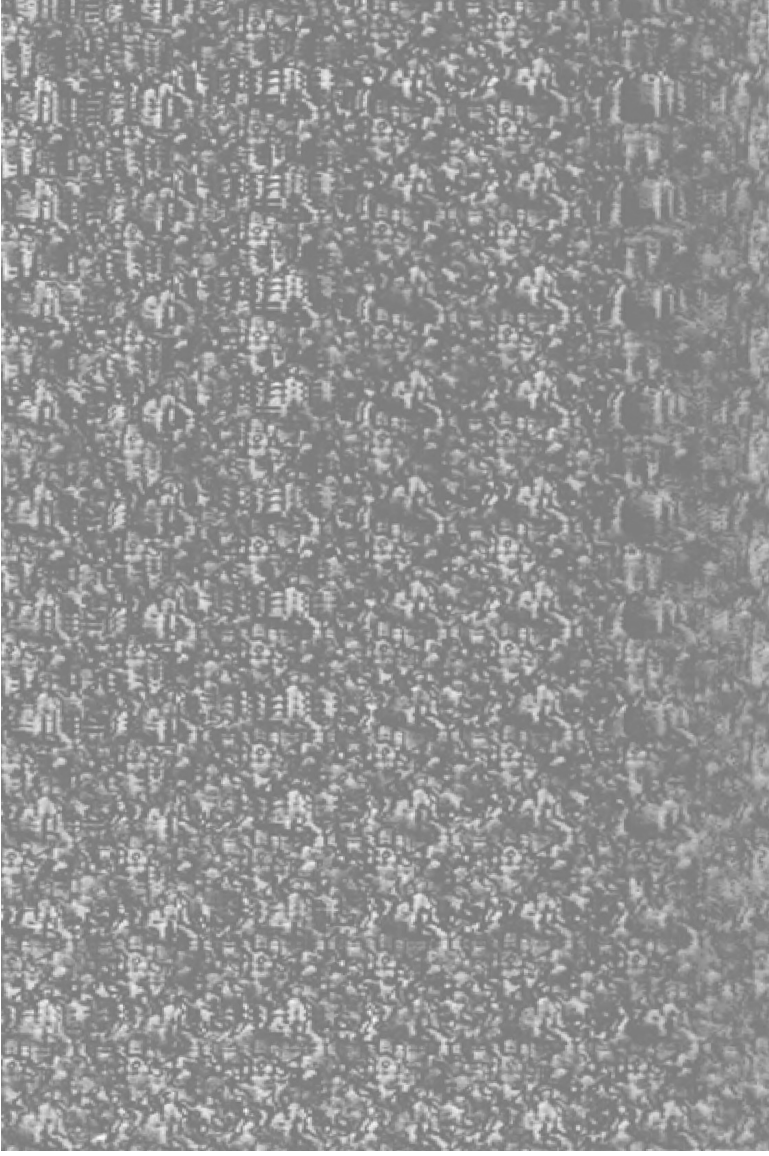


An
Orthodox
Understanding
of the Bible
with
Physical Science

GEOFFREY ERNEST STEDMAN

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the Bible with
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Figure 1. The magic 3D pictures whose principles were discovered in 1979¹ illustrate how it is possible to receive a genuine message within a pattern of dots and dots by taking a larger view of the matter. I take this as a parable of the way science can lead to knowledge of God's truth, how even the small details of the world around revealed by science are as significant as the detail of a magic picture.²



1. 1979, Christopher Tyler of Smith-Kettlewell Institute.
2. The hidden text within the picture below comes from John chapter 5v24. Also see Chapter 2.

An Orthodox Understanding of the Bible with Physical Science

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at the University of Canterbury at Christchurch, New Zealand



Eloquent Books

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To all I love and all who love the truth

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1

Preface

1.1 TWO ORTHODOX BELIEFS ARE DEFENDED HERE

These are orthodox physical science and orthodox Christianity.

The word ‘orthodox’ here does not refer to any particular religious tradition, but to what is generally accepted as reliable by those who are informed, about true Christianity and true Science, respectively. For example, I take the orthodox Christian position that the Bible conveys the word of God to all mankind, that its words are divinely inspired, and that it gives us a reliable message of supreme importance in life and death. I also see physical science as a well proven revelation by God. This is admittedly as somewhat unorthodox position both within the scientific and even to some extent within the Christian communities.

The general unpopularity of Christianity is often gratuitous assumed to imply the incompatibility of science and Christian belief, in a manner that I believe is destructive of God’s truth. I am pledged to defend both as a scientist and as a Christian. Naturally, this work is quite simply a defence and balancing of the truth as I see it in both areas science and Christianity. Of course the above commitments will make is that on several counts I owe my life to modern science, in fact medical science, which was first developed during my working life. A Christian like me working in orthodox science is often sidelined as a cultist crackpot or traitor by both agnostic scientists and some Christians. Orthodox beliefs can be highly unpopular.

If Orthodox scientists endorse anything beyond science, it may usually be something unorthodox by Christian standards, and which I am not interested in discussing in this work. I do see modern science as conveying a revelation from God, not one opposed the old revelations but real none the less. A new revelation is something God provided even in biblical times. Paul (Chapter 11,13) could not excuse the Pharisees and Judaizers who attempted to impose Moses' ceremonial law on the infant Christian church. Paul announced a new revelation in the light of Christ's death; we may see this as a caution that we should not sideline fuller revelations from God. Of course, merely asserting a new revelation needs serious justification, and this work is concerned partly to summarise some of the evidence for that claim that God has revealed things to men through science and partly to consider evidence that is widely supposed such a view. The claim is rooted in much experimentally confirmed physical science, which is how God's universe behaves. I am driven to this view as a resolution of many issues related to science and Christian faith by the nature of the evidence a knowledge of physical science brings. I cannot be expected to be less frank than Paul was about the problems associated with clinging to a misunderstood or only partially understood aspect of God's revealed truth characterizing as it does the world as God has revealed it. Orthodox Science is often as unpopular as Christianity, especially for many orthodox Christians, who favour an unorthodox approach to science, particularly some form of Creationism. This work is in the nature of a testimony or witness as to how both orthodoxies can be understood to be consistent. Some personal allusions that may help to explain this perspective are given in Chapter 2. I concentrate on the physical sciences, which is my area of specialisation. Biology and associated debates are not my main interest. However, many superb evidences of God's creative skill can be drawn from biology. A few such which may encourage Christian faith are summarized within Chapter 8, the format being of skeletal parables for younger people.

Discussions of science and religion in the context of Creationism are inevitably tangled with many different controversial issues, and have to be disentangled. One major aim here is to help orthodox Christians do this. There are a variety of "hot topics" discussed mainly within Chapters 12-13. Many of these topics bridge a wide variety of topics within sciences, and considerable care is needed to arrive at a correct understanding both of the issues that are defensible both biblically and scientifically.

Sometimes terms used require careful untangling. An example is the term *evolution* that is widely used as an indiscriminate swear word in situations where it is far from helpful or relevant.

1.2 CREATIONISM: A PERSPECTIVE

It is perhaps surprising that many, who would agree with me over the strong view of biblical inspiration outlined above, are nevertheless opposed to much orthodox science and that supposedly on Scriptural grounds. This is no new problem. As the man born blind in John 9 found, one cannot always trust one's religious advisers, fortunately he found a better in Jesus. That man had three blind eyes, the third eye of his spiritual understanding (Ephesians 4v18) had to learn the hard way that since his orthodox religious advisers were similarly handicapped (John 9v40) he needed Jesus to open all of his three eyes. Saint Augustine, in the 'city of God'³ provides a supposedly scientific proof that no human beings can live in the Antipodes, a doctrine I am pleased to help refute in living there myself. All this reminds us that pretensions to religious knowledge can't be accepted on face value, and even when they come from leading figures in the Christian church. Creationism raises a raft of novel issues many of which will be considered here. Because to me there is a relative lack of attempts at a simple informed comment on this topic at a level useful to the average Christian believer, who is puzzled by some claims, I see creationism as being as much a threat to Christianity as indeed to orthodox science. Its effect is that both Christianity and creationism are widely rejected in the world of science today. My dissatisfaction with creationist teachings will be spelt out more in Chapter 9, with particular issues discussed in chapters following that one. I am considering only a few of the possible areas of contention for discussion, mainly those of which unbelieving Christians (unbelieving in science I mean) have made me aware. These are naturally the vital ones and I am unaware of any other compact summary of how a Christian scientist may evaluate these various heavily intertwined issues. No encyclopedic analysis would be helpful, for reasons explained in Chapter 11, under "everyone needs a nose." The term Creationists has reference to followers of movements as, Institute of Creation Research (ICR) www.icr.org/, Answers in Genesis (AIG) www.answersingenesis.org Creation Ministries etc. I am referring rather to a system of beliefs, a

³ Saint Augustine De Civitate Dei, Book XVI, Chapter 9.

list of several relevant dogmas offered in Chapter 10. Purporting to be orthodox Christianity, its fruit is to decry much orthodox science, and also to replace orthodox interpretations of the biblical texts, with controversial assumptions and dogmatic statements, somewhat after the manner of a religious cult or sect,⁴ compromising the claims that Christianity to give the revealed truth of God. A creationist ideology is dominant within many parts of the Christian church today, and is obviously here to stay. It is often assumed all real Bible-believing Christians must follow such teachings, or be numbered among the heretics within today's Church. I have had my ears bent by several strong supporters of Creationism, making me well aware of the supposed case against orthodox science (Chapter 10). And I see such teachings as being as destructive both of orthodox Christianity and of orthodox science. Creationism is a perversion of both areas of truth in both areas. It may seem a cynical saying but a cautionary one that, Samuel Taylor Coleridge said, "He, who begins by loving Christianity better than truth will proceed to loving his own sect or church better than Christianity, and end in loving himself better than all." I see the modern emphasis on creation science is one of the most regrettable developments within the Christian Church in many years. One fears the effects of this misguided teaching will certainly persist in centuries. This may seem a harsh judgement. It is scarcely harsher than the verdict of Peter Hollingsworth, Anglican Archbishop of Brisbane, reported to say that "Creation Science if followed to its conclusions, is anti-knowledge, anti-religious, and anti-science,"⁵ or that of Guy Consolmagno, curator of the Vatican meteorite collection when he said "Religion needs Science to keep it away from superstition and close to reality, to protect it from Creationism, which is a kind of paganism."⁶ It is a trend that needs examination, and one not to be lightly dismissed as merely a matter of opinion. Thomas Jefferson said, "Error of opinion may be tolerated where reason is left free to combat it." For many the creationism movement and its teachings are indistinguishable from biblical Christianity. Non-Christians cannot normally be expected to have the patience to disentangle the beliefs of a Bible believer such as myself from those of a traditional creation-

⁴ I am not very concerned to distinguish these terms, arguably the 'cult' refers to dogmas that compromise the foundational truths of the Christian gospel, indeed some (not me) would argue that is precisely what is at stake.

⁵ Foreword to Ian Plimer's "Telling Lies for God."

⁶ New Scientist. 13 May 2006 p. 9.

ist supporter for example. It is understood very well that those not interested in the Bible have no interest in adjudicating in ‘turf wars’ between different types of Bible Believers. I regret this situation as much as anyone, but can offer no alternative to recognising this necessity of the discrimination if one is to find the truth in the world in which we live. This kind of discrimination is vital to finding the truth if true Christianity is to survive the uniform condemnation earned by creationism in the eyes of orthodox scientists. Many are reluctant to entertain the possibility (that an understanding of the Bible other than creationist is worthy of consideration) should recognize the latitude of thought when the Bible-believer who rejects creationism is encouraged to take his work seriously in the manner illustrated here. The publicity to the dogmas of the creationist movement makes it indistinguishable from orthodox biblical Christianity for all practical purposes. Enormous damage is being done to the understanding and the witness of the Christian Gospel within my generation. Creationism becomes a totally and dispensable obstacle to the spread of the Christian Gospel. Tragically the effect is for Christian people increasingly to isolate themselves from God’s truth on both fronts, Scientific and Christian, and because of this confusion, the truths of God’s creation and the Christian Gospel are at stake. In this environment, non-Christian scientists and science students usually take it as self-evident that all Bible believers are Creationists and also that Orthodox science is incompatible with any orthodox interpretation of the Christian scriptures. Such errors have to be confronted and refuted. I shall not be squeamish about referring to some things as lies, mindful of Horatius Bonar’s distinction: Truth exists; lies are invented. Basic questions as raised by Creationists literature, cast doubt, on the secure achievements of orthodox science to the deep loss of many. Words such as Christianity, Creationism and fundamentalist (with other such terms used as fulcra of orthodoxy are discussed in Chapter 11) are widely taken as synonyms.

All anyone can do is to make the search for the truth as plain as possible. Aiding this process of discrimination between opposed beliefs is a major reason for this work. A substantial proportion of his work is therefore concerned with a considered comment on some standard Creationist teachings. Such material can be found within Chapters 9 and following. This discussion will be of little interest to those scientists and Christians who are already convinced creation science is so misguided and does not merit comment. But because the topics call for discussion, when the truths of either orthodox science

or orthodox Christianity is at stake and precious arguments are advanced as put-downs for modern science. My aim is to protect the truth of God on matters he has revealed, in both science and Christianity. No with any concern for the truth can simply ignore or just brush aside the popularity of creation science, or the untruths associated with it. As a member of both groups, Christians and Scientists, I find such a standoff situation inimical of truth and totally unsatisfactory. It is not an easy thing to say, but Creationism is almost the threat to Christianity within our generation as is 'scientific atheism.' It misrepresents what I believe to be the truth of God, and is a stumbling stone for many. Both become excuses for disbelief in Christianity. Anyone who doubts this has simply failed to understand the depth of the scandal posed by creationism from a scientist's viewpoint. Any Christian scientist who has attempted to defend Christianity to colleagues knows this only too well. The publicity generated by Creationism movement has been hideously successful in re-defining Christianity in the popular mind, making it all but impossible for many people to understand what true Christianity faith really is. The high moral ground apparently claimed by the Creationist is a deception, obscuring God's revelation in creation, and based on claims that dishonoring the revelations of God, both in Science and the Scriptures. The implication left by all this in the non-Christian mind is that if Christians cannot do better than this in explaining their faith, Christianity must all be rubbish.

I see this situation as conferring an evangelical responsibility on Christian scientists like myself who take God's twin Christian revelation and the scientific revelations seriously to explain our disagreements with the tenets of Creationism. In an age of scientific achievement, the Christian faith demands as never before a balanced interpretation of the biblical texts. This is another major emphasis of this work. Such a mission then is hardly a popular mission. It is a mission to the scientists who have already rejected orthodox Christianity along with Creationism, as well as to those who have rejected orthodox science as God's truth. Most Christian scientists know only too well that attempts at discussion can be a dialogue with the deaf on all fronts.⁷ I have good friends, who are seduced by some form of creation science and who have challenged me with such reasons as those considered here (Chapters 9 and following) to embrace it and to

⁷ Daniel Barenboim once said, "This is not a project for peace. This is a fight against ignorance; and to allow contact so that they learn to know the other."

oppose orthodox science. I hope to explain why a fuller faith avoiding these misrepresentations of Christianity is credible to a scientist, and to defuse associated causes of mistrust of science to harmonize a view of Christianity and of science, so as to do justice to all. The only alternative I see is to accept their joint incompatibility, which amounts to saying that two of God's revelations to men cannot be reconciled. Such a libel is quite intolerable to me. Much distrust of science springs from a deep distrust of the dominance of Darwinism within modern biology. Historically the latter has spawned much atheism, and therefore a fear of science amongst Christians. Topics like biological Evolution and intelligent design are not discussed in this book in detail. My concerns are about what I see to be more basic questions arising within physical science about any tendency for Christians to reject the revelation of God that his creation affords, at the physical level and for specious reasons. For example, the word evolution has been misused as an indiscriminate slur on the theoretical basis of physical science, apparently in an attempt at impose guilt by association. This is discussed in several later chapters. The scriptures themselves condone no such rejection of God's truth see Proverbs 1v22. Unhappily difficulties with Creationist teaching are sadly no new situation for science for all its immediacy and importance. The Christian church has had to do battle over many centuries with the anti-scientific tendencies with it as illustrated by Galileo, Copernicus, etc. This current dialogue with Creationism will influence history similarly. Today I see an urgent missionary need within the Christian church, as well as outside it, on this issue of Creationism. What is at stake is nothing less the very definitions and fundamental significance both of Christianity and of Science.

1.3 WHY MODERN MECHANICS

A stock argument by creationism again orthodox physical science has to do with a blanket rejection of any truth value in the mathematical modelling and 'theorising' that characterises the mechanics of physical science, as if this issue was somehow symptomatic of a fundamental malaise in orthodox science, viz. its unacceptably humanistic basis and so of its vulnerability.⁸ The opposition to science here is that of rejecting all scientific theories on principle, on the grounds for example that they are seen *ipso facto* to be purely human, and so can have no Divine origin. This objection is one opposed strongly here since I am convinced of the Divine origin of the basics of modern

physical science. The roots of this fear reflect a widespread lack of conviction on the whole apparatus of the theories accompanying scientific research, well founded since the 1700's and amply vindicated today in mechanics, whether classical, Newtonian mechanics (which includes of course a hundred and one related things like engineering mechanics), and also quantum mechanical or relativistic mechanics. To deny the importance of all of these is to deny one task of science, to explain and relate experimental data. The whole of the scientific method is at stake. To deny all these disciplines their place, is ludicrous given the efficacy of modern science. Here is offered a brief introduction to such topics as quantum mechanical or relativistic mechanics, in an effort to redeem the ignorance that spawns these libels and so there may be no undue mystery over the meaning and significance of such theoretical and experimental advances. Even when it comes to discovering new theories from experiment, will illustrate this further with a worked example in Appendix I. As Einstein once said, an example is not another way to teach, but the only way to teach.

1.4 AN ALTERNATIVE SCIENCE

There is a popular notion within Creationism that orthodox science can be replaced by supposedly a valid alternative science and one supposedly derived from the Bible. This is obviously the line of contention used to justify teaching an alternative to Darwinism. And give the plethora of objections to orthodox physical science this is the clear implication here also. I deny that such an alternative physical

⁸ As evidence for this I mention the following from the ICR web site (1) the search for laws of nature in particle physics seems an oddity to at least one creationist "following the instructions from our Greek heritage (or inner voices), there have been attempts at...finding some common, all-embracing law of physics out of which the apparently different forces would arise, but for reasons largely aesthetic. They have an almost mystical faith in symmetry." As one of those who spent over 20 years of my life in study of the results of group theoretically related symmetries in quantum theory. This simply reveals ignorance on this topic and it's seminal importance in science.

We also on the web site (2), "Our understanding of the Creation remains incomplete. God's ways are certainly "past finding out" (Romans 11:33). A final interpretation concludes that the universe is unknowable and will always defy common sense." (3) AIG web site, "Despite the fixed creation beliefs, which gave rise to science, human theories derived by applying these beliefs to the real world can change. History teaches us such theories have been repeatedly subject to change." (This issue is discussed in later chapters.)

science exists and that such could be derived from the Bible. It only exists is people's imagination, see Chapter 9. So the issue as to which choice of physical science should be taught our children has only one answer, viz. orthodox physical science. Scientifically my witness is that any alternatives proposed to today's orthodox physical science are simply nonsense. The only alternative to teaching orthodox physical science is to teach lies. God's revelations are unique and unambiguous and any attempt to outclass them with some human invention is simply and literally inconceivable.

To be sure that there is an appearance, of justice and democracy in allowing freedom of choice over the syllabus. But the principle remains the same: nothing excuses a consistent Christian from deliberately teaching ideas known to be untrue or for rejecting the revelation of God that a careful study of his creation affords, regardless of the attendant problems of interpretation and understanding real or imaginary. Doing otherwise is to despise God's revelation in creation. Favouring an unorthodox scheme of scientific education puts the truth of God at stake. One may as easily insist on teaching children swimming without a bathing pool, or home science without a stove, or touch-typing without a keyboard, all for some supposedly biblical reason as to try to teach science without God's science, which is what he built into his creation. The difficulty in attempting to replace orthodox science by another is illustrated in Chapters 5-7. A misguided piety asserts a blanket rejection of orthodox science by an appeal to 1 Timothy 6v20 that (in the King James Version) speaks apparently ill of 'science.' Such only increase the urgent need to present the case for supporting today's science. Being confronted with objections to science is not a new exercise for me, see Chapters 2 10, and both as a Christian and as a scientist I understand the rationale of many of the objections that some Christians advance against science. I know that many Christians face some mix of these particular objections and feel forced to endorse a Creationist line as a result. Indeed, such a line has become a requirement of fellowship in some 'Christian churches.' Creationist teaching can then amount to a redefinition of Christianity viz. as alliance to their dogmas. In that the associated trends in Christianity are not orthodox Christianity, and are to be rejected. My case includes expositions of the relevant scriptures, to illustrate that total harmony that exists between God's revelations, Nature and the Christian faith. I shall illustrate and affirm my witness that there is no shadow of inconsistency whatever between orthodox Christianity and orthodox physical science.

1.5 THE DOUBLE REVELATION

One emphasis here will be to accept the position Bacon and others took that God has two books of revelation. Within our modern world there is no reason to doubt many secure achievements of orthodox science as being trustworthy and reliable for anyone. Just as the Bible is trustworthy and reliable in its unique way, one can accept both revelations, in the scriptures and in science two books written by the one author, our Creator God. I affirm that modern physical science, like all of Nature, is a divine revelation as is the Bible. I believe that God has not simply left the human race to spend their lives to wallow within some cloud of uncertainty on either the topic of religion, or on that of science. He has not told all of his curatorial secrets. All those who share in discovering these are fascinated by them. This fully justifies a very high view of science, that the scientist is discovering Divine truth. The claim is not that science is any kind of substitute for the Bible or adequate for the spiritual needs of man, and the biblical revelation retains its uniqueness and power. But I am happy to take any well-refereed paper within physical science as likely to contain divine truth, a Divine insight into God's creation; This admittedly raises the somewhat tricky questions such as at exactly what epoch a new scientific discovery is really made, In say a physical sciences. Workers at CERN for example have suggested the first observation of novel tracks in a bubble chamber, the announcement in seminars, or to a press gallery issuing of a preprint, etc. If anyone want a legal definition, of what I take as acceptable physical science I am sticking here to a explicit and more orthodox and obvious point of decision viz. publication of the results after peer review. For all the disadvantages of that process, I consider this definition to be satisfactory in practice. I speak as always of the physical sciences, my area of witness. I shall try to address the supposed problems with science in Chapter 10. There are some attitudes outlined there and above that have become catch cries of the Creationist movement Christians who oppose science can have no idea of the degree of careful and honest hard work, self-discipline and genuinely novel insight that lies behind each major and minor forward step forward in these quests for truth. Such advances are of Divine origin, the fruits of God's work within humanity. As an author and referee, the human defects and inadequacies of the primary literature of science are familiar. Chapter 2 illustrates this. Such defects in science have occupied much of my professional work. But human defects within scientific work are grossly exaggerated by the opponents of

orthodox science, and that this reinforces the necessity I and others feel to the support for orthodox science. In short I believe and have always believed in God's revelation of his truth, within orthodox physical science. My experiences as a student and scientist make no alternative view tenable for me.

1.6 ANTI-AMISH-ISM

Some of my readers thus far could scarcely credit the reality and proportions of the problems discussed here. Someone asked me, am I writing to the Amish? Meaning to those opposed to anything modern. Yes partly so, but not only so. Painting the situation in the above terms does not depart from fact and indicates that a huge amount of dead wood has to be cleared away to allow sensible discussion of science, when the current climate of discussion even in some Christian circles is fundamentally opposed to it, and where people use the most perverse ingenuity to circumvent the most obvious of conclusions. People I know who profess to reject modern science as entirely falsely based do not let their views prevent them from possessing TV, CD players, microwave ovens and getting medical x-rays, e-mail and purchasing many other modern electronic tools, plus trusting modern aircraft guidance systems, and accepting all such as if they were universal and obvious personal rights, even although such tools absolutely require the framework and foundation of orthodox modern physical science to have been developed to their present extent it is not reasonable to me to preach against science as devilish and humanistic given the benefits it confers to our lives. The extent of the perversion of the truth involved here defies analysis and belief. Some relevant considerations are given in chapters 4-5 11-12. The right approach to human wisdom is discussed in Chapter 4 and 5. It is a concern here when people misrepresent orthodox science as a total misconception and misrepresentation of God's truth, in the context of the counterpart cases of Chapters 9,10.

1.7 THE FASTEST LIE IN THE WORLD

The English Baptist preacher, C.H. Spurgeon, once quoted an old saying about truth. If you want truth to go round the world you must hire an express train to pull it; but if you want a lie to go round the world, it will fly: "it is as light as a feather, and a breath will carry it," and, "a lie will go round the world while truth is pulling its boots

on.”⁹ The arrival of every new internet page only confirms this saying as more true than ever. In this book I endeavour to show why it is my belief the foundations of modern science are neither a fraud, nor all they based purely on human speculation to name two such popular lies. Also I explain why my belief is that the insights gained from science have a divine origin. Of course an aim is to encourage anyone remotely interested in such topics like the Bereans to hear the evidence and to prove all things, and hold fast that which is good.

1.8 APOLOGETICS

Traditionally such works as this concentrate on apologetics re the Christian faith. The need is clear. Most people within the western world probably regard the Bible simply as ancient rubbish, without any great importance in their lives, outdated and refuted by scientific investigation. Or to re-state this in the 16th century words of Joseph Butler. “It is come, I do not know how, to be taken for granted, by many persons, that Christianity is, not so much as a subject of inquiry; but that it is now at length, discovered to be fictitious. And accordingly they treat it, as if, in the present age, this was an agreed point among all people of discernment, and nothing remained but to set it up as a principal subject of mirth and ridicule.”¹⁰ One goal in this book is rather to face the challenge posed by creationism to a Bible believer, who is skeptical of the scientific dogmas associated with creationism, and to challenge those dogmas directly. Nevertheless, there is more apologetic material defending the Christian gospel in this book than may meet the casual eye. One novel aspect in Chapter 14, is the suggestion of some lines for recognising evidence purely from within science that God exists.

Admittedly such evidences are unpopular; however where such evidence exists why suppress it? Jesus was asked for proof of his divinity, and consented (John 2:18ff). The fullness of its evidence became more generally available at his resurrection. This was not an event witnessed by a bunch of scientists with their microscopes whom he used to be witnesses, nor a bunch of stock exchange sharps with their eye on today’s values, but a group of fishermen and farmers and

⁹ Spurgeon, C. H. “*Gems from Spurgeon*” (1859) and “*The Oxford Dictionary of Quotations*.” Ed. Elizabeth Knowles. Oxford University Press, 2004. *Oxford Reference Online*. Oxford University Press.

¹⁰ Joseph Butler *The Analogy of Religion*, Iveson New York 1872, p. 27.

womenfolk who had the commonsense of peasant shrewdness to see through the fake and to find the truth, despite the lies told by the authorities and the guards. It was such peasant folk who were our personal witnesses to Christ's resurrection. There is no substitute to a personal witness to the truth one has witnessed. I have not attempted to write a physicist's handbook on all biblical topics (say Joshua's prayer re the sun). There is by now a voluminous apologetic literature, and one starting point would be Bernard Ramm's book¹¹ that starts off with the particularly telling chapter entitled "The imperative necessity of a harmony." A recent discussion of the miracles of Exodus is by C. J. Humphries.¹² Many creationist objections are appropriately considered in Hugh Ross web site.¹³ I consider that Ross's work is scientifically reliable, and a fair representation of the orthodox science position on such matters as evidences on the speed of light, the big bang, C dating. My comment on these topics is in Chapters 12-13. Some possible analogies and illustrations from science for talks to young people are given in Chapter 8. Orthodox science is distrusted for other reasons as well as those mentioned above. Some topics involve moral issues, like nuclear power, and advances within biological and medical science. Specific concerns raised by these are not my topic and no attempt is made to cover the relevant science or related matters here. Certainly one must choose one's advisers and authorities with care. Scientists have strong objections to any line of modernistic thinking that despises science. Such were lampooned by Sokal famously in an exposé of some trends in some arts and literature against science,¹⁴ this exposé was an immense satisfaction to many within the community of scientists. That community only echo his words. "It seems an insuperable barrier to understanding that many prefer to simply doubt the insight given by modern science into our understanding of nature. I am simply a stodgy old scientist who believes naively that there exists an outside world, and that there exist objective truths about that world and that my job is to discover some of them."¹⁵ Viewpoints that deny absolute truth, which for me means

¹¹ B. Ramm "The Christian view of Science and Scripture" (Paternoster Press Exeter 1967)

¹² The Miracles of Exodus, Colin J. Humphreys continuum, London 2003.

¹³ I would recommend Hugh Ross's web site, "Reasons to believe: <http://www.reasons.org>.

¹⁴ <http://www.physics.nyu.edu/faculty/sokal/>

¹⁵ Sokal *Dissent* 43 pp. 93-99 (1996).

God's truth, or the reality of the outside world would make scientific work such as mine quite impossible. I hope to clarify my belief that the currently orthodox models of physical science like quantum theory and relativity to be Divine revelations to humanity and are witness to the omniscience of the Creator. It is small wonder that within Christian communities the subject of science is often sidelined as too hot to handle. Certainly the principal teaching mission of the church lies elsewhere. But when science provides a major witness to God, and his truth, and as the Bible itself affirms the truth is at stake, there is still room for plain speaking.

1.9 WHEN IT COMES TO POPULAR UNBELIEF, WHICH IS OF THE MOST CONCERN IS MOST DEBATABLE

There is then obviously a great need for the Christian to defend the truth of God against Christians who do not believe, both as regards in the insights of science, and as regards the good name of Christianity amongst scientists who do not believe in Christianity. This is a very serious matter for the good names of both Christianity and Science. What is at stake is the truth itself. But when God's things are being up to public disgrace (Hebrews 6v6) and the science I have devoted much of my life to and even owe my life to (Chapter 2) is under attack, it is impossible to be silent or impartial. Any diligent Bible student or minister of the Scriptures must choose continually between competing biblical interpretations of all kinds. We cannot expect things to be any easier when we discuss ultimate questions of science and faith. If more Christians would come to accept the fruits of scientific study as a legitimate and an noble enterprise made possible through the author of the Christian faith, a revolution could take place in the attitudes to God's truth and open new opportunities of Christian witness would emerge.

1.10 IT IS A CURIOUS FACT THAT BOTH ORTHODOXYS OPERATE THROUGH A CONSENSUS OF DOCTRINE

Both the orthodoxies defended (physical science and Christianity) at least within Protestantism operate through a consensus of doctrine, and the purity of the scientific literature from error depends largely on the caution of referees within the peer review system, combined an extraordinary history of honesty and professional competence of sci-

entific researchers. One cannot guarantee perfection, of course, with any system but the degree of reliability is amazingly high. I see the same as true in Protestantism, in the sense that both lack the court of appeal provided by a Papal figure. This to me reflects a considerable strength in each community. One could regard this similarity not as accidental, but rather as reflecting the Divine origins of each body of knowledge, in the minds of man, given the resources God has provided for each. To me it is as if God's two books of revelation, had a common front page. An outsider to each with experience in, say, the business community, no doubt would see each situation described above as quite unworkable, and insist on some papal figure to pronounce doctrine. Nobel laureates are commonly taken with much justification as papal figures but are not invariably reliable in their pronouncements, sometimes amusingly so. It is to me a great strength of each community that they operating by a common consent. Admittedly this lack of papal authority in science makes severe problems for those who expect easy answers to everything. Many paradoxical or counter intuitive aspects of Einstein's relativity are generally adequately resolved by working through a decent university level course on the topic. By "decent" I mean one that properly explores as far as time permits, the many possible grounds for objection and disbelief. Such an emphasis on examining foundations is unhappily not fashionable (mainly through lack of teaching time), nor is it well tolerated. As a teacher I have often been frustrated by some first year student calls from engineering students, who are impatient with any explanation of the physical foundations of a topic. "Blow explaining the reasons, all we want are the formulae."¹⁶ It is no doubt inevitable that perverse interpretations of both orthodox Christianity and science cloud all mutual discussion. The difficulties of defending modern science sympathetically to creationists were vividly illustrated in September 2008, when the English Royal Society sacked its education spokesperson, Professor Michael Reiss, an ordained clergyman and ex school teacher for saying amongst other things that Evolution is best presented as theory, not dogma, so that fewer children might turn away from science. Given that the Society distinguished by many Christian believers in its roll of Fellows over the years, I am minded to agree with Lord Winston, Professor at Imperial College, who commented. "I fear that the Royal Society may have only diminished

¹⁶ All that matters in life apparently is how you calculate the weight the bridge will stand, that will get us through all the exams, thank you."

itself. The individual (Reiss) was arguing that we should engage with and address public misconceptions about science—something that the Royal Society should applaud.” No doubt many will object for similar reasons to the tasks attempted here.

1.11 SOME ISSUES IN SUMMARY

It is clear that a major mission field exists at the moment amongst Christians who oppose orthodox science, as much as amongst those scientists opposed to religion.

My mission is therefore not only to the person who thinks science has made religion obsolete, but also to the Christian who considered orthodox science misguided. Both these views fall far short of God’s revelation to the world. and fail to honour their compatibility, stemming as it does from their joint Divine authorship. This task requires that I speak frankly to all groups of the problems perceived in their views (Chapters 9,10), which will extend from the fundamentals of Christianity to the secure results of modern orthodox physical science. My aim throughout is to offer a perspective on both orthodoxies, Christian and scientific, that demonstrates their full compatibility to the Christian. This effort was encouraged by a relative dearth of works within this area accessible aimed for the average church member and involving frank discussion of both these orthodoxies taken together, one notable exception of the work being Hugh Ross mentioned above. It is not the aim to present a choice of options for people to choose from, either in Science or in Christianity. The only choice I offer anyone is simply whether you believe God or whether you don’t. This is precisely the same as the choice a Christian can offer over the Christian gospel itself. God has revealed himself, and it is up to all of us simply to accept that. At the end of the day, God’s truth stands whoever dares oppose it. Christian’s not comfortable with this latitude of belief might consider two scriptures. 2Chronicles 13v12 Men of Israel, do not fight against the LORD; Acts 5[39] But if it is from God, you will not be able to stop these men; you will only find yourselves fighting against God. No one can fight against God. An overriding concern here is that in our generation Christianity is being redefined in a way its author would not recognize. Certainly everyone is entitled to one’s own convictions. But no one is entitled to ignore the facts. Some comments will be given through the book also on the essentials of Christianity partly in response to suggestions. That may explain the background both to those who believe I have

wasted my life, either because I am a Christian believer or because I am involved in orthodox scientific research. It seems important to me to show as clearly as possible how these two areas of knowledge can sit together harmoniously.

1.12 ACKNOWLEDGMENTS

This work would not have been attempted however without the encouragement of Professor Bob Dunn of Hendricks College, Conway, Arkansas, a colleague in our ring laser project, and of Mr Ross Poltner, Brookhaven, New York, and for example. I have followed Bob's suggestion that some comment be made on teaching of basic Christianity. I have also benefitted from several Christian scientists, for example my brother in law Dr James Dodd, Instow, Devon. And I particularly thank Mr Wilf Badger for permission to reproduce Chapter 4. This relates to a passage of scripture that is often cited as proof that academic knowledge is undesirable, written by a non-academic Christian friend with no axe to grind. It may provide a balance to the more academic tone of much of the rest of this work. I also acknowledge lengthy discussions with some creationist supporters, including some members of the BRO forum managed by Ken Heslop. Special mention must be made of the long support of my wife Rachel and of the example of my father, Silas Ingle Stedman. both as regards his endorsement and defense of Christianity, and even as regards to approaching science. I am convinced that, as often as not, he hit every nail on the head. In this connection I can only echo the reported words of New Zealand's 3rd Nobel Laureate, Alan Graeme MacDiarmid who once said, "It is my home life that I consider to have been the single: most important factor in life. Success is knowing, that you have done your best and have exploited your God-given abilities, or gene-given abilities, to the maximum extent. More than this no one can do."¹⁷ Uncredited photos or pictures are by the author. Several issues over Bible quotations will be discussed within Chapter 3.

I am most grateful to a brother who refuses to be named who edited this script.

¹⁷ Obituary by Paul Callaghan, 2007 Annual Report of the Royal Society of New Zealand pp 156-157.

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