

- Far from it being true that man and his activity makes the world comprehensible, he is himself the most incomprehensible of all, and drives me relentlessly to the view of the accursedness of all being, a view manifested in so many painful signs in ancient and modern times. It is precisely man who drives me to the final despairing question: Why is there something? Why not nothing?

FWF Schelling, c 1797

Helsinki, May 2012

Medical humanities and science

*challenges of increasing scientific &
technical dominance in medicine*

implications for our priorities

John Saunders
Swansea University

Helsinki, May 2012

Aristotle's champagne

Microscopes. Methodology. Golden Mean.
The embodiment of science you sit

just after midnight in numb November.
You have tired of evidence and hemostats

and MRIs; grown weary of blowing your
breath through the straw of life.

You face predictable desires: to drink
deep at the Muse's spring and calculate

seasons as dolphins do or to sip from
stems of flowers whose Latin names

you do not know or to sing with poets
of morning and enter, perhaps, the Mystery

beyond blue steel and the scalpel's kiss.
Humanity is fragile: mere sparrows

formed of twigs and mud, of dreams
and blood. Armed with reason you have

served the gods of science all your life
and long tonight for some sweet dram

of madness while Eternity trickles you
like fine wine into Her smiling mouth.

B.A. St. Andrews, Syracuse, NY

Science: a reminder from Immanuel Kant:
(Groundwork of the metaphysic of morals)

Ancient Greeks proposed 3 sciences:

- physics
- ethics
- logic

Aristotle: scientific inquiry progresses from-

Observation (knowledge of a fact)
 by *induction*
 to general principles
 by *deduction*
 to observation (knowledge of reasons for
 a fact)

The necessity of viewpoint

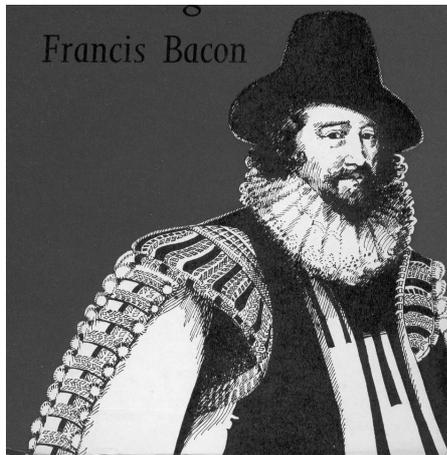


St. Augustine (384-322 BC)

credo ut intelligam

- (believe in order that you may understand)
- Rationalizations as reasons, intellect as the source of false theories, error etc
 - = no objectivity in existential affairs
- Augustine of Hippo 382-322

the Englishman sets it out



- *'Novum Organum'*
1620
- *A critique of Aristotle*
- *The scientist begins his investigation without prejudice & with an open mind*
Francis Bacon 1561-1626

more Baconian thoughts

- Only after sufficient observations, should we try to infer causes or explanation
- Don't look for evidence & try to confirm
- Genuine support comes before the idea

Hence the idea of the scientist as unprejudiced seeker after truth...

believed by

- Newton ("the main business of philosophy is to argue from phenomena without feigning hypotheses and to deduce effects from causes")

Isaac Newton 1642-1727

- Sherlock Holmes
- & ? most of you



scientia

- Descartes: science as applied mathematics



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Enter the awkward Scotsman



Induction depends upon a pseudo-empirical superstition

David Hume 1711-76

Why?

Hume's objection

Every inference from observed effects to their underlying causes (or from observed particulars to universal laws) is effectively an inference from what is found in observation/experience to what is not.

The underlying causes or universality of the law can't be observed. Hence every inductive inference is based on a hidden assumption: at the heart of empirical science lies the non-empirical

The devastating conclusion

- The principle of induction only gets support if it is pre-supposed
- Therefore the inductivist must reject it as pseudoscience
- Therefore taking Western medicine to Africa is imperialism
- *Does anyone believe this?*

- “things behave in particular ways, not necessarily because of prior actions or impulses of things but because their position in the ever moving cyclical universe was such that they were endowed with intrinsic natures which made their behaviour inevitable for them. The idea of correspondence has greater significance and replaces the idea of causality for things are connected and not caused”

Pietroni 1990

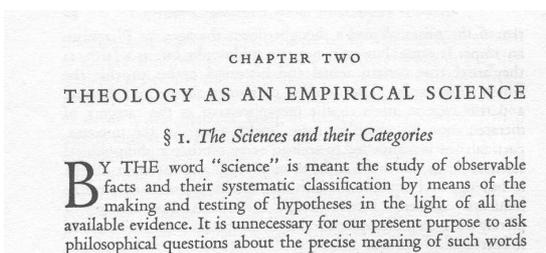
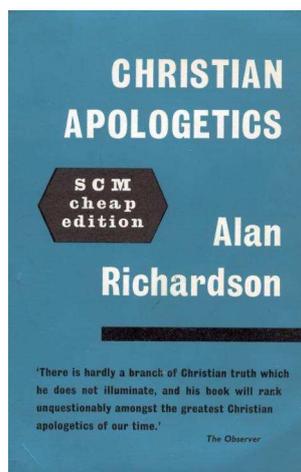
from Kant

- How is metaphysics as science possible?



Immanuel Kant 1724-1804
(Prolegomena to Any Future
Metaphysics)

A footnote: the breadth of science?



“don’t believe it anyway..”

- Chlorpropamide alcohol flushing
- UGDP tolbutamide & the heart
- “That 36 documentary accounts of research into (speech therapy in) aphasic therapy all fail to produce conclusive results about its effectiveness suggests the studies were flawed....research must begin to produce scientifically acceptable data.”

Whurr R. More Scientific research is needed Speech Therapy in practice, 1985, 1, June

- What counts as evidence?

Randomised Controlled Trials (1)



- Fibiger J.
Om Serumbehandling af
Difteri
Hospitalstidende
1898;6:309-25 & 337-50

Johannes Andreas Grib Fibiger
(1867 - 1928)

What Fibiger added in 1898:

- 1 large numbers
- 2 a long study period
- 3 to compensate for seasonal variation in mortality, it must last 1 year
- 4 a discussion & realisation of random allocation

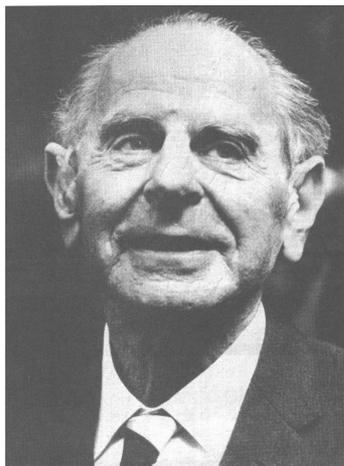
Failures of rationalism

- Oxygen for neonates
- HRT to prevent heart disease (after £ 20 million)

does it matter?

- the largest trial of antihypertensive therapy studied 17,000 patients with mild hypertension for over 90,000 patient years of treatment.
- no benefit in lives saved
- 850 patient years of treatment were needed to prevent one stroke.
- i.e. of 25 people on treatment for 35 years, one will benefit.
- so 24 people will take 38,325 pills each, a total of 919,800 pills, or, laid end to end, 3 miles of tablets of no proven benefit.

Popper's solution



- Demarcation is not about observation by inference but the openness to empirical criticism & falsification: only theories empirically falsifiable can be admitted

Karl Popper 1902-1994

objections

- What counts a refutation, by whom?
- It is possible for a proposition to be verifiable but not falsifiable e.g. π
- Scientific knowledge doesn't actually proceed like this. The importance of the active participation of the knower is being ignored.

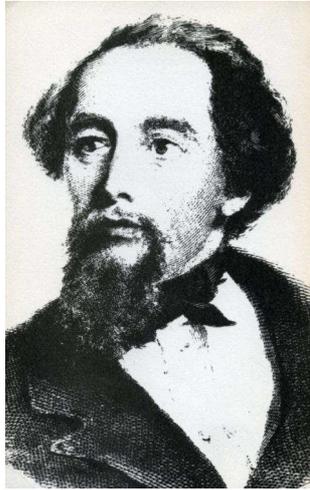
A postscript from Kant

- No system of rules can prescribe the procedure by which rules are to be applied.
- 'native wit'
Immanuel Kant 1724-1804

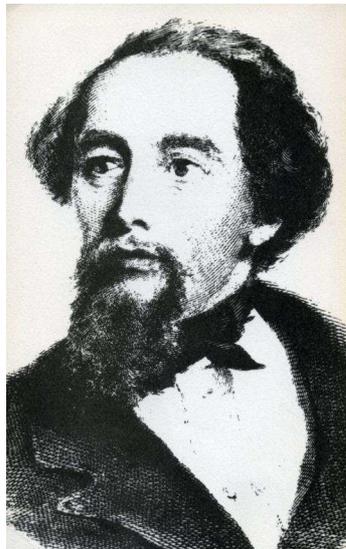


Immanuel Kant (1724-1804)

Scientia – knowledge?



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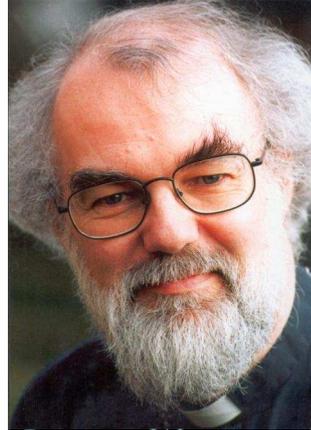
- “Now, what I want is, Facts. Teach these boys and girls nothing but Facts. Facts alone are wanted in life... You can only form the minds of reasoning animals upon Facts...”

Charles Dickens, 1812-1870

Medicine is more than the technical

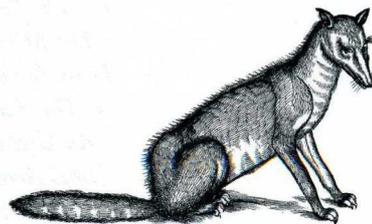
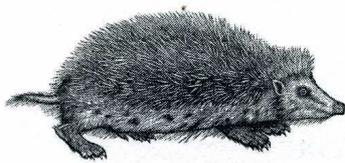
- “Medicine.....a set of conversational and relational skills, rooted in but not confined by knowledge of the material organism...”

Rowan Williams, *Clinical Medicine*, 2003



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Gesner's *Historia animalium*, 1551



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Desiderius Erasmus (1466-1536): *Adagia*

- *Multa novit vulpes,
verum echinus unum
magnam*

(Archilocus, 700 BC)

When the hunter
comes.....



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- Foxes survive by flexibility, knowing when to change paths
- Hedgehogs survive by knowing what they want and sticking to it

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- Foxes spread their genius across many fields of study, introducing new fruit for other scholars to study
- Hedgehogs locate one mine and dig deep into richer and richer stores.

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- Does medicine demand that we should be foxes or hedgehogs? Should our values, knowledge and activities be flexible and mobile or should we pursue and hold on tenaciously to ancient ideals?
- Narrow special interests or broad culture?

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- “The things that really matter to us – the secrets of the heart, of what it means to be an individual, the depths and heights of human experience – all are accessible, if at all, only through literature and the creative arts. Science has no purchase on them.”

Michael O'Donnell

- Medicine is more than the sum of knowledge about disease(= science of disease)
- Concerns the experiences, feelings, interpretations of human beings in extraordinary moments of fear, anxiety & doubt

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A dose of unpleasant reality

- Healthcare Commission (2009): excessive deaths in N Staffordshire 2005-2008.
- Public Inquiry ('Francis Report'), published 24 February, 2010. In 2010, £1,029,000 paid over "poor nursing and dignity issues"

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- *“evidence of multiple and wide-ranging incidents of bad care as described by patients and their families has been such that it is impossible to do other than accept that, in the vast majority of cases, events have occurred as they have described.”*

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- *“The doctor demonstrated little concern or interest”*
- *“They (nurses) bullied...the other staff and they bullied the patients. There was no other word for it”*
- *“I looked at this doctor... There was no compassion in that woman whatsoever.”*

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- *“scores of doctors must have known about problems at the hospital. But almost no one lodged official complaints.”*
- An issue of “culture”?

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- Failures **not** primarily about protocol driven care or scientific knowledge.
- failures of practical morality interpreted as respect for persons;
- also failures of virtue: as identified by witnesses there were instances of discourtesy and plain unkindness.

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roles of medicine

- To bridge the gap between science and society
- Doctors are the agents through which this scientific understanding is expressed
- Multiple providers, new groups, pressure for more equal decision making, falling working hours, social & political factors change the roles

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The warning....

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(A) Are we tacitly accepting movement toward a definition of competence that is largely technical?

- By 'technical', imply a loss of the humanity of medicine
- Defining competence was vague formerly
- Question is empirical: what data would show this?

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Technical competence

- Not 'are' we defining competence in this way, but...
- SHOULD we?

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In favour of defining 'competence' as technical abilities

- Easy to define criteria, easy to examine, fairer to assess.
- Therefore revalidation, licensing, regulation of doctors (etc) easier (& may be cheaper)
- 'cobbler, stick to thy last' – avoids claiming or seeking competence in 'problems of living' (Szasz)

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In favour of defining 'competence' as technical abilities (2)

- Increased technology: greater gap between patient & doctor
- Patient more dependant
- Hence, defining competence more important.

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Against defining 'competence' as technical abilities

- Doctor/patient partnership necessary in most disease
- Rise of chronic disease management increases the need for personal medicine
- 'we know more than we can tell' – tacit skills, tacit knowledge, tacit attitudes

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Against defining 'competence' as technical abilities (2)

- Clinical trials are epidemiological studies: even pragmatic trials may have sub-groups that benefit less or those that may even do worse.
- Applying trials to individuals requires more than technical competence
- Applying EBM at the bedside is the hard bit

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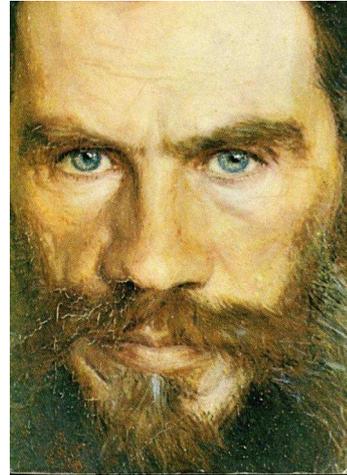
Against defining 'competence' as technical abilities

- illness and health are experiential; disease is technical/scientific
- Understanding disease involves understanding patients
- Medicine's 'objects' are 'subjects'

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- There are two sides to the life of every man: his individual existence which is free in proportion as his interests are abstract; and his elemental life in the human swarm, in which he must inevitably obey the laws laid down for him

Leo Tolstoy (1828-1910), *War and Peace*



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What can the humanities contribute to our efforts to understand and respond to these questions?

- A reconsideration of the nature of scientific knowledge – still largely conceived in terms of the ‘hard’ sciences?
- Subjectivity as making a legitimate contribution (this is intrinsic to qualitative research)

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What can the humanities contribute to our efforts to understand and respond to these questions? (2)

- Value inquiry: ethics, philosophy of medicine (concepts, epistemology etc)
- Other humanities disciplines: history, literature, art
- more richly-textured ways of understanding medicine as a practice, and understanding health, illness and medical care in relation to individual subjective experience

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What can the humanities contribute to our efforts to understand and respond to these questions? (3)

- A personal resource & solace for doctors faced with medicine's demands
- Articulating wonder at embodied humanity
(“fearfully and wonderfully made”, Ps 139)

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conclusions...

- Evidence-based medicine and standard empiricism that underlies medical science offer structures for decisions but are not sufficient to describe the more tacit processes of clinical judgment



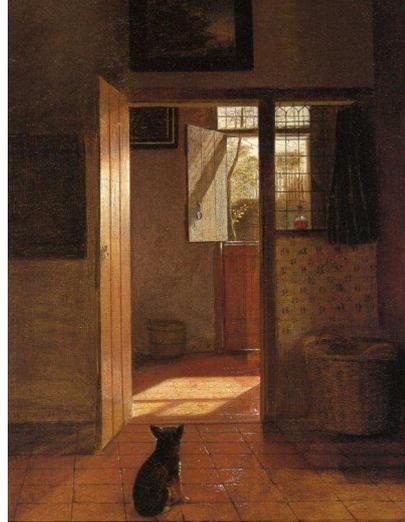
- Professionalism as one big idea.....or the flexibility of many paths?

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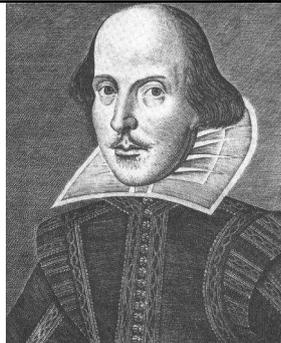
Whether professional standards can be maintained
depends as much on us as on institutions.

Knowledge dwells
In heads replete with
thoughts of other men;
Wisdom in minds attentive
to their own.

William Cowper 1731-1800



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Study is like the heaven's glorious sun
That will not be deep-searched with saucy
looks
Small have continuous plodders ever won,
Save base authority from others' books
(Love's Labour Lost I.i.84)

Aristotle's champagne

Phronesis

=

Practical wisdom

(adding weight to the imponderable & values to the unmeasured or unmeasurable)

- "...form, structure, content, & meaning – both the artistic creative process & the qualitative research process are inextricably bound up with these concerns. Artist and researcher take experience & interpret. This requires an engagement on the part of both, a commitment to being truthful rather than a quest for truth"



- Paul Wainwright, 1948-2010

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Thank you



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