

Thoughts on the adequacy of social science

Matt Berkley, correspondence and other documents 2000-3
 With quotations from others. This compilation 18 January 2006.

MB	Others
<p>policy-makers need help to understand how economic analysis can reflect individual outcomes among the most vulnerable.¹ ...is there any reason for...policies not to be evaluated on the number of deaths among the most-vulnerable?²</p>	<p>Your argument seems absolutely correct: government policy as a whole ought to be judged, at least partly, on implications for the poorest members of society -- and mortality rates should loom large in that analysis...³</p> <p>increasingly, policy makers have recognized that one part of what it means to be poor resides in a sense of vulnerability to devastating loss⁴</p>
<p>What I would like to do is get data which reflects the life courses of individuals⁵</p>	<p>I like your life-cycle idea.⁶</p> <p>one fruitful avenue....a greater focus on life-cycle income.⁷</p>

¹ Email to Amartya Sen, 19 July 2000. Automated reply received.

² Email to Jonathan Morduch, Princeton, 3 August 2000. Reforming poverty alleviation policies.

³ Jonathan Morduch, August 2000. Email.

⁴ Jonathan Morduch, 2005. Concepts of poverty. Draft chapter for United Nations Statistics Division handbook on poverty measurement. [http://unstats.un.org/unsd/methods/poverty/2.%20Chapter%20%20\(15-06\).doc](http://unstats.un.org/unsd/methods/poverty/2.%20Chapter%20%20(15-06).doc)

⁵ Possibilities. Email to Simon Maxwell, Overseas Development Institute, London, 27 July 2000.

⁶ Simon Maxwell, 30 July 2000, document sent by email.

Many economists think this is a minor technical issue. It is not ⁸	fixing this problem is not simply a technical matter. ⁹
We need mortality data or cohort data to ensure that incomes are being raised ¹⁰	we need to have data on birth dates (ti), length of life (li) and income profiles ¹¹
a family where there are more surviving children is counted as “poorer”, but one where....more died of malnutrition, looks “better off” ¹² Child deaths in a family result in a higher per capita income ¹³	a household whose young children die may be reported as escaping poverty when a similar household that manages to raise all its childrenis seen as ‘failing’ to escape from poverty as its income/ consumption levels per capita are lower ¹⁴

⁷ Erik Thorbecke, Cornell. Conceptual and measurement issues in poverty analysis Paper prepared for United Nations University - WIDER Conference on Inequality, Poverty and Human Well-Being, Helsinki. 30-31 May 2003.

⁸ Document 16 October 2001. Written as record of email sent to Andrew Smith MP 15 October 2001. Email forwarded by Mr Smith to Clare Short MP, Secretary of State for International Development and Britain’s Governor of the World Bank.

⁹ Ravi Kanbur, Cornell. Conceptual challenges in poverty and inequality: one development economist’s perspective. April 2002.

¹⁰ Document 16 October 2001. Written as record of email sent to Andrew Smith MP 15 October 2001. Email forwarded to Clare Short MP, Secretary of State for International Development and Britain’s Governor of the World Bank.

¹¹ Ravi Kanbur and Diganta Mukherjee. Premature mortality and poverty measurement. 2003.

¹² Finance ministers, truth and logic. Part 1 of a report on the logic of economics. Submitted to ELDIS, University of Sussex. Sent to Simon Maxwell, Overseas Development Institute; Alex Wilks, Bretton Woods Project; Professor Uskali Maki, Erasmus University, Rotterdam. Draft 26 January 2003.

¹³ Note 28 June 2000. Point raised at DFID Development Forum, Church House, London, 5 July 2000 during Trade and Poverty workshop.

¹⁴ David Hulme, Manchester and Andrew Shepherd, Overseas Development Institute. Conceptualizing chronic poverty. World Development, March 2003.

One reason why per capita income figures go up can be that fertility rates have gone down...¹⁵ Other things being equal, the Bank must have overestimated the reduction in the proportion of people living on the *original* level of per-day consumption considering their age and size. A dollar a day, even if we knew its value in food terms, would not be an appropriate measure where the proportion of children is changing, as now. ¹⁶

The World Bank's "dollar" line....mistakenly counts adults' needs as the same as children's. [and] will underestimate poverty as birth rates fall...¹⁷

other things being equal.....If the birth rate falls, and babies earn less than adults, average income will go up even if average incomes for all age groups stay the same. ¹⁸

[the per capita] approach is taken, for example, in calculating the widely-used \$1/day and \$2/day per capita poverty lines....a population experiencing a rapidly declining fertility rate....will experience an exaggerated decline in the short-term reduction in poverty when poverty is measured on a per capita basis ¹⁹

[No comment] ²⁰

Thank you. ²¹

¹⁵ Growth and survival. Email 10 August 2000 to Edward Anderson, Sussex, co-author of "*Growth versus distribution: does the pattern of growth matter?*", background paper for UK Government White Paper. Email followed telephone call to explain mortality flaw. Similar emails sent to Claire Melamed, Christian Aid following telephone call; Mark Weisbrot, Center for Economic and Policy Research, Washington D.C.

¹⁶ Millennium Goals and poverty indicators. Email to Tony Baldry MP, Chairman of the International Development Select Committee of the UK House of Commons. 25 June 2003

¹⁷ Finance ministers, truth and logic. 26 January 2003 (as above).

¹⁸ Email to Professor Anthony Giddens, London School of Economics. 19 August 2002.

¹⁹ Jonathan Morduch, 2005. Concepts of poverty. Draft chapter for United Nations Statistics Division handbook on poverty measurement. [http://unstats.un.org/unsd/methods/poverty/2.%20Chapter%202%20\(15-06\).doc](http://unstats.un.org/unsd/methods/poverty/2.%20Chapter%202%20(15-06).doc)

²⁰ Hilary Benn MP, 2003. Letter to Tony Baldry MP concerning Matt Berkley's observations of fundamental errors in the major World Bank claims on policies and poverty. Mr Benn was at the time Minister of State for International Development. The letter contained the sentence "I am responding as monitoring of progress towards the millennium development goals falls in my area of responsibility." He

<p>Child deaths in a family result in a higher per capita income ²²</p> <p>If the poorest die, the average income of those alive at the end of the period will be higher...</p> <p>If we measure the income of those alive in 1995 and then the income of those alive in 2000, we will not notice the decline in income of someone who died in 1998. The average income of those alive will be exactly the same as if he had survived and raised his income to the average of the group.</p> <p>To me, no outcome measure is humane unless it takes into account what happened to people who started the period but didn't make it to the end....For any outcome measure...account needs to be taken of those within the relevant group who did not achieve the target, whether through death or any other path. ²³</p>	<p>Per capita income as a measure of welfare fails to reflect welfare losses of the prematurely dead ²⁴</p>

subsequently became Britain's Governor of the World Bank. The new Chief Economist of the World Bank who took up his post in October 2003 continued to make claims about global poverty without estimating either the cost of living or the cost of dying.

²¹ Gordon Brown MP, Britain's Alternate Governor of the World Bank, 6 November 2003. Spoken after examining a one-page note pointing out among other errors the discrepancy between FAO and World Bank assumptions on food needs. The outgoing Chief Economist of the World Bank, Nicholas Stern, having confused a) cross-sectional and longitudinal statistics, and b) income and profit in reports on the "extremely poor", was knighted and given a senior job in Her Majesty's Treasury.

²² Note 28 June 2000. Point raised at DFID Development Forum, Church House, London, 5 July 2000 during Trade and Poverty workshop.

²³ Economics of survival. Email to Jeffrey Sachs. Email began: "I wonder if the following is of interest to the WHO Commission". 11 April 2001. Same day: discussed mortality flaw with Eric Swanson, head of World Development Indicators project at World Bank.

²⁴ The Effect of the AIDS Epidemic on Economic Welfare in Sub-Saharan Africa. Dean T. Jamison, Jeffrey D. Sachs & Jia Wang. Commission on Macroeconomics and Health Working Paper Series Paper No. WG1 : 13. December 2001

<p>I am working on a way of taking mortality into account when measuring welfare outcomes for a population over time.To me, no outcome measure should look better as a result of higher numbers of deaths. Your data suggest that this effect may be large. ²⁵</p>	<p>Incorporating mortality into assessment of economic welfare substantially changes the qualitative picture of trends over time. ²⁶</p>
<p>Life expectancy fell in Uganda in the 90s while the economic statistics did better. Just looking at the economic statistics would not be to measure aggregate welfare gains and losses. ²⁷</p>	<p>when life expectancy changes systematically and out of harmony with consumption patterns, as it has in ...Africa in the 1990's, ignoring it in welfare calculations will result in misleading inferences. ²⁸</p>
<p>Sen also talks about capabilities....I would like to see more of an emphasis on increasing capabilities by removing constraints (the main one being risk of dying) since these are what matter most to people. ²⁹any Benthamite definition of utility includes the duration of pleasure, or happiness, or utility, or well-being, or capabilities. ³⁰</p>	<p>acknowledging Sen's arguments for extending well being comparisons to the space of capabilities....dictates that life expectancy, the length of time over which an individual has the capability of enjoying such things as he or she values, should be included in the calculation of their well being. ³¹</p>

²⁵ Life and death. Email to Maria Bonilla-Chacin, Johns Hopkins University, co-author of "Life and death among the poorest". 3 April 2001. Note my ridiculous suggestion that I could measure the "welfare" of other people.

²⁶ Dean T. Jamison, Jeffrey D. Sachs & Jia Wang, December 2001 (as above)

²⁷ Re: Three questions on utility and life length. Usenet post to sci.econ Jul 20, 2003

<http://www.talkaboutinvestments.com/group/sci.econ/messages/188873.html>

²⁸ Gordon Anderson, Toronto. Life expectancy and economic welfare: the example of Africa in the 1990's. November 2004

²⁹ Note 25 June 2000

³⁰ Re: Mistakes in macroeconomics? Usenet post to newsgroup: sci.econ 17 July 2003

³¹ Gordon Anderson 2004 (as above).

blindingly obvious ³² mortality paradox ³³ Any outcome measure that does not take deaths into account can give paradoxical results. ³⁴	There is a glaring paradox in all commonly used measures of poverty. ³⁵
fact of mathematics...if the poorest person in a group dies....per capita income of living people is higher ³⁶	technical-mathematical reason....removing the poorest person from the count lowers poverty as measured. ³⁷
This raises a conceptual issue ³⁸ not primarily an empirical issue ³⁹	the issue raised here is not empirical. It is conceptual. ⁴⁰
It is standard practice in economics to use changes over time in indices of average income among living populations. ⁴¹	The standard approaches to poverty measurement look at a snapshot of alive individuals ⁴²

³² Possibilities. Email to Simon Maxwell, Overseas Development Institute, London, 27 July 2000.

³³ Draft letter to James Wolfensohn. Document saved 18 April 2001.

³⁴ Draft 9 April 2001. Same day: Explained problem to Brian Hammond, in charge of development statistics at OECD.

³⁵ Ravi Kanbur and Diganta Mukherjee 2003. Premature mortality and poverty measurement.

³⁶ Notes "Raw material for Wolfensohn letter" 11 April 2001

³⁷ Ravi Kanbur 2002.

³⁸ Draft letter to James Wolfensohn 18 April 2001 apparently saved just prior to first conversation with Professor Kanbur.

³⁹ Draft letter to Ravi Kanbur between conversations of 18 April and 2 May 2001.

⁴⁰ Ravi Kanbur 2002.

⁴¹ A modest proposal: Economics and variable mortality. A short note on set theory and inference from changes over time in groups with variable populations to real populations Draft 26 April 2001

⁴² Kanbur and Mukherjee 2003

all measures (proportion under \$1, poverty gap etc) look better [if enough of the poorest die] ⁴³	the most commonly used family of poverty measures... would decrease if the poorest person died as a result of poverty. ⁴⁴
The logical fallacy that in poor countries (populations with unknown differential mortality rates) “average income went up” is the same as “people’s incomes went up” may turn out to be one of the most disastrous logical mistakes in recent history. ⁴⁵	It cannot be right in concept that differentially higher mortality rates among the poor serve to reduce poverty. ⁴⁶
I am working on a way of taking mortality into account when measuring welfare outcomes for a population over time. ⁴⁷	The purpose of our paper is to derive instructive analytics on how to account for differentials in demographic variables, and in particular mortality, when performing welfare comparisons over time ⁴⁸
average income of those alive will be exactly the same as if he had survived and raised his income to the average ⁴⁹	In principle we should project what they would have had if they had been alive. ⁵⁰

⁴³ Notes 10 April 2001

⁴⁴ Ravi Kanbur 2002.

⁴⁵ Document 16 October 2001. Written as reminder of contents of email sent to Andrew Smith MP 15 October 2001. Original forwarded by Mr Smith to Clare Short MP, Secretary of State for International Development and Britain’s Governor of the World Bank.

⁴⁶ Kanbur and Mukherjee 2003.

⁴⁷ Life and death. Email to Maria Bonilla-Chacin, Johns Hopkins University, co-author of “Life and death among the poorest”. 3 April 2001. Note my ridiculous suggestion that I could measure the “welfare” of other people.

⁴⁸ Denis Cogneau and Michael Grimm 2004. The measurement of poverty dynamics when mortality is correlated with income - theory, concept and empirical implementation. First complete draft June 1 2004

⁴⁹ Economics of survival. Email to Jeffrey Sachs 11 April 2001

⁵⁰ Kanbur and Mukherjee 2003

<p>for the purpose of clarity the language used is simplified somewhat. No-one's life is infinite, so whereas I talk about people being counted in the index at different times, in real life people may be replaced by their descendants.⁵¹</p>	<p>conceptual clarity can be gained by considering a situation in which....each individual at income level Y_i lives for l_i periods, after which time he or she is replaced by exactly one individual.⁵²</p>
<p>no-one knows how much [poverty reduction statistics are] due to raised income, and how much to excess mortality among the poor due to AIDS, hunger or bad government.⁵³</p>	<p>relatively little is known about....what exactly it is that we are buying into when we accept [the goal of] halving income poverty⁵⁴</p>
<p>if the poorest die, the income figures look better.⁵⁵</p>	<p>If conditions for the poor turn very bad, then many of the households that would have otherwise made up the bottom quintile may not exist.upward bias in the measure of the income of this group....⁵⁶</p>

⁵¹ Welfare indices of the living depend on who survives. Draft 28 April 2001

⁵² Kanbur and Mukherjee 2003

⁵³ Document 16 October 2001. Written as reminder of contents of email sent to Andrew Smith MP 15 October 2001. Original forwarded by Mr Smith to Clare Short MP, Secretary of State for International Development and Britain's Governor of the World Bank.

⁵⁴ Ravi Kanbur. Growth, inequality and poverty: some hard questions. January 2004

⁵⁵ Reforming poverty alleviation policies. Email to Jonathan Morduch, Princeton. 3 August 2000.

⁵⁶ Growth may be good for the poor-- but are IMF and World Bank policies good for growth? A closer look at the World Bank's most recent defense of its policies. Mark Weisbrot, Dean Baker, Robert Naiman, and Gila Neta. Center for Economic and Policy Research, Washington D.C.

Draft released August 7, 2000

<p>if the poorest die, the income figures look better. ⁵⁷</p>	<p>when a poor person becomes poorer the headcount index of poverty will not increase (indeed, if the person dies, the index will fall!). ⁵⁸</p>
<p>differential survival rates according to wealth are clearly not constant over time, between policies, over the incidence of disease, or between countries. In fact, nor are they perfectly constant in rich countries... These points on differential survival rates are in no need of empirical proof ⁵⁹</p>	<p>higher mortality rates and lower life expectancies among the poor are an established empirical regularity the world over. ⁶⁰</p>
<p>no outcome measure is humane unless it takes into account what happened to people who started the period but didn't make it to the end. ⁶¹</p>	<p>It would be a monstrous assault on our fundamental intuitions if [<i>AIDS deaths</i>] were not recorded on the negative side of the ledger... ⁶²</p>
<p>In Ravi Kanbur's paper on disagreements he points out the mismatch between people's perception of poverty (no improvement) and the headline figures produced by macroeconomists. One reason for this could be the disparity in mortality rates between the middle class and the poor ⁶³</p>	<p>I think you've put your finger on something very important. ⁶⁸</p>

⁵⁷ Reforming poverty alleviation policies. Email to Jonathan Morduch, Princeton 3 August 2000

⁵⁸ Martin Ravallion. Issues in Measuring and Modeling Poverty, Policy Research Working Paper 1615, Policy Research Department, Poverty and Human Resources Division, The World Bank, June 1996. Page 2.

⁵⁹ Welfare indices countries (sic). Draft 25 April 2001

⁶⁰ Kanbur and Mukherjee 2003.

⁶¹ Economics of survival. Email to Jeffrey Sachs. 11 April 2001. Same day: discussed mortality flaw with Eric Swanson, head of World Development Indicators project at World Bank.

⁶² Ravi Kanbur 2002 Conceptual challenges in poverty and inequality: one development economist's perspective.

⁶³ Progress, poverty and survival. Helping people out of poverty: A short note on measuring progress. Draft 9 April 2001

This raises a conceptual issue.....a clear choice as regards the aims of development. There are two concepts of progress...the first is aptly described by the phrase "A Better World for All". The "all" include all the poor alive today...The other view is that progress consists in the poorest of 2015 being on average better off than the poorest of today. The big problem with this view is not only that it takes no account of mortality; it is that averages are always better if the worst-off die.

...it is necessary to look at what happened to everyone in the group over the period. If they died, then we need to ask what happened to their welfare before they died, and why they died. My own view is that any question of what is good for the poor, or how the poor are faring, has to take mortality into account - otherwise the statistics are vulnerable to this effect, in addition to discounting the human cost (or saving) and ignoring what happened to the welfare of those who died before the end of the period. Countries need to

⁶⁴ Draft letter to James Wolfensohn, President of the World Bank, 18 April 2001. Not sent. Mr Wolfensohn was informed of the mortality error, and the error concerning food needs, on 19 February 2003 before an audience at the Sheldonian Theatre, Oxford. Also on 18 April 2001: First telephone discussion with Professor Ravi Kanbur, Cornell University.

⁶⁵ Correction to press release. Email to Caroline Anstey, Head of Media Relations, World Bank. 3 April 2001. Followed by telephone call to Srikanth Puranam, speechwriter to President of World Bank on 6 April. Email then forwarded to speechwriter. In the email to the Head of Media Relations and the telephone call to the speechwriter I explained a) a discrepancy between the text of a speech by Mr Wolfensohn and its press release, and b) the problem relating to indicators and mortality rates which was relevant to the discrepancy. Note: It would be more accurate to say that the World Bank indicator is about reducing the proportion of low spenders.

⁶⁶ Email to Alex Wilks, Bretton Woods Project, London. 4 April 2001. Followed by telephone discussions on the mortality error, 6 April with Michael Schultz, principal Social Development Adviser at the United Kingdom Department for International Development; Frances Harper, DFID statistician.

⁶⁷ Draft follow-up email to Caroline Anstey, head of Media Relations at the World Bank 5 April 2001. Telephone call to Srikanth Puranam, speechwriter to President of World Bank instead.

⁶⁸ Ravi Kanbur, 18 April 2001. Telephone.

<p>be given credit for saving lives, not penalised ⁶⁴</p> <p>The income target on its own is vulnerable to misunderstanding, since it is not about raising incomes, but reducing the proportion of people at a low level of income. ⁶⁵</p> <p>...this goal on its own provides a disincentive to helping the poor survive. Personally, I'd rather be alive with a low income even if this meant the goal being missed by one person.</p> <p>...Incidentally, the education goal, like the income goal, cannot humanely be separated from the one on child mortality - the education and income goals are in terms of proportions of the population, so progress will appear slower if more uneducated children survive. ⁶⁶</p> <p>There is no merit for people's lives in achieving one goal while leaving the others behind - it would just be a statistical victory..... Suppose on December 31, 2014 achieving the income goal depends on one child among the poorest.....If the child dies, there are fewer people living on below \$1 a day, and so.....statistically the target is met.....This is not what we are really aiming at. ⁶⁷</p>	
<p>if the poorest die at a disproportionate rate... average income of those living will automatically be higher ⁶⁹</p>	<p>In the presence of premature mortality for the poorer sections of the population, standard snapshot poverty measures will show a decrease. ⁷⁰</p>

⁶⁹ Economics and mortality rates. Email to Kenneth Arrow, Stanford. 20 April 2001

⁷⁰ Kanbur and Mukherjee 2003

<p>....how is the purchasing power of the poor's money assessed? what happens if a) a lot of people die off, e.g. children; b) people lose or gain land through inheritance or having to sell at a knockdown price? ...An increase in the amount of money going round the system may reflect an increase in landlessness.⁷¹</p>	
<p>It would seem sensible to compare countries' national and bottom-quintile growth rates along with 1) fertility rates; 2) ratios of productive to non-productive members of households; and 3) death rates among non-productive members of households (under-fives would be a good start)....I do wonder how in a situation where a high numbers of children die, there could be more debate about the effects of growth on fertility rates and survival rather than on tiny changes in income.⁷²</p> <p>Any measure of my well-being has to take into account my likelihood of dying.... Mortality rates reveal degrees of risk for individuals in the group. If the age-specific death rate curve improves nationally, but gets worse for the poor, then poverty has increased. If the curve gets better nationally and improves at a slower rate for the poor, then inequality has increased....Measures</p>	<p>....candidates for topics or questions in the distributional area that may well spark the conceptual excitement of three decades ago — measurement of poverty with differential mortality rates....⁷⁵</p>

⁷¹ Note 25 June 2000. Reaction to a macroeconomic claim that economic statistics for income show benefits to the poorest.

⁷² Growth and survival. Email to Edward Anderson, Sussex, co-author of "Growth versus distribution: does the pattern of growth matter?", background paper for UK Government White Paper. Following telephone call to explain mortality flaw. 10 August 2000. Similar emails sent to Claire Melamed, Christian Aid following telephone call; Mark Weisbrot, Center for Economic and Policy Research, Washington DC.

of “income inequality” don’t apply where mortality rate differences are so unequal.⁷³

“This year the average size of fish in the pond is higher. This confirms that, on average, the fish grew”. Later, we realised big fish lived longer than small fish.

Perhaps survival rates are relevant to what is good for the poor (“Grinding the Poor”, September 27) - and not just for the obvious reason.

Growth falls if the poor live longer.

Growth rises if the poor live shorter lives.

Growth rises if inequality of life length between rich and poor rises.

Inequality of life length has varied greatly in poor countries.

Among poor people, studies measure consumption [*] rather than income.

People who eat less have shorter lives.

People at the bottom of the poor group probably last less time.

Many people think the following two inferences are obviously valid.

“Average income among the poorest fifth alive now is 1% higher than for the poorest fifth alive last year. Therefore, poor people’s incomes rose on average by 1%.”.

“The proportion of poor people went down. Therefore, poor people’s incomes rose.”

⁷³ Progress, poverty and survival. Draft 9 April 2001. Same day: telephone conversation with Brian Hammond, in charge of development statistics for OECD in Paris.

⁷⁴ Statistics and survival. Letter to the editor of the Economist newspaper. Not published. 10 October 2001.

⁷⁵ Kanbur 2002.

<p>Maybe it is time to find out. Survival data, like cohort data, never give rise to the “fish” mistake. ⁷⁴</p> <p>* correction: the large studies looked mostly at what people said they spent.</p>	
<p>economists ask, for example, “was x or y good for the poor?” on the basis of average income for the bottom quintile of those living in a country at various times...⁷⁶ The mathematical relationship between a rise in average income among the living and a rise in income for the real population at the start is completely unknown, without a large amount of other data. ⁷⁷</p>	<p>Current conceptualizations of poverty measurement focus (somewhat unthinkingly) on those currently alive...⁷⁸</p>
<p>If there is a <i>possibility</i> that statistics that look good are reflecting outcomes we consider bad, then a fundamental question arises as to the burden of proof, and another about what concepts and terminology describe accurately enough what is going on. ⁷⁹</p>	
<p>account needs to be taken of those within the relevant group who did not achieve the target, whether through death or any other path. ⁸⁰</p>	<p>We call the set of individuals who enter into the measurement poverty, whether they are alive or dead, the relevant set of individuals. ⁸¹</p>

⁷⁶ Economics of mortality rates. Email to Kenneth Arrow, Stanford 20 April 2001

⁷⁷ Welfare indices countries. Draft 25 April 2001.

⁷⁸ Kanbur 2002.

⁷⁹ Social science and survival. Draft 2 May 2001. Same day: second conversation with Professor Kanbur.

⁸⁰ Economics of survival. Email to Professor Jeffrey Sachs, Harvard. 11 April 2001.

Also on that day: telephone discussion with Eric Swanson, head of World Development Indicators project at World Bank. ?40 minutes?

<p>If economists don't tackle this, they will end up saying that genocide of the poor is good for the poor...⁸²</p>	
<p>Other things being equal, if someone on below-per-capita income, at any age, survives a situation where they were about to die, GDP per capita falls. Amazingly, economics has never taken this on board, even though it applies in rich countries as well as poor. ⁸³</p>	
<p><i>Cross-sectional data are static data from whoever is in the population at the time.</i> Per capita statistics are on the basis of cross-sectional data. They ignore whether the people are adults or children, and the paradoxical effects of longevity. ⁸⁴</p>	
<p>Causation in the past (ie the effect of previous growth levels in decreasing mortality rates) may not be enhanced to the same extent by encouraging national growth in the future. One factor here has to be AIDS. ⁸⁵</p> <p>There's a need to challenge the economic models which ignore health/mortality/political implications, and the effect of population dynamics.</p> <p>...the economic analysis ignores how many people die...</p>	

⁸¹ Kanbur and Mukherjee 2003.

⁸² Economics is not utilitarian. Usenet post. Newsgroup: sci.econ 22 October 2002

⁸³ Finance ministers, truth and logic. 26 January 2003 (as above).

⁸⁴ Finance ministers, truth and logic. 26 January 2003 (as above).

⁸⁵ Note 10 August 2000

<p>....the ratio of children to adults, which influences the per capita income figures considerably, is not stable...⁸⁶</p> <p>There is a need to cut through the confusing forest of terminology on “poverty” and look at what happens to individuals, in a way that is more similar to how we view our own welfare in the West.⁸⁷</p> <p>...adding up income doesn’t show the amount of productive activity, just the amount of money changing hands. (Governments in regulated countries, I suppose, like money to move between people because a lot of it is taxable)....⁸⁸</p>	
<p>economists ask, for example, “was x or y good for the poor?” on the basis of average income for the bottom quintile of those living in a country at various times...if the poorest die at a disproportionate rate... average income of those living will automatically be higher....can a researcher credibly claim that there has been benefit to “the poor” without knowing how many died...?⁸⁹</p>	
<p>....economics needs to look at the demographic impact of falling birth rates, and any influence this has calculations of the distribution of income.⁹⁰</p>	

⁸⁶ Document saved 11 August 2000

⁸⁷ Document saved 11 August 2000

⁸⁸ Document saved 11 August 2000

⁸⁹ Economics and mortality rates. Email to Professor Kenneth Arrow, Stanford. 20 April 2001

⁹⁰ Extract from notes 26 April 2001.

	<p>I'm sure you're right ⁹¹</p> <p>...a paper on China that I did....shows some sensitivity to the role of food prices in Chinese inflations -- they are typically the issue. Looking at it now I could have stressed this point even more. ⁹²</p>
<p>Actually this is a big can of worms, because it's not just mortality that's relevant to the difference between the conceptual group and the real group. It's demographics. The problems involved in looking at a conceptual group result from variable birth rates in families at different levels of welfare, the changing ratio of adults to children (because sometimes researchers adjust welfare indicators to fit the different needs of children and adults; and give weightings for economies of scale in different household sizes), and who replaces who in the group - the fact that someone is replaced at the same level of welfare does not mean that the average for the conceptual group will reflect the average outcome for real people. ⁹³</p>	
<p>I believe that I am raising a fundamental issue for social science about the validity of using statistical averages to infer benefit to individuals, in populations with variable mortality. ⁹⁴</p>	

⁹¹ Partha Dasgupta, Cambridge. Responding to the following observation: if international dollars are inappropriate for global poverty estimates (relevant prices are not estimated) then there is a problem for international policy assessments based on the same virtual dollars. Telephone 2003.

⁹² James K. Galbraith, University of Texas. Director of University of Texas Inequality Project. Chief Technical Adviser to the State Planning Commission, P.R. China, on a project on macroeconomic reform from 1994 to 1997.

⁹³ Social science, statistics and survival rates. Email to friend 22 April 2001.

⁹⁴ Statistics and survival. Email 10 October 2001 to Sudhir Anand, Oxford following telephone conversation.