**REFLECTIONS ON**

**GUNTON PRESUPPOSITIONS, FAITH AND STATISTICS: AN ECOLOGIST VIEW**

**M BURKE**

***m.e.burke@salford.ac.uk***

**DISCUSSANT**

**AFFIRM**

The author has concerns about the Christian way of teaching and applying statistics in Universities today. He has worries that stats may be taught in a way that encourages “everything can be reduced to numbers” kind of attitudes and that this precludes a belief in God / our Creator. He concludes that Subjective Bayesism is the way forward.

**CRITIQUE**

The paper looks at perspectives of the teaching of statistics. The author has a desire to know the true value of a quantity and to use this knowledge to enhance decision-making. The author is worried about how methods or schools of thought about stats reflect on the accuracy of beliefs and the justification of actions. The author discusses the “School of Frequentism” (Hartley) whereby

1. Beliefs and justification are reduced to numbers (or at least numerical functions)

BUT

“School of Bayesian” thought is that

1. Statistics tends to “infer” that statistical inference is based on a prior belief.

Consideration is given to four statistical paradigms, as follows:

* Indirect frequentism – induce beliefs direct from maths equations
* Direct frequentism – assumes that an expert can “come in”

 and change the decision (expert knowledge)

* Indirect Bayesians – Instead of maths being seen as always correct and equal, this school starts from a prior belief.
* Subjective Bayesians – Acknowledges radical differences.

**ENRICH**

This work could be enriched by the use of empirical evidence. A survey could be done (maybe longitudinal) of students taught both schools of thought to find out if opinions change or are influenced by the assumptions outlined in the paper.

Other comments / questions / thoughts

1. Bayes was around in 1763 ish – what happened about this problem prior to that time?
2. Do you think that the first view (Frequentism) leads to views held by Dawkins and Hawkins etc?