Main points

• Ideas, theories, paradigms, et cetera matter a great deal – they can mean life or death on a massive scale.

• Our concern for health is not one-dimensional; not amenable to silver bullets.

• A moral/human right to health is a coherent idea

• Personal ethics matter as much or more than effective and just institutions
1 January 1877
Proclamation Durbar
Queen Victoria, Empress of India
The Indian mutiny of 1857
aka - The first war of independence

Nationalization of the East India Company
Creation of the India Office
Indian Treasure Hunt UnCOVERS $22B Fortune

Jewels, statues and two golden coconuts discovered in Hindu temple's underground vaults.

By Christina Gossmann | Posted Tuesday, July 5, 2011, at 3:56 PM ET

A court-ordered treasure hunt in India has unearthed a $22-billion fortune beneath a Hindu temple.

The historic find includes precious metals, jewel-encrusted idols and even two golden coconut shells, among other treasures. The trove was found divvied up among a handful of underground vaults at a temple in Thiruvananthapuram, the *New York Times* reports.

The treasures are believed to be an accumulation of devotees' offerings to the deity Lord Vishnu, and were discovered by a team of experts tapped by India's supreme court to search the temple's secret vaults.

The massive granite structure was built in the 18th century, but the underground shrine dates back to the 10th century.

Five vaults held artifacts worth an estimated $22 billion, making the temple's fortune by far the richest ever found at an Indian temple – and archaeologists still have one more vault to open.

The supreme court ordered the search to determine how much the temple's holdings was worth following complaints of administrative mismanagement and poor security by a local activist.
Robert Bulwer-Lytton
Viceroy of India, 1876-1880
The Great Famine 1876-78
6 to 10 million deaths
1876 -1878
<table>
<thead>
<tr>
<th>Year</th>
<th>Name of famine (if any)</th>
<th>Mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td>1769–70</td>
<td>Great Bengal Famine</td>
<td>10 million[^2] (about one third of the then population of Bengal).[^3] Disputed as excessive. [citation needed]</td>
</tr>
<tr>
<td>1782–83</td>
<td>See below.</td>
<td></td>
</tr>
<tr>
<td>1783–84</td>
<td>Chalisa famine</td>
<td>Severe famine. Large areas were depopulated. Up to 11 million people may have died during the years 1782–84.[^4]</td>
</tr>
<tr>
<td>1791–92</td>
<td>Doji bara famine or Skull famine</td>
<td>One of the most severe famines known. People died in such numbers that they could not be cremated or buried. It is thought that 11 million people may have died during the years 1788–94.[^5]</td>
</tr>
<tr>
<td>1837–38</td>
<td>Agra famine of 1837–38</td>
<td>800,000.[^6]</td>
</tr>
<tr>
<td>1865–67</td>
<td>Orissa famine of 1866</td>
<td>1 million (814,469 in Orissa, 135,676 in Bihar and 10,898 in Ganjam)[^7]</td>
</tr>
<tr>
<td>1868–70</td>
<td>Rajputana famine of 1869</td>
<td>1.5 million (mostly in the princely states of Rajputana)[^8]</td>
</tr>
<tr>
<td>1873–74</td>
<td>Bihar famine of 1873–74</td>
<td>An extensive relief effort was organized by the Bengal government. There were no [excessive] mortalities during the famine.[^9]</td>
</tr>
<tr>
<td>1876–78</td>
<td>Great Famine of 1876–78 (also Southern India famine of 1876–78)</td>
<td>5.5 million in British territory.[^6] Mortality unknown for princely states. Total famine mortality estimates vary from 6.1 to 10.3 million.[^10]</td>
</tr>
<tr>
<td>1888–89</td>
<td>Indian famine of 1896–97</td>
<td>150,000 deaths in Ganjam. Deaths were due to starvation as famine relief was not provided in time.[^11]</td>
</tr>
<tr>
<td>1896–97</td>
<td>Indian famine of 1896–97</td>
<td>5 million in British territory.[^6]</td>
</tr>
<tr>
<td>1905–06</td>
<td>Bengal famine of 1943</td>
<td>235,062 in Bombay (of which 28,369 attributed to Cholera). Mortality unknown for Bundelkhand.[^12]</td>
</tr>
<tr>
<td>1943–44</td>
<td>Bengal famine of 1943</td>
<td>1.5 million from starvation; 3.5 million including deaths from epidemics.[^12]</td>
</tr>
</tbody>
</table>
East India Company College 1806 – 1858
Malthus, taught political economy from 1805-1834
AN

ESSAY

ON THE

PRINCIPLE OF POPULATION,

AS IT AFFECTS

THE FUTURE IMPROVEMENT OF SOCIETY.

WITH REMARKS

ON THE SPECULATIONS OF MR. GODWIN,

M. CONDORCET,

AND OTHER WRITERS.

LONDON:

PRINTED FOR J. JOHNSON, IN ST. PAUL'S

CHURCH-YARD.

1798.
6 to 10 million deaths
1876-1878
‘..a misconceived theory can kill, and the Malthusian perspective of food-to-population ratio has much blood on its hands.’

Amartya Sen

Development as freedom.

(1999, p.209)
Two kinds of errors

Conceptual / analytical errors (CE)

Moral errors (ME)

Philosophical reasoning identifies and addresses both.
1987 – Ronald Reagan makes his first public speech about AIDS after 20,000 people have died, and 100,000s are being fatally infected.

More than 100 million girls and women are missing from living populations.
1.7 billion years of human life lost ever year
(Wired, Nov 2013)
CE 1: Individual level of analysis

one person starves because they have no food.

A lot of people starving because they have no food is a famine. Famines are caused by lack of food.
Anomalies/ black swans

Sen’s analysis of ‘FAT’

• People starve when there is no food available

• People starve when there is food available

• People don’t starve when there is no food available locally

• Differential distribution of starvation across population (you find this when you use social science not just biology)
Bangladesh Famine 1973-1977

- 1 to 1.5 million people died.

- Causes?

1 August 1971
### TABLE IV

Foodgrains Output and Availability in Bangladesh: 1971–1975
(Base: 1971 value = 100)

<table>
<thead>
<tr>
<th>Year</th>
<th>Index of per capita rice output (a)</th>
<th>Index of per capita foodgrains availability (b)</th>
<th>Calories per capita (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>100</td>
<td>100</td>
<td>1,900</td>
</tr>
<tr>
<td>1972</td>
<td>90</td>
<td>103</td>
<td>1,913</td>
</tr>
<tr>
<td>1973</td>
<td>95</td>
<td>103</td>
<td>2,023</td>
</tr>
<tr>
<td>1974</td>
<td>105</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1975</td>
<td>99</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source. (a) and (b) calculated from Alamgir [1980]; (c) is obtained from FAO Production Yearbook 1976.
Entitlement analysis

- Endowments
- Exchanges: labour for wages & wages for ‘entitlements’
- Entitlement sets expand or contract based on interaction of endowments, and two exchanges
**Entitlement Analysis**

Endowments $\rightarrow$ Exchange Mapping $\rightarrow$ Entitlement Sets

<table>
<thead>
<tr>
<th>Assets</th>
<th>Exchange 1</th>
<th>Exchange 2</th>
<th>Bundles (1, 2, …n)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour</td>
<td>for money</td>
<td>for food</td>
<td></td>
</tr>
<tr>
<td>Knowledge/ skills</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Govt. Transfers</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Bundles – ‘legal entitlements set’
- Different bundles represent capability to be (adequately) nourished.
Commodities versus capabilities

• Food Availability Thesis (how it tolerates deaths)
  – If there is food available then famine is not possible / happening
  – If there is no food then it is a natural cycle

• Food is incredibly important for individual survival and wellbeing, but measuring the agricultural output, or grains stored in silos, or amount being exported does not tell you about how well nourished individuals are.

• The causation and distribution of mass starvation and low-level malnutrition is explained by the determinants of entitlement sets – ‘capability sets’ (democracy imp.)
Extending the entitlement analysis to health
UK Life Expectancy
Fig. 1. Occupational class differences in life expectancy, England and Wales, 1997–1999
Whitehall Studies

![Bar chart showing total mortality across different years of follow-up and occupational groups.](image)

*Figure 1. Social gradient in total mortality, Whitehall 25 year follow-up.*
<table>
<thead>
<tr>
<th>Country/Region</th>
<th>Life Expectancy</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK, Glasgow (Calton)</td>
<td>54</td>
</tr>
<tr>
<td>India</td>
<td>62</td>
</tr>
<tr>
<td>US, Washington D.C. (black)</td>
<td>63</td>
</tr>
<tr>
<td>Philippines</td>
<td>64</td>
</tr>
<tr>
<td>Lithuania</td>
<td>65</td>
</tr>
<tr>
<td>Poland</td>
<td>71</td>
</tr>
<tr>
<td>Mexico</td>
<td>72</td>
</tr>
<tr>
<td>Cuba</td>
<td>75</td>
</tr>
<tr>
<td>US</td>
<td>75</td>
</tr>
<tr>
<td>UK</td>
<td>77</td>
</tr>
<tr>
<td>Japan</td>
<td>79</td>
</tr>
<tr>
<td>US, Montgomery County (white)</td>
<td>80</td>
</tr>
<tr>
<td>UK, Glasgow (Lenzie N.)</td>
<td>82</td>
</tr>
</tbody>
</table>

Sources: WHO World Health Statistics 2007; Hanlon, Walsh & Whyte 2006; Murray et al. 2006
Social gradient in developing countries too!

**Figure 2.2:** Under-5 mortality rate per 1000 live births by level of household wealth.

Source: Gwatkin et al. (2007), using DHS data.
Again – conceptual errors and moral errors

• Individual level risk factors / exposures (classic epi)
  – Biology, behaviours, external proximate exposures
  – Not adequate as a general framework (too many unexplained phenomenon.)

• Supra-individual analysis (social epidemiology)
  – Distribution
  – Biology, behaviour, external conditions.
  – ‘causes’ & ‘causes of causes’
  – Direct pathways
  – Psycho-social pathways (stress, social support)
Health is determined by the conditions where we are born, live, play, work and age.
Health in an unequal world
Lancet 2006, M. Marmot
Brian MacMahon 1923 -2007

Head, Department of Epidemiology, Harvard School of Public Health 1958
Epidemiologic Methods, 1960 Little Brown & Co.
Modern Epidemiology
THIRD EDITION
Kenneth J. Rothman
Sander Greenland
Timothy L. Lash
WORLD DEVELOPMENT REPORT 1993

INVESTING IN HEALTH

WORLD DEVELOPMENT INDICATORS
MACROECONOMICS AND HEALTH:
INVESTING IN HEALTH FOR
ECONOMIC DEVELOPMENT

REPORT OF THE COMMISSION ON
MACROECONOMICS AND HEALTH

Presented by JEFFREY D. SACHS, Chair
to Gro Harlem Brundtland,
Director-General of the
World Health Organization
on 20 December 2001
Closing the gap in a generation

Health equity through action on the social determinants of health
Main points

- Ideas and theories matter a great deal

- Access to healthcare is very important for health

- Healthcare is affected by politics, economics, culture, etc.

- Health is determined by more than healthcare, by social determinants over the life course.

- There are many dimensions of health – causes, levels, consequences, distribution patterns, consequences, et cetera which have ethical implications.
Health Justice

• Our conceptual analysis, our science has to be correct
• Our ethics must be right in the face of uncertainty
• Every person has a moral claim to be healthy
• There are many difficult decisions that have to be made in the distribution of healthcare as well as other social resources.
Ethical questions

• How important is health relative to other social goals?
• Can you say to someone born in the lower socio-economic groups that they are being treated with equal concern and respect?
• What are priorities in addressing poor health and health inequalities?
• How do we allocate limited healthcare resources?
• What is my/our duty regarding the health of others/foreigners?
Therefore the job of scientists should be to formulate and evaluate scientific hypotheses, rather than to muster support for or marshal evidence against specific policies. This is not to deny the rights and responsibilities of scientists to participate, like any concerned citizens, in the political process that determines policy. It is important, however, for scientists to safeguard their scientific objectives as much as they can from secular influences. The conduct of science should be guided by the pursuit of explanations for natural phenomena, not the attainment of political or social objectives.

(Poole & Rothman)
Health in an unequal world
Lancet 2006, M. Marmot
SRIDHAR VENKATAPURAM
ASSOCIATE PROFESSOR
KING’S GLOBAL HEALTH INSTITUTE
KING’S COLLEGE LONDON

EMAIL: SRIDHAR.VENKATAPURAM@KCL.AC.UK