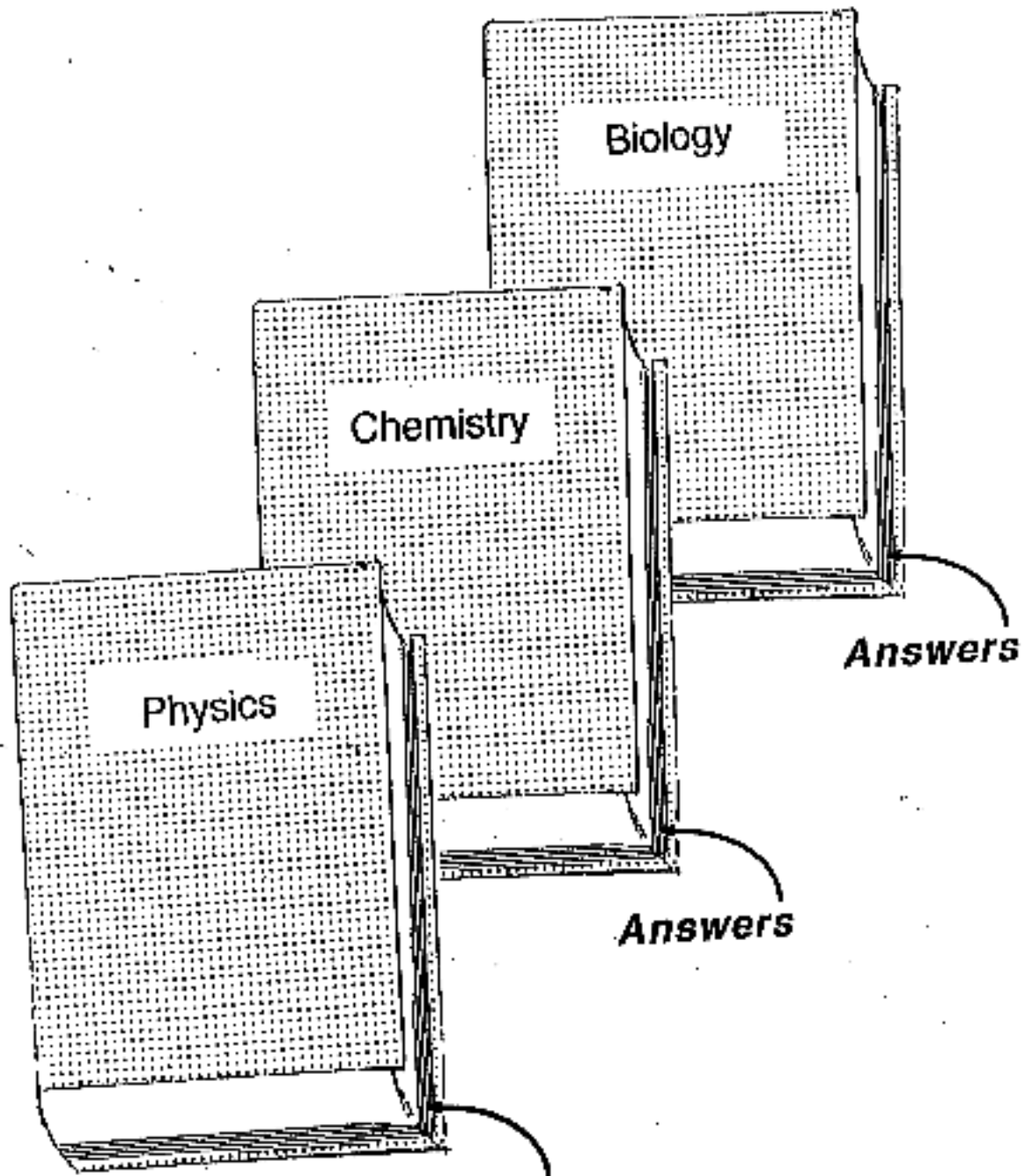


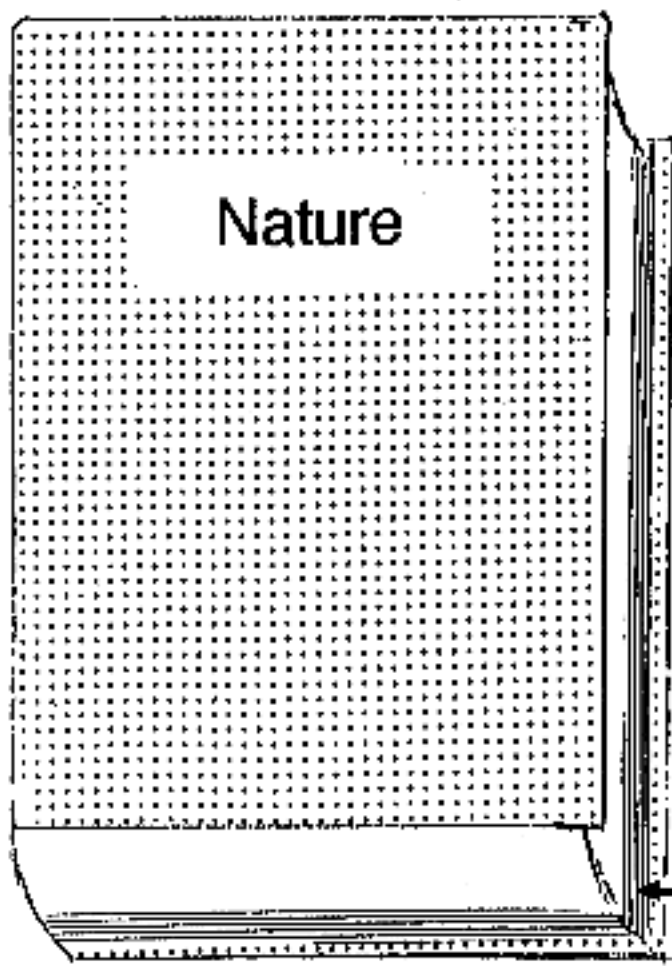
# Whither Post-Normal Science?

Jerry Ravetz

25/26 June 2009

- Why is PNS catching on, meaning very different things to different people?
- It's a liberation; people see that it's OK 'to say no' to a false picture of science as value-free Truth.
- See the sketches from the Pittsburgh lecture.





Nature

**Answers**

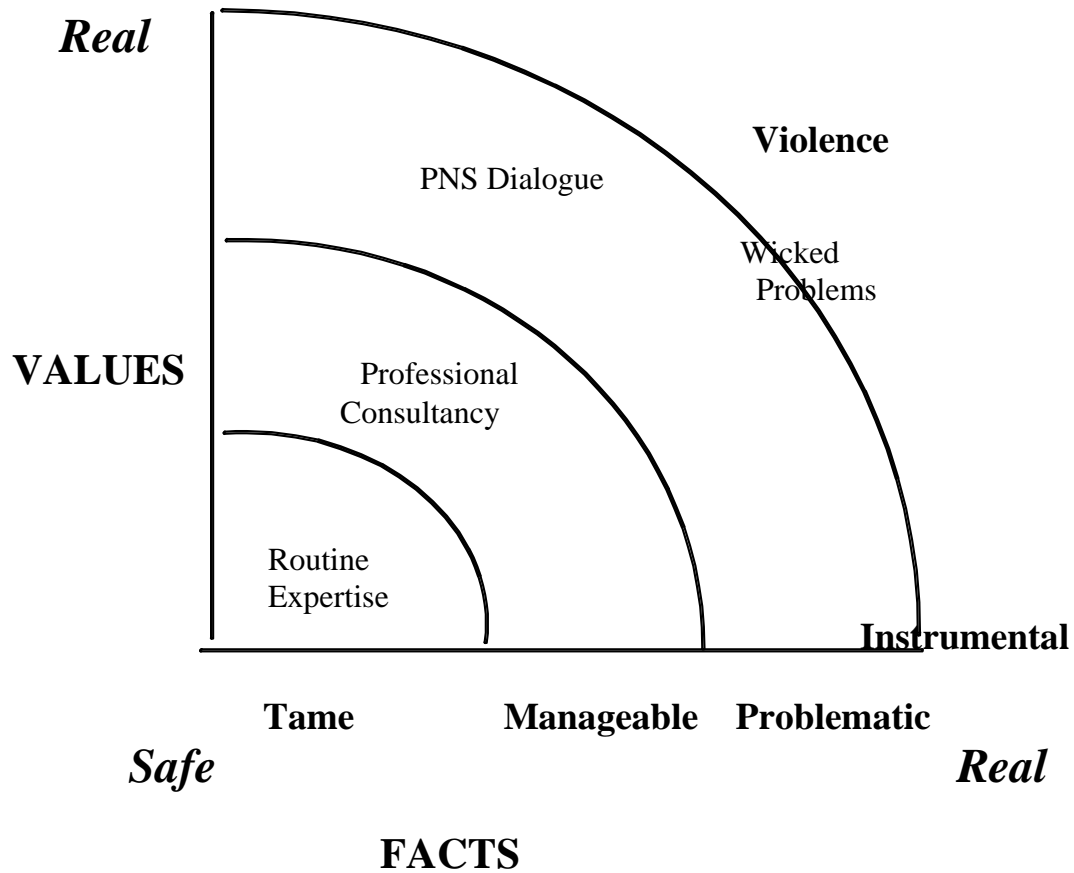
- The world has moved on - a lot.
- Some people still believe in Science as True and Good.
- But in the U.S.A. firms have been 'manufacturing doubt' for a long time.
- Everywhere science has become problematic, on many issues.

- My old warnings of: entrepreneurial, shoddy, dirty and reckless science, plus runaway technology - are being realised.
- We have notorious corruptions of big-business science.
- The mathematics of finance is as dangerously demented as that of nuclear warfare.
- There is the profoundly uncertain climate-change science.
- And there are counter-sciences, in alternative medicine and the nascent 'wiki-sciences'.

- Does PNS still have sufficient content to provide guidance, a quarter-century after its inception?
- What are the core insights?
- First, facts and values interpenetrate.
- Second, the case for democracy in science is based on methodology not sentiment.
- Finally, we have a quadrant-rainbow with continuous gradations, not a 2 X 2 matrix.

- What about the diagram? Is the shape itself iconic? Some have already altered the legends for their own understandings.
- I cannot believe in the original legend as remaining adequate for the life of the insight.
- There will be new interpretations, valid and fruitful. We cannot police PNS.
- I therefore offer my own modification.





Generalised Post-Normal Science 09\6

- I am well aware of the confusions and the contradictory tendencies that will necessarily emerge if PNS becomes popular.
- These are quite distinct from the misunderstandings and corruptions, which will also surely emerge.
- Having said all that, I recognise that there seems to be no alternative organising concept just now.

M.J.Kolkman, *Controversies in water management / frames and mental models*, Twente 2005

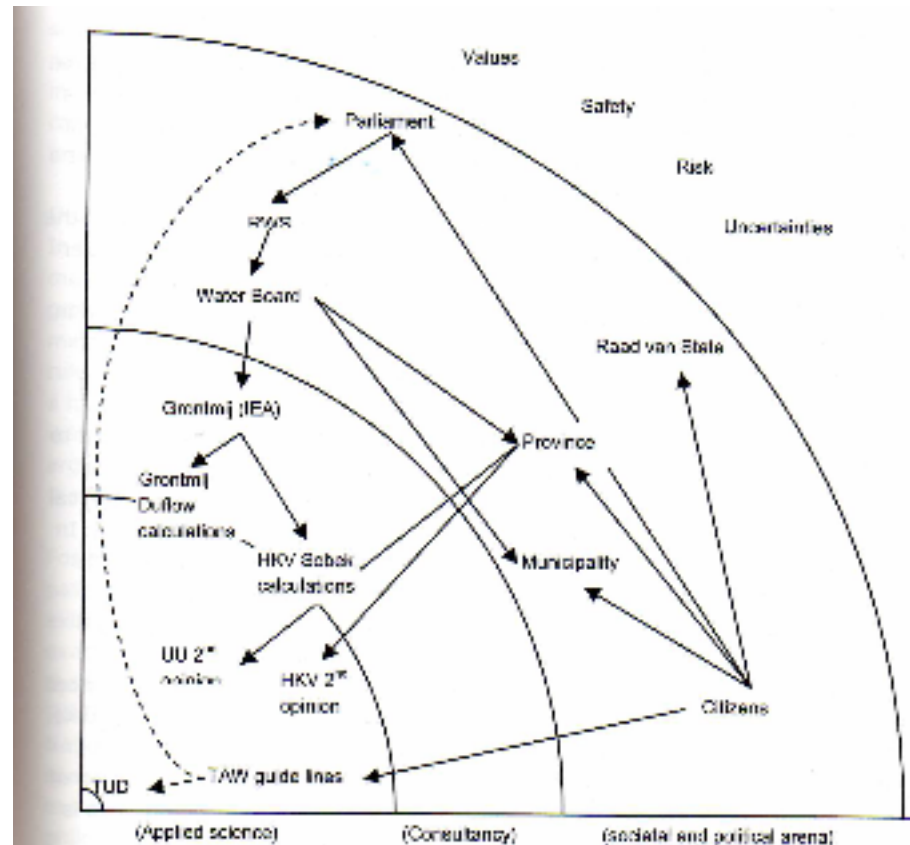


Figure 6-1: The trajectories of inquiry resulting from the controversies raised around the "Zwolle Barrier" issue. The trajectories are plotted in the three concentric communities of knowledge construction / discussion arenas introduced by (Funtowicz&Ravetz 1993b).

- I can only hope that looking back, people will see that the idea has done more good than harm!
- The children of the mind are like the children of the body. Once born, they grow up by a lot of their own being, and, if their parents could foresee their future development, it would sometimes break their hearts. -R.H. Tawney (1926)

- I have been learning so much from this workshop, that I have a new inspiration to re-think PNS and help to make it worthwhile for the future.