

Greg Crow

Point Loma Nazarene University

A Mathematician at the Science and Theology Book Club"

The book club I am here to discuss has no formal membership roll and has been called by several names including *the Faculty Discussion Group* and *the Science and Religion Discussion Group*. When I joined them, in the summer of 1993, the group consisted of about six or seven people. A typical meeting would include two physicists, a couple of biologists, a Renaissance man from the community and myself. When a new dean came to town, he started buying lunch for the group—albeit cold sandwiches in the cafeteria. Attendance changed from 8 or 9 to a situation where we start most semesters with 25 seated around the table. Even in the middle of summer, the gathering last Monday consisted of representatives from Biology, Chemistry, Economics, History, Literature, Mathematics, Philosophy, Physics and Theology.

The types of subjects studied are illustrated by a brief list of some of the books that we have read:

Portraits of Creation by Howard J. Van Till et al.

The Whole Shebang by Timothy Ferris

John Polkinghorne's *Science and Providence*

Karl Barth's volume on *The Doctrine of Creation*

Darwin's Dangerous Idea by Daniel C. Dennett and

Whatever Happened to the Soul edited by Brown, Murphy, and Malony

When I started, we were reading cosmology, origins and the history of science. The subject matter has tilted more toward theology. It is needless to say, but the collection of ideas that flow out of these books is not easily mastered.

Having the context in hand, the first question to be answered is "What contributions can a mathematician make to such discussions?"

Occasionally one is asked a question such as “Is non-Euclidean geometry embodied?” This is a bit sticky to answer, because the Aristotelians in the crowd want a direct “Yes” while the Platonists in the crowd want a discourse on the abstract nature of the practice of mathematics. There are other times when our particular skills are useful in sorting out the definitions used by an author of terms such as Highly Ordered (short algorithm) and Highly Organized (long algorithm). That is, we have been called on to discuss algorithms and information content.

A mathematician masquerading as a probabilist can inform the group on the difference between what Polkinghorne calls Tame and Wild Chance. We can serve the roll of pointing out that probabilistic calculations are reasonably difficult when the situation is well understood, let alone with speculation mixed in. I am happy to report that a discussion in Dennet’s book even led to the rare event where a brief discussion of minimal surfaces broke out. In general though, we do not find ourselves making major substantive contributions to the discussion.

A second question is “What contributions can such a group make to a mathematician’s understanding of the Interaction of Science and Theology?” To answer the question let me give several examples:

The vocabulary alone would be worth the ride. Where else would one learn of the difference between a pantheist and a panentheist? Words such as Lakatosian, dualism, paradigm shifts, and non-reductive physicalism now roll off our lips with a shared understanding of their meanings.

A second contribution to our understanding is that of providing a model from which to judge research agendas. Imre Lakatos’s methodology is just such a framework. We can examine the auxiliary hypotheses that guard the core theory that a researcher holds to and observe as novel predictions are made and eventually perhaps unexpected facts are found to exist. This model allows us to examine and evaluate attempts at reconciliation or unification of scientific and religious world views.

A third contribution to my understanding is that of cracking the door to see through to the various scientific and theological bodies of knowledge. This is a wonderful earth on which to live and we have an incredible Savior in whom we live and move and have our being.

A final contribution is by way of an admonition:

It is a disgraceful and dangerous thing for an infidel to hear a Christian, while presumably giving the meaning of Holy Scripture, talking nonsense. We should take all means to prevent such an embarrassing situation, in which people show up vast ignorance in a Christian and laugh it to scorn.... If they find a Christian mistaken in a field which they themselves know well, and hear him maintaining his foolish opinions about Scriptures, how then are they going to believe those scriptures in matters concerning the resurrection of the dead, the hope of eternal life, and the kingdom of heaven?

—St. Augustine, *The Literal Meaning of Genesis*, Book 1, Ch. 19

(Quoted by Francisco J. Ayala in Chapter 2 of *Whatever Happened to the Soul* by Brown, Murphy, and Malony)