Propagation of the Absurd: demarcation of the Absurd revisited

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There has been a breakdown of the social constraints that limit the Absurd

Twenty years ago, the late Petr Skrabanek, physiologist at Trinity College, Dublin, noted the rising interest in sectarian medical schemes ("complementary and alternative medicine"; CAM), and lamented the lack of a clear "demarcation of the Absurd" in medicine.[1] He acknowledged that human irrationality, rather than being unusual, is an integral part of being human: "Even the greatest thinkers, Descartes, Berkeley, [and] Newton could not resist the overpowering pull of their own wishful thinking … ".[1] This principle, that irrationality is a normal human characteristic, is more functional than the stance that humans are exclusively rational.

The Absurd has gained a degree of agency and respect in some quarters of society through the CAM movement. Many complementary practices long known to result from magical thinking and observational errors are regularly trumpeted to be effective — based on new studies. The Absurd has been aided and legitimised through economic, social, and political currents. The internal pull of the Absurd has coalesced with external currents, forming a critical mass for the CAM wave to be propagated through the social system.

Observations on human isolation reveal how fragile is one's hold on rationality. In isolation (intensive care, etc), we can perceive internally generated stimuli and interpret them as emanating from external sources. These anomalies can be controlled simply through human contact and familiar surroundings.

We propose that, in a similar way, irrationality in clinical decisions and research is normally modified, neutralised, or controlled by feedback from surrounding colleagues. However, when irrational beliefs are shared with a surrounding community of sympathetic thinkers, errors become institutionalised. Thus are generated medical sects and cults that propagate the Absurd.

What has pushed institutions into the Absurd?

The guardians that usually keep the institution of medicine from reeling off into irrationality are social contracts built into medical science and ethical behaviour. The academic community guards the contractual borders of science, while laws and regulations encode our ethical system. For the Absurd to have advanced, there must have been some breakdown of these social guardians.

Postmodernism has promoted breakdown and reorientation of structured forms of thought. One of its guises is language distortion — the redefinition and use of words to fit personal views. For example, *alternative* and *complementary* have been substituted for *quackery*, *dubious* and *implausible*. Another is the invention of *integrative* medicine — designed to leapfrog methods into practice without need for proof.[2] In a recent commentary, one author redefined standard scientific indicators of efficacy as various *biases*.[3] Postmodernism creates an atmosphere in which absurd claims are accepted more readily because they have simply been renamed.

In the postmodern catechism, facts and science are artefacts of social constructions, and modern medicine expresses political hegemony over other, subjugated forms of healing,[4] such as naturopathy and homoeopathy.

Postmodern CAM also tolerates contradiction without need for resolution through reason and experiment, resulting in a medical pluralism. Various "schools" and philosophies of healing — each inconsistent with the others, such as chiropractic, homoeopathy, orthomolecular medicine, and traditional Chinese medicine — create a scientific multiculturalism. Implausible proposals and claims become tolerable and comfortable, and the CAM advocate's burden of proof is shifted to disproof by the science community, which that community accepts without major objection. These are constructions designed for propagation of the Absurd.

Medical teaching and practices reshape themselves in this atmosphere. Of 175 US medical school CAM courses, only four were found to teach critical analysis of absurd claims.[5] Public institutions follow. The US National Library of Medicine's MEDLINE abstracts some 30–70 journals largely devoted to CAM advocacy, and none devoted to CAM critique. The National Institutes of Health's website refers only to advocates, such as chiropractic and acupuncture guilds. They exclude well known critical and objective web pages such as those found on Quackwatch (www.quackwatch.org).

The new sociolegal order also shows breakdown of classical ethics. CAM followers declare it to be ethical to perform clinical trials on scientifically implausible treatments — merely because the treatments are popular.[6] In the United States, legislatures pass Access to Medical Treatment Acts allowing previously unethical practices such as chelation therapy. In 2002, the Federation of State Medical Boards set new physician behavioural guidelines that allow physicians to refer to, and work with, unscientific practitioners.[7] Outlier pseudomedical occupations such as acupuncture and naturopathy have gained licensure in several US states. As the borders of science and ethics broaden to accommodate these notions, the Absurd occupies its expanded social space.

Evidence-based medicine (EBM), relying on results of randomised trials, should be a bulwark against the Absurd. However, the heterogeneity of clinical trial methods and designs, differing population bases, and varying endpoints often result in heterogeneity of outcomes. This has precluded systematic reviews of CAM methods from defining a line of inefficacy.[8] EBM also does not include plausibility or consistency with basic science in its methods and reviews, leaving each to physician and patient

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interpretation. Moreover, there are no solid criteria for evaluating the quality of trials and reviews, especially for detecting erroneous, manipulated, and faked data.[9] Thus, most CAM systems remain in an indeterminate limbo state, awaiting enough negative clinical trials to return consensus opinion to the state of decades prior.

Can we demarcate the Absurd in science and medicine?

Skrabanek recalled Bevan's warning, also attributed to Galileo: "The aim of science is not to open a door to infinite wisdom, but to set a limit to infinite error".[1] If EBM fails to resolve the indeterminacy of dubious and absurd claims, routes can be found to re-establish borders, and limit error and infinite repetition of borderline results.

The most promising in our opinion is to adopt Goodman's suggestion for using a Bayes factor to express statistical results of reports on anomalous methods.[10] Goodman suggested assigning to each *P* value several values for the prior probability of the null hypothesis being true, and calculating the posterior probability for each value using Bayes' theorem. The results give the reader the choice of several levels of efficacy depending on the estimated degree of initial plausibility of the tested claim. A Bayesian guardian at the gate to determine which methods are plausible enough to be worthy of further study would at once help to clarify inconsistent trial results and create a saving in clinical trials expense. It would certainly have met with Petr Skrabanek's approval.

Competing interests

None identified.

References

1 Skrabanek P. Demarcation of the Absurd. *Lancet* 1986; 1: 960-961.
2 Sampson W. Antiscience trends in the rise of the alternative medicine movement. In: Gross P, Levitt N, editors. Flight from science and reason. Baltimore: Johns Hopkins University Press, 1998.
3 Kaptchuk T. Effect of interpretive bias on research evidence. *BMJ* 2003; 326: 1453-1455.
4 Morris D. Illness and health in the postmodern age. *Adv Mind Body Med* 1998; 14: 237-251.
5 Sampson W. The need for educational reform in teaching about alternative medicine. *Acad Med* 2001; 76: 248-250.
6 Miller FG, Emanuel E, Rosenstein DL, Straus SE. Ethical issues concerning research in complementary and alternative medicine. *JAMA* 2004; 291: 599-604.
7 Federation of State Medical Boards of the United States. Model guidelines for the use of complementary and alternative therapies in medical practice. 2002. Available at: http://www.fsmb.org/pdf/2002_grpol_Complementary_Alternative_Therapies.pdf (accessed Nov 2005).
8 Furlan AD, van Tulder MW, Cherkin DC, et al. Acupuncture and dry-needling for low back pain (Cochrane Review). *Cochrane Database Syst Rev* 2005; (1): CD001351.
9 Flamm BL. Faith healing by prayer: review of Cha KY, Wirth DP, Lobo RA. Does prayer influence the success of in vitro fertilization-embryo transfer? *Sci Rev Altern Med* 2002; 6: 47-50.
10 Goodman S. Toward evidence-based medical statistics. 2: The Bayes factor. *Ann Intern Med* 1999; 130: 1005-1013.

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