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EXTRATERRESTRIAL LIFE AND THE COSMIC CHRIST AS PROTOTYPE

MARTIN THOMSON, CHURCH OF SCOTLAND, KIRKOWAN AND
WIGTOWN¹

Whether or not we are alone in the universe is a question of ancient pedigree which has attained contemporary urgency. It has been restated more frequently during recent years, and the theological implications of the answer are not lost on many both within and outwith the domain of professional science. The physicist Paul Davies makes an attempt to address some of these issues in his book *Are we Alone?: Implications of the discovery of Extraterrestrial life*.² In the preface to his book he writes:

There is little doubt that even the discovery of a single extraterrestrial microbe, if it could be shown to have evolved independently of life on Earth, would drastically alter our world view and change our society as profoundly as the Copernican and Darwinian revolutions. It could truly be described as the greatest scientific discovery of all time.³

Similar sentiments concerning the profound impact the discovery of extraterrestrial life would have on humanity can be found expressed wherever they arise. Consider the following from an editorial in *The Economist*.

If life were found elsewhere, it would change humanity's view of itself forever. No longer the lone, brave experiment on a little planet, but a cosmic commonplace – and the ultimate knockdown. Copernicus told people they were not at the centre of the universe. Darwin told them they

¹ The author is grateful to John Jefferson Davies and Brian Stewart for their comments on an earlier draft of this essay.

² Paul Davies, *Are we Alone: Implications of the Discovery of Extraterrestrial Life* (London, 1995).

³ *Ibid.*, p. xi.

were not divine creation. Now the risen apes are hearing that the same evolutionary process that created them may have gone on elsewhere.⁴

Setting aside the journalistic manner in which this is expressed, the point remains the same, that there are profound philosophical and religious implications in the existence of extraterrestrial life.

Christians believe that humankind has a special relationship with God; we were fashioned in the image of God. The existence of alien beings of equal or superior intellect, capable of self-reflection and questioning their place in the cosmos, is seen by many to represent a challenge to that assumption. This challenge is made all the more acute when we relate it to the incarnation of Christ and to the doctrine of redemption. Christ became a man to save men and women, which fact appears to many thinkers unjustifiably to sideline extraterrestrial life (should it exist) and at the same time illegitimately and arrogantly place inequitable value on terrestrial life in general, and Homo Sapiens in particular. To put the issues succinctly, in the words of Ernan McMullin the philosopher and historian of science at Notre Dame University, 'Could one still take the Christian doctrines of incarnation and redemption seriously if there were millions of developed civilisations dotted throughout the universe?'⁵

Indeed McMullin believes that a failure properly to address these issues has serious implications for the credibility of the faith: 'a religion which is unable to find a place for extraterrestrial persons in its view of God and the universe might find it difficult to command terrestrial assent in the days to come'.⁶

The purpose of this article is twofold. First, by giving a sketch of the issues involved, to sponsor discussion and initiate some further thinking on the part of Christians. There is a danger that the theological outlook of evangelical believers is implicitly built on the assumption that human beings are unique and alone in the universe as intelligent creatures. This may well be the case, but if so it is surely important that we are clear why it is the case.

Secondly, it is not well known that in the 1830s, Thomas Chalmers published a collection of sermons under the title 'A series of discourses

⁴ *The Economist*, August 10 1996, p. 13.

⁵ Ernan McMullin quoted in John Jefferson Davis, 'Search for extraterrestrial intelligence and the Christian Doctrine of Redemption' in *Science and Christian Belief* 9, no. 1 (April 1997), p. 22.

⁶ *Ibid.*, p. 21.

on the Christian revelation viewed in connection with the modern Astronomy'.⁷ Chalmers suggested that just as the effects of the cross were not diminished by time, neither are they restricted by space. Just as we, who live two thousand years from the cross, may be recipients of its redemptive power, so those who live two thousand light years away may be no less blessed. This thought has been further developed by John Jefferson Davis to whom we will later refer, and whose own ideas we hope to develop by reference to Christ as 'Prototype' in relation to humanity.

SCRIPTURAL SILENCE

It should be noted at the outset that there are no explicit references to extraterrestrial life within the pages of Scripture. However, it would be wrong to conclude that scriptural silence necessarily implies non-existence. There are many matters which do not fall within the orbit of immediate biblical concern, but whose existence is beyond doubt. Scripture was not written as a scientific encyclopaedia and should not be treated as such. In particular, we will refer later in this article to the creation of human beings in the image of God, taking the Genesis material as specifically relating human beings to God in the context of terrestrial life. It is not the burden of the Genesis narrative to deal with other life forms on other planets (should they exist), but the absence of that concern does not necessarily imply that the issues raised are 'non-questions' (though they may be). The opening chapters of Genesis are God-centred, presenting to us a personal, unique, perfect and self-revelatory God and revealing how he relates to the creatures he created in his image. Alien life is not a concern in Scripture but it would be a mistake to read any significance into the absence of reference to the existence and significance of life on other worlds. Arguments from silence are notoriously weak.

Marcus Dods in his commentary on Genesis, published in 1882, makes the following pertinent remarks on Genesis 1.

If any one is in search of accurate information regarding the age of the earth, or its relation to the sun, moon, stars, or regarding the order in which plants and animals have appeared on it, he is referred to recent text-books in astronomy, geology, and palaeontology. No one for a moment dreams of referring a serious student of these subjects to the Bible as a

⁷ Thomas Chalmers, *A Series of Discourses on the Christian Revelation Viewed in Connection with the Modern Astronomy* (New York, n.d.).

source of information. It is not the object of the writers of Scripture to impart physical instruction or to enlarge the bounds of scientific knowledge. But if anyone wishes to know what connection the world has with God, if he seeks to trace back all that now is to the very fountain-head of life, if he desires to discover some unifying principle, some illuminating purpose in the history of this earth, then we confidently refer him to these and subsequent chapters of Scripture as his safest, and indeed his only guide to the information he seeks.⁸

One would not look to the Bible for evidence of ET's existence. At the same time this is far from suggesting that Scripture is irrelevant. Indeed, the very opposite is the case for believers. Whilst Scripture cannot be expected to deal explicitly with the detail of each modern scientific discovery, it does provide us with relevant principles which, in turn, shed light on issues raised by that ongoing scientific endeavour. This then enables us to come to a Christian mind and view in connection with matters highlighted by each new discovery. In recent times the scientific enterprise has yielded some significant results in connection with the search for extraterrestrial life. To these we must now turn before we then search for relevant scriptural insights by way of response.

THE 1995 AND 1996 SCIENTIFIC DISCOVERIES

1995 and 1996 witnessed two areas of scientific speculation and discovery which have some bearing on the question as to whether we are alone in the universe and which have invested the issues arising with even greater urgency.

First, there was the evidence for the existence of Jupiter-sized planets circling other sun-like stars.⁹ On October 6, 1995, Michel Mayor of the Geneva observatory announced the discovery of a planet one-half to two times the mass of Jupiter orbiting very close to the star 51 Pegasi, a star found some 55-60 light years from our own sun (next door in astronomical terms). During subsequent months this discovery was verified and there have been an abundance of similar announcements. This evidence being genuine, and it appears to be accepted as such, the question as to whether our own planetary system is unique has been

⁸ Marcus Dods, *The Book of Genesis* (Edinburgh, 1882) p. 1.

⁹ For a more detailed account of the search for, and discovery of, such extra-solar planets see Ken Crosswell, *Planet Quest* (New York, 1997). Crosswell helpfully brings together much of the research from scientific journals in an accessible form.

answered – in the negative. There are apparently other planets orbiting other suns located in other corners of our galaxy; and if there are Jupiter-sized planets then there seems every reason to expect there to be smaller specimens comparable in size to our own.

In fact, smaller planets have already been detected orbiting pulsars. Pulsars are the dense remnants of ancient stars which, having completed their cycle, shed their atmosphere in a supernova, leaving a collapsed core. In 1991 Wolszczan and Frail announced the discovery of a planet 3.6 times the mass of earth orbiting a pulsar. The reason this, and similar discoveries of smaller planets orbiting pulsars, has been largely overlooked is because such planets have been irradiated by their sun going supernova, and are therefore not likely to harbour any surviving life.¹⁰ They are to be viewed more as astronomical fossils. However the existence of even the remnants of planets resembling the size of earth is further evidence that our own solar system is not unique.

Many astronomers believe that our solar system condensed from a dust cloud that formed, and then surrounded, our star in its youth. The colliding and coalescing of bodies in this cloud led to the emergence of planets. They speculate that similar dust clouds surrounding young stars elsewhere may well be the early stages in the formation of planetary systems. Examination of a composite image of the Orion nebula from the Hubble telescope suggested the existence of no less than 160 'new-born' stars possessing just such clouds. However, suggestive as such evidence is, it is not nearly as compelling as the direct claim to have detected planets themselves.¹¹

¹⁰ The strange neglect of the work of Wolszczan and Frail serves as an indicator of how much this field of research is driven, at least implicitly, by a search for extraterrestrial life.

¹¹ Such is the seriousness with which NASA has responded to these discoveries that it is planning what has been described as a 'squadron of space observatories' designed to detect and image earth-like planets. These include the Space Interferometer (SIM) scheduled for 2005 and the Terrestrial Planet Finder (TPF) in 2010. The latter will be designed to determine whether the chemical 'signature' of planets found by the former provide circumstantial evidence for the existence of life. NASA initially funded SETI (Search for Extraterrestrial Intelligence) by founding Project Columbus whereby thousands of radio telescopes around the world 'eavesdrop' on thousands of target stars in the hope of detecting radio signals of artificial origin. However NASA has since withdrawn from that project, which now continues independently as project Phoenix. NASA

The existence of such planets is an important step in the quest for life elsewhere in the universe. But even if this was a universe replete with billions of planets, this is not the same as there being life elsewhere.

Secondly, in August 1996 a group of scientists led by David McKay, of America's National Aeronautics and Space Administration (NASA), suggested that a Martian meteorite found in 1984 in the Allan Hills of Antarctica carried evidence of extraterrestrial bacteria. NASA recognised the importance of this discovery and no less an individual than President Clinton made the announcement before the World's press. The President went on to remark that if this discovery proved genuine then humankind's relationship to the cosmos would be redefined.

It ought to be made clear that this evidence has been much disputed in the scientific press ever since, with no resolution to the controversy in sight. Many scientists believe that the meteorite holds no such conclusive evidence and they are quick to offer alternative explanations. The professional and popular scientific press have run many articles debating the pros and cons of the findings of McKay and his group.¹²

EVOLUTIONARY OPTIMISM

These two discoveries in late 1995 and 1996 certainly fuelled the interest in extraterrestrial life and its detection by scientific means. They added significantly to a growing expectation that such life will be discovered. However, there are certain philosophical assumptions which underpin that optimism and which ought not to be overlooked. It is widely, and erroneously, assumed that the Darwinian model of the evolution of the species has yielded a likely model and theory for the development of life. This is testimony to the extent to which Darwinism has become something of a cultural and intellectual icon in the modern world. Michael Denton has argued that, in the absence of verifiable evidence to substantiate its claims, Darwinism's highly theoretical and metaphysical nature has been forgotten. He describes how it has been elevated to the status of a self-evident axiom. He writes:

Once a theory has become petrified into a metaphysical dogma it always holds enormous explanatory power for the community of belief... The overriding supremacy of the myth has created a widespread illusion that

has stated that it is now focussing its efforts on its search for 'habitable planets'.

¹² Cf. Peter Bond 'Jury still out in case of the Martian meteorite', *Astronomy Now* (February 1999) pp. 24-5.

the theory of evolution was all but proved one hundred years ago and that all subsequent biological research – paleontological, zoological and in the newer branches of genetics and molecular biology – has provided ever-increasing evidence for Darwinian ideas. Nothing could be further from the truth. The fact is that the evidence was so patchy one hundred years ago that even Darwin himself had increasing doubts as to the validity of his views, and the only aspect of his theory which has received any support over the past century is where it applies to macroevolutionary phenomena. His general theory, that all life on earth had originated and evolved by a gradual successive accumulation of fortuitous mutations, is still, as it was in Darwin's time, a highly speculative hypothesis entirely without factual support and very far from that self-evident axiom some of its more aggressive advocates would have us believe.¹³

The acceptance of Darwinism as a dogma and its penetration into our thinking surely contributes to the optimism among many searching for extraterrestrial life. It is assumed that evolution explains how life developed on earth and supposes that the same processes are likely to have occurred elsewhere. That is to say, the theory of evolution is assumed to have validity far beyond anything Darwin conceived, and far beyond anything that is scientifically justifiable. Darwin certainly argued a theory purporting to explain how one species might, by process of mutation and natural selection, transmute into another species. However, Darwin himself appears to have been very aware that a theory for the origin of the species falls far short of explaining the origin of life. He recognised that his theory could not explain how life began in the first place, how the first living thing appeared. Darwin wrote: 'I have met with no evidence that seems in the least trustworthy, in favour of so-called spontaneous generation.' Darwin also commented 'You expressed quite correctly my views where you said that I had intentionally left the question of the Origin of life uncanvassed as being altogether ultra vires in the present state of our knowledge.'¹⁴ That situation has not changed. There is no known mechanism by which the chemical compounds of the so called 'primeval soup' could develop into the massively complex building blocks of life. It is noticeable that this yawning gap in established scientific theory is largely overlooked.

¹³ Michael Denton, *Evolution: A theory in crisis* (Maryland, 1986) pp. 76-7.

¹⁴ These quotations are found in Paul Davies, *Fifth Miracle: The Search for the Origin of Life* (London, 1998) pp. 40, 53.

It is necessary, at this point, to clarify some issues concerning how scientists understand life to have begun. It should be noted at the outset that scientists look for naturalistic explanations for the emergence of life. It is not the purpose of this article to enter into whether or not they are correct to do so. We are simply exploring some of the assumptions being made and avenues being explored in current research.

It has commonly been thought that life emerged totally by accident. The traditional biological view is that life is a complete freak, a surprising fluke. The traditional evolutionary understanding of the emergence of life views it as being the chance concatenation of molecules in the primeval soup to form the building blocks of life. The problem for this theory lies in its inherent improbability. The chances of complex molecules forming by chance have always been calculated as vanishingly small. The obvious conclusion is that life is a statistical fluke and that the universe, outside of our own planet, may well be utterly sterile.

By way of contrast, it is also commonly affirmed that since the universe is so vast, its enormity will overcome the improbability of the chance emergence of life. This is based on a misunderstanding and is wrong. It is certainly true that the universe is now perceived to be mind numbingly large. Our own immense Milky Way Galaxy includes over two hundred billion stars plus interstellar gas and dust, all revolving around the centre. The Milky Way Galaxy is about one hundred thousand light years across (one light year is practically 10 trillion km, or 6 trillion miles). The Milky Way Galaxy is only one of billions of galaxies that exist to the edge of the observable universe, some 15 billion light-years away. With such an enormous universe, so the argument runs, there must surely be the expectation that even a chance event could occur with some regularity. However, if the size of the universe is staggering, it is nothing to the odds against atoms coalescing in the correct manner to produce the building blocks of life. Life (or perhaps more correctly, terrestrial life) is based on very complicated molecules which have meticulously crafted structures. Even in the simplest of organisms the DNA contains millions of atoms, and those atoms are ordered in a very precise manner. Change that order only slightly and the organism is threatened.

To illustrate the problem, consider the hundreds of thousands of specialist proteins upon which life is based. The odds against producing just the right proteins by chance have been calculated to be $10^{40,000}$ to 1

against.¹⁵ In the light of this, the British astronomer Fred Hoyle once remarked that the odds against the chance and spontaneous assembly of life was as likely as a whirlwind sweeping through a junkyard and producing a fully functional Boeing 747.

Many scientists are therefore looking elsewhere in their search to explain the emergence of life. The recent developments in the mathematics of complexity theory have been deployed by those seeking to argue that complexity is a naturally occurring phenomenon. According to this theory there is an inherent tendency in the way of things to produce complexity. This being the case, life is likely wherever there are the conditions necessary. However, the 'laws of complexity' sought by some have not yet been articulated, but that has not discouraged those who are puzzled as to why the universe appears to have been programmed to produce life, perhaps from the very beginning.¹⁶

Notwithstanding the fact that, to date, there is no satisfactory theory explaining the emergence of life, there is a remarkable confidence among the scientific community at large that there exists life elsewhere in the universe. Not only are considerable private resources, not to say scientific careers, being deployed on Project Phoenix (the search for signals from other civilisations), but also a fundamental motivating principle of much of NASA's exploration of our own Solar System and beyond is geared towards the search for life.

This optimism rests on two assumptions. First, the false assumption that somehow Darwinism holds the key to understanding the emergence of life (an assumption which looks more religious than scientific), and second, that an alternative explanation is likely to be found, one which may rest on as yet to be formulated 'laws of complexity'. Indeed, for those scientists most aware of the gaps in our knowledge of how life began there is a hope that the discovery and study of extraterrestrial life may well provide clues as to how life began on earth.

CHRIST AS COSMIC PROTOTYPE

Turning now from science to theology, there are several points to make. First of all we ought to draw a distinction, so far blurred, between

¹⁵ I have depended on Paul Davies, *Fifth Miracle*, chapter 3 for these statistical odds.

¹⁶ Cf. John D. Barrow and Frank J. Tipler, *The Anthropic Cosmological Principle* (Oxford, 1986); and M. Michael Waldrop, *Complexity: The emerging science at the edge of order and chaos* (London, 1993).

extraterrestrial life and extraterrestrial intelligence.¹⁷ Microbes on Mars would not be as problematic for believers as would the arrival of intelligent interstellar spacefarers. If our own Solar System is found to contain primitive life forms, perhaps within a sub-surface sea on Jupiter's moon Europa or amidst the frozen organic wastes of Saturn's moon Titan,¹⁸ or were evidence for life to have previously existed on Mars to be confirmed, then Christians might regard such life as being embraced within the domain of stewardship bestowed on humanity by God following the creation.

It follows from the nature of humanity created in the image of God that it exercise dominion over the created order. There is no reason to imagine that the created order need be restricted to our home planet. It is following the declaration in Genesis 1 of the creation of man in his image that God then issues the command: 'Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish of the sea and the birds of the air and over every living creature that moves on the ground.'¹⁹ As a consequence of being made in the image of God humankind is to subdue the earth, and that not by brute force or tyranny but as God's steward. That dominion is expressed in Genesis 2:19-20 in the naming of the animals. Henri Blocher echoes the conclusion of many that in this we see the beginnings of science:

[T]he bestowal of names undoubtedly reveals at the same time the insight of knowledge. The man must in fact study the character of the animals which pass before him, in order to see whether any one of the birds or animals can bring him the company he desires. The name he gives summarises his conclusion.... The picturesque, almost humorous, scene suggests a rudimentary kind of science, the means of man's domination over nature. The French philosopher Condillac (1715-80) held that science was simply an advanced state of language. Language in any case is

¹⁷ This is not a distinction which will be recognised by many scientists. If an evolutionary model of life is accepted, then it will be assumed that the existence of microbial life holds forth the possibility of the evolution of higher life forms. Microbes on Mars would then be regarded as evidence making extraterrestrial intelligence more likely.

¹⁸ Two places concerning which there continues to be intense speculation as regards the possibility of their harbouring life.

¹⁹ Genesis 1:28, NIV.

the form and condition of science, and in language the act of naming is the first and indispensable operation.²⁰

To this last comment we may add that the language of science is largely that of mathematics, and one of the deeply perplexing mysteries confronting many scientists is the simple fact that the universe is so strangely susceptible to mathematical description. For example the much sought after 'theory of everything' which has become something of a 'holy grail' among physicists would be a mathematics which would effectively relate the geometry of space-time with the fundamental forces.²¹ Such mathematics would likely be unsurpassed in beauty and elegance. But the truly awe inspiring aspect of such a theory would be that it would further reveal the universe to be susceptible to mathematical language which human beings are capable of expressing and understanding. As John Polkinghorne has noted, 'Mathematics is the abstract key which turns the lock of the physical universe.'²² The intricate patterns freely invented by the minds of Pure Mathematicians are found to correspond exactly with the physical structure of the world. The intelligibility of the universe is something so familiar that we tend to miss its importance.

The intelligibility of the world calls for an explanation. Einstein said that the only incomprehensible thing about the world is that it is comprehensible. The explanation will not be given us by science, since science assumes the world's intelligibility as part of its initial act of faith.²³

Polkinghorne explores these issues as he pursues his thesis that science and theology are complementary explorations of reality. However, in the light of the Genesis revelation this intelligibility ought not to surprise Christians. It follows from our being made in God's image. It is our dominion exercised in 'naming' that which is around us.

This dimension to, and expression of, the nature of humankind created in God's image ought to make us excited about the exploration of space and what it may discover, rather than defensive and reactionary. If there is

²⁰ Henri Blocher, *In the Beginning* (Leicester, 1984) p. 91.

²¹ Perhaps the best known publication on this topic is Stephen W. Hawking, *A Brief History of Time: From the Big Bang to Black Holes* (London, 1990).

²² John Polkinghorne, *One World* (London, 1986). (See also his essay 'Rational discourse' in *Reason and Reality*, London, 1991, pp. 20-33).

²³ *Ibid.*, p. 46.

primitive life out there then that may be taken to mean that there is more for us to 'name', and the dominion bestowed on us as a consequence of our nature as 'the image of God' is more spacious than we may at first have thought. Having said that, this hardly applies to extraterrestrial intelligence which, were it to exist, raises the very questions about incarnation and redemption with which we began this article. To this more refined possibility we now turn.

Secondly, if a more advanced form of life exists elsewhere in the universe then it falls into a different category to that discussed above. Human beings are distinctive because of our bearing the image of God. There has been some debate and even divergence over the precise meaning of the 'image of God'. Blocher helpfully summarises these as falling under four types.²⁴

First that the 'image of God' is a reference to our spirituality:

Mankind shares in the spirit as does God himself: that is the implicit point of the comparison. In the created spirit, the ancient writers make *reason* the 'hegemonic', or predominant part.²⁵

Sometimes this interpretation has also incorporated an alleged distinction in meaning between the word 'likeness' and the word 'image' in Genesis 1:26: 'Let us make man in our image, in our likeness'(NIV). Such an interpretation often regarded 'image' as referring to natural qualities, such as reason and personality, whilst 'likeness' referred to the supernatural graces. Older commentators certainly acknowledged such a distinction, and thus Calvin writes 'The greater part, and nearly all, conceive that the word image is to be distinguished from likeness.' However he concludes, 'As for myself, before I define the image of God, I would deny that it differs from his likeness.'²⁶

Similar conclusions are reached by most modern commentators such as Kidner²⁷ and Wenham.²⁸ However, what remains of this line of reasoning is the conviction that something spiritual is meant, although, as Wenham notes, it is hard to pin down precisely what this means.

A second interpretation of the 'image of God' focuses on what we have already suggested follows from it, namely the exercise of authority

²⁴ Blocher, *In the Beginning*, ch. 4 and especially pp. 79-82.

²⁵ *Ibid.*, p. 80.

²⁶ John Calvin, *The Book of Genesis* (London, 1965; reprint of Calvin Society edition of 1847), p. 93.

²⁷ Derek Kidner, *Genesis* (Leicester, 1967), p. 50.

²⁸ Gordon J. Wenham, *Genesis 1-15* (Waco Texas, 1987), p. 30.

and dominion over the created order. The image is then the rule of God over his universe particularised through the rule of humankind. Wenham adds weight to this interpretation by his insistence upon interpreting the Genesis text in the light of ancient near eastern ideas. His book is an attempt to interpret the theological relationship between Genesis 1-11 and oriental ideas on the one hand and Genesis 1-11 and Genesis 12-50, the rest of the Pentateuch and modern thought, on the other. He argues particularly strongly that the oriental context to which the book first spoke crucially informs the original intention of the biblical writer, since what is offered is essentially an alternative world view:

An examination of the relationship between Gen. 1-11 and earlier oriental tradition sheds much light on the background to biblical thought and highlights the distinctiveness of its message. Though Genesis shares many of the theological presuppositions of the ancient world, most of the stories found in these chapters are best read as presenting an alternative world-view to those generally accepted in the ancient Near East. Gen. 1-11 is a tract for the times, challenging ancient presuppositions about the nature of God, the world, and mankind.²⁹

Wenham then applies this in interpreting the phrase 'image of God', for he notes that both Egyptian and Assyrian texts refer to the king as the image of God, a train of thought continued in Psalm 8. This lends weight to the understanding that what is intended is a view of man as God's vice-regent on earth.³⁰

Thirdly, Luther related the 'image of God' to the original righteousness that was lost at the fall. Thus, in Luther's understanding, the image would have been tarnished and shattered at the entrance of sin and exist now only in broken form. Redemption then effects a restoration of this image. This interpretation drives a wedge between the believer and the unbeliever, which Luther may himself have acknowledged when he distinguished a private image that was lost from a public image that was preserved.

Finally, Karl Barth makes a distinctive contribution to this debate when he asserts that the 'image of God' may be understood as referring to human sexuality. By this he means that:

it should be understood that the difference male/female calls humankind to a personal, face-to-face relationship, as God himself exists in face-to-face

²⁹ *Ibid.*, p. xiv.

³⁰ *Ibid.*, pp. 30-31.

relationship (hence the divine plural 'let us make'). The image of God is fulfilled, ultimately, only in Christ's face-to-face relationship with the church.³¹

Blocher suggests that we need not choose between these and provides an extensive discussion of how the image of God might embrace all these features. Wenham reaches a similar conclusion, although argues that the strongest case is made for the view that the divine image makes human beings God's representatives on earth, although he then perceptively adds, 'But this merely describes the function or the consequences of the divine image; it does not pinpoint what the image is in itself.'³²

Turning to the concept of extraterrestrial intelligence, we would imagine that such intelligence might conceivably carry many, if not all, of these characteristics. Any extraterrestrial civilisation found living on a planet orbiting another star would, as far as our imagination can conceive of such intelligent life, bear exactly the same characteristics in terms of spirituality, dominion, moral righteousness and sexuality.

The purpose here is not to explore exhaustively the varied nuances of interpretation associated with the 'image of God', but simply to illustrate that across the range of emphases presented by mainline theology, there is nothing to preclude the possibility of that image being manifest in alien life.

As already noted above, many believe that Christianity is particularly unable to accommodate the existence of extraterrestrial intelligence. This inability, it is said, centres on the incarnation whereby God became a man. If the incarnation of the second person of the Trinity was necessary to effect our salvation, what of extraterrestrial life – non-human, but intelligent life (bearing the characteristics listed above)?

This charge, I suggest, is based on a misunderstanding which effectively conceives God to be in the image of human beings, rather than the reverse. Scripture makes it clear that human beings were made in the image of God. But it is no less clear that Christ was the prototype of which human beings were the type. When Christ became a man he assumed the type of his own prototype. That is to say, for want of a better phrase, the priority of being lies with Christ.

This perhaps leaves the door open for the possibility of there being other 'types' derived from that single prototype. Whilst there is no

³¹ Blocher, *In the Beginning*, p. 81.

³² *Ibid.* pp. 31-32.

explicit reference to such life in Scripture, as we argued above, scriptural silence is not necessarily significant.

The description of Christ as 'prototype' is intended not to conjure images of his being one Platonic ideal of which we are imperfect replicates, but rather to reaffirm the biblical portrait of the unique, divine Christ as the eternal Word who is the agent of all creation and yet whose image is found manifest in humanity. That image may be uniquely reflected in men and women on our own planet but the suggestion being made here is that there appears to be no conclusive biblical evidence to preclude that same image being found in alien life. Far from undermining the Christian faith, such a possibility, neither supported nor precluded by Scripture, may be seen further to glorify Christ by revealing a universe teeming with life bearing his image. Christ is the original, unique defining prototype of which we are types, and of which, conceivably, ET may be a type.

Having argued thus, it should be emphasised that this is, for the moment, pure speculation. To date, there is absolutely no accepted and verifiable scientific evidence for the existence of any life outwith our own biosphere.

COSMIC CHRIST

It is in the light of this description of Christ as Prototype that we might draw attention to the suggestion made by Thomas Chalmers, and developed by John Jefferson Davis, of the cosmic Christ. Chalmers, as already noted, had no problem in regarding the terrestrial events of the incarnation and death and resurrection of Christ as having soteriological significance beyond this planet, and beyond the confines of the human race. Chalmers contested the view that the Christian Gospel need necessarily be terrestrially-bound:

The whole of the infidel difficulty proceeds upon the assumption, that the exclusive bearing of Christianity is upon the people of our earth; that this solitary planet is in no way implicated with the concerns of a wider dispensation; that the revelation we have of the dealings of God, in this district of his empire, does not suit and subordinate itself to a system of moral administration as extended as is the whole of his monarchy.³³

Chalmers argued that the revealed existence of angelic beings and their place in the divine plan and purpose of salvation is evidence that the

³³ Chalmers, *A series of Discourses*, p. 178.

saving significance of Christ's work is far wider in scope than to be merely terrestrial:

I have adverted, it is true, to the knowledge of our moral history, which obtains throughout other provinces of the intelligent creation. I have asserted the universal importance which this may confer on the transactions even of one planet, in as much as it may spread an honourable display of the Godhead among all the mansions of infinity.³⁴

Chalmers appears to suggest in some places that God may have come to independent arrangements in respect of his relationship to other beings in different corners of his universe,³⁵ a line of thought echoed in the writings of C. S. Lewis.³⁶ However, his more considered argument is more overtly biblical and regards humanity as the centre of a great cosmic conflict played out on the stage of this planet, the significance of which extends far beyond our home world.

Whilst Chalmers draws heavily upon biblical testimony to the conflict involving 'principalities and powers' and the role, and defeat, of Satan and his hordes, John Jefferson Davis develops the thought of events on earth having wider significance by drawing from Colossians 1:15-20.³⁷

Davis argues that Colossians 1:15-20 has received 'inadequate attention' in connection with these issues. It is a passage, after all, which portrays redemption as being cosmic in scope, with repeated and insistent use of the word 'all', 'all things' and 'everything'. Davis proposes that this alone is evidence that the

redemptive effects of the atoning sacrifice of Christ are not limited to humanity, but extend in some way to the entire created order. The apostle stresses in the most emphatic way the absolute supremacy of Christ in every realm of space, time, and human experience. This supremacy of Christ is asserted in creation (vv. 15,16), providence (v. 17), incarnation

³⁴ *Ibid.*, pp. 183-4.

³⁵ *Ibid.*, from p. 186.

³⁶ C. S. Lewis, 'Religion and Rocketry' in *Fern-seeds and Elephants* (Glasgow, 1975). This essay was originally published in April 1958 in the *Christian Herald* under the title 'Will we lose God in outer space?'

³⁷ Davis, 'Search for Extraterrestrial Intelligence'.

(v. 19), reconciliation (v. 20), resurrection (v. 18b), and in the church (v. 18a).³⁸

As we consider this passage it is obvious that it was written against the background of a society which was, from our perspective, 'pre-scientific'. The cosmic scope of the passage would embrace, in the minds of the original readers, principalities and powers. They had no concept of the vastness of the universe peppered with galaxies (a twentieth-century discovery). It might reasonably be questioned whether it is legitimate to take something written against the background of such a limited world view and apply it to a modern scientific world view. Can we take what was applied first to 'principalities and powers' and properly reach conclusions about possible extraterrestrials in far away galaxies? However, the thrust of this passage is the assertion that there is no domain over which Christ does not hold sway. There is no corner of reality left unaffected by the potency of his victory on the cross. It seems, therefore, perfectly legitimate to apply that principle to our modern, scientific view of reality and reach the conclusions Davis does concerning the cosmic scope of Christ's atoning work.

Davis then draws upon the concept of 'federal headship' as found articulated in traditional reformed covenant theology to provide a framework to understand how Christ's atoning work could be related to the reconciliation of any alienated extraterrestrials.³⁹ It is made clear in the Westminster Confession of Faith chapter 8 that the redemptive benefits of the death of Christ were not limited by time.

Although the work of redemption was not actually wrought by Christ till after his incarnation, yet the virtue, efficacy, and benefits thereof, were

³⁸ *Ibid.*, p. 31.

³⁹ For the purposes of this article we set aside any discussion as regards the extent of the Fall and whether extraterrestrials might have maintained 'original righteousness'. Interested readers may wish to consult Polkinghorne's essay 'The fall' in *Reason and Reality* (London 1991) in which he argues 'on the view I am proposing, the whole universe is fallen physically but only part is fallen morally. If there are other life-bearing planets elsewhere in the cosmos it is conceivable that their inhabitants may be as innocent of moral evil as were the dwellers in C. S. Lewis's Perelandra' (pp. 100-101).

communicated unto the elect in all ages successively from the beginning of the world.⁴⁰

Equally, the Confession draws on the biblical emphasis of salvation being for the elect. That is, Christ's mediatorial work is effective for 'all those whom the father has given him'. Davis invites us to interpret this on a cosmic scale.

Davis concludes his argument:

the Pauline Christology of Col. 1:15-20 makes it unnecessary to postulate additional incarnations or atonements in order to conceptualise the possible reconciliation of any alienated extraterrestrials elsewhere in the universe. The once-for-all incarnation and death of Christ on the Cross has already provided the basis for such a reconciliation (vv. 19, 20).⁴¹

CONCLUSION

Drawing together the strands of the above arguments, we conclude that the concerns raised by the possible existence of extraterrestrial life need not be the insurmountable problems they appear at first, and certainly do not present the knockdown arguments against Christianity that some of the Faith's critics would have us believe. Perhaps 'our God is too small' and as a result we have lost sight of the cosmic Christ and thereby allowed the Christian faith to be portrayed as being vulnerable to scientific discovery of life elsewhere. Equally, we must recall to mind the supremacy of Christ in creation whereby he is the prototype and humanity the type. It is our all-too limited and anthropocentric view of Christ which requires challenging. Chalmers provided us, in a largely forgotten work, with a useful corrective to an earthbound theology, and Davis helpfully fills this out by reminding us of the remarkable cosmic dimensions of Christ's supremacy as expounded in the Christology of Colossians 1:15-20.

As history moves into the third millennium, it seems likely that human beings will be increasingly escaping beyond the confines of the earth. Scientific exploration of our solar system and beyond moves ahead apace. At the same time commercial exploitation of space is also proving to be an increasing driving force behind space science. We have noted

⁴⁰ Westminster Confession of Faith (1647), ch. 8.

⁴¹ Davis, 'Search for Extraterrestrial Intelligence' p. 34.

above that 1996 proved to be a significant year in terms of scientific discovery. It was also a decisive year in terms of the economics of space, for in that year the world-wide commercial revenues in space transportation for the first time surpassed governments' spending.⁴² Space is now big business. The coming decades will likely see manned exploration and settlement upon Mars, driven not simply by scientific curiosity but by commercial necessity. The new century of technological advance and scientific discovery will open up a new set of theological and ethical issues which will demand a degree of both scientific and theological literacy. That agenda will be set by the world for the church, and it remains for the church to take up that challenge and do so in service of him who is, 'the image of the invisible God, the firstborn over all creation'.⁴³

⁴² Tim Beardsley, 'The way to Go in Space' *Scientific American* (February 1999) pp. 61-77.

⁴³ Colossians 1:15, NIV.