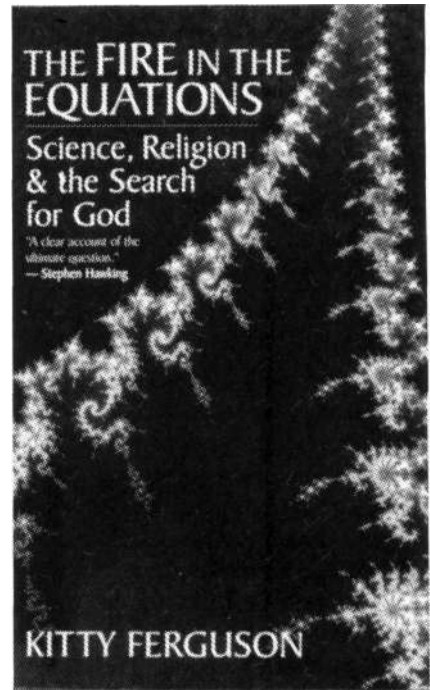


The Fire in the Equations: Science, Religion and the Search for God

by Kitty Ferguson
William B. Eerdmans Publishing Company,
Grand Rapids, Michigan

Reviewed by Carl Wieland



This is one of the increasingly common genre of books so beloved of the Templeton Foundation. That is, one which tries to find some new 'religious meaning' compatible with all of the scientific conclusions of today (especially evolution). Not surprisingly, such works (which invariably dismiss Biblical authority, implicitly or explicitly) seldom consider that these conclusions are often (for example, macroevolution itself) based upon a chain of reasoning which begins, arbitrarily, on the anti-Biblical presuppositional foundation of materialism. Such authors therefore set themselves a heroic task — to try to establish a non-materialistic conclusion upon a materialistic base.

The blurb on the dust jacket assures us that Ferguson has definitely disposed of the tiresome argument that science has done away with religion. It also contains the comment by Anglican physicist (and renowned theistic evolutionist) John Polkinghorne that the author *'weaves together science, philosophy, and theology with verve and clarity'*. This is the same John Polkinghorne of whom Phillip Johnson points out that his 'God-of-the-gaps' theology has defined God almost into non-existence as the 'lighter of the fuse of the Big Bang', as it were.

However, the glowing commendations on the cover do not mislead when it comes to the clear, 'simple yet profound' writing style. Reading this book would help Christians concerned with Bible/science intellectual issues

in a number of ways.

Firstly, they would obtain some very engagingly explained insights into some of the 'big picture' issues of modern science — cosmology, chaos and complexity, quantum theory and so on — in a way that is genuinely enjoyable for the non-specialist.

(Ferguson herself was trained in music, but that is by no means a put-down. Reading this book allows one to appreciate how her grasp of her secondary passion, science, enables her to now make a living as a full-time scholar and lecturer on the subject.)

Secondly, those who are actively engaged in creation/evolution apologetics can never, in my view, obtain too much insight into the philosophy of the scientific endeavour in order to help dispel some of the common mythology which surrounds it. Ferguson, despite weaknesses in some areas, excels in explaining this, also.

Thirdly, this book would help one to become immune to any premature excitement about future comments (by successors to Davies, Hawking *et al.*) reported to be evidence of 'scientists coming closer to God' or seeking 'the mind of God' and the like.

Ferguson is adept at maintaining a stance of apparent scholarly neutrality, dancing back and forth with ease between the starkly atheistic conclusions of a Dawkins and the theistic 'loopholes' of a Polkinghorne. However, one gets the impression that her innate preferences (presumably on the basis of her upbringing) lie with a

deity at least somewhat akin to the Biblical God, even though she claims in an entire chapter that Biblical evidence is inadmissible.

She occasionally speculates freely about such things as miracles occurring without God interfering in the physical laws. When she does so, her reference is often to Biblical miracles — Joshua, Jonah and the Resurrection, for example. She asks — could these simply be the permissible, but highly unlikely exceptions to natural law, akin to extremely improbable molecular fluctuations causing temporary, localised exceptions to the Second Law of Thermodynamics, for example? Could God have set the Universe up in such a way from the beginning that these exceptions were 'built in'? Her aim is not so much to conclude, but to take the reader on a tour of all possible options, as it were.

Many readers may have never stopped to consider the matter she raises on page 24, namely, that certain 'constants of nature' (for example, the mass and charge of the electron and the speed of light), while they can be

measured exactly, cannot be predicted from any current theory. They are therefore still 'arbitrary' —they just are. A fascinating excursion (which will come as no surprise to readers of David Malcolm's articles in this journal) is her discussion of the way in which mathematics, which we tend to think of as the most exact and non-arbitrary element of science, requires a leap of faith —

'truth goes beyond our ability to prove that it is true'.

As she puts it:

'One definition of religion has it that a religion is a system of thought which requires one to believe in "truths" which can't be proved'.

If that's what a religion is, she says, then according to Godel's Theorem,

'Mathematics is a religion. In fact, mathematician F. De Sua has remarked that it seems to be the only religion that has proved it is a religion'.

Not surprisingly, but sadly nevertheless, Ferguson presumes without question that the Darwinian framework held by such as Dawkins is totally true. Yet at the same time she still tries to (cleverly, but in this reviewer's opinion in vain) find a loophole in there somewhere for a god, one who could have planned the whole show.

Of course, it is not difficult to be a speculative apologist for a 'god' of one's own imagining, one who is infinitely flexible, and who could have even (she would dare you to disprove it) set the whole game up so as to deliberately engineer for the universe to make itself in such a way as to look as if this god had no part in it. (Akin to the notion that the universe was created three days ago with built-in histories and memories, etc. — bizarre, but beyond empirical disproof.)

The problem is, such a god, because he (she/it?) could possibly be anything and have any variety of characteristics, is effectively meaningless. Such a god cannot provide an absolute standard of right and wrong,

and (having presided over eons of death and suffering for no apparent reason) is unlikely to be concerned about such trivia as human wrongdoing. Such a deity, therefore, is at most a convenient security blanket for those occasions when one finds it hard to cope with the apparent meaninglessness of the universe presented by humanistic science. While at the same time, that very humanistic science, by its cloaking of the true God Who is there, becomes a convenient deadener of the conscience concerning our inborn affront to the same Holy Creator God.

Concerning mutation/selection as a mechanism for evolution, Ferguson claims that

'biologists are able to demonstrate that there has been ample time even given the extreme slowness of the step-by-step process' (page 156).

This is mind-blowing in light of the prestigious Wistar Institute Symposium in 1967, when leading mathematicians and evolutionary biologists got together to thrash out this very question, using the then latest Cray supercomputers. With the most favourable possible assumptions for evolution, and given the postulate of randomness for mutations to arise, the numbers didn't so much crunch as jam up. Billions upon billions of times longer than the proposed 4.5 billion years of Earth history would have been required — and one of the convenors, Professor Murray Eden of MIT, certainly no creationist, indicated that one would need to look for new physical laws to explain the evolutionary process in light of those results. To the best of the creation movement's knowledge (which would certainly have its nose rubbed into any evidence subsequently neutralising such findings) that conclusion still stands today.

She says (page 157) that *'the fossil record provides supporting evidence'* (for evolution). Yet a few lines further on she says,

'But gaps in the fossil record also provide interesting and telling evidence of the way the

evolutionary process works'.

I think many evolutionists would join me in taking her to task for her conclusion (allowing her belief in evolution for the sake of the argument) that, given the existence of a god and given that evolution works in the commonly presupposed way,

'Not only would God have been able to "create Man" through evolution, God would have had to do some fancy manipulation behind the scenes in order to change his mind and PREVENT such a creature from emerging.'

I can see Stephen J. Gould vigorously shaking his head — and I would agree with him. If evolution were true, then by its sheer nature, there is absolutely no reason why, if the tape were played again, something like man would have to inevitably appear. To the contrary, it would be most unlikely for that to happen. Consistent evolutionary thought allows for no inherent 'ladder of progress'; such ideas are a wistful remnant of the Christian concepts of man as the crown of creation and time as directionally goal-oriented.

Ferguson quotes a prominent science historian as debunking a common myth about Darwin. Namely, that there he was in the Galapagos, patiently collecting facts which were waiting there for him to process, and which pointed *'unequivocally toward a new theory'*. Apparently, even Darwin recognised that *'the constitution of a relevant fact depended on prior expectation'*. In other words, you are likely to find what you are looking for, and as Gould put it (in **Ever Since Darwin**), facts are read in the light of theory.

The author amplifies this in some detail; even decisions about how we look and where we look are affected by our presuppositions. For example (page 40):

'Points of view also come from sources we think of as having less legitimate right than scientific technique or theory to influence what we find with our science, things more insidious and harder to control: individual preference,

cultural conditioning, religious or antireligious belief, political and economic interests, our value system, the spirit-of-the-times, the current fads in science'.

Yet she appears to be perfectly blind to the obvious possibility that, if the Bible (with which she shows more than passing familiarity) is correct, man is intrinsically biased against God; and thus we have the most fertile possible ground for the establishment of a creature-worshipping system of belief in self-creation (evolution); a great recipe for how to end up with today's scientific culture, straight-jacketed by materialistic presuppositions.

And here is ultimately where she founders philosophically, no matter how adept her navigational skills — she is attempting to find room for anti-materialist thought modalities within a scientific framework squarely based upon materialist presuppositions.

Her dismissal (not cavalierly, but almost with a touch of reluctance) of the evidence of Scripture seems, ultimately, based on nothing much stronger than the fact that the majority of believers do not regard the Bible as inerrant. However, the main reason for this endemic unbelief is the widespread propagation of the very sort of humanistic, evolutionary science which has so undermined Genesis in the eyes of many believers. I couldn't help but speculate how interesting it would be to have Ferguson engage in a compulsory, intensive discussion over several days with a number of bright creationist thinkers. One would try to take her back to a different presuppositional basis, and then apply the same consistent logic which shines throughout most of her book. The purpose would be to try to show her how radically different her conclusions would be, if she would, even if only for the sake of argument, presuppose the truth of Genesis and therefore by extension the inerrancy of the total Scriptures.

Her grasp of the state of play of present-day orthodox science is excellent. But the emphasis is on 'orthodox'. For example, on page 23,

referring to the current expansion of the universe, she says, *'No one today seriously contests it'*. Thus she is either unaware of, or unwilling to face the implications of, the work of her countryman Tift and others (on quantised red-shifts) which challenges the very notion of an expanding cosmos. However, let us give her this assumption of universal expansion. She then states, *'Unless something has changed dramatically in the past'*, one can extrapolate back to a single, infinitely dense point of beginning. Much of her subsequent reasoning presupposes this alleged 'singularity' at the beginning, but it is obvious that she has *a priori* dismissed the Biblical account of **fiat** creation, which from the point of view of someone looking back in time, is precisely the sort of dramatic change in the past which is the subject of her 'unless'.

In any case, her 'unless' clause seems to be just a rhetorical flourish while getting to the point of a Big Bang beginning, so as to go on to the next phase of discussion, as quickly as possible. At this point, among others, her seeming 'neutrality' breaks down, belying the impression that she is prepared to go anywhere and everywhere the evidence might lead. It is not clear of course, whether Ferguson herself would be aware of this intrinsic anti-Biblical bias, because she is so thoroughly, as Goethe put it, a child of her times.

As she herself appropriately says: *'We're all to a certain extent prisoners of the mind-set of our culture and time in ways so inherently part of us that none of us can discern exactly how we and our science are influenced. It's easier to see biases in other cultures and historical eras than our own, but we can't look thoughtfully at human history and come away believing that our own culture is for some reason the exception — free of biases that affect our perception of the world!'*

If only she saw the bars of her own intellectual prison.

On page 99, she repeats the

common myth of the Big Bang theory having **exactly** predicted the cosmic abundances of elements, seemingly oblivious of the 'twiddling of the knobs' required to 'fine tune' the predictions to make them match observed reality, particularly within some stars.

She also uncritically accepts the so-called 'ripples' in the cosmic microwave background, which caused so much excitement, as confirming the big bang; in spite of the fact that they turned out to be rather trivial, certainly not the Holy Grail they were made out to be in media reports.

She says (page 74) in a classic example of autonomous humanist reasoning, that

'it is not at all unreasonable to think that if there is a god, he would be better served by trying to falsify him, and failing, than by trying to prove he exists'.

In fact, she has it gloriously upside down. The God worshipped by Christians has indicated that any who would come to God must first believe that He exists (Hebrews 11:6).

Her understanding of chaos/complexity theory is excellent for a non-specialist. However, discussions with qualified people in the relevant disciplines lead me to conclude that it is wishful thinking — albeit widely shared — to hold that such things as eddies in flowing water give us hints of 'self-organisation' which is 'inevitable in the midst of chaos — a trend as strong as, perhaps even stronger than, the increasing disorder (entropy) brought about by the Second Law of Thermodynamics'. This fantasy recurs on page 274 where she says,

'Even our depressing vision of a universe running down as an inexorable increase in entropy is being replaced by a picture that also shows us self-organization on every scale'.

Given all the preceding caveats, this book is profoundly well worth the read. The believer who is armed with the appropriate presuppositional filters of consistent creation-based Biblical

Christianity will not be swayed by, but rather will enjoy greatly, and learn from, this masterful (yet eminently understandable) exploration of the limits of human reason.

Having enjoyed and appreciated

the immense flexibility of the author's mind, however, the most powerful impression this book left with me was of a sad, grim monument to the futility of attempting to play at 'reaching God' via humanist thought patterns. Man,

reasoning autonomously, unfettered and unguided by any 'givens' from divine revelation, must forever stumble and grope through a maze hedged by an array of doubt, vagueness, mysticism and wilful unbelief.

**QUOTABLE QUOTE:
Evolution is Idolatry**

'In our own times idolatry, which was a universal substitute for the creator God, has been replaced by the widely held theory of evolution. Both are substitutes for the concept of the creator God. Just as the ancients and the heathen today deified and worshipped the creature as the creator, modelling images of man or birds or animals or reptiles and worshipping these, so for western secular man the modern theory of evolution deifies nature, and acknowledges it as creator of all we see around us. All the beauty and intricacy and all the marvellous arrangements of the natural world are supposed to have been evolved by a thoughtless, purposeless, mechanical operation of nature, and in this way the God who made the world is as effectively shut out of the minds of those who are enjoying the blessings of His creation as He was by the false religions of idolatry. Just as the idolators could not see the foolishness, indeed the stupidity, of worshipping gods of wood and stone, which have no life nor purpose nor mind, so modern believers in the theory of evolution cannot see the foolishness of that theory, which not only lacks evidence to support it, but also runs counter to such evidence of origins as is indoctrinated into children in the schools with the aid of public money and placarded in natural history museums as though it were the only explanation of the world around us, while those who criticize and expose the theory receive the same intense religious hostility as did those who denounced idolatry in earlier days. The Bible says that if we refuse to have the creator God in our mind, God gives us up to a reprobate mind.'

Knox, D. Broughton (Former Principal, Moore Theological College, Sydney), 1988. **The Everlasting God**, Lancer Books, Homebush West, NSW, pp. 30-31.