

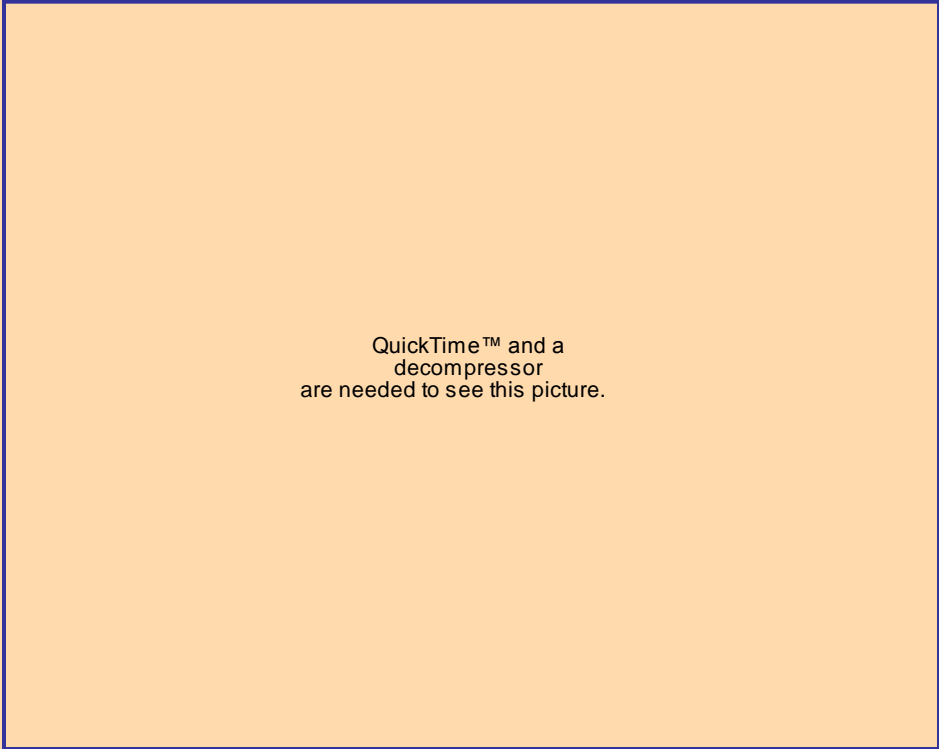


# **From Jenner to Wakefield:**

*The long shadow of the anti-vaccination movement*

Gareth Williams

*Professor of Medicine, University of Bristol*

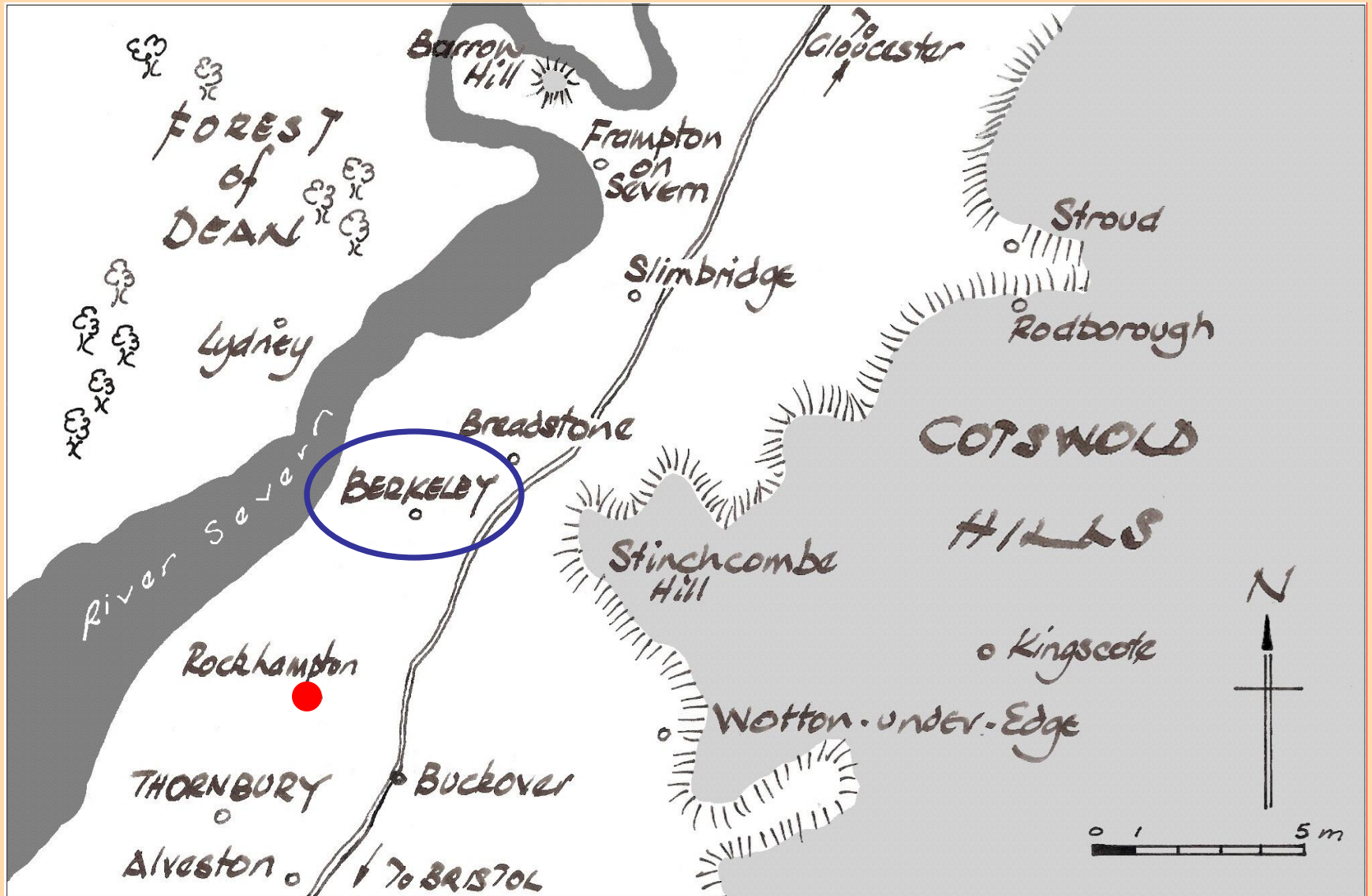


QuickTime™ and a  
decompressor  
are needed to see this picture.

# My research background ...



*... The big questions in obesity*



The catchment area of Dr. Edward Jenner FRS

# Berkeley, 14th May 1796

## *The birth of vaccination*



Blossom\*

*cow*



**Cowpox**  
*virus*



Sarah Nelmes  
*milkmaid*



James Phipps  
*guineapig*

*(\*omitted for clarity)*

“The fact is we have forgotten what smallpox is like.”

*D. Fraser Harris, 1914\**

*\* Still to go:  
63 years  
250 million deaths*

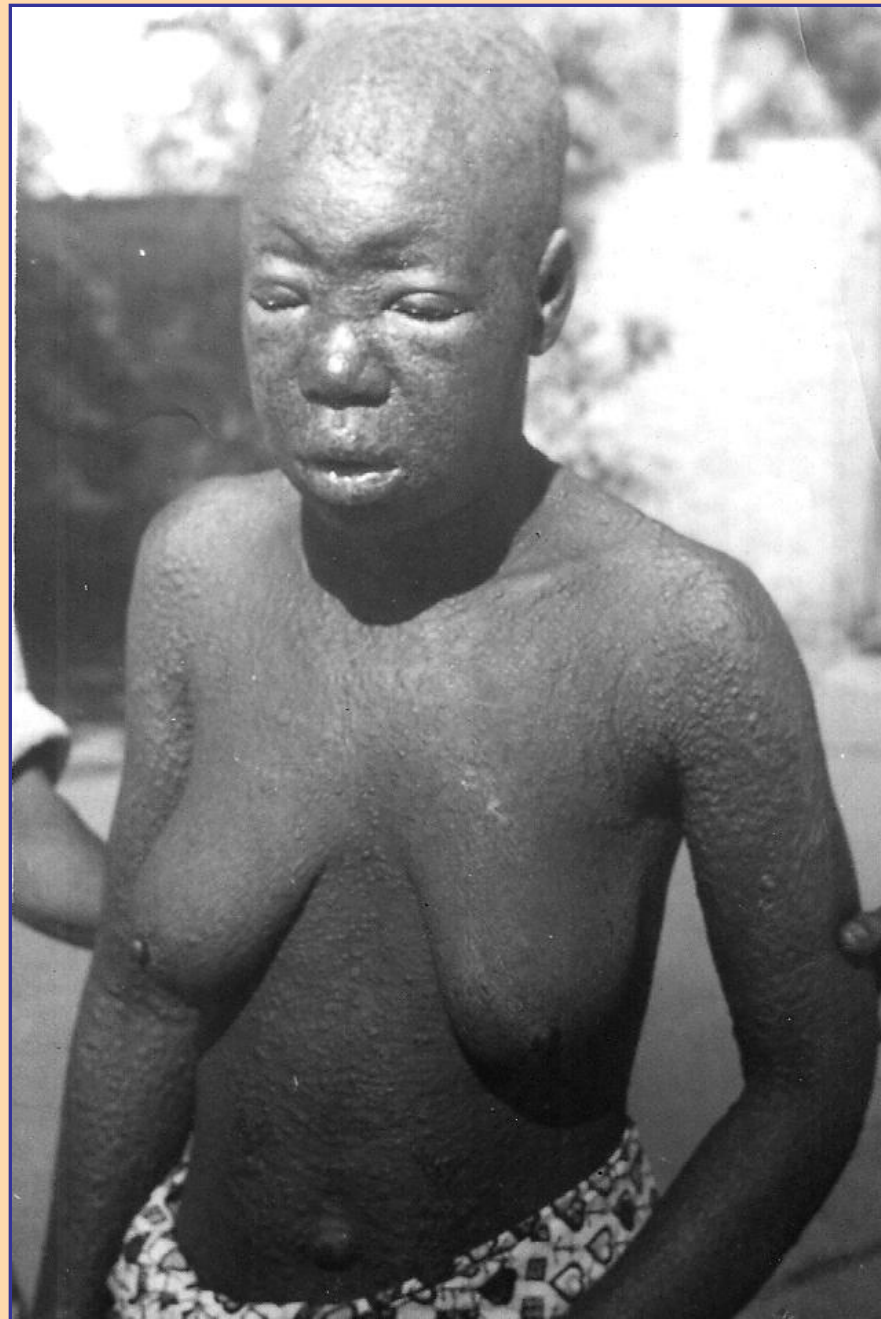
## The Smallpox Lottery

- Hit 1 in 3
- Killed 1 in 12  
(90% aged <5 years)
- Badly scarred 1 in 3 survivors
- Commonest cause of blindness in young adults

“The fact is we have forgotten what smallpox is like.”

*D. Fraser Harris, 1914\**

*\* Still to go:  
63 years  
250 million deaths*





# Treating smallpox: the Therapeutics of Despair

## Medicinal leech



... as prescribed, 1884

1770s:

- *Leeches, etc*
- *Purges, vomits*
- *Red things*
- *Let out the pus*

Mortality: 20-50%

1970s:

- *No mirrors!*
- *Intensive care*
- *Anti-viral drugs*

Mortality: 20-30%

# Prevention is better than cure



**Edward Jenner, FRS  
(1749–1823)**

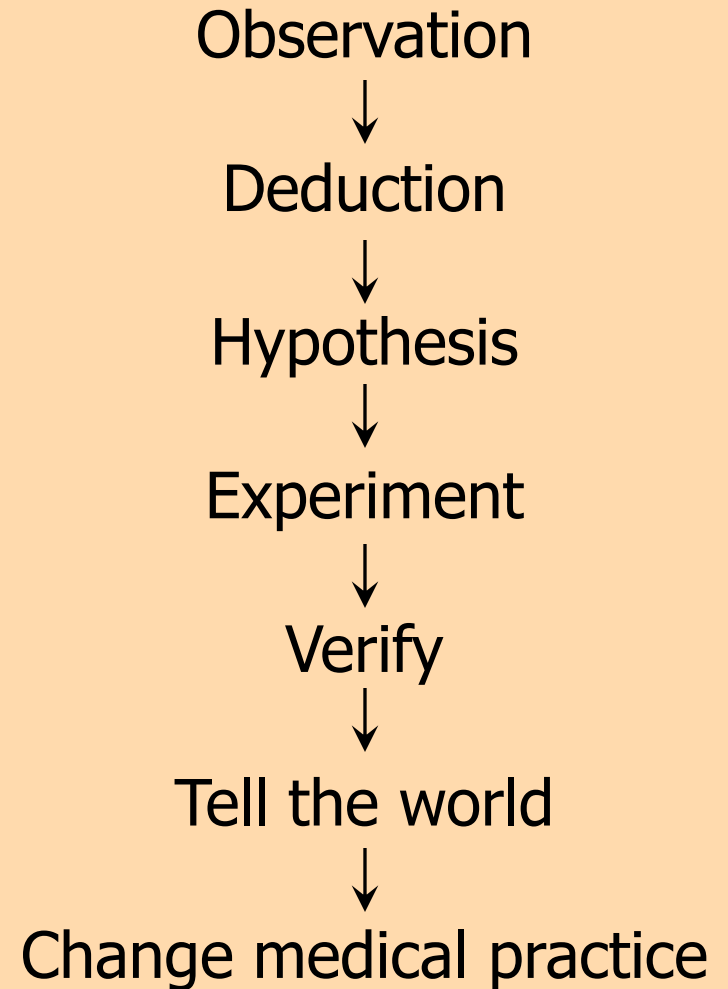
*Gentleman doctor*

*Polymath and dilettante*

*Bon viveur, musician,  
poet*

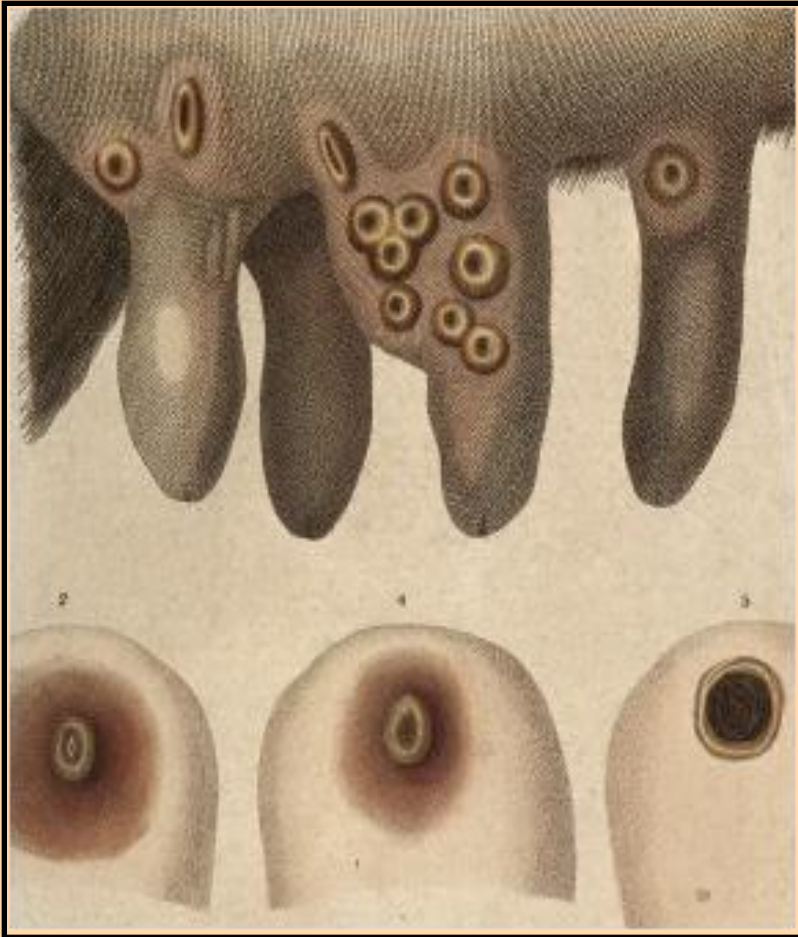
*Pupil of John Hunter,  
Surgeon Extraordinary,  
via Daniel Ludlow*

# Edward Jenner and the scientific process



# Vaccination

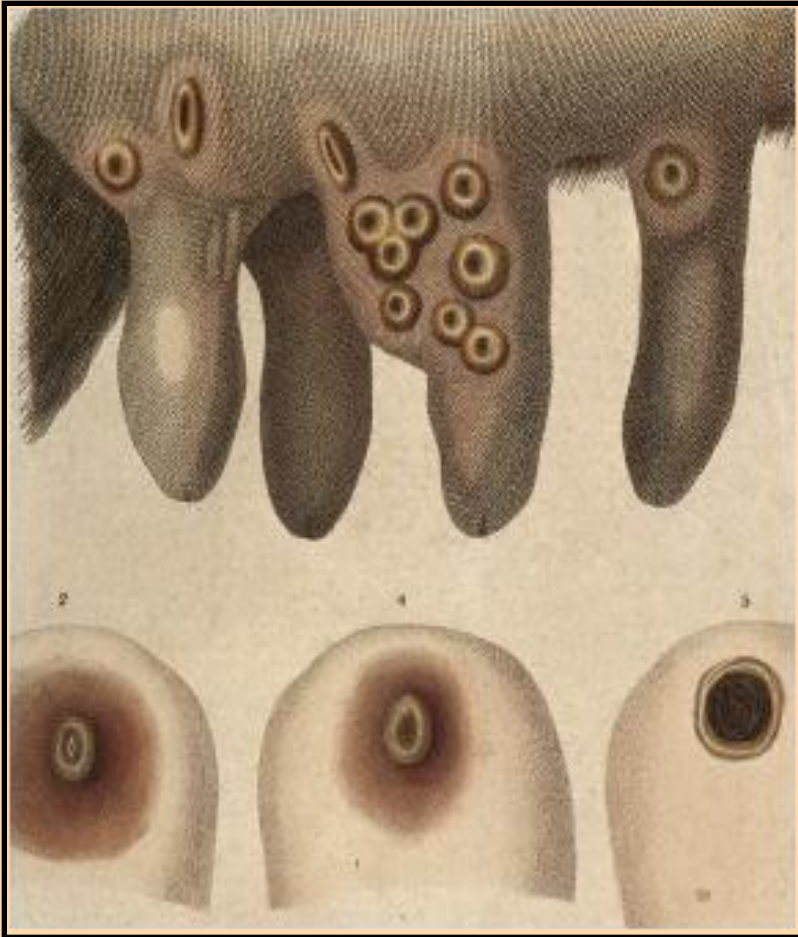
Giving *cowpox* to prevent *smallpox*!



Milkmaids' disease and legend

## Vaccination

Giving **cowpox** to prevent smallpox!



“I cannot take smallpox,  
for I have had cowpox.”

*Anonymous milkmaid  
to Edward Jenner  
Chipping Sodbury,  
ca. 1768*

The start of a 30-year  
experiment ...

Milkmaids' disease and legend

## The Convivio-Medical Society, ca. 1788



*“For the united purposes of conviviality and improvement of medical science” (but not cowpox)*

## And eventually to James Phipps



*14th May 1796*

Inoculated with cowpox pus  
– small sore, mild fever

*1st July*

Variolated  
– no reaction

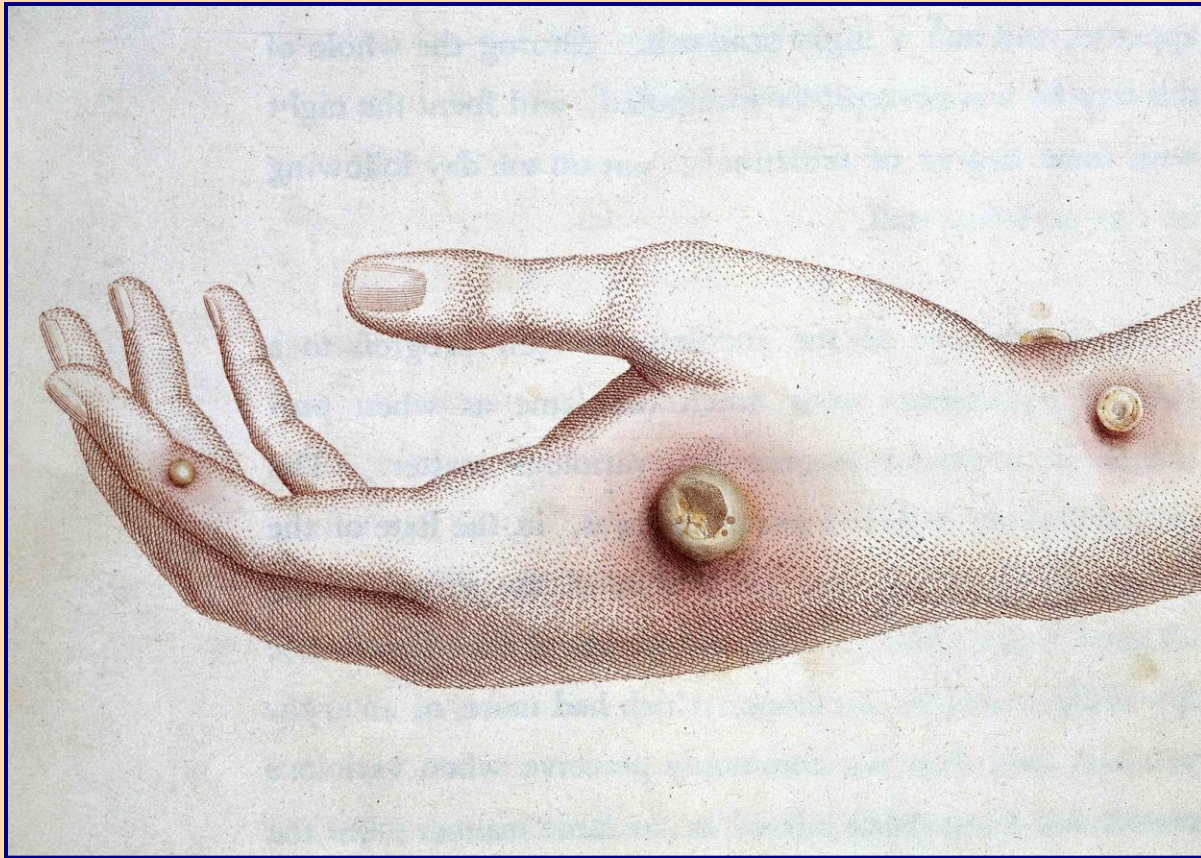
i.e. immune to smallpox

**Eureka!**

... But the Royal Society  
rejected Jenner's paper

# An Inquiry into the causes and effects of the Cow Pox

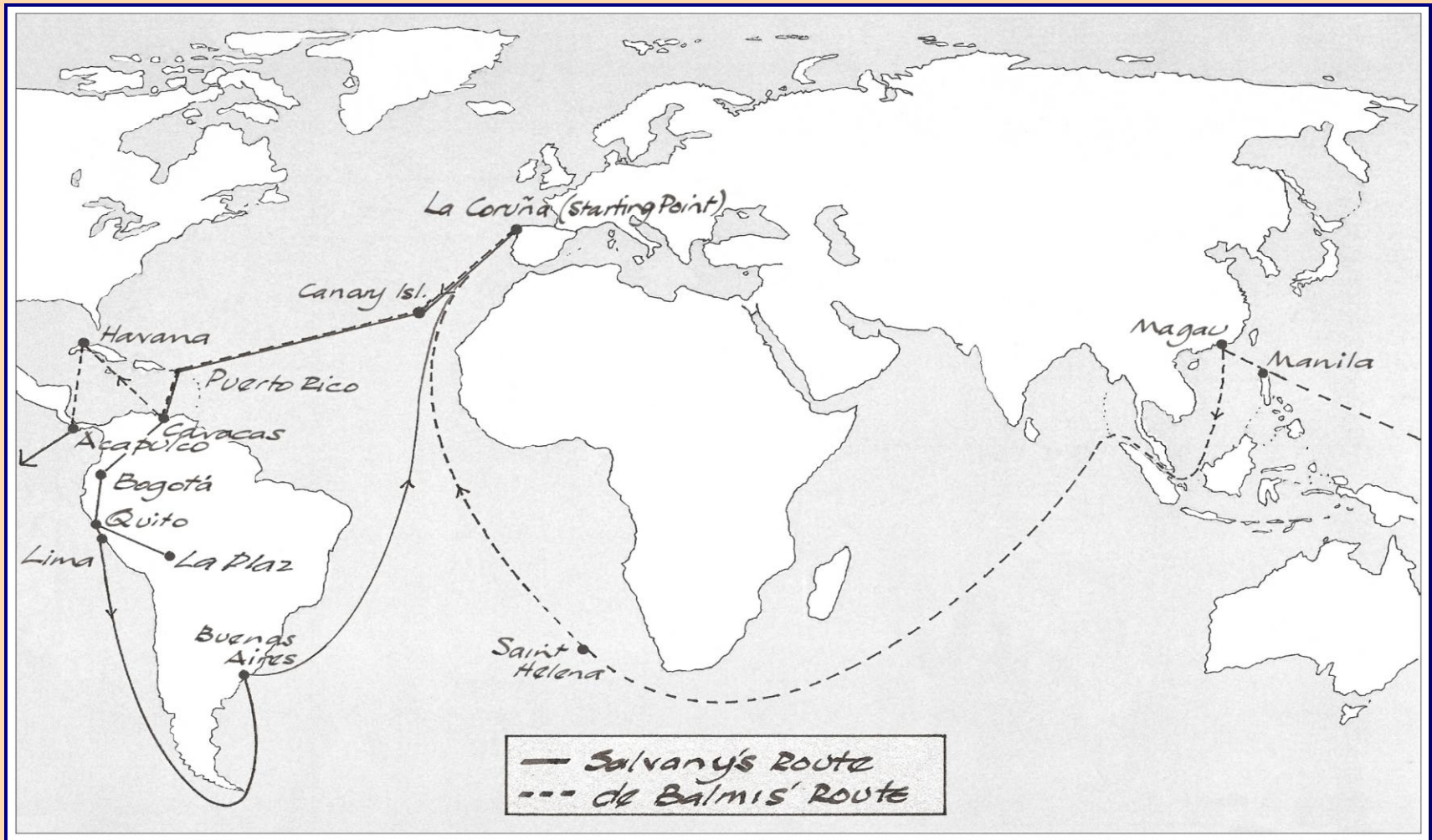
*Published September 1798, by Sampson Low, Soho (7/6d)*



A DIY guide to vaccination ... and an instant sensation

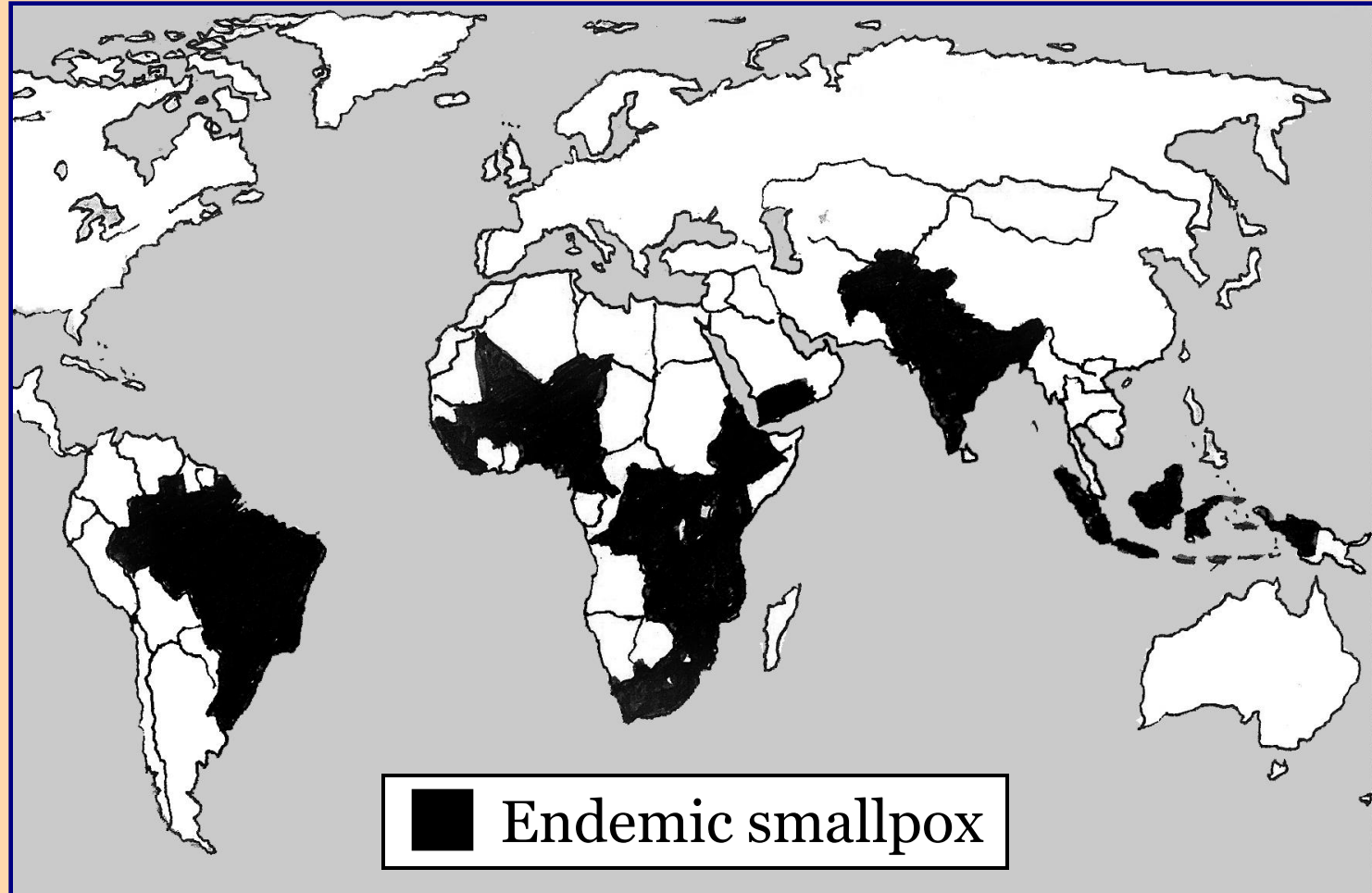


# Vaccination encircles the planet, 1803–6



The Royal Philanthropic Expedition of King Carlos of Spain

# Vaccination conquers the planet ... 1967



*The start of the WHO Smallpox Eradication Programme*

# Jenner's vision realised



Rahima Bhanu

**October 1975:**

Last victim of *Variola major*  
*Rahima Bhanu, Bangladesh*

**October 1977:**

Last victim of *Variola minor*  
*Ali Maow Maalin, Somalia*

**8th May 1980**  
**WHO Declaration:**  
***Target Zero achieved***

# **“A prophet without honour in his own country”**



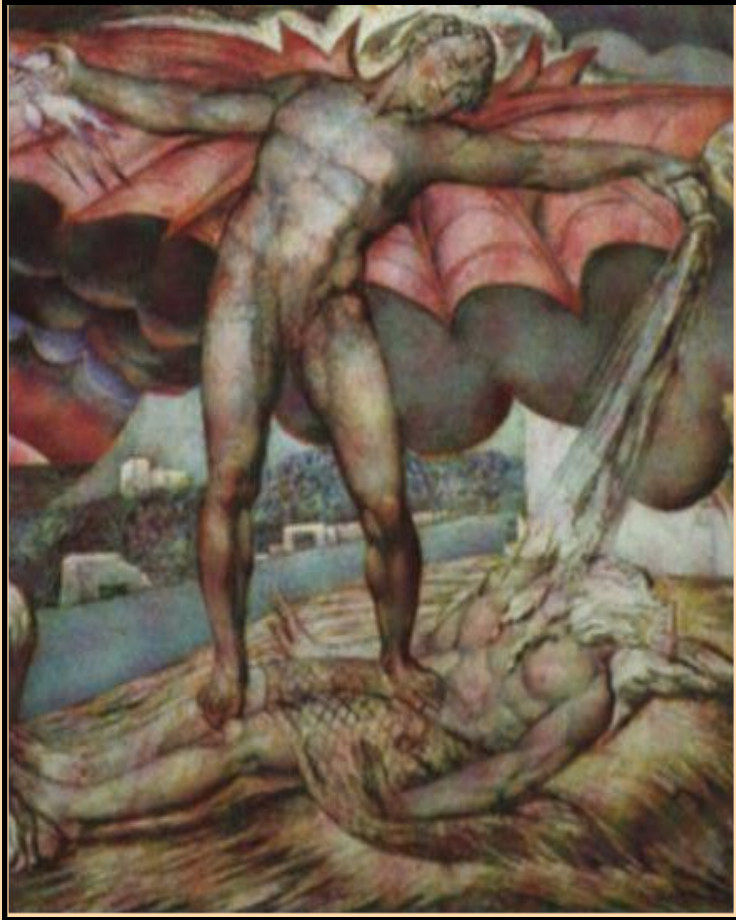
*“Mankind can never forget that you have lived ...*

*Future nations will know by history only that the loathsome smallpox has existed.”*

Thomas Jefferson, 1806  
*Letter to Edward Jenner*

Trafalgar Square, 1858-62

# Opposition: God



## Vaccination is blasphemy:

- prevents 'merciful Providence' from culling children of the poor  
*John Birch (1806)*
- and subverts the Divine Plan  
*Andrew Dick White (1896)*

Satan: the first vaccinator

# Opposition: doctors

## Vaccination is dangerous:

- *Bovine transformation*
- *Tuberculosis*
- *Madness*
- *Syphilis*
- *Blood poisoning*
- *Diabetes*
- *Etc*



*From child to cow*



A non-hazard of vaccination (Gillray)

# Opposition: doctors



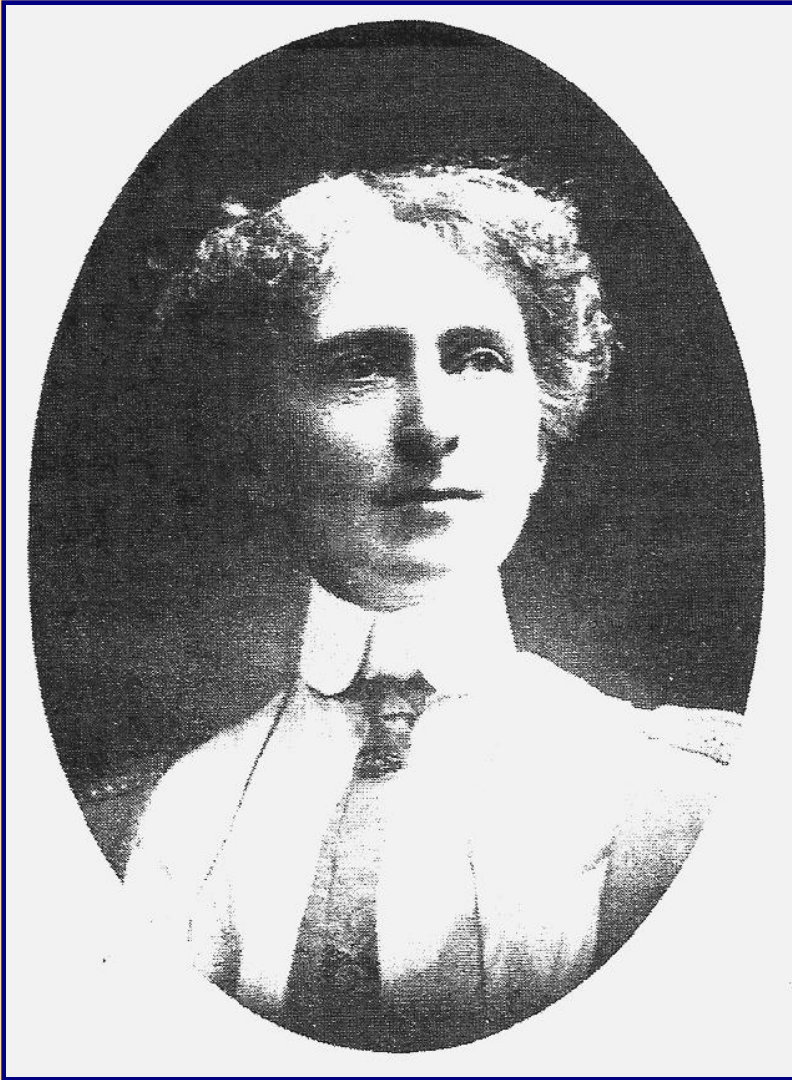
*Congenital syphilis*

## **Vaccination is dangerous:**

- *Bovine transformation*
- *Tuberculosis*
- *Madness*
- *Syphilis*
- *Blood poisoning*
- *Diabetes*
- *Etc*



## 'Crimes of the Cowpox Ring'



**Lora C. Little**

Natural healer, activist, writer



**Case No. 30**

Died aged 7 years,  
after forced vaccination at school

# Medical disasters following vaccination



“Dangerous consequences of the absorption of a brutal miasma into the human blood”  
*Immanuel Kant (1843)*

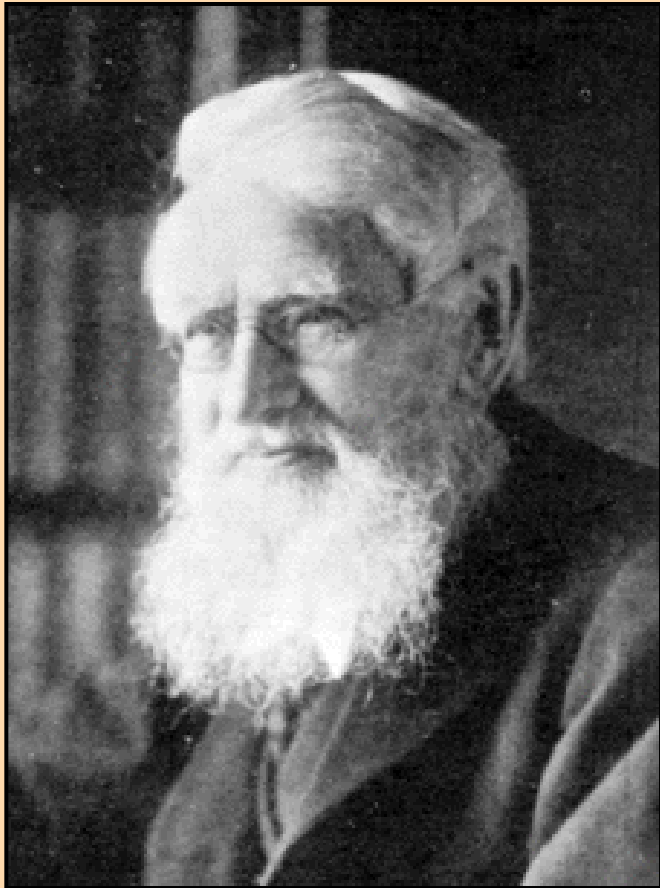
Extracts of cow cause cancer  
*Ernest McCormack (1909)*

**Case No. 275**

Benjamin Olewine

‘Saved from smallpox by vaccination’

# Big Names speak out against vaccination



Alfred Russel Wallace

“A particularly filthy piece of witchcraft”

*George Bernard Shaw*

“Probably the cause of a greater mortality than smallpox itself ... But cannot be proved ever to have saved a single life”

*Alfred Russel Wallace*

**Deaths caused: thousands**

# The Vaccination Acts, 1840–1909

1840: Vaccination of newborn encouraged

1853: Vaccination of newborn compulsory (fines)

1858: Vaccination of newborn enforced (prison)

## ‘Perverse’ outcomes:

- Social division
- Outrage
- Civil disobedience
- Anti-Vaccination League



# A predictable outcome, Leicester, 1900



*Thanks to Mum, Dad and their MP*

**Kenneth Marion Little**  
*Only child of Lora C. Little*  
*Vaccinated September, 1895*  
*Died from the effects, April 1896*



KENNETH MARION LITTLE.

Only child of Mrs. Lora C. Little. Vaccinated Sept., 1895. Died from the effects, April 10, 1896. Age 7 yrs. 3 mos. (No. 30.)



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**Kenneth Marion Little**  
*Only child of Lora C. Little*  
*Vaccinated September, 1895*  
*Died from the effects, April 1896*

Vaccinated in September



Measles (recovered)



Diphtheria in April (died)

**Mortality rates in USA, 1896:**

- Diphtheria: 40%
- Under tens: 40%

# **'The Science [*sic*] of Chiropractic'**

*D.D. Palmer (1906)*

*“We do not believe that any disease is the result of a specific infection from micro-organisms ...”*

- ‘luxation’ of vertebrae causes diphtheria, smallpox, cancer, epilepsy, tapeworms, etc etc

*“Smallpox and chickenpox are one and the same”*

- treat both by manipulating the neck
- miracle cure!

*“Replacing luxation will cure the patient and give the death-blow to the vaccine poison swindle.”*



# The great Vaccination Debate, 1800—?

*A war of disinformation*



# The great Vaccination Debate, 1800—?

*A war of disinformation*

## *Anti- vaccination*

Anecdote	+++
Bent statistics	+++
Lies	+++
Scientific fraud	++
Cover-up	++
Celebrities	+++

# The great Vaccination Debate, 1800—?

*A war of disinformation*

	<i>Anti- vaccination</i>	<i>Pro- vaccination</i>
Anecdote	+++	+
Bent statistics	+++	+
Lies	+++	+
Scientific fraud	++	+ ( $\pm$ pious)
Cover-up	++	+
Celebrities	+++	+

# The lens that focused anger over vaccination



Jenner – saint or demon?

# The lens that focused anger over vaccination



“His unscientific, foolish, unsupported assertions show that it was time that he should die ...

Only in oblivion should his name and doings be decently buried.”

*Alexander Wheeler (1879)*

Jenner – saint or demon?

# Jenner: not perfect



## ‘Inquiry’ flawed

- *How many vaccinated?*
- *How many test-variolated?*
- *Cover-up?*

## Evidence denied

- *Immunity **not** lifelong*
- *There **were** risks*

Lives saved: millions  
Deaths caused: thousands

# The World's Greatest Names in Medicine



“Credit goes to the man who convinces the world,  
not the man to whom the idea first occurs.”

*Francis Galton*



# **Anti-vaccinationists today**

*Still going strong, e.g.:*

*Council of Chiropractic Pediatricians*

*Association of American Physicians and Surgeons*

- ‘Battered baby’ death due to vaccine reaction

*Campaign against Fraud in Medical Research*

- ‘Gulf War Syndrome’ due to vaccine reaction
- AIDS and Ebola are man-made

*Dr. Viera Scheibner*

*Age of Autism*

- Daily Web Newspaper of the Autism Epidemic



# Ex-Doctor Wakefield

**Andrew Wakefield was hired by a solicitor to help launch a lawsuit against MMR manufacturers.**

**The Royal Free Hospital's pathology service repeatedly judged the biopsy samples to be unexceptional**



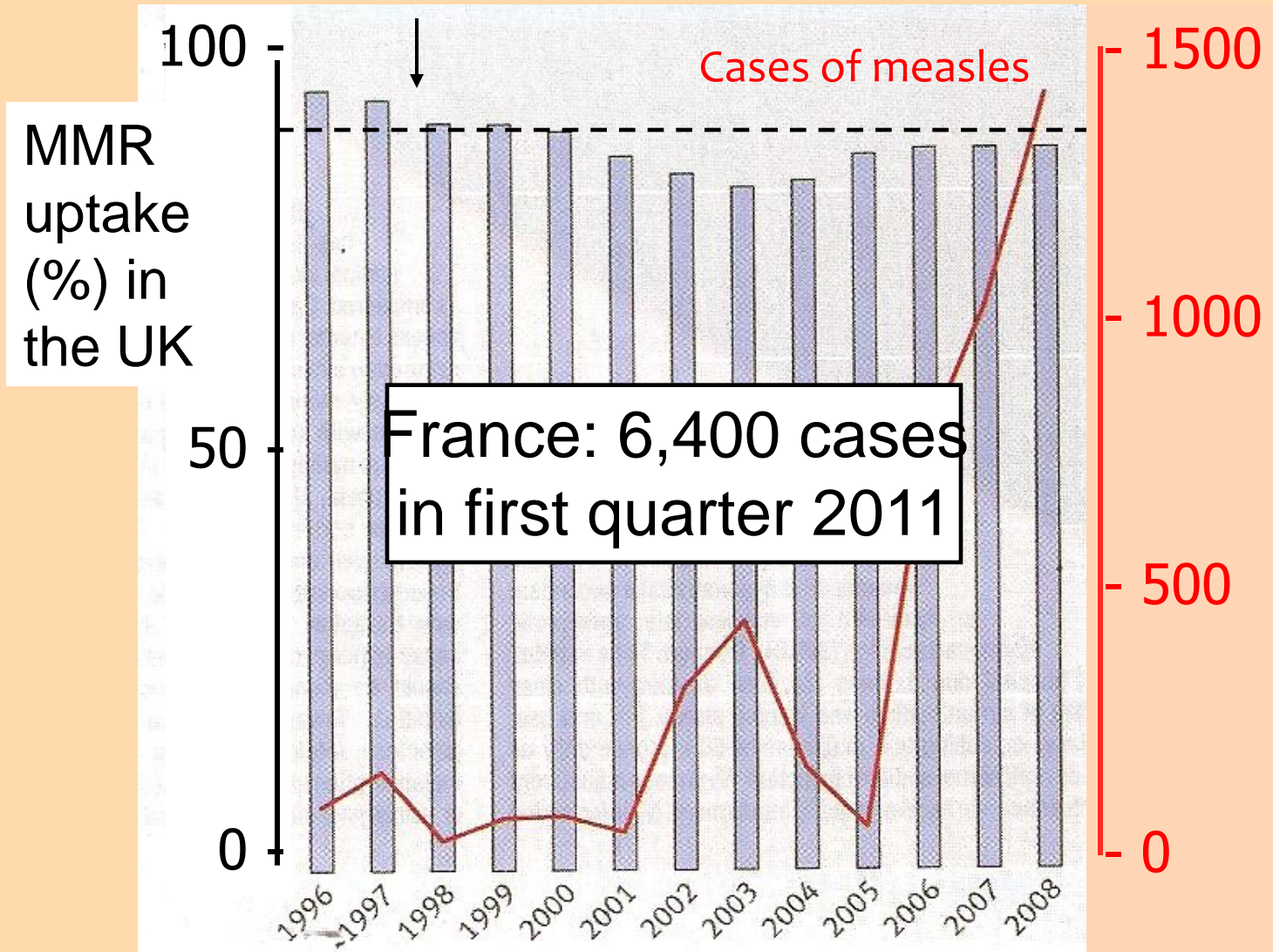
JUSTIN SUTCLIFFE/REX



DAVID PEARSON/ALAMY

Worse than just bad science ...

# Another long shadow



# The shape of things to come?

## Indian doctors hold summit to tackle estimated 130 000 annual deaths from measles

**Ganapati Mudur** NEW DELHI

India's attempts to control measles have failed, public health experts told a national round table consultation last week, with the estimated number of annual deaths from the infection stubbornly high at about 130 000.

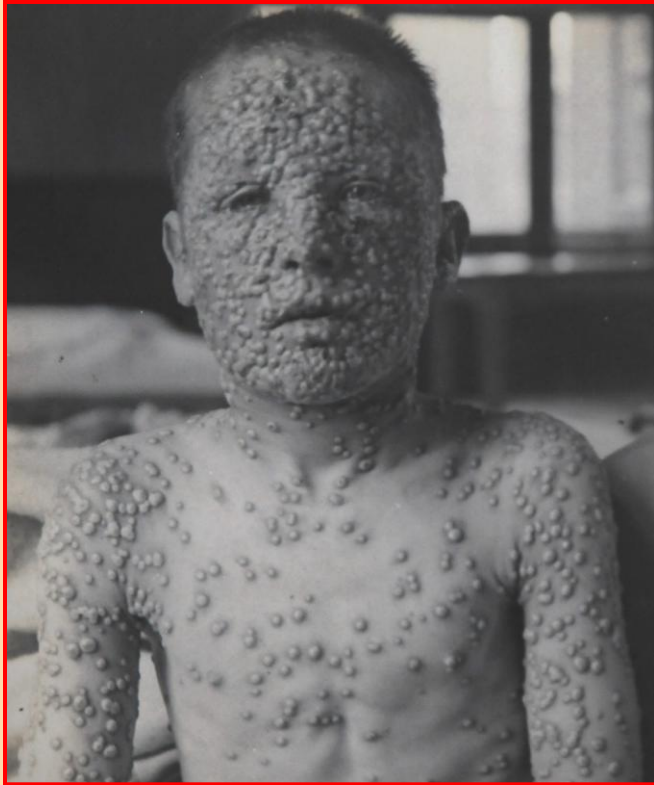
The report from the three day consultation, to be submitted to the Indian health ministry, has attributed the failure to inadequate immunisation, poor surveillance, and lack of basic health services in several states.

The health ministry's own figures indicate that the number of cases of suspected measles each year over the past decade has ranged from 35 000 to 60 000, down from 40 000 to 90 000 in 1990-8. However, it is generally conceded that the ministry's numbers do not reflect the true picture.



Data show that only 60% of children in India get immunised against measles

# Benefit *versus* risk?



**Emotions *versus* evidence**  
**Hearts *versus* brains**

What would  
you do?

**You can stand where it all began:**  
*Dr. Jenner's House, Berkeley*



[www.jennermuseum.com](http://www.jennermuseum.com)

# ANGEL OF DEATH

THE STORY OF SMALLPOX

GARETH WILLIAMS



*Why buy this book?*

- All royalties going to Dr. Jenner's House
- Only 87 shopping days to Christmas
- It's not too bad really

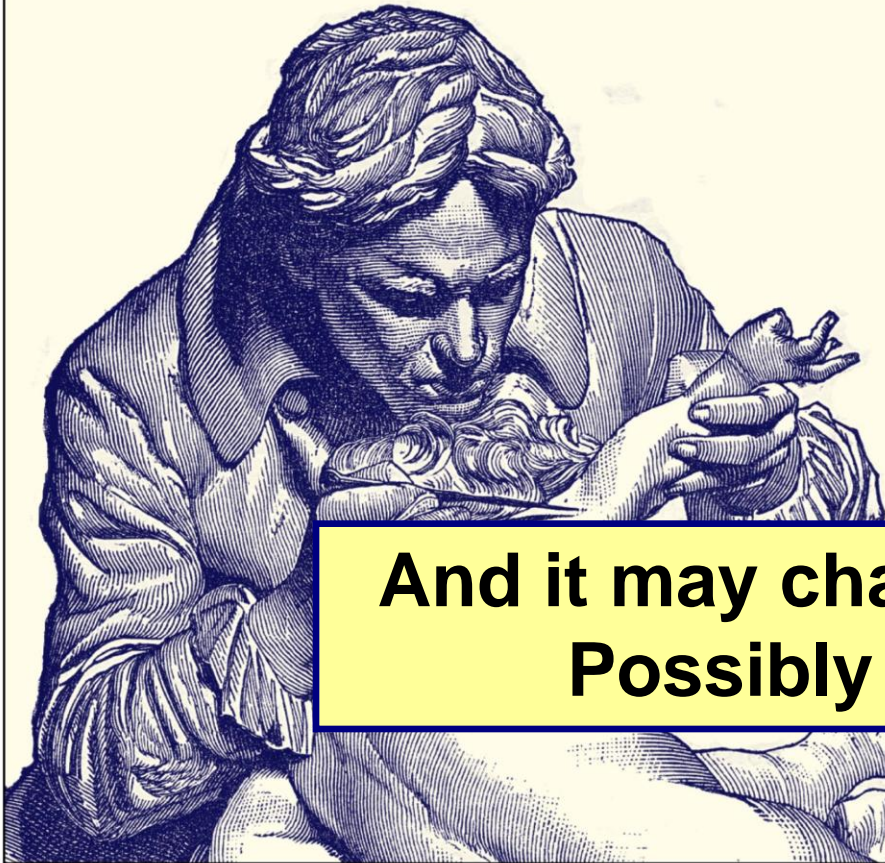
*Shortlisted for:*

Wellcome Trust Book Prize, 2010  
Medical Journalists' Award, 2011

# ANGEL OF DEATH

THE STORY OF SMALLPOX

GARETH WILLIAMS



*Why buy this book?*

**And it may change your life.  
Possibly for ever.**



**Before ...**



... and shortly after



