

## **Wrong fight, wrong concepts, wrong everything.**

W Grainge Clarke

W Grainge Clarke BSc(Hons) BEd MA DipRE MACE is a retired senior lecturer in science.

---

### **Abstract**

What appears to be a dispute between science and religion has little to do with the truth of either. Rather it reflects philosophical confusion with respect to the nature of science, the meaning of creation, the nature of scientific methods and the concept of proof. The true centre of the conflict lies not in the facts of science, the theory of evolution or the Biblical text itself but in a philosophical decision. For reasons that will be discussed, the decision as to whether the universe is an open system on which a Deity can act or a closed system on which neither God nor autonomous man can act cannot be based on scientific evidence.

### **Key Words**

Closed system, creation, evolution, intelligent design, mechanism, open system, philosophy of science, purpose, scientific methods.

### **The nature of science**

The great strength of science is, or perhaps was, its experimental nature. Many people believe that science proves every thing by experiment. This of course is impossible. All forms of knowledge depend on some unprovable, even hotly contested, philosophical presuppositions. There are many such assumptions in science (Clarke 1965), a *few* of which are:

1. The existence of the scientist, of other scientists and the Universe;
2. That the human mind is capable of rational thought;
3. The uniformity of nature — that is to say, if an identical experiment that was carried out today had been carried out yesterday, 10,000 years ago or in a hundred years time, the results would be identical. That is that the universe is orderly;
4. That the Universe is coherent, and in part at least, intelligible. This is closely related to assumption (2) above;

5. That the scientist is capable of interpreting the sense data which he has received from the world outside<sup>1</sup>;
6. Certain ethical qualities of honesty, respect for truth, etc., in the observer;
7. Certain special presuppositions directly related to the subject in hand, for example the Axioms in Geometry.

To this list I would now add one more:

8. The existence of objective truth as distinct from only subjective truth as held by Post-modern exponents and some eastern religions.

These presuppositions are, by their nature unprovable, and some philosophers would consider them unacceptable. Behind the acceptance of these presuppositions lies the fact that modern science developed when the dominant worldview in Europe was Christian. If the Christian worldview is accepted they all make reasonable sense. However on the atheistic worldview, that all is the product of matter-energy, time and chance, then none of these presuppositions are justifiable. To consider just one case: 'The human mind is capable of rational thought'. If the human mind has been developed solely by non rational forces then there is no reason to believe that it can be rational and certainly it is not to be relied upon. Consider two computers one of which was designed and assembled by the IT staff at the local university and the other by the local kindergarten. Which is most likely to function well? Yet the kindergarten children have much more intelligence than blind chance.

Someone will object that scientific discoveries work so well that the presuppositions must be correct. Indeed this seems very likely, but if the presuppositions appear to be effective then it is almost certain that the Christian worldview upon which they depend is also true. Indeed the more closely scientists approach the truth; the more it reinforces the Christian, or at least a Theistic worldview.

The formulation of a scientific theory depends upon hypothetico-deductive reasoning (very much the type of reasoning that Sherlock Homes uses except that in science we are dealing with a general not usually a specific case). This type of reasoning, like inductive reasoning, can be disproved but never proved. As Popper points out (Popper 1968 pp. 40–41) a good scientific theory must expose itself to the risk of falsification and withstand the test. It can never be proved. As part of this process it should make testable predictions. It should also aid further research. Scientific theories

---

<sup>1</sup> This point needs further explanation. Even the sense of sight needs training and experience to interpret the data received by the eye. In general we perceive what we expect. If one is confronted with an entirely new situation then the data is often misinterpreted. The difficulty that first year students have on first using a microscope is a well-known example of this. Likewise, when English painters first tried to paint Australian gum trees they represented them in the form of the familiar European trees. Presumably this is what they perceived, because this was how they expected trees to appear.

are not static truth but are modified as new discoveries are made. If no modifications are made to a scientific theory it means that little or no research is being done in that area. It may be out of fashion or funds may not be available for the necessary research. To insist that a scientific theory is a fact is nonsense, because theories and facts are formulated by different logical processes. A scientific theory may be confirmed as a result of testing and so accepted as valid or it may be falsified.

The theory of evolution is a brilliant theory. It has enabled a systematic understanding of vast quantities of scientific knowledge. It has done for biology what the Periodic Table did for inorganic chemistry. It has promoted further research.

From the point of view of the philosophy of science, its one problem is that it is now so extensive that even if some mythical creature like a centaur were to be discovered it would not be too difficult to postulate a mechanism for its evolution. That is to say it is difficult, or impossible to falsify the theory. Popper suggests (Popper 1974 pp. 133-43) it has become a metaphysical research programme.

A general does not enhance his chances of winning a war by trying to attack an unimportant and strongly defended, almost impregnable fortress. This is what many leading Christians are doing when they attack the theory of evolution and demand it be not taught in science lessons.

## **Clearing the ground: Two red herrings**

Neither of these diversions have any major bearing on the questions of how and why the universe and life were created.

### **1. The age of the universe**

The evidence for the age of the universe is confirmed by so many diverse disciplines that it is reasonable to say that geological calculations have been confirmed beyond reasonable doubt. The age of the earth (US Geological Survey 2004) and solar system has been put at 4.5 to 4.6 US billion (thousand million) years. The attempts to challenge this by so-called 'Creation Scientists' are very unconvincing to most who have examined them. The age of the universe is calculated at from 7 to 20 thousand million (US billion) years. There is evidence of a stellar explosion 12.8 thousand million (US billion) light years away (O'Hanion 2006). So the universe must be older than 12.8 thousand million years. The oldest known star (Whitehouse 2002) is the giant star HE0107-5240. Because it is almost metal free it is thought to be from the first generation of stars after the Big Bang. It is claimed to have been formed about 14 thousand million years ago.

The only possible escape from the evidence for a very old earth and a yet older universe is to claim that the universe was created with apparent age, just as a railway modeller may make his layout appear much older than it is. This escape may remove the scientific problems but it creates serious theological difficulties.

## **2. The brilliant theory of evolution**

Wallace and Darwin independently developed the theory of evolution and their results were presented at the same time. Wallace is believed to have been a Christian and Darwin was planning to become an ordained Church of England minister. Certainly, at this time neither was an avowed atheist.

The theory of evolution itself is a most useful theory. Like all theories it gathered together a lot of apparently unrelated facts in such a way as to produce an overall picture that accounts for the data. This logical process is known as hypothetico-deductive reasoning, or just abduction.

### **There are a number of different aspects to the theory of evolution.**

There is urgent need for some light on the issues! The early opposition in the church to the theory of evolution was by no means universal. However the alleged disgraceful behaviour of Bishop Wilberforce would not have helped the cause of careful analysis and consideration. Some leading scientists seized the opportunity to use the theory as a 'stick with which to beat the theologians'.

Evidence that all life is related is strong. While the evidence from palaeontology is incomplete some very good fossil series are known to exist.

Evidence that all life is related is increasing at a rapid rate, particularly in the area of genetics. The cells of all higher organisms are extremely similar. While there are some differences particularly in the nature of the cell wall the general structure of plant and animal cells is similar. Genetic material has been transferred between phyla and been able to function. Some cases of successful transfer are reported even between kingdoms.

The sum total of the evidence that one species has changed into another is so great that it can be stated that on the balance of probabilities it has been confirmed. (Remember scientific theories are not proved but can be strongly supported.) Further this can be extended, with only slightly less confidence, to higher taxa. I strongly suspect that if it had been possible to film life on earth from the beginning, one would have seen something very like evolution occurring. All the traditional evidences for evolution, with the probable exception of the claim that 'ontogeny recapitulates phylogeny', remain worthy of careful consideration.

On the other hand the proffered theories for the origin of life remain the source of claim and counter claim, ranging from the 'small warm pond' to extra-terrestrial sources. Of course the extra-terrestrial theories of the origin of life are extremely difficult to test by experiment.

When we look at the possible mechanisms for the modification of species, things are not so simple. The Neo-Darwinian view of mutation and natural selection has long held sway. Natural selection is a very powerful force but in a stable environment the wild type allele of a given gene is almost always selected. Basically natural selection produces changes almost only

in response to a changing environment. One could say environmental changes to a very large extent control natural selection. Throughout geological time there have been numerous times when a large percentage of animals have become extinct only to be replaced by what appears to be extensive speciation from the few surviving lines. Changes of climate, geography, and other ecological factors could all provide opportunity for natural selection to work. Sexual selection appears effective in a polygamous species where one outstanding individual is selected by a number of partners, but in a species where a pair mates for life, even the least glamorous may find a mate and they could show greater Darwinian fitness<sup>2</sup>. Mutation, believed to be a random process, sometimes needs to produce a series of compatible mutants in a fairly short period of time. This is particular the case with symbiotic species. The mutual adaptation of animals and plants to facilitate pollination is a good example. There are a number of problems that need more research.

Attempts to find solutions of these problems have included macro mutations and macroevolution (Stanlet 1979). (These terms are used very differently by different authors (Wilkins 1997).) These ideas were resisted for many years by orthodox biologists, however renewed interest has been shown by some geneticists. Clearly more research is needed in this area. While mechanisms have been suggested for many steps in the evolutionary process, even where they are feasible, 'fortunate timing' does seem to be required in many instances.

The theory of evolution is a most productive scientific theory. Like all scientific theories it will benefit from more research and undergo modification, development and refinement. It is already considerably modified from Charles Darwin's original presentation. Perhaps one day it could be superseded, though at present this does not seem likely.

## **The nature of revelation**

Centuries before Darwin some Biblical scholars did not take the days of Genesis as literal days of twenty four hours. Many evangelical scholars have for years rejected what Bernard Ramm (Ramm 1955 p. 120) calls the 'Naïve Literal view'. There are many different interpretations of the details of Genesis 1, but its meaning is clear. The one and only true God made absolutely everything in a planned, orderly manner; nothing existed — apart from Himself — that He did not make. Contrast this with the many pagan accounts of creation. While there are some similarities, the differences are extreme.

The Biblical revelation was given to ordinary men, in a non-scientific environment, in language that they could understand. The manner in which the Scriptures describe nature is phenomenological (Ramm 1955

---

<sup>2</sup> Darwinian fitness does not mean physical fitness, but is measured by the number of offspring that survive and reproduce. A strong mule would have a Darwinian fitness of zero.

pp.46–48), that is it describes phenomena as they are perceived, not in an explanatory manner.<sup>3</sup>

The purpose of Scripture is to bring people into a relationship with God. It was not designed to teach them science but theology. It was neither possible nor desirable to give a detailed scientific account of creation. The language and terminology, including mathematical concepts and number system, that would be required for a scientific account, did not exist. The Biblical account of creation was adequate for God's purpose (2 Tim 3:15–17, Jn 20:30–31). One may even say man was given information on a 'need to know' basis. A scientific account of creation would have been incomprehensible, useless, and a waste of writing material.

There has been much learned debate on the exegesis of the early chapters of Genesis. Few scholars today insist on the extreme literal view of the creation scientists. Early work was done by PJ Wiseman (Wiseman 1948). Others including WJ Beasley (Beasley 1953) put forward the Day age view. A view held by some leading evangelical scholars is that Genesis 1 is a literary device that shows God made everything. Days one to three describe the creation of background fixed things and days four to six show the creation of the moving objects that move against their respective backgrounds in the same order. Whatever exegesis is preferred it is clear that the creation science interpretation of Genesis 1 is not necessarily the correct one.

## **Mechanism Vs Purpose**

Christians and atheists alike have fallen into the same logical fallacy that if it is possible to postulate a mechanism, however doubtful, with respect to an event that happened or an organ formed, then there is no need or even possibility for the existence of a plan or a Planner. Thus the atheists claim that they have disproved Divine creation and the Theists refuse to consider the possibility of a mechanism.

Throughout the Scriptures there are many examples of God using a mechanism to achieve His purposes. For example, the parting of the Red Sea to let the Israelites cross is said to have been effected by a 'strong east wind' (Ex. 14:21 RV).

The Scriptures assert that God made the mountains and the seas yet extremely few Christians would deny the mountain building effect of volcanoes and major earth movements as a result of plate tectonic movements. Here we see God's plan carried out by a reasonably understood mechanism.

---

<sup>3</sup> For example the statement 'the sun rose and set' is phenomenological; while the statements: 'Apollo in a golden chariot draws the sun across the sky' and the more scientific statement 'the earth rotated causing the sun to disappear from sight' are attempts at explanation. Phenomenological statements are the only way of describing natural phenomena that does not date but remains true regardless of theories as to mechanism.

The Scripture says: 'he maketh his son to rise on the evil and the good' (Matt. 5:45 RV) but nobody now would challenge the rotation of the earth as the means by which this is effected.

Christians have seen no conflict with the idea that 'God made me' and indeed every other person in the world and the well established processes of procreation and ontology. This is true, even though we know of the apparent chance nature of the union of a particular ovum and a particular sperm! (Scripture contains many examples where God's will is made known by an apparent chance process: Ex. 28:30, Num. 27:21, Josh. 7:14-19, Acts 1:26.)

However if it is suggested that the universe may have come into existence by a process similar to that postulated by the 'Big Bang' theory, or that different species may have been derived from one another by some evolution-like process, then there is an outcry.

***Design by an Intelligent Being does not preclude proved existence of a mechanism.***

Japanese car manufacturers are fast approaching the point where a whole car can be made by machinery without human intervention, but no one would dare suggest that therefore there was no designer or engineer behind the manufacture of the car!

***The postulation or even the proved existence of a mechanism does not preclude design by an Intelligent Being.***

## **The changing nature of science**

As can be seen from the proceedings of the Royal Society up to the mid 18<sup>th</sup> Century most scientists believed in the uniformity of natural causes in an open system (one that left open the possibility of Divine action). Francis Schaeffer (Schaeffer 1976 p. 36) terms this 'modern science'. After this time there was a change in the worldview of many scientists and what Schaeffer calls 'modern modern science' developed. In this view there is a closed system and there is no room for the existence of God or anything else outside the material system: that is most scientists embrace a naturalistic philosophy. *It is most important to realise that this fundamental change, whether made consciously or unconsciously, was a philosophical not a scientific decision.* This change had some methodological advantages. The decision removed an uncontrollable variable, God, from the discussion. Anything that could not be studied and measured could be ignored. Further, when an inexplicable phenomenon occurred one could not take the easy escape and say 'God did it'. The scientist had to look for a physical explanation and this furthered research. However, since the existence of a closed system is an unprovable philosophical assumption, not based on any evidence, it is not a scientific fact. It cannot be used to refute the existence of an Intelligent Designer. To use any data derived from 'modern modern science' to deny the existence of God involves an invalid circular argument since this was assumed in the methodological constraints.

The philosophical and practical implications in this change are immense. While the belief that the universe is a closed system may have many initial methodological advantages, if it forms the basis of a worldview it is disastrous even to science. As has already been pointed out, the very presuppositions upon which all science (and most other knowledge) are based become unsupportable.

## **The real issue**

The mechanism of creation is *not* the real issue. The real issue is: 'Is everything that has ever existed or now exists the product of time, blind chance, and matter-energy, or the work of a Supremely Intelligent Personal Creator?'. (The method of creation has little or no theological significance.)

This is a philosophical question. It is not possible for science to give a definitive answer for several reasons. Firstly the basic presuppositions of science assume a Theistic worldview (that is an open system) yet much of the working methodology of science assumes the system is closed — that is there is nothing outside the system. Secondly and more profoundly it is not an experimental question of the type to which one can readily apply any of the methods of science.

### ***Ultimately either answer involves a step of faith.***

The atheistic answer involves a belief that starting with absolutely nothing — no space, no time, no energy, no matter, no intelligence — somehow the universe came into existence. (Indeed on some views, not one universe but an infinite number of universes. The reasoning behind the multiple universes is that so many things had to be exactly right to produce the universe we inhabit there must be an infinite number of universes that did not produce intelligent life). This is an enormous step of faith, but not faith in anything, for nothing exists outside the closed system!

The Theistic answer also involves a step of faith: belief that an all knowing, all-powerful God created and designed everything. Christians admit this:

By faith we understand that the worlds have been framed by the word of God, so that what is seen hath not been made out of things which do appear.

(Heb. 11:3 RV)

The whole future of any society depends upon the answer that they give to this philosophical question. In searching for an answer to this philosophical question evidence must be evaluated from all human knowledge, not just science. Both Judaism and Christianity claim to be historical religions and have always based their claims on historical events, therefore history is clearly relevant. Other disciplines need to be considered. It is not just a matter for academic discussion. If there is no Intelligent Personal Creator and everything just happened, there can be



no meaning or purpose for the universe or life or humanity, no absolute standards of good and evil, right or wrong and probably none of the beautiful or the ugly. Francis Schaeffer rightly claims that:

With an impersonal beginning, everything is finally equal in the area of morals.

(Schaeffer 1972 p. 34)

There is no reason to condemn Hitler or Stalin. Belsen was neither right nor wrong, good or evil. It just happened<sup>4</sup>. The only basis for law becomes the ever-changing popular opinion or the will of a party or a dictator. Certainly there is no basis for trials of war criminals, except that they lost. Genocide can be defended as an inevitable result of the survival of the fittest and so is not right or wrong, it just happens. The act of building a hospital to help people is no better or worse than bombing one. Human life has no value neither has the environment nor knowledge or love. All values, purpose and responsibility vanish. C.S. Lewis (Lewis 1956) considers this from a different approach in *The Abolition of Man* and in his novel *That Hideous Strength*. This Nihilism is the logical development of the Naturalism<sup>5</sup> that is adopted by 'modern modern science' when it makes the philosophical choice that cosmos exhibits a uniformity of cause and effect in a closed system on which neither God (for it denies His existence) nor a rational autonomous man can act (for he too is just part of the same naturalistic closed system). The behaviourist psychologists realised this. Skinner says:

It is the autonomous inner man who is abolished, and that is a step forward.

(Skinner 1971)

While the practical results of this thinking have been shown in atheistic communism they are also visible in our own society. Acts that were acceptable seventy years ago are now regarded as evil and those regarded as evil are now just a different life style. Society has rejected the absolute Biblical standards and replaced them with the transitory values of various pressure groups. Many years ago an atheistic Jew told me 'a thing is not wrong unless you cannot get away with it'. Much of modern society seems to agree with him. Even science is suffering. The number of falsified experiments that have been published has seriously undermined scientific credibility.

---

<sup>4</sup> A number of atheist scientists would agree that there cannot be absolute values if there is no God. They see this as an advantage as there are no absolute restraints upon their experiments.

<sup>5</sup> For a detailed discussion of this see James W. Sire, *The Universe Next Door*, Intervarsity Press, Downers Grove, Illinois, 1976.

## The concept of creation

The classical Christian statement of creation is: 'I believe in one God the Father Almighty, maker of heaven and earth, of all things visible and invisible' (Nicene Creed). That is to say nothing exists that was not created by God. This includes space, time, matter-energy and all the properties of these created things including what we would call the laws of physics, the properties of the elements and all biological systems. This is the true meaning of creation *ex nihilo*, as distinct from the ideas of the 'Creation Scientists'. It does not mean that God did not make use of that which He has already made. It does not exclude the possibility of mechanism including evolution.

## Is there evidence for Theistic<sup>6</sup> design?

Arguments for Theistic design support the concept that the system is an open one in which God can act, not that evolution has not occurred. If one makes the arbitrary philosophical decision that the system is closed, then by definition, no evidence of design, however cogent, can be accepted. Any apparent evidence must be explained away no matter how improbable the so-called explanation is.

But if the possibility of an open system were to be considered then there would appear to be an enormous quantity of such relevant data coming from astronomy (Ross 1984), physics, geology and biology.

It must be realised that in an open system where God is active, this activity may not be obvious even to a close observer. It does not have to be a dramatic interference. A small change in the environment, the formation or closing of a land bridge is known to produce profound effects in speciation as is shown by fossils from South America. Rapid speciation is known to occur after a mass extinction. The exact timing of the mass extinction would effect which species provided the raw material from which the radiation occurred. It would be interesting to apply chaos theory to some of these events. Of necessity an open system is much harder to handle but that cannot be held to limit its likelihood.

***The existence of an understood mechanism in no way excludes design; the processes of evolution itself could be understood as an example of very intelligent theistic design.***

Even Charles Darwin (Darwin 1859) did not maintain that the system was entirely closed. He concludes *The Origin of Species*:

---

<sup>6</sup> I choose the term 'theistic design' rather than 'intelligent design' because I reject the dogmatic anti-evolution stand of many in the Intelligent design movement and also the suggestion by some that intelligent design does not necessarily imply an omnipresent, omniscient, omnipotent, personal God.

There is grandeur in this view of life, with its several powers, having been originally breathed by the Creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being evolved.

## **What should children be taught in science at school?**

Some education systems completely exclude any mention of God on the grounds they are being neutral or the law of the separation of church and state requires it. However to teach the philosophy that the universe is a closed system is to teach atheism, a form of negative religion. Christians and other Theists have no grounds to try to exclude the scientific theory of evolution but have a duty to object to teaching an unprovable and socially destructive philosophic view that the universe is a closed system. Such a view promotes a negative form of religion, namely, atheism.

In a Christian environment, Creation (Clarke 1985) should be taught as a truth independent of the ever developing and changing theories of science, a concept that is:

valid in its own right... Indeed, for the theory of evolution to be valid, creation must have occurred!

Senior students should understand something of the way in which theories are formed, developed and tested. A good example from the physical sciences would be the kinetic molecular theory of gases, and from the biological sciences: the theory of evolution.

It is important that students learn the scope, power and limitations of the scientific approach (Clarke 1989). To undertake this it would be necessary to include something of the history and philosophy of science.

With a proper understanding of the structure of knowledge and of science and theological knowledge in particular, Christian schools ought not to fear to teach any scientific theory including evolution.

## **References**

- Beasley, WJ, 1953, *Creation's amazing architect*, Marshall, Morgan & Scott, London.
- Clarke, WGrainge, 1965, *The continuing conflict: An approach to some aspects of Christian apologetics*, R.S.C.F. Paper No.2, Inter-Varsity Fellowship of Evangelical Unions (Aust.) Sydney.
- Clarke, WGrainge, 1985, 'The teaching of Creation', *Journal of Christian Education*, vol. 83 (July), pp.45-53.
- Clarke, WGrainge, 1989, 'Limitations on the scope of science', *Journal of Christian Education*, Paper 96 (December), pp.45-51.

- Darwin, C, 1859, *On the origin of species by means of natural selection*, John Murray Publishers, London.
- Dembski, WA, 2004, *The design revolution*, InterVarsity Press, Downers Grove, Illinois.
- Lewis, CS, 1956, *The abolition of man*, Geoffrey Bles, London.
- O'Hanlon, L, *Oldest star burst even older*, viewed 10 March 2006, <http://www.abc.net.au/science/news/stories/s1587621.htm>
- Popper, KR, 1968, *The logic of scientific discovery* (Revised edition), Hutchins, London.
- Popper, KR, 1974, 'Darwinism as a metaphysical research programme' in Schilpp PA (ed.), *The Philosophy of Karl Popper*, Vol.1, Open Court Pub. Co., La Salle, pp. 133-43.
- Ramm, B, 1955, *The Christian view of science and Scripture*, The Paternoster Press, London.
- Ross, H, 1984, *The fingerprint of God*, Promise Publishing Co., Orange County.
- Schaeffer, FA, 1972, *He is there and He is not silent*, Hodder and Stoughton, London.
- Schaeffer, FA, 1976, *Escape from reason*, Inter-varsity Press, Leicester.
- Sire, JW, 1976, *The universe next door*, Intervarsity Press, Downers Grove, Illinois.
- Skinner, BF, 1971, *Beyond freedom and dignity*, Cape, London.
- Stanlet, SM, 1979, *Macroevolution pattern and process*, W.H. Freeman and Company, San Francisco.
- U.S. Geological Survey, 2004, *The age of the earth*, United States Department of the Interior.
- Geological Survey, Branch of Isotope Geology Menlo Park, California, Available from: <http://www2.nature.nps.gov/geology/usgsnps/gtime/ageofearth.pdf> accessed 3 March 2006 Cached copy on Google: "ageofearth"
- Whitehouse, David 2002 'Oldest' star found in galaxy, BBC News <http://news.bbc.co.uk/1/hi/sci/tech/2381935.stm>. viewed 10 March 2006.
- Wiseman, PJ, 1948 *Creation revealed in six days*, Marshall, Morgan and Scott, Ltd, London.
- Wilkins, J, 1997, *Macroevolution*, The TalkOrigins Archive, viewed 17 March 2006 <http://www.talkorigins.org/faqs/macroevolution.html>