

Stars, Life and Intelligence:

Being a Darwinian and a
Believer

Terry Kelly SJ



Adelaide

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Introduction

Chapter Overview

- Is the question purposeful creation or evolution?
- The wonder of evolution
 - * Only a theory?
 - * More than chance?
- Science: a powerful but limited discipline
- Chance or God? A false dilemma?
- Plan of the book
 - * The story of evolution
 - * Philosophical and theistic reflection on evolution

1. Purposeful creation or evolution?

There is a simplistic mantra around today linking evolution and religion. It is reducible to a logical dilemma.

Either a purposeful creation or natural selection

Natural selection, Yes

Therefore purposeful creation No .

A convincing case can be made for the operation of natural selection in the process of evolution. Seemingly this adds strength to the above logical dilemma. If one equates creation to a literal account of the first chapter of the book of Genesis, one would have to agree with the conclusion of the dilemma. However, the Genesis account was put into its final form about two millennia before the advent of science as a serious discipline. It is an affirmation of the supreme mastery of God over the material universe in the context of the geography and cosmology of 2500 years ago. One needs to look beyond the primitive science and work out if the religious assertion can be intelligible when considered alongside the scientific picture of today. One needs first of all to abstract the religious assertion from the accompanying primitive science and ask whether the religious assertion can sit well with today's science.

2. The wonder of evolution

2.1 *Only a theory ?*

The story of evolution by natural selection is ultimately a theory, but much more than only a theory . Fossil evidence dating back over three billion years shows in retrospect an evolving scenario from primitive cells to many sea based organisms, ever more complex with time, then to land based organisms which subsequent to evolutionary changes were made more able to explore and colonise the land. Eventually there was a very rapid transition to full intelligence. The fossil evidence is well confirmed by DNA studies. Comparing DNA sequences of different animals can show investigators when species diverged. As the whole process is guided by the laws of nature as well as by chance, one can say the process is evidence of purpose. Then one can ask the question: is God involved in this? One view stops at science and says the combination of the laws of nature and chance is the only

necessary explanation. God is superfluous. As Laplace said to Napoleon, 'I have no need of that hypothesis'.¹

2.2 Chance not a sufficient explanation

Others look at the laws of nature and enquire firstly why they are mathematical and wonder about an overriding intelligence to fashion such laws. Secondly why are the laws fitted to cause such a remarkable series of transitions? The possibility of chance mutations can be associated with a property of DNA whereby elements can swap positions and do so with a certain amount of regularity. The laws then select the advantageous changes. Only favourable chances are selected. One can say, with this variety of chance there is a power and designer at work. Chance-laden DNA and Nature's Laws are the work of the one God.

3. Science powerful but limited

Science is a powerful discourse; it has unravelled for us the workings of nature, and technology has enabled us to apply the findings in many ways to further advance knowledge, to perform complex tasks, to further communication, and to make life easier and more exciting. But there are boundaries and limits to science. Firstly, the final models of how nature is working are never the final word; they are always awaiting 'falsification', never blessed with certain 'verification'. Secondly, the deeper one goes towards hoped-for truth the more one is confronted with counter-intuitive models such as quantum theory, spooky action at a distance, dark energy of the vacuum, the Big Bang. Thirdly, science cannot advance beyond the questions accessible by scientific experiment. Questions about purpose and God, right and wrong, good and evil, are not accessible to science. Scientific conclusions, however, can then be subjected to reasonable analysis, philosophical reflection, aided perhaps by religious beliefs.

4. Chance or God? A false dilemma?

Is the above dilemma a false dilemma? Can purposeful creation and natural selection both be true?

Such are the features of evolution, one can argue strongly the case for a purpose. One can at least say belief in God sits well with evolutionary theory. To come to this conclusion we need to extend and improve our image of the God of Abraham, Moses and Jesus. God is intelligent, subtle, powerful a respecter of the freedom with which the Divine will has endowed creation itself and *homo sapiens*.

Either a purposeful creation or natural selection is, therefore, a *false dilemma*. A case can be made out for purposeful creation via natural selection.

5. Plan of the book

5.1. Part 1: The story of evolution

As many students do not study biology, and hence lack acquaintance with evolution, the first five chapters of the book are involved with expounding the agreed features of the evolutionary process. In the first chapter, there is a brief account of the general evolution of the Cosmos, and a more detailed account of the formation of the Earth which sets the scene for coming journey of life. Chapters 2, 3 and 4 take the reader from the first cell, to the Cambrian Explosion in the depths of the sea, to the emergence of vertebrates from the sea to the land, and their consequent development in the new environment. Chapter 5 is the story of the rapid progress from the first bipedal ape to *homo sapiens*.

5.2 Part 2: Evolution and theism

The next five chapters are involved with evolution as a process, and philosophical and religious reflection on the process. Chapter 6 analyses the laws of nature and chance. Chapter 7 describes Darwin's experiences and his theory of evolution by natural selection. The slow acceptance of natural selection is mentioned and the question of evolution in the theory of evolution itself is raised. Chapter 8 examines carefully how evolution by natural selection is consonant with God as a Designer. It

1. Je n'avais pas besoin de cette hypothèse-l. Well known response to Napoleon. Rouse Ball, (1908). Accessed 2/5/2009: *Pierre-Simon Laplace*. Wikipedia.

further considers the laws of nature, and then outlines views of selective theistic biologists and other academics. Chapter 9 looks at the Christian God in relation to evolution. It discusses how to interpret the various creation accounts in the light of scriptural research and modern science. Following this, it treats Deism, Yahweh the God of the Jews, Intelligent Design, and begins a discussion of Jesus.

The final chapter is an explanation of Jesus' mission, what he meant by the kingdom of God in relation to miracles, incidents, parables, leading in the end appropriately to the final kingdom as spoken about by Jesus and in the Book of Revelation. The beginnings of the kingdom on Earth and its fulfilment in the 'new heaven and the new earth' are the ultimate goals of evolution. Natural selection finishes with the arrival of *homo sapiens* who then is constrained freely to undertake to build the kingdom and await its final revelation.

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