one environment will indicate the same dose response in another is heroic[3]. It is heavily dependent upon the strength of the body metaphor used in relation to a society/economy/culture. In such circumstances, this metaphor error is likely to deepen the analytical problem rather than facilitate a solution.

If the two preceding metaphors did not give rise to enough confusion, the final metaphor, that of "structural drivers" adds to the problem. This metaphor states that there are structures which "drive" epidemics. The use of the term "drive" appears to indicate that it is not clear how the supposed "driver" is related to the phenomenon it is supposed to drive, usually acquisition of HIV by an individual. In other words, how the driver relates to the infection is not clear: neither is it clear that the term means "cause" or, indeed, how the term "driver" does or does not relate to the idea of cause!

Risk Behaviours versus Structural Drivers: Unexamined metaphor 3

The idea of "drivers" is the third metaphor in the conceptual set which frames the analysis of social policy interventions. Its key metaphorical content is the idea of a power source transmitting power through a transmission unit to produce a final effect.

The structural driver approach has the following advantage: it displaces analytical focus from risk behaviours (characteristics of individuals and all too easily assimilated to various forms of rational choice theory: (Ajzen and Fishbein 1980 ; Nelkin 1989 ; Taylor 1991 ; Wynne 1992; Slovic 1992 ; Singleton and Hoyden 1994; Chin 2006) toward attempts to understand the genesis of those behaviours from within a specific matrix of social, economic and cultural conditions. These matrices of social, cultural and economic conditions may be described as "risk environments", environments wherein risk comes into being via the niches the environment establishes in which virus and human host can come into contact with each other. Such a broad definition accommodates all kinds of transmission, from blood borne to sexual (Barnett and Blaikie 1992).

The idea of a risk environment leads to that of an *ecology of risk* (Barnett and Blaikie 1992) where risk is thought of as differentially distributed across a social or geographical space depending on the coming together of specific factors which made a particular activity 'risky' in a specific environment. The idea of a risk environment in relation to risk behaviours may perhaps be elucidated by paraphrasing the title of a once popular song written by Sy Oliver and Trummy Young and sung by Ella Fitzgerald - "It ain't what you do but it is where you do it". In other words, given the periodicity of HIV infection and in particular the associated variations in levels of viraemia,

3 In a recent paper, Mead Over notes that: "Real world prevention interventions, such as the Avahan initiative in India, take for granted that they must pass through the appropriate channel to access their clients. However, prevention organizations have typically focused on a single channel, thus failing to provide financiers with evidence of the effectiveness of various channels, or of different channel mixes, at achieving prevention goals in a given target population." Over, M. (2010). Using Incentives to Prevent HIV Infections. Washington DC, Center for Global Development., p. 20.

concurrent sexual partnerships may present a greater or lesser risk in different risk environments and interventions to prevent them will be more or less cost effective in these different settings. In other words, behaviour is not intrinsically more or less risky, but a particular environment will alter the probability of disease acquisition occurring. It is in these different risk environments that "drivers" come into existence and are reproduced. Such drivers may consist of cultural attitudes and practices (dry sex which can result in genital lesions), economic conditions (labour migration with the increased possibility of concurrent partnering) and forms of social relations (polygyny and patriarchy). But while such components of a risk environment may be common from one environment to another, it is not at all clear that they operate in the same way across diverse environments.

There are some distinct disadvantages with the vague term "driver". These include the ways that vagueness can suggest causality where it is not present, eliciting interventions based on observations of mere correlation or even elective affinity. Associated with this are the manifold ways in which conceptual vagueness can spoil a useful conceptualisation by permitting the importation of ideologically acceptable rather than rigorously determined variables as drivers. An example of this is to be found on the website of the Tanzanian AIDS Commission. Here we find a list of "drivers" of the epidemic, and also of "contextual factors" which illustrate some of the practical and ideological difficulties with the terms. Thus:

"Drivers" of the epidemic

- Promiscuous sexual behaviour
- Intergenerational sex
- Concurrent sexual partners
- Presence of other sexually transmitted infections such as herpes simplex x 2 virus.
- Lack of knowledge of HIV transmission

Contextual factors shaping the epidemic in the country

- Poverty and transactional sex with increasing numbers of commercial sex workers
- Men's irresponsible sexual behaviour due to cultural patterns of virility
- Social, economic and political gender inequalities including violence against women
- Substance abuse such as alcohol consumption
- Local cultural practices e.g. widow cleansing
- Mobility in all its forms which leads to separation of spouses and increased establishment of temporary sexual relationships
- Lack of male circumcision"[4]

Formulations of the problem can be found in several places(Görgens-Albino, Mohammad et al. 2007; Gupta, Parkhurst et al. 2008). Recurring themes include: the nature of sexual cultures in framing sexual risk and risk taking and the differential influence of distal and proximal factors, for example the major structural factor of role of differential wealth and income inequality as contributory factors to the epidemiology of HIV(Barnett T and Whiteside A 1999).

4 http://www.tacaids.go.tz/hiv-and-aids-information/current-status-of-hiv-and-aids.html, accessed 7 September 2011

Geeta Rao Gupta and her co-authors provide a useful overview of the problem and experience with structural interventions. They comment significantly that: (a) "Mapping the way in which each of these factors increases individual HIV vulnerability is essential to determine the most appropriate type and level of response."(Gupta, Parkhurst et al. 2008) (b) Taking a structural approach...begins by understanding the causal pathways in order to identify the points of maximum effect for any given intervention or agency."

These are important but challenging insights. They may be insights which we would rather not know for they point to a constantly recurring problem. This is the conflict between cost effective interventions and the growing knowledge that where social policy is concerned, while dose-response frames of thought and funding constraints may point to cost-effectiveness and cost benefit analysis as *the* starting point, interventions dependent upon these perspectives are unlikely to be cost effective because the objects for treatment are in fact rather more heterogeneous than homogeneous. Such an idea is of course hardly welcome to funding agencies whose political constituencies and financial contributors naturally demand generalizability of solutions through cost effectiveness, sometimes it seems, with the emphasis on the administrative benefit of controlling cost and being seen to spend budgets rather than on the quality or quantity of social outcome effectiveness or benefit.

If the Metaphors are inappropriate, what is to be done?

If this is the case then what should we do? The answers are that we should: (a) take each situation on its merits and design structural interventions specific to that situation; (b) recognise that structural approaches can be more or less distal; (c) understand that the more distal structural factors are the most intractable and challenging and that therefore we should identify the most proximal level at which to intervene; (d) not assume that structural interventions are the sole valid type of interventions but that they can and should be combined with more individual interventions.

Contextual analyses are likely to be expensive, time consuming and subject to suspicion from policy makers and politicians because of their very specific recommendations and probable use of qualitative as well as quantitative (including participatory) techniques. The challenge is to deploy such detailed information pragmatically together with insights from understanding the *ecology of risk*. The building blocks for such a pragmatic engagement rest on two foundations: first, recognition of the links between individual risk behaviours and the environments in which these occur; second, clarity about the ways in which different environments permit differing degrees of hope for the future and thus longer or shorter decision horizons for individuals.

Hope seems to offer the possibility of being a fundamental and measurable concept for linking individual behaviour to the characteristics of the surrounding risk environment.(Snyder 1994; Snyder CR, Sympson SC et al. 1996). The environment is best thought of as a *regulator* of individual behavioural decisions, imposing constraints and opportunities that shape behavioural risk factors (Glass and McAtee 2006). The next section proposes that the concept of hope is a missing piece of the jigsaw linking the individual to the environment. Whereas some environments permit hope for a future, thus enabling individuals to take a long term perspective on their current behaviours, other environments have the opposite effect, resulting in harmful sequelae for individuals and societies. A growing body of research links aspects of the social environment to risk behaviour and health inequality (Marmot 2003; Marmot 2005). Indeed, with recent developments in epigenetics, we are now able to understand far more about the complex relationship between individual

genetic inheritance and its interaction within the environment prior to and after birth. The detailed mechanisms whereby nature and nurture interact are becoming so clear that what Richard Sennett once described as *The Hidden Injuries of Class* (Random House, 1988) are no longer opaque but are revealed as embodied in the cells of individuals, see: Nessa Carey, The Epigenetic Revolution, Icon Books, London, 2011.

Important here is the idea of the *embodiment of social conditions*. It seems very likely that this is no longer merely a rhetorical descriptive term; rather it is an explanation of how social structures are written into individual bodies, a process whereby wider social forces shaping health opportunity and inequality are internalised over time by individuals, quite literally *embodying* their social, economic and cultural experience. In this sense, the term embodiment is in the process of changing from mere description to explanation. Evidence exploring health inequalities show links between the environments people occupy and perceptions of stress, autonomy and self-efficacy, which in turn shape the self-regulation of risk behaviour (Siegrist 2000)[4]. Some characterise this process as a kind of *oppression illness* in its effects among the socially excluded, including populations vulnerable to HIV.[5] In short, environments are regulators of hope and hope shapes risk decisions.

The approach outlined above offers a way into the conundrum about the relationship between HIV and poverty. A direct relationship has often been claimed, more frequently seemingly for purposes of advocacy simplification rather than in the pursuit of scientific understanding. However, careful attention to this question suggests that the causal relationships are more complex, depending in part on the stage of the epidemic, for example it is well established that in African circumstances, in the early stages, the wealthier have been more likely to become infected than the poorer and that only later did the inverse relationship develop between high prevalence and low socio-economic class. For a long time, however, and more convincingly, it has been hypothesised that the degree of income inequality, perhaps as a proxy for social cohesion, is an important link in the complex chain of causation between poverty and transmission susceptibility (Cohen 1993; Cohen 1998; Hargreaves JR and Glynn JR 2002; Hargreaves JR, Morison LA et al. 2002; Boerma, Gregson et al. 2003; Lurie M, Williams BG et al. 2003; Nguyen and Peschard 2003; Drain PK, Smith JS et al. 2004; Gregson S, Garnett GP et al. 2006; Johnson K and Way A 2006; Mishra 2006; Mishra, Vaessen et al. 2006; Tladi LS 2006 ; Gillespie S, Kadiyala S et al. 2007; Hargreaves JR, Bonell CP et al. 2007; Hargreaves JR, Morison LA et al. 2007; Hargreaves JR, Morison LA et al. 2007; Helleringer and Kohler 2007; Lachaud JP 2007; Masanjala W 2007; Mmbaga, Hussain et al. 2007; Nombo 2007).

To put the matter very simply and distinctly: where the distribution of wealth and income results in social structures and hierarchies where people feel powerless, where insecurity is the normal condition of existence, then people will be less able to have realistic hope for the future. Rather they are constantly pressed back into situations where only short term decisions are realistic responses to the conditions they endure. Thus it is that a low security, unpredictable risk environment is related to short term decisions, which include decisions about sexual behaviour, with a marked gender aspect where women may be forced to use transactional sex as an element in their livelihood or survival strategy. A starting point for engaging with the difficult questions associated with developing social policies for structural interventions is to recognise that the question is incorrectly formulated. It is not solely about "structural" interventions. A more proper formulation is to see that at the centre of the "structural intervention problem" lies in the meeting point of agency and structure – a long standing and familiar theoretical problem in the social sciences. Once we have reformulated the problem in these terms, we can move our analysis logically into one of the two following alternative positions: (a) each situation must be analysed in its own terms,

with no attempt to generalise from the findings; (b) we can try to develop and deploy a pragmatic and practical diagnostic tool which summarises and gives access to the key point where structure and agency come together and which in so doing enables us to identify locations where effective interventions can be made which, because they have taken agency into account, engage with the subjective experience of those people who are to be the likely recipients of the medicinal dose of social policy intervention.

Hope as a diagnostic tool: Steps toward social policy interventions

The key question is how we might identify what alters the possibilities for people to be able to make rational choices within the context of their particular socio-economic and cultural situation. With regard to infectious diseases, we also need to understand the links between individual susceptibility to infection and epidemiological observations of the social distribution of patterns of infection. Finally, we need to reach conclusions about workable social policy interventions. The answer, for at least a large proportion of heterosexually acquired HIV infections, may lie in the concept of hope. This argument can certainly be made in relation to evidence that in some circumstances young people ignore prevention messages because they cannot think beyond the present, and have little or no hope for the future (Rotheram-Borus, Kracker et al. 2000; Cambell and MacPhail 2002). Thus, we need a conceptual approach which captures the following: (a) individual decision matrices; (b) the situations within which they make their decisions. The concept of hope may be one practical way of capturing these complexities by means of a single variable. In other words, we can use the concept of hope – both theoretically for thinking purposes and also practically as part of intervention programmes. Hope links structure and individual behaviour and has the potential advantage of being measurable using validated psychological instruments at the individual and possibly at the aggregate level. It has he additional advantages of being part of the everyday lexicon of ordinary people, researchers, policy makers and politicians.

There has been surprisingly little work on hope (J. Braithwaite, 2004a, b, c; V. Braithwaite, 2004d, e; Drahos, 2004; McGeer, 2004; Pettit, 2004; Sarah Bernays, Tim Rhodes, & Tony Barnett, 2007). However, some of the most useful was done by the psychologist Richard Snyder. This work defined hope in a very specific way: as a way of thinking about the future which takes into account *both* a vision of that future and pragmatic ways of achieving envisioned goals. Thus hope is to be distinguished from mere optimism, which lacks pragmatic engagement. In contrast, hope can be nominally defined as:

- ‘a cognitive set that is comprised of a reciprocally derived sense of successful (1) agency (goal-directed determination), and (2) pathways (planning of ways to meet goals)’(Snyder 1995) or:
- ‘goal-directed thinking in which people appraise their capability to produce workable routes to goals (pathway thinking), along with their potential to initiate and sustain movement via the pathway(s) (agency thinking)(Snyder 1998).
- ‘goal-directed thinking in which the person appraises his or her perceived capability to produce workable routes to goals (pathways thinking), as well as the potential to initiate and sustain movement along the pathways (agentic thinking) (Snyder 1996).

Each of these overlapping definitions emphasise a mental attitude (‘cognitive set’), appraisal of the future (‘goal directed’) and practical engagement with the future via consideration of agency (individual or communal action) and pathways (pragmatic consideration of how to act).

The concept of hope is of interest as a possible composite explanatory variable in relation both to individual and communal regulation of infection pathways. It may account for a number of observed characteristics of the HIV epidemic which do not fit neatly into either the simple individual rational choice model or into the structural poverty and disempowerment causes HIV infection model. In particular it may serve as a way of focusing the complex relationships of various kinds of inequality, gender, income, wealth, ethnic, which are components in the risk environments within which individual infections occur.

Hope can be seen as a conceptually distinct and operationalisable variable which provides a possibility for measuring, via individuals and groups of individuals, ways in which ecologies of risk regulate and reveal risk to individuals and thus influence their decisions. Thus hope concentrates and summarises the individual behaviour and characteristics of the risk environment as experienced by individuals and provides a framework for understanding differing potentials for behaviour change (Snyder, Harris et al. 1991; Snyder 1998; Snyder, Cheavens et al. 1999; Snyder 2000; Snyder, Sympson et al. 2000). The concept of hope may lead us to a better understanding of the pathways between individual perspectives on the world, social, cultural and economic conditions, and risk taking behaviours.

Deployed in this way, surveys of relative hope levels within and between communities could help in identification not only of low and high risk environments but also of changes in communities over time in response to wider system changes, including changes resulting from distal phenomena such as changes in global commodity prices affecting a particular country or region. The next step would then be location of communities on a scale of hope-hopelessness, an approach which would be particularly appropriate in poor countries where more general background socio-economic data are not available. Such a strategy could facilitate pinpointing geographical areas and social segments in which further exploration of the social and economic conditions leading to hopelessness could expose leads into effective policy and programme responses.

Because the ideas of hope and hopelessness are probably translatable into most languages the concept lends itself to deployment in techniques such as surveys, focus groups and other methods of data collection whereby members of such communities could themselves be directly involved in dialogue (and even diagnosis) intended to identify ways in which the existing situation could be improved. A very early example of such a structural intervention based on local diagnosis was encountered by this author in 1989 in Rakai, Uganda where village elders had banned Saturday night discos, thus reducing the opportunities for young men and women to go off into the bush together.

Hope has not been deployed as a concept in relation to infectious diseases. Indeed, it has not been the focus of any significant research in relation to health issues other than in relation to palliative care (Snyder 1996; Snyder 1998). However, transposed to a different field, as a link between the pathogen, the individual, and social and economic structures which form a risk environment, hope offers the following analytical advantages:

- it is measurable using fairly straightforward scales (Snyder, Harris et al. 1991; Babyak, Snyder et al. 1993; Snyder, Sympson et al. 1996; Snyder, Hoza et al. 1997);
- it is easily understood by politicians and others in a position to allocate resources;
- it is understood by ordinary people who may be able to tell us directly what is required to restore hope and therefore directly inform policy.

Furthermore, it may turn out that levels of individual hope are not directly related only to income (Diener and Oishi 2000), although up to a certain point this is undoubtedly the case, but that thereafter other factors such as the nature of government and of civil society become of considerable importance (Oswald 1997; Diener and Oishi 2000; Frey and Stutzer 2002; Nettle 2005). The evidence from studies of happiness certainly lead to this kind of conclusion (Frey and Stutzer 2003).

As a diagnostic tool for understanding the agency-structure points where social policy interventions may be possible, hope may offer some clear pointers towards policy interventions which are effective, community driven, specific and cost saving. It is certainly *not* being argued here that *all* HIV infections reflect relative hopelessness, and it probably does not help us very much as a concept for explaining MSM (men who have sex with men) epidemics in Western Europe and North America. There it has often been the highly articulate, educated and relatively prosperous who have become infected. Notably in North America, the *individual* behaviour change model has been most effective, but never alone; it has always been accompanied by attention to structural factors, which include collective action, solid funding support and, in some cases, government leadership. But, it is this latter case which really suggests the power of hope as an addition to our analytical—and possibly preventive—armoury. Where there is hope (and this requires structures and other resources if it is to be effective), individual behaviour change in response to rational argument is possible. Where hope and resources are absent, behaviour change messages are less likely to be effective on their own. Social policy interventions in the HIV epidemic which are based on diagnosis of the structural conditions which make people hopeless may be the way forward and ultimately these policy interventions may be both cost effective and cost beneficial. Regardless of the technical sophistication of the cost benefit or cost effectiveness analysis deployed in choosing between one policy intervention and another, choosing between structural interventions which have not been linked to and designed in relation to their particular "upstreams" may turn out to be neither cost effective nor cost beneficial.

References

Ajzen, I. and M. Fishbein (1980). Understanding Attitudes and Predicting Social Behaviour. Englewood Cliffs, NJ, Prentice Hall.

Babyak, M., C. R. Snyder, et al. (1993). "Psychometric properties of the Hope Scale: A confirmatory factor analysis." Journal of Research in Personality 27: 154-169.

Barnett T (2006). "A long-wave event: HIV/AIDS, politics, governance and 'security': sundering the intergenerational bond? ." International affairs 82(2): 297-231.

Barnett T and Whiteside A (1999). " HIV/AIDS and development: case studies and a conceptual framework." Eur J Dev Res 11: 220-234.

Barnett, T. and Blaikie (1992). AIDS in Africa: Its Present and Future Impact. New York, Belhaven Press, London and Guildford Press.

Barnett, T. and J. Parkhurst (2005). "HIV/AIDS: sex, abstinence, and behaviour change." The Lancet Infectious Diseases 5(9): 590-593.

Boerma, J., S. Gregson, et al. (2003). "Understanding the uneven spread of HIV within Africa: Comparative study of biologic, behavioral, and contextual factors in rural populations in Tanzania and Zimbabwe." Sexually Transmitted Infections Diseases 30(10): 779-787.

Cambell, C. and C. MacPhail (2002). "Peer education, gender and the development of critical consciousness: Participatory HIV prevention by South African youth." Social Science & Medicine 55: 331-345.

Chin, J. (2006). The AIDS Pandemic: the collision of epidemiology with political correctness. Oxford & Seattle, Radcliffe Publishing.

Cohen, D. (1993). Poverty and HIV/AIDS in sub-Saharan Africa. Issues paper. Geneva, UNDP.

Cohen, D. (1998). Socio-economic causes and consequences of the HIV epidemic in Southern Africa: A case study of Namibia. Geneva, UNDP.

Diener, E. and S. Oishi (2000). Money and Happiness: Income and Subjective Well-Being. Culture and Subjective Well-Being. E. Diener and Suh. Cambridge, MA, MIT Press.

Drain PK, Smith JS, et al. (2004). "Correlates of national HIV seroprevalence: an ecologic analysis of 122 developing countries." J Acquir Immune Defic Syndr 35(4): 407-420.

Frey, B. and A. Stutzer (2002). Happiness and Economics: How the economy and institutions affect well-being. Princeton and Oxford, Princeton University Press).

Frey, B. and A. Stutzer (2003). The Economics of Happiness. New Jersey, Princeton University Press.

Gillespie S, Kadiyala S, et al. (2007). "Is poverty or wealth driving HIV transmission?" AIDS 21(Suppl 7): S5-S16.

Glass, T. and M. McAtee (2006). "Behavioral science at the cross roads in public health: extending the horizons, envisioning the future." Social Science and Medicine 62: 650-671.

Görgens-Albino, M., N. Mohammad, et al. (2007). Results of the World Bank's Response to a Development Crisis: The Africa Multi-Country AIDS Program 2000–2006. Washington DC, The World Bank.

Gregson S, Garnett GP, et al. (2006). "HIV decline associated with behavior change in eastern Zimbabwe." Science 311: 664-666.

Gupta, G. R., J. O. Parkhurst, et al. (2008). "Structural approaches to HIV prevention." The Lancet 372(9640): 764-775.

Hargreaves JR, Bonell CP, et al. (2007). "Systematic review exploring time-trends in the association between educational attainment and risk of HIV infection in sub-Saharan Africa." AIDS: in press.

Hargreaves JR and Glynn JR (2002). "Educational attainment and HIV infection in developing countries: a systematic review. Tropical Medicine and International Health." 7 6: 489-498.

Hargreaves JR, Morison LA, et al. (2007). "Explaining persistently high HIV incidence in rural South Africa: a cohort study, 2001-2004." AIDS 27: :in press.

Hargreaves JR, Morison LA, et al. (2002). "Socioeconomic status and risk of HIV infection in an urban population in Kenya." Tropical Medicine and International Health 7(8): 1-10.

Hargreaves JR, Morison LA, et al. (2007). "The association between school attendance, HIV infection and sexual behaviour among young people in rural South Africa." Journal of Epidemiology and Community Health: in press.

Helleringer, S. and H.-P. Kohler (2007). "Sexual network structure and the spread of HIV in Africa: evidence from Likoma Island, Malawi." AIDS 21(17): 2323-2332.

Johnson K and Way A (2006). "Risk factors for HIV infection in a national adult population: evidence from the 2003 Kenya Demographic and Health Survey." J Acquir Immune Defic Syndr 42(5): 627-636.

Lachaud JP (2007). "HIV prevalence and poverty in Africa: micro- and macro-econometric evidences applied to Burkina Faso." J Health Econ 26(3): 483-504.

Lakoff, G. and M. Johnson (1980). Metaphors we live by. Chicago ; London, University of Chicago Press.

Lurie M, Williams BG, et al. (2003). "Who infects whom? HIV-1 concordance and discordance among migrant and non-migrant couples in South Africa." AIDS 17(15): 2245-2252.

Mallal S, Nolan D, et al. (2002). "Association between presence of HLA-B*5701, HLA-DR7, and HLA-DQ3 and hypersensitivity to HIV-1 reverse-transcriptase inhibitor abacavir." Lancet 359: 727-732.

Marmot, M. (2003). "Self esteem and health." British Medical Journal 327: 574-575.

Marmot, M. (2005). "Social determinants of health inequalities,." Lancet 365: 1099-1104.

Masanjala W (2007). "The poverty-HIV/AIDS nexus in Africa: a livelihood approach." Soc Sci Med 64(5): 1032-1041.

Michel, O., T. D. LeVan, et al. (2003). "Systemic responsiveness to lipopolysaccharide and polymorphisms in the toll-like receptor 4 gene in human beings." The Journal of allergy and clinical immunology 112(5): 923-929.

Mishra, V. (2006). Patterns of HIV Seroprevalence and Associated Risk Factors: Evidence from the Demographic and Health Surveys and AIDS Indicator Surveys. Abstract 48. The 2006 HIV/AIDS Implementers Meeting of the President's Emergency Plan for AIDS Relief, Durban, South Africa.

Mishra, V., M. Vaessen, et al. (2006). "HIV testing in national population-based surveys: experience from the Demographic and Health Surveys." Bull World Health Organ 84(7): 537-545.

Mmbaga, E. J., A. Hussain, et al. (2007). "Prevalence and risk factors for HIV-1 infection in rural Kilimanjaro region of Tanzania: Implications for prevention and treatment." BMC Public Health 7(58).

Nelkin, D. (1989). "Communicating technological risk: the social construction of risk perception " Annual Review of Public Health 10: 95-113.

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

Nguyen, V.-K. and K. Peschard (2003). "Anthropology inequality and disease: a review." Annu. Rev. Anthropol 447-74(32).

Niehof, A., G. Rugalema, et al., Eds. (2010). AIDS and Rural Livelihoods: dynamics and diversity in sub-Saharan Africa. London & Washington DC, Earthscan.

Nombo, C. I. (2007). When AIDS meets poverty: Implications for social capital in a village in Tanzania. Wageningen, Wageningen Academic Publishers.

Nombo, C. I. (2010). Sweet cane, bitter realities: The complex realities of AIDS in Mkamba, Kilombero District, Tanzania. AIDS and Rural Livelihoods: dynamics and diversity in sub-Saharan Africa. A. Niehof, G. Rugalema and S. Gillespie. London & Washington DC, Earthscan: 61-76.

Oswald, A. J. (1997). "Happiness and economic performance." Economic Journal 107: 1815-1831.

Over, M. (2010). Using Incentives to Prevent HIV Infections. Washington DC, Center for Global Development.

Rotheram-Borus, M. J., Z. O. K. R. Kracker, et al. **(2000). "Prevention of HIV Among Adolescents."** Prevention Science 1(1): 15-30.

Siegrist, J. (2000). "Place, social exchange and health: proposed sociological framework." Social Science and Medicine 51: 1283-1293.

Singleton, W. T. and J. Hoyden (1994). Risk and Decisions. Chichester: , Wiley.

Slovic, J. (1992). Perception of risk: reflections on the psychometric paradigm. Social Theories of Risk. S. Krimsky and D. Golding. Westport, CT, Praeger.

Snyder, C. (1994). Hope and optimism. Encyclopedia of human behavior. V. S. Ramachandran. San Diego, CA, Academic Press: 535-542.

Snyder, C. R. (1996). "To hope, to lose, and hope again." Journal of Personal and Interpersonal Loss 1: 1-16.

Snyder, C. R. (1998). A case for hope in pain, loss and suffering. Perspectives on loss: A sourcebook. J. H. Harvey. Washington D.C, Taylor & Francis Ltd.

Snyder, C. R. (1998). A case for hope in pain, loss, and suffering. Perspectives on loss: A sourcebook. J. H. Harvey. Washington, D.C. , Taylor & Francis, Ltd.

Snyder, C. R. (1998). Hope. Encyclopedia of mental health. H. S. Friedman. San Diego, CA, Academic Press: 421-431.

Snyder, C. R. (2000). (in press) A new model of hope. Handbook of hope: Theory, measurement, and interventions. C. Peterson and C. R. Snyder. New York, Academic Press.

Snyder CR, Sympson SC, et al. **(1996). "Development and validation of the State Hope Scale "** Journal of Personality and Social Psychology 2: 321-335.

Snyder, C. R., J. Cheavens, et al. (1999). Hoping. Coping: The psychology of what works. C. R. Snyder. New York, Oxford University Press: 205 - 231.

Snyder, C. R., C. Harris, et al. (1991). "The will and the ways: Development and validation of an individual differences measure of hope. ." Journal of Personality and Social Psychology 60: 570-585.

Snyder, C. R., B. Hoza, et al. (1997). "The development and validation of the Children's Hope Scale." Journal of Pediatric Psychology 22: 399-421.

Snyder, C. R., S. Sympson, et al. (2000). The optimism and hope constructs: Variants on a positive expectancy theme. Optimism and pessimism. E. C. Chang. Washington, D.C., American Psychological Association.

Snyder, C. R., S. C. Sympson, et al. (1996). "Development and validation of the State Hope Scale." Journal of Personality and Social Psychology 2: 321-335.

Snyder, C. R. i., 73, 355-360, p. 355 (1995). "Conceptualizing, measuring, and nurturing hope. 'Current Trends' Focus Article." Journal of Counseling and Development 73: 355.

Tanzania Commission for AIDS (TACAIDS), Zanzibar AIDS Commission (ZAC), et al. (2008). Tanzania HIV/AIDS and Malaria Indicator Survey 2007-08. Dar es Salaam, Tanzania.

Taylor, S. E. (1991). Health Psychology. New York McGraw-Hill.

Tladi LS (2006). "Poverty and HIV/AIDS in South Africa: an empirical contribution." SAHARA 3(1): 369-381.

Wittgenstein, L. (1953). Philosophical investigations. Oxford, Blackwell.

Wynne, B. (1992). Risk and social learning: reification to engagement. Social Theories of Risk. S. Krimsky and D. Golding. Westport, CT, Praeger.

RethinkHIV RESEARCH PAPERS

Prevention of Sexual Transmission
Assessment Paper: Jere Behrman, Hans-Peter Kohler
Perspective Paper: Damien de Walque
Perspective Paper: Alan Whiteside

Prevention of Non-sexual Transmission
Assessment Paper: Lori Bollinger
Perspective Paper: Rob Baltussen, Jan Hontelez
Perspective Paper: Mira Johri

Treatment
Assessment Paper: Mead Over, Geoffrey Garnett
Perspective Paper: Robert J Brent
Perspective Paper: John Stover

Vaccine Research and Development
Assessment Paper: Dean Jamison, Robert Hecht, with Jared Augenstein, Gabrielle Partridge, and Kira Thorien
Perspective Paper: Steven S. Forsythe
Perspective Paper: Joshua Salomon

Social Policy
Assessment Paper: Anna Vassall, Michelle Remme and Charlotte Watts
Perspective Paper: Tony Barnett
Perspective Paper: Harounan Kazianga

Strengthening Health Systems
Assessment Paper: William McGreevey, with Carlos Avila, Mary Punchak
Perspective Paper: Till Bärnighausen, David E. Bloom, and Salal Humair
Perspective Paper: Nicoli Nattrass