



Scientists and Ministers

*The Society of Ordained Scientists
25th Anniversary Year
Collection*

Foreword

There was surprise verging on incredulity when I visited the school group appearing to be a clergyman, but speaking as an experienced scientist. How, they wondered, could these things be possible in the same person? This reaction, which I have come across on several occasions, reflects the widely-held perception, strongly reinforced by the media, that science and religion are not only incompatible but that their practitioners are at war with each other. Yet look at any list of clergy and you will see that many of them hold degrees in science. So for some people at least it must be possible to wear both hats at once.

But this position comes with its own intellectual and spiritual challenges, so in response nearly 30 years ago the Society of Ordained Scientists (SOSc) was founded. It was the inspiration of Revd Dr Arthur Peacocke, himself a practicing biochemist, Anglican priest and author. The Society is not an academic discussion group; rather it is a dispersed religious community whose members follow a rule in which they support each other in prayer and meet together as often as is practicable. The membership now extends to around 180 ordained and associate members from many different church backgrounds and from different parts of the world.

To celebrate our 25th anniversary I invited members to contribute a short commentary on a text that they had a particular affinity with. Around 20 members responded and we brought these together as our 25th Anniversary Collection. It was immediately clear that this collection of short texts and reflections might well be of interest to a wider public so we offer them now, in revised form, to those who are curious to know what it is like to be both in ministry and to have serious scientific expertise. The contributors come from a wide background of sciences and churches and I hope what they

have to say will provide food for thought for many who are searching their own way to understand creation and its Creator.

For more information on the Society, see:

(<http://ordainedscientists.wordpress.com/>)

Keith Suckling
Warden, SOSc

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David Atkinson

You never enjoy the world aright, till the Sea itself floweth in your veins, till you are clothed with the heavens, and crowned with the stars: and perceive yourself to be the sole heir of the whole world, and more than so, because many are in it who are every one sole heirs as well as you. Till you can sing and rejoice and delight in God, as misers do in gold and Kings in sceptres, you never enjoy the world.

Thomas Traherne, Centuries of Meditations, First Century p. 29

By an Act of understanding therefore be present now with all the creatures among which you live; and hear them in their beings and operations praising God in in heavenly manner. Some of them vocally, others in their ministry, all of them naturally and continually. We infinitely wrong ourselves by laziness and confinement. All creatures in all nations, and tongues and people praise God infinitely; and the more, for being your sole and perfect treasures. You are never what you ought till you go out of yourself and walk among them.'

Thomas Traherne, Centuries of Meditations, Second Century p. 76

One of the early Annual Gatherings of the SOSc in the 1980s was addressed by Canon Donald (A M) Alchin. He took as his theme some of the recently recovered manuscripts of the seventeenth-century English poet and theologian, Thomas Traherne. Traherne was new to me, and the two excerpts above which Donald Alchin read to us have stayed with me. Traherne was born in 1636, lived as a boy through the Civil War, went up to Brasenose Oxford, was ordained in 1660 and served in Herefordshire and as chaplain to Sir Orlando Bridgeman, Lord Keeper of the Seal. He died, aged 38, in 1674.

This was a time of political turbulence, the uneasy tensions between church and state, the emergence of experimental science. Most of

Traherne's work was not published in his lifetime, and much of it was lost until it emerged through a series of accidents in the C20th - some of it as late as the 1990s. He is best known for his lyrical prose in the four books of *Centuries of Meditations*, though he also wrote poetry and some more systematic theological work. He was very open to the new science, and wanted to celebrate the hand of God in new discoveries. What attracted me to Donald Alchin's selection for the SOSc Annual Gathering was Traherne's emphasis on 'enjoying the world'. From the turbulence of Traherne's world, to that of our own (population growth, food insecurity, climate change, political and economic instability of different sorts), there is something wonderfully refreshing about his delight in the natural world, and his enjoyment of God's joy in creation. He does not deny suffering and sin. He is not a naïve utopian. He knows of the ambiguity of the Garden of Eden, and the weariness of Ecclesiastes. But he celebrates with great joy our place under God in the natural world, and seems to catch the delight of the author of Job (38.7) writing of God's creative work 'when all the morning stars sang together and all the heavenly beings shouted for joy.'

George Bolt

Francis & Clare of Assisi: the Franciscan path

Francis seems to have become the unofficial saint of ecology and the environment, and after his youthful experience of warfare, a pacifist. He and his followers renounced all possessions and lived very simple frugal lives. It is a paradox that this 'poor man of Assisi' should have had such a wonderful Romanesque cathedral built in his honour and for his tomb, but as with Golgotha the site had been the place where the city's rubbish was burnt.

Clare came from a noble Assisi family. She escaped at dead of night to join the brotherhood, but this of course was an impossibility in 12c. Italy and so the Order of the Poor Clares came into being as others came to join her for quiet contemplative prayer in the little Church of San Damiano. She was a woman of spirit who on one occasion drove marauding mercenary soldiers from the grounds of the convent by the elevation of a monstrance.

The Canticle of the Creatures

Most High, all powerful, good Lord,
to you be praise, glory, honour and all blessing,

Only to you, Most High, do they belong,
and no one is worthy to call upon your name.

May you be praised, my Lord, with all your creatures,
especially Sir brother sun, through whom you lighten the day for us.

He is beautiful and radiant with great splendour.
He signifies you, O Most High.

Be praised, my Lord, for sister moon and the stars.
Clear and precious and lovely they are formed in heaven.

Be praised, my Lord, for brother wind and by air and clouds,
clear skies and all weathers, by which you give sustenance to your
creatures.

Be praised, my Lord, for sister water,
who is very useful and humble and precious and pure.

Be praised, my Lord, for brother fire,
by whom the night is illumined for us.
He is beautiful and cheerful, full of power and strength.

Be praised, my Lord, for sister, our mother earth,
who sustains and governs us and produces divers fruits and coloured
flowers and grass.

Be praised, my Lord, for all who forgive for love of you
and who bear weakness and tribulation.

Blessed are those who bear them in peace;
for by you Most High they will be crowned.

Be praised, my Lord, for our sister, the death of the body,
from which no one living is able to flee
Woe to those who are dying in mortal sin.

Blessed are those who are found doing your most holy will,
for the second death will do them no harm.

Praise and bless my Lord and give him thanks
and serve him with great humility. Francis of Assisi

*The first nine stanzas were composed early in his ministry; the tenth
and eleventh after settling a dispute between the Bishop and
municipal leaders of Assisi; and the final stanzas as he lay dying.*

Francis' sequence of praise and thanks makes sense to me as an ordained scientist/physicist.

First *'praise, glory, honour and all blessing'* to God, the living creator of all creatures;

Then, focussing on our sun for *his* beauty, radiance and light, - the source of all life's energy. The symbolism of *'He signifies you, O Most High'* echoes back to earlier more primitive human faiths when the sun was worshipped as a god, perhaps the most powerful of that pantheon.

Reaching out into space Francis praises the Lord for his clear vision of the moon and stars untroubled by light pollution in the 12c. There are records of his interest in viewing the heavens. Above Assisi on Mount Subasio at the Eremo Carceri, where the early brothers used to gather for retreat there is a modern bronze of them viewing the stars. Already Francis is identifying sun, sister moon and stars as related to us. This is not anthropomorphism since he does not imply that they think or behave like us, but it does recognise our common celestial heritage being creatures formed of stardust. In an age of chivalry one would expect Francis to identify the sun as a powerful masculine creature and the beautiful remote moon and stars as *'precious and lovely'* sisters.

Living in a sylvan mountain country he is accustomed to a changing climate and gives thanks for all the crops that result. He especially recognises the essential priority for sister water so *'useful and humble and precious and pure'* as she gives herself to the soil to be absorbed into the growing plants. Sister water's gift for LIFE.

He now praises another of the ancient *'elements'* brother FIRE emphasizing his beauty, power and strength, and CHEERFULNESS. Francis as the son of a wealthy business man had enjoyed an exuberant youth amongst the young men and women of Assisi and he never lost his sense of JOY after the events that brought him down to earth and into the ministry of God. The three notes of the Order of Saint Francis are **Humility, Love and Joy**.

The earlier part of the Canticle concludes with praise of MOTHER EARTH recognising our utter dependence on the bounty of this

creature of God. James Lovelock's Gaia Hypothesis regarding the earth as a self-regulating living organism is truly an understanding which I believe can be seen to derive from the Franciscan vision of our common interdependence in the web of life. The fact that we are brothers and sisters of all life on earth.

Francis was a great peacemaker even travelling to the wars of the crusades endeavouring to bring peace to that conflict. His latter journey to the middle-east caused trachoma which resulted in the blindness and pain of his last years. He lived in a time of great unrest in Italy and had experienced war, imprisonment and sickness resulting from them.

Be praised, my Lord, for the death of the body - . Francis' faith sustained him to the end of his life. Towards the end of September 1226 Francis was aware that he only had a few days left to live. He was determined to die at the Porziuncula, one of the little churches that he and the brothers had restored and which had become and remains the founding home of the Order. It lies a few miles outside of the city walls and so he was carried down on a litter, pausing to bless Assisi, which, being blind, he could no longer see.

Adrian House concluded his book on Francis of Assisi with this reflection on his death:

'Death sometimes approaches like a shadow or cloud, even the onset of night, and it must have seemed so to the brothers who prayed around Francis in the fading light. But he was moving into another world, growing closer to his God whose emblem was the sun. Blind, he was looking up into the cloudless blue sky of a perfect summer morning which suddenly blazed with a dazzling light as he died. For the others it was just after sunset on 3rd October.'

Gail Bucher

God, Who Stretched the Spangled Heavens

God, who stretched the spangled heavens infinite of time and place,
Flung the suns in burning radiance through silent fields of space:
We your children in your likeness, share inventive power with you;
great Creator, still creating, show us what we yet may do.

We have ventured worlds undreamed of since the childhood of our
race;
known the ecstasy of winging through untraveled realms of space;
probed the secrets of the atom, yielding unimagined pow'r,
facing us with Life's destruction or our most triumphant hour.

As each far horizon beckons, may it challenge us anew:
children of creative purpose, serving others, honoring you.
May our dreams prove rich with promise; each endeavor well begun;
great Creator, give us guidance till our goals and yours are one.

Catherine Cameron (1967)

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I first used this hymn in October 1999 as the invocation for the 10th Anniversary celebration of the Faith & Science Exchange and the passing of the baton from Barbara Smith-Moran to me as Director after ten years. It seemed most fitting in that our keynote speaker was American astronaut, Dr Story Musgrave. His breath-taking photos from space and message were indicators of the vastness of God's creation. We talked about the challenges of scientific discovery and our human desire to learn more and more about the world and life as a way to grow closer to God.

This hymn speaks to me in many ways as I reflect on science's power to preserve life and to destroy it. On September 13, 2011, I

was in rural North Carolina, away from the city lights and planes overhead looking at the starlit sky. The country had been through a great trauma, yet somehow in that moment; I felt God's overwhelming presence and knew that we would survive this horrific time.

The theme for this hymn seems to have its origin in several favorite Psalms, such as Psalms 8, 19, 102, 104 and 147 or perhaps Isaiah 40, 45 or 48. Although the Psalmists and prophets had little knowledge of science, in particular, astronomy, they knew that God created the stars in the heavens and named each one. In the night sky they had a glimpse of the divine.

In our roles as scientists and leaders in our churches, I feel that the author has laid out our Christian responsibility to encourage scientific exploration. We need to help to save our planet from destruction, much caused by human activity while also finding new and better ways to cure illnesses and preserve life. I am particularly fond of the last sentence of stanza 1: *'We your children in your likeness, share inventive power with you; great Creator, still creating, show us what we yet may do.'* With Christ anything is possible. Let us use our knowledge faithfully and responsibly to help create a better world.

Dennis Cheek

Praise the Source of Faith and Learning

Praise the source of faith and learning
who has sparked and stoked the mind
With a passion for discerning
how the world has been designed.
Let the sense of wonder flowing
from the wonders we survey
Keep our faith forever growing
and renew our need to pray.

May our faith redeem the blunder
of believing that our thought
Has displaced the grounds for wonder
which the ancient prophets taught.
May our learning curb the error
which unthinking faith can breed
Lest we justify some terror
with an antiquated creed.

As two currents in a river
fight each other's undertow
Till converging they deliver
one coherent steady flow,
Blend, O God, our faith and learning
till they carve a single course
While they join as one returning
praise and thanks to You their source.

God of wisdom, we acknowledge
that our science and our art
And the breadth of human
knowledge only partial truth impart.
Far beyond our calculation

lies a depth we cannot sound
Where Your purpose for creation
and the pulse of life are found.

Reverend Thomas Troeger: Borrowed Light: Hymn Texts, Prayers and Poems, Oxford University Press, 1994. (tune Hyfrydol)

These wonderful hymn lyrics from the gifted poet, hymn writer, and preacher Rev. Thomas H. Troeger, Edward and Ruth Cox Lantz Professor of Christian Communications at Yale Divinity School, were composed for the retirement of Professor Waldo Beach at Duke Divinity School in 1986 and were inspired by Duke's motto, *Erudito et Religio*. Published a year later and revised in 1989, they have appeared in at least four different church hymnals and sung at numerous venues including churches, university chapels, commencements, and convocation, and a Presidential Prayer Breakfast. They helpfully remind us that the inquisitiveness, ingenuity, and ability of humans to probe and make sense of the cosmos they inhabit are a testament to a loving Creator. At the same time, there is a fragility associated with human knowledge, thus science is indeed an 'endless frontier' as Vannevar Bush styled it and we may say the same thing about the theological enterprise. Within nature, including the human species, lies deep mystery. Humility should, therefore, be a hallmark of both scientific and theological investigations even though it is by now quite clear that progress can be made by diligent efforts and that significant insights accumulate over generations in both domains. William Henry, the famous early 19th century English chemist known for 'Henry's law' is reputed to have remarked, 'What is research, but a blind date with knowledge?' As ordained scientists we have a special responsibility to encourage scientists, theologians, public figures, and religious leaders to remain humble in the face of both nature and ourselves. Thank God for all that human beings have discerned, including the ongoing recognition and correction of prior misconceptions and faulty understandings in both science and religion/theology! May the Lord graciously grant us wisdom to apply our scientific and technological prowess to improve

life on Earth and better understand ourselves, the cosmos we inhabit, and the God we humbly worship and serve.

Geoffrey Cook

In being asked to offer one of our favourite writings and our thoughts on them to a collection to celebrate the 25th Anniversary Year of the Society of Ordained Scientists I had no hesitation in offering a piece from *The Little World of Don Camillo* by Giovanni Guareschi. I have a rather battered copy, published by The Reprint Society London in 1953. It had belonged to my father who died at a rather early age and it is not only a treasured personal keepsake but a delightful book full of humanity and which I would warmly recommend to anyone.

Giovanni Guareschi's book is set in the Po region of Italy and has three principal characters, Don Camillo the parish priest, Peppone the Communist and Christ on the Cross. The commentary on the inside of the dust jacket of my copy points out that it is a story between Good and Evil but with a difference; *'the good is not unattainable good and the evil is not positively bad'*.

The piece I enjoy reading again comes in the last chapter of the book. Christmas is approaching and Don Camillo gets the figures for the crib out of their drawer to freshen up the paintwork. He is joined by Peppone who is persuaded to help. As they paint they start to argue about the world, about the way Don Camillo got Peppone's son to recite a poem for the bishop. Don Camillo hands Peppone the figure of the Holy Infant to repaint. As they finish their painting Don Camillo takes the figure of the ass and places it next to the Madonna and child saying how the ass represents Peppone and the Madonna and child his wife and son. Peppone seizes the ox saying this is Don Camillo as he adds it to the group. The author ends his story with Don Camillo saying *'Oh well! Animals always understand one another. Though Peppone didn't reply he was now perfectly happy, because he still felt in the palm of his hand the living warmth of the pink baby'*. And as Peppone and Don Camillo sit looking at the group of figures *'and listening to the silence that has settled over the Little World of Don Camillo .. that silence no longer seemed ominous but instead full of peace'*.

Perhaps we could hope that at Christmas time ‘the living warmth of the pink baby’ will be felt in our world.

David Gosling

Encounters with Islam: a perspective from Pakistan

During my four years as Principal of a prestigious university college in Peshawar, Pakistan, I was immensely impressed with the sincerity and quality of devotion of most of the students. During the month of Ramadan, for example, they would gather each evening after sunset under a shamiana (tent) to participate in a complete recital of the Qu'rān. Not being familiar with the bodily postures, I would sit on the grass at the back and participate mentally. On the final night I was called forward to thank the reciter and say a few words.

Edwardes College is particularly strong in science subjects, and I used to go around the classrooms every morning joining briefly – as far as I was able – in what was being taught. I worked especially hard at ways of increasing the participation of women students, who were often the best, and in improving academic standards all round.

But storm clouds gathered; Benazir Bhutto was killed, and an ugly side of what was maintained to be Islamic extremism began to appear. Suicide bombings, kidnaps and random shootings became commonplace, and I received a personal death threat based on the allegation that I promoted coeducation and was a kafir – which is not correct according to Islam because the term does not apply to Jews and Christians.

A comparison between the Qu'rān and the Old Testament makes it quite clear that Islam not only does not countenance suicide, but that wherever there is a suggestion of such in the Old Testament, the comparable section in the Qu'rān 'airbrushes' it out (e.g. the deaths of King Saul and his son Jonathan). But western publications, even from Ivy League university presses, revel in misrepresenting Islam for their own political purposes, and hardly anybody seems prepared to listen to a contrary view.

Islam in the northwest frontier region of Pakistan around Peshawar has been strongly influenced by the Sufis, whose teaching contains a powerful socially transformative thrust. The Pashtuns, who dominate the region, have their own culture, which I came to admire and wanted to study. A major figure in Pashto history is the mystic seventeenth-century poet, Abdul Rahman Baba, whose poems express a strong humanistic trend:

Humanity is all one body,

To torture another is simply to wound yourself.

When you don't look for faults in others,

They will conceal your weaknesses in return.

Make your path straight now, by the bright light of day;

For pitch darkness will come without warning...

The heart that is safe in the storm

Is the one which carries others' burdens like a boat.

Such sentiments are an antidote to the violence which many in the West try to superimpose on our fellow Abrahamic believers!

Richard Hills

Father, hear the prayer we offer;
Not for ease that prayer shall be,
But for strength that we may ever
Live our lives courageously.

Not for ever in green pastures
Do we ask our way to be;
But the steep and rugged pathway
We may tread rejoicingly.

Not for ever by still waters
Would we idly rest and stay;
But would smite the living fountains
From the rocks along our way.

Be our strength in hours of weakness,
In our wanderings be our Guide;
Through endeavour, failure, danger,
Father, be thou at our side.

Mrs L.M. Willis, (1824 - 1908)

I have nick-named this the mountaineers' hymn through its references to steep and rugged pathways and the rocks along our way. I have enjoyed tackling such challenging routes in the actual mountains throughout my life but there have also been metaphysical mountains to surmount as well.

I sometimes wonder, when I come to stand before the awful throne of God in the Day of Judgement, what our Lord will say. Will it be, 'Well done thou good and faithful servant', or will it be, 'Why were you surprised that the pathways of your life were steep and rugged when you failed so often to follow the routes I had planned for you'?

I have often felt that, when I made the wrong choice and took the wrong path, God was able to adapt his plans for me so that, in my wanderings, He was still my Guide.

Looking back over my life, I can see He was there when, recovering from a climbing accident in the Lake District, I was able to start researching the history of the Stretham engine, used for draining part of the Fens. This would lead via Imperial College, London, to Manchester and so to the founding of the Museum of Science and Industry – not exactly a green pasture but a great challenge.

At the same time, I was able to draw upon other living fountains along the way such as taking the Lay Readers course in Southwark Diocese so that later I could be licensed in Chester Diocese. Helping at Mottram on Sundays was almost like doing two jobs but God was a strength in hours of weakness. This would lead to ordination when I had to leave the Museum.

Now as another phase in my life begins to open up through ceasing academic work and coming to terms with Parkinson's condition, I know I can rest assured that, through whatever endeavours, failures, dangers will be my lot in the days to come, our heavenly Father will still be at my side.

Rodney Holder

The Creator came to earth

In the beginning was the Word, and the Word was with God, and the Word was God. He was in the beginning with God. All things came into being through him, and without him not one thing came into being. ... And the Word became flesh and lived among us, and we have seen his glory, the glory as of a father's only son, full of grace and truth.

John 1:1-3a, 14 (NRSV)

This astonishing passage is the New Testament mirror of the creation story of Genesis 1. It tells us something at once utterly profound and utterly mind-blowing: it identifies the Logos or Word, which Greek readers of the gospel would have understood as the rational principle of order behind the universe, with a human person, Jesus Christ. The one through whom this whole vast cosmos, from the tiniest sub-atomic particle to the furthest galaxy 13 billion light years away, came into existence has walked the earth as a human being.

Some cosmologists say that the universe is eternal, or that it is one of many universes (comprising a 'multiverse') eternally coming and going out of existence. But for us Jesus Christ alone is eternal, and apart from his will nothing else would exist at all.

The God in whom Christians believe is not some great experimenter in the sky, the cosmic puppeteer remote from his creation and impervious to his creatures' sufferings. No, while remaining fully God, he has also become fully human. He has lived a human life, suffered rejection by his own people (v.11), wept over the death of a friend (11:35), and been brutally scourged and crucified.

'We have seen his glory', John says, and as his gospel unfolds it becomes plain that Jesus' glory is revealed most fully on the cross. It

is when Jesus is lifted up on the cross that he draws all people to himself (12:32). From the cross he recreates humanity, winning our forgiveness, sending his Spirit to change us from the inside, and transforming our destiny beyond the grave. What an amazing Creator God!

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John Kerr

Then God said to Noah and to his sons with him, ‘Behold, I establish my covenant with you and your descendants after you, *and with every living creature that is with you, the birds, the cattle, and every beast of the earth with you, as many as came out of the ark.* I establish my covenant with you, that never again shall all flesh be cut off by the waters of a flood, and never again shall there be a flood to destroy the earth.’ And God said, ‘This is the sign of the covenant which I make between me and you and *every living creature that is with you, for all future generations:* I set my bow in the cloud, and it shall be a sign of the covenant between me *and all the earth.* When I bring clouds over the earth and the bow is seen in the clouds, I will remember my covenant which is between me and you and *every living creature of all flesh;* and the waters shall never again become a flood to destroy all flesh. When the bow is in the clouds, I will look upon it and *remember the everlasting covenant between God and every living creature of all flesh that is upon the earth.*’ God said to Noah, ‘This is the sign of the covenant which I have established between me and *all flesh that is upon the earth.*’

Genesis 9: 8 – 17 (RSV) (Italics mine for emphasis)

Covenant? What Covenant?

In Genesis 9: 8 -17, God establishes a covenant. But with whom, exactly?

The all-too-frequently-cited view insists that it is with humankind, initially with Noah and his family. But look at the text. Who else is involved? ‘*With every living creature that is with you: the birds, the domestic animals, and every animal that came out of the ark.*’ And God, clearly feeling that Noah is unlikely to have got the point on the first telling, repeats God’s self, saying, ‘This is the sign that I make between me and you’ and again, who else? Why, ‘every *living*

creature that is with you for all future generations.' The italics are mine for emphasis.

Perhaps Noah's note-taking skills were rudimentary. For a third time, God points out that the covenant is NOT just with Noah – which means NOT just with humans, but with '*every living creature of all flesh.*'

Not a fourth time? Yes, a fourth time: 'When the bow is in the clouds, I will see it and remember the everlasting covenant between God and of *every living creature of all flesh that is on the earth.*'

Surely not? YES! For a fifth time in NINE verses, God says to Noah, 'This is the sign of the covenant which I have established between me and *all flesh that is upon the earth.*'

Ah. In these last two declarations establishing God's everlasting covenant, HUMANS ARE NOT MENTIONED AT ALL AS A SEPARATE CATEGORY!!!

Never was such a biblical text so willfully distorted. We have shamefully broken God's covenant by misreading it. We and our anthropocentric religion and culture thought the covenant was all about us and saving our precious souls to heaven while we got on with conquering Nature.

My attention was drawn to the words of the text in a conversation with a graduate student (whose name I can no longer recall) in the Lutheran Theology School in the University of Chicago. He wondered why Christianity was so late in developing a comprehensive theology of animals and of our place and role in creation.

Joan Bakewell, the BBC commentator writing in *The Times*, (London), March 3, 1980, observed that, '*Animals are almost over. They are retreating back into the Ark. They will not survive, but as*

they go, we their destroyers, use them to furnish our fantasies, corrupting their reality into images by which we exploit each other.'

And the Australian poet, Bradley Grieve, wrote poignantly:
'For endangered species we are both their greatest enemy and their only hope. Those wonderful creatures will not argue their case. They will not put up a fight. They will not beg for reprieve. They will not say goodbye. They will not cry out. They will just vanish. And after they are gone, there will be silence. And there will be stillness. And there will be empty places. ... With so many lives hanging in the balance, the paths we choose today will decide the fate of the world.'
(*Reverence, Animals* Bradley Trevor Grieve in, *The Friends We Keep* (Baylor UP, 2010) by Laura Hobgood-Oster, co-chair of the Environmental Studies Department at Southwestern University)

So, this Lent, that time of reflection and penitence, and now that we have noticed it, we might well try to teach the theology of the Genesis Covenant story correctly. Our aim should be to arrest our breaking of the everlasting creaturely covenant. Species are vanishing fast, animals are retreating into the Ark, into zoos and wildlife parks, a few pathetic survivors linger in the wild, their habitats logged and leveled and strip-mined.

Is this Covenant breaking of ours something of which humans, and Christianity in particular, self-evidently should repent? The Genesis 9 covenant is the five-times repeated Word of the Lord and five repetitions seem to make close reading of the text all but unnecessary.

Ian James

Migrants: from ‘Mass for hard times’, R.S. Thomas 1992.

I first encountered the poetry of R.S. Thomas around 1994, when an article in the Church Times finally prodded me into looking up his work in the University library. Reading his *Collected Poems* that evening was a turning point for me; not since I was an adolescent has an evening’s reading had such a profound effect on me.

At that time, I was stuck in the arid shallows of a version of Evangelical Christianity about which I was increasingly skeptical. It seemed to me to be a faith of platitudes, of saying the right thing and never, for fear of rejection, saying what you actually felt or believed. God became small and unreal, imprisoned in a strait jacket of facile words. Thomas, a priest in the Church in Wales, showed me a grown up version of the Christian faith for the twentieth century. He faced head on the paradoxes of faith, the limitations of language and the power of imagery when we try to talk about God. He spoke of the God he sought as one who was as often as not absent, silent. He faced the contradictions of a violent arbitrary world and the Christian yearning for a God of love.

Among the aspects of Thomas which immediately appealed to me was his imagery based on modern science, especially physics. The expanding Universe crops up in several poems. One poem contains an equation – what else but? Another poem’s first line is ‘Tricyano-aminopropene’.

The poem I chose for this collection involves science, albeit rather less exotic science. Thomas was an avid bird watcher, and his home on the North Wales coast lay on the migration routes of many birds. This poem is based on the annual migration of geese to the far north in summer and involves recent theories that such long distance migrants can sense the Earth’s magnetic field and navigate by it. And so their ‘needle in the mind’ becomes a metaphor for our longing for the ‘great void’ of God. I find the conclusion of poem breath-taking,

with the axial tilt of the Earth bringing the time of perpetual light, when God ‘pauses in his withdrawal’.

As in so many of Thomas’ poems, there are not that many words here, but those that he gives us are rich with hints and allusions. There is an echo of John 3.8 in lines 4 and 5. ‘What matter if we should never arrive/ to breed or to winter/in the climate of our conception?’ in the first verse might refer to the act of generation but it also suggests the life of human ideas. The ‘needle in the mind’ (verse 2) brings together both the guidance of the compass and the uncomfortable probing of the surgical needle. The ‘perpetual light’ of the final line reminds us of the words of the Requiem Mass – the title of the entire collection from which this poem is taken is ‘Mass for hard times.’

Thomas’s ‘needle in the mind’ is an unforgettable image for me. It is my answer to the facile reductionism of the new atheists. It reminds me of my life-long quest: to respond to that needle, and to the purpose of my ministry as a priest, which is to help my people to be aware of and to respond to the prompting of that same needle.

Maureen Palmer

‘Wonder .. is the seed of knowledge..’ so wrote Francis Bacon (1561-1626) and the description of the creation as envisaged by the Biblical Wisdom authors seems to me to suggest the ‘still centre’ of God, dynamic with love and creativity and although sustaining his creation, also the source of destruction and renewal. The concept that Wisdom is the breath of the power of God can be appreciated in the whole created order and is expressed in the book of Wisdom:

May God grant me to speak with judgement, and to have thoughts worthy of what I have received; for he is the guide even of wisdom and the corrector of the wise. For both we and our words are in his hand, as are all understanding and skill in crafts. For it is he who gave me unerring knowledge of what exists, to know the structure of the world and the activity of the elements; the beginning and end and middle of times, the alternations of the solstices and changes of the seasons, the cycles of the year and the constellations of the stars, the natures of animals and the tempers of wild animals, the power of spirits and the thoughts of human beings, the varieties of plants and the virtues of roots; I learned what is secret and what is manifest, for wisdom, the fashioner of all things, taught me.

There is in her a spirit that is intelligent, holy, unique, manifold, subtle, mobile, clear, unpolluted, distinct, invulnerable, loving the good, keen, irresistible, beneficent, humane, steadfast, sure, free from anxiety, all-powerful, overseeing all, and penetrating through all spirits that are intelligent, pure and altogether subtle. For wisdom is more mobile than any motion; because of her pureness she pervades and penetrates all things. For she is a breath of the power of God, and a pure emanation of the glory of the Almighty; therefore nothing defiled gains entrance into her. For she is a reflection of eternal light, a spotless mirror of the working of God, and an image of his goodness. [1]

The vastness of the universe is awesome and wonderful – at one end of the scale the stars and galaxies coming into being then exploding and dying, while at the other end of the scale the intricate complexity

of the living cells with their carefully sculpted cell walls and organelles; and on a more macro and visible scale the colours of the trees and shrubs, the form of insects, the song of birds and in total, the death and resurrection of the seasons, all of which puts the world into a perspective of understanding: the love of the Creator and the way that things making up our world really are: making the creation a 'whole'.

As Rupert Sheldrake recently observed, 'Most of the [unsolved and outstanding problems of science] are precisely to do with what makes things wholes. How do ecosystems or societies or organisms function as wholes? ... The reductionist approach ... doesn't add up to understanding how the whole organism works. In fact it leads to an increasing fragmentation of research ... A science of interconnectedness could have beneficial effects for our understanding of the environmental crisis.' [2]

The mystery of continuous creation, which Annie Dillard expresses so beautifully in the book about her home at Tinker Creek, speaks of a continuum which cannot be broken but which is enhanced by the seasonal changes of the rivers, the hills and the creatures: the hand of the Creator is ever-present.

The creeks – Tinker and Carvin's - are an active mystery, fresh every minute. Theirs is the mystery of the continuous creation and all that providence implies: the uncertainty of vision, the horror of the fixed, the dissolution of the present, the intricacy of beauty, the pressure of fecundity, the elusiveness of the free, and the flawed nature of perfection. The mountains are a passive mystery, the oldest of all. Theirs is the one simple mystery of creation from nothing, of matter itself, anything at all, the given. Mountains are giant, restful, absorbent. You can heave your spirit into a mountain and the mountain will keep it, folded, and not throw it back as some creeks will. The creeks are the world with all its stimulus and beauty; I live there. But the mountains are home. [3]

This concept of continuous change yet stability resonates with me living in the beautiful county of Herefordshire. I share the experience of Annie Dillard and the continuum of the ‘flawed nature of perfection’ is all too obvious. This is not only seen in the changing colours of the seasons but in the changing patterns of the River Wye, in the changing patterns of the fields; asparagus, potatoes, hops and apples; in the birth of lambs; in the changing kaleidoscope of the hedgerows and the sky. The simple mystery of ‘creation from nothing’ and the cycle of death and new life becomes the ‘given’. The beauty is often overwhelming and there is something about the ‘givenness’ of the creation, which points to a pattern of the suffering that leads to destruction and subsequent renewal: and then the only reaction is one of wonder and awe: awe of the wisdom of God, a ‘reflection of eternal light: a spotless mirror’ reflecting the goodness of the Creator and the still centre of his love.

The diversity of the natural world reminds me that I too am but a tiny part of the creation as a whole: my own death is inevitable. While I live I must fit into the ecosystem just as must every other creature. The love that God has for me as a unique being is similar to the love that God has for every part of his creation. The love of God is infinite: God cannot help but love his creation for he is all love. God, as the ‘spotless mirror’ reflecting his goodness and care for us, encourages us to attempt to imitate that love and accept his sovereignty.

[1] Wisdom of Solomon 7.15–26 [NRSV]

[2] Rupert Sheldrake, ‘Need Science and Wisdom be separate’ in *The Adriatic Sea, A Sea at Risk, a Unity of Purpose*, Athens: Religion, Science and the Environment 2003.

[3] Annie Dillard, ‘Pilgrim at Tinker Creek’ HarperCollins 1974.

David Peat

And he also counselled his disciples to offer to God the first fruits of his creatures, not because he needed these gifts, but so that they should not be unfruitful nor unthankful. This he did, when he took bread, of the natural creation, and gave thanks, and said, 'This is my body'. Likewise the cup of wine, belonging to the creation of which we are part, he declared to be his blood, and explained as the new oblation of the New Testament.

We are his members, and are nourished by means of his creation (and he himself provides his creation for us, 'making the sun to rise and sending rain as he will'); therefore the drink, which is part of his creation, he declared to be his own blood, and by this he enriches our blood: and the bread, which comes from his creation, he affirmed to be his own body, and by this he nourishes our bodies.

Irenaeus: Second Christian Century

‘Creation looks towards Incarnation;
the Incarnation fulfils Creation’

Athanasius: Fourth Christian Century

These well-known passages from Irenaeus and Athanasius have always seemed to me the intrinsic Spirituality of the work of a scientist. They also express the life and ministry of a priest, who is both observing and reflecting on the nature of Creation, whilst at the same time engaging in pastoral ministry. This Spirituality is deeply sacramental, and integrates the lives of people with the cosmic purposes of God.

Here are some possible theological and spiritual meditations on this theme, arising from my own ministry in many years as a scientist and parish priest.

1. Creation is the means by which God reveals Himself - says Irenaeus 'we are his members, and are nourished by means of his creation'. Supremely, this is in the Sacrament of Bread and Wine, which is the great Sacrament of Creation.
2. Jesus himself is a part of that creation, and it is in and through that creation that he came into being, along with us human beings.
3. Evolution in Biology, Geology, Cosmology and Astrophysics have particularly extended our awareness of the spiritual truths mentioned above. How Irenaeus and Athanasius would rejoice, if they were here to-day to see these truths expressed in our modern scientific world view.
4. The scientific investigation of the processes of Creation not only reveals wonder and mystery, but also offers practical results which can provide for human need. Creation and Redemption are thus clearly linked together, and reinforce one another.
5. Incarnation, 'the Word made flesh', also clearly links Creation with Redemption. Athanasius would, I am sure, see modern science 'looking towards Incarnation'. And that would be the start of his sacramental journey to Heaven, in the company of the believing Eucharistic community.

Scott Peddie

A human being has so many skins inside, covering the depths of the heart. We know so many things, but we don't know ourselves! Why, thirty or forty skins or hides, as thick and hard as an ox's or bear's, cover the soul. Go into your own ground and learn to know yourself there.

Meister Eckhart

The German theologian, philosopher and mystic is almost unparalleled in his wisdom and insight; his writings have stood the test of time and are as popular today as they have ever been.

In this quotation, Eckhart reflects on the complexity of human beings and our inability to truly know ourselves. Only God has that knowledge; here Eckhart seems to be echoing what is so beautifully written in Jeremiah 1.5: 'Before I formed you in the womb I knew you, before you were born I set you apart; I appointed you as a prophet to the nations.'

Eckhart's intuitive statement that 'we know so many things' juxtaposed with 'but we don't know ourselves' is an apt reminder that despite the myriad facts and insights that science affords us, it does not have the final word. God has made us to be curious, to thirst after wisdom and knowledge and it is proper that we pursue these avenues with all of the abilities God has bestowed upon us both individually and collectively. But He also calls us to introspection and prayer; He knows us intimately, but we are called to be His co-worker in our lifelong task of digging deep and endeavouring to uncover the soul and the glory locked therein.

As Eckhart knew, our souls (however that concept may be interpreted in the light of modern theological and scientific understanding) are hidden. In our lives we busy ourselves with 'worldly' tasks and concerns, thus dulling our perception of the Divine and denuding our relationship with Christ. We become

myopic and disorientated; we do not know ourselves and therefore cannot truly know God.

Meister Eckhart's prescription is, unsurprisingly for a mystic, to 'Go into your own ground and learn to know yourself there'. Such a beautiful call to contemplative prayer. Spending time in silence and mindful reflection can, and does, pay dividends – it makes us more aware of ourselves, but more importantly, of God and His presence all around us and indeed within us.

John Polkinghorne

I consider the sufferings of this present time are not worth comparing with the glory to be revealed to us. For the creation waits with eager longing for the revealing of the children of God; for the creation was subjected to futility, not of its own will but by the will of the one who subjected it in hope that the creation itself will be set free from its bondage to decay and will attain the freedom of the glory of the children of God. We know that the whole creation has been groaning in labour pains until now; and not only the creation, but we ourselves, who have the first fruits of the Spirit, groan inwardly while we wait for adoption, the redemption of our bodies. For in hope we were saved. Now hope that is seen is not hope. For who hopes for what is seen? But if we hope for what we do not see, we wait for it with patience.

Romans 8. 18-25 (NRSV)

One of the biggest problems for Christian belief is surely the suffering that is present in what is claimed to be the creation of a good and powerful God. I believe that this perplexing issue holds many back from religious commitment and it continues to trouble those of us who are believers. Paul faces this head on with his acknowledgement that 'the creation was subjected to futility'. But he boldly affirms his hope that 'the creation will be set free from its bondage to decay'. The picture of a 'universe groaning in labour pains' resonates with what science tells us about our evolutionary world, in which the death of one generation is the necessary cost or the new life of the next. Evolution brings about great fruitfulness, but it also has ragged edges and an inescapable shadow side to it. Genetic mutations can not only produce new forms of life but sometimes they will result in malignancy. You cannot have the one without the other. Evolutionary process, in which creatures are allowed 'to make themselves' (Charles Kingsley), is part of the Creator's purpose but it is not the whole of God's purposes for creation. The old creation will eventually be transformed into the new creation in which 'death will be no more, mourning and crying

will be no more' (Revelation 21.4), a process which has already begun in the seminal event of Christ's resurrection. Truly creatures will 'obtain the freedom of the glory of the children of God', a destiny that awaits not only human beings but the whole created order.

I chose this passage because it illustrates the profundity and many-levelled character of scripture. It would be absurdly anachronistic to suppose that Paul had evolutionary process in mind when he wrote Romans. Yet his deep grasp of the purposes of the steadfast love of God enabled him to write words that bring us today, living in a very different context, hope and the assurance that the last word does not lie with death but with the eternally faithful purposes of our Creator.

Colin Price

John Ray FRS (1627-1705)

Naturalist and nonconformist; former Tutor, and Fellow of Trinity College Cambridge author of *The Wisdom of God Manifested in the Works of the Creation* (1691) and works on flora, insects, birds, fish, geology – all copiously illustrated.

‘You ask me what is the use of butterflies? I reply to adorn the world and delight the eyes of men; to brighten the countryside like so many golden jewels. To contemplate their exquisite beauty and variety is to experience the truest pleasure. To gaze enquiringly at such elegance of colour and form designed by the ingenuity of nature and painted by her artist’s pencil, is to acknowledge and adore the imprint of the art of God.’

This oft-quoted statement of John Ray, discloses Ray’s general attitude to natural philosophy vis-a-vis theology. Through utility, that is the purposes of natural things and living organisms, Ray saw through to the benevolence of the Creator and vice versa; through the Wisdom of the Creator, one could glimpse a teleology of design and purpose in the living world.

Ray’s modern-day biographer, who did much to spread abroad his name and influence, was Canon Charles Raven DD, DSc, himself a Ray-like character being both a clergyman and naturalist - see John Ray, *Naturalist: His Life and Works* (CUP, 1942, 1987). Raven was at pains to point out that Ray’s idea of ‘design’ had none of mechanical notions now associated with William Paley (and neither with those of today’s followers of Intelligent Design). Ray’s insight was of an ‘organic’ design, which is probably best to think of in terms of General Jan Smut’s *holism* – parts working together to produce a whole which may end up being greater than the sum of its parts. Examples can be found not just in animals like jelly-fish (being made up from individuals into colonies) or slime moulds (which act both as individuals and bodies) but *apoptosis* in cell biology (where ‘cell death’ is corporately initiated) and genes like PAX6 in

embryology which direct cell differentiation and placement. Ray envisaged the whole of Nature working together to achieve a meaningful elegance, which is not the same as the piece-meal utility of Intelligent Design.

In his *Wisdom* Ray presented what he considered as the possible views one might entertain as to the “nature and origin of the world” - how do we explain the universe we live in. They are still worthy of some consideration even today.

First the Aristotelean view of eternalism. That the world has existed from eternity and therefore neither needs nor has an Author.

Second, the Epicurean view, that everything is the result of chance. This would accord with today's views on probability in the quantum world and mutational change in natural selection.

Thirdly, Cartesianism, the view that while God or some agency might have made original matter, having been made, the world carries on under its own steam with no external help. This is Deism, but it also covers some of the Big Bang theories of cosmology, in the sense that the universe expands under its own impetus, while the pre-Planckian conditions before the Big Bang remain unknown and unknowable.

Finally Ray presents what he calls Boyle's Hypothesis that the world is the work of the wisdom and infinite power of a beneficent Creator. You can take your choice!

Michael Soulsby

Therefore I tell you, do not worry about your life, what you will eat or what you will drink, or about your body, what you will wear. Is not life more than food, and the body more than clothing? Look at the birds of the air; they neither sow nor reap nor gather into barns, and yet your heavenly Father feeds them. Are you not of more value than they? And can any of you by worrying add a single hour to your span of life? And why do you worry about clothing? Consider the lilies of the field, how they grow; they neither toil nor spin, yet I tell you, even Solomon in all his glory was not clothed like one of these. But if God so clothes the grass of the field, which is alive today and tomorrow is thrown into the oven, will he not much more clothe you—you of little faith? Therefore do not worry, saying, ‘What will we eat?’ or ‘What will we drink?’ or ‘What will we wear?’ For it is the Gentiles who strive for all these things; and indeed your heavenly Father knows that you need all these things. But strive first for the kingdom of God and his righteousness, and all these things will be given to you as well.

So do not worry about tomorrow, for tomorrow will bring worries of its own. Today’s trouble is enough for today.

Matthew 6.25-34 (NRSV)

This well-known passage has an especial resonance for members of the Society of Ordained Scientists, for it was for many years used as the Gospel at the Admissions Eucharist at each Annual Gathering – a Eucharist where new members are admitted and where we renew our commitment to the Society and its Rule.

The passage comes in that part of Saint Matthew’s Gospel which we know as the Sermon on the Mount – a sermon that begins with the eight ‘beatitudes’ – sentences that begin with the word Blessed. I am indebted to the late Michael Goulder for his suggestion that the three chapters of the gospel which follow the beatitudes are a series of eight ‘mini sermons’ each taking up the theme of a beatitude. Following the usual Jewish custom of the Old Testament the

beatitudes are worked through in reverse order and so verses 11 – 26 of Chapter 5 expand the eighth beatitude.

The third beatitude is ‘Blessed are the meek for they shall inherit the earth’ which is exactly the message of the whole of Psalm 37; in that psalm it is made clear that the meek are most certainly not God’s doormats – they are those who are living their lives trusting God – and the second half of Chapter 6 of Saint Matthew’s Gospel develops this third beatitude. We are implored to trust God; truly we can trust God for those daily necessities for life to continue. We really can put our very natural anxieties away from us and trust in God’s guiding upholding presence in all our daily life. And more than that; the lilies of the field delight us with their loveliness and yet they do not live in a state of continual anxiety – and neither should we. No mere existence for those who truly trust in God, but a life of fulfillment, satisfaction and joy that will also bring blessing to many others as well.

Scholars may well argue about how much of these Chapters are actual words uttered by Jesus and some will seek to persuade us that the author of the sermon is Matthew himself. Matthew has through these well-known words has made memorable the tradition of Christ’s teaching which he, himself had received. But fascinating as these speculations are, much more important is that after many years of being a disciple of the risen Jesus Christ, Matthew is still convinced that the Christian way is the way of trusting in the God who has revealed Himself in the life, ministry death and resurrection of Jesus Christ. Matthew does not write as a cloistered academic. He writes as one who has without doubt sought to live out the faith day by day. The verdict of his lived experience – and hopefully ours as well, is that the only way is to trust absolutely in God.

But for us, who live in the global village which is today’s world, there is a real problem. We are all desperately aware that there are many faithful Christians for whom life is far from good. Think only for a moment of the faithfulness of the Christians of the Southern Sudan over many years of brutal repression and frequent famine. We

cannot shut our eyes to these unpleasant uncomfortable facts. So perhaps these verses of Chapter 6 of Saint Matthew's Gospel must also be a call to us to redouble our efforts to bring the help and hope to the world's suffering people which they so desperately need. Trusting in God is not the passport to an easy comfortable life. Far from it, the way of trusting God is a lifetime of challenge. We can also trust in God to guide us as to how we should be responding to these challenges.

Keith Suckling

For it is he who gave me unerring knowledge of what exists,
to know the structure of the world and the activity of the elements;
the beginning and end and middle of times,
the alternations of the solstices and the changes of the seasons,
the cycles of the year and the constellations of the stars,
the natures of animals and the tempers of wild animals,
the powers of spirits and the thoughts of human beings,
the varieties of plants and the virtues of roots;
I learned both what is secret and what is manifest,
for wisdom, the fashioner of all things, taught me.

For wisdom is more mobile than any motion;
because of her pureness she pervades and penetrates all things.
For she is a breath of the power of God,
and a pure emanation of the glory of the Almighty;
therefore nothing defiled gains entrance into her.
For she is a reflection of eternal light, a spotless mirror of the
working of God, and an image of his goodness.

Wisdom 7.17-22,24-26 (NRSV)

But we speak God's wisdom, secret and hidden, which God decreed before the ages for our glory. None of the rulers of this age understood this; for if they had, they would not have crucified the Lord of glory. But, as it is written, 'What no eye has seen, nor ear heard, nor the human heart conceived, what God has prepared for those who love him'— these things God has revealed to us through the Spirit; for the Spirit searches everything, even the depths of God. For what human being knows what is truly human except the human spirit that is within? So also no one comprehends what is truly God's except the Spirit of God. Now we have received not the spirit of the world, but the Spirit that is from God, so that we may understand the gifts bestowed on us by God.

1 Corinthians 2.7-12 (NRSV)

There was surprise verging on incredulity when I visited the school group appearing to be a clergyman, but speaking as an experienced scientist. How, they wondered, could these things be possible in the same person? What could it be like to be in that apparently contradictory position? These two readings would have given them some answer. I'm delighted to read that the author of Wisdom seems to understand the excitement of discovery and understanding, and probably would appreciate the satisfaction of an experiment well planned and data interpreted. There is a link in this useful knowledge to the divine.

Yet here, as in many other places, Paul reminds us that our understanding has its limits, and he affirms with Wisdom where it all comes from and what it depends on. It is exciting to come upon new ways in which our world can be described and to devise uses of this knowledge to good purposes, such as I had done in pharmaceuticals. But it is important not to be carried away. Although there may always be questions for us to answer, science does have its limits and we have to give due weight to Paul's cautionary comments. So we are caught between two extremes. It is as if we are bouncing to and fro between two poles of knowing and unknowing, to echo a later spiritual writer. As these oscillations in the life of a minister and scientist continue, I hope that the collisions are reasonably elastic and that I actually grow in a broader kind of understanding, perhaps being able to recognize more clearly where I fit. Somewhere knowing and unknowing do come together and that convergence is our destination.

Roger Yates

The Passover of the Jews was near, and Jesus went up to Jerusalem. In the temple he found people selling cattle, sheep, and doves, and the money-changers seated at their tables. Making a whip of cords, he drove all of them out of the temple, both the sheep and the cattle. He also poured out the coins of the money-changers and overturned their tables. He told those who were selling the doves, ‘Take these things out of here! Stop making my Father’s house a market-place!’

John 2 13-16 (NRSV)

Then they came to Jerusalem. And he entered the temple and began to drive out those who were selling and those who were buying in the temple, and he overturned the tables of the money-changers and the seats of those who sold doves; and he would not allow anyone to carry anything through the temple. He was teaching and saying, ‘Is it not written,

“My house shall be called a house of prayer for all the nations”?

But you have made it a den of robbers.’

Mark 11.15-17 (NRSV)

These verses (and the corresponding ones in Matthew and Luke) have always puzzled and challenged me. I’m not concerned with the debate about whether this happened near the start (John) or the end (the Synoptics) of Jesus’ earthly ministry - or both! I can understand that Jesus disapproved strongly of what He saw as misuse of the temple as a house of prayer and the overlaying of reverence by (perhaps not always entirely honest) commercial enterprise. But why did Jesus choose to cleanse the temple on this/these occasion/s? What was it that prompted Him to use physical force for the only time(s) in His Ministry?

I go on seeking an answer because it would be a valuable guide to my deciding whether or not to take strong – perhaps even physical – action against something that after careful and prayerful consideration seems wrong. I recall advice given decades ago by a

priest I considered wise 'don't wage Holy Wars unless you are sure to win'. I very much doubt if Jesus' action eliminated commerce from the temple for more than a very short space of time – so in a purely practical/materialistic sense Jesus' action failed. Could it be that Jesus' action was intended to get publicity for his disapproval of trading in the temple? With the story included in four Gospels that have been read and revered for 2000 years I have to conclude that Jesus undoubtedly achieved that possible objective.

Has that helped me? I have to conclude that strong action should be based on a well-considered conviction that it will further God's purposes. I have to accept that I will not always/often/ever succeed in stopping whatever it is that I object to. I know must rely on God to use my poor efforts for His good purposes in His way and in His time. I still don't have a guideline that helps me decide if and when to react strongly to something that seems 'wrong' by Gospel standards. The need for such a guideline can crop up in response to pastoral issues, to political issues inside and outside of the Church and to responding to so-called scientific or atheistic challenges to our faith.

My current answer is prayer in the words of the first line of one of my favourite hymns '*Guide me O Thou Great Redeemer*'

Jennifer Zarek

Give me understanding that I may live
Psalms 119. 144

He who believes has eternal life.
John 6.47

I do not seek to understand so that I may believe, but I believe so that I may understand; and what is more, I believe that unless I do believe I shall not understand.
Saint Anselm (1033-1109) – Proslogion ch 1

I must understand in order that I may believe. By doubting, we come to questioning, and by questioning we perceive the truth.
Abelard (1079-1142) – universally stated to have said or written this in 1122, but no-one gives the source!

The perpetual ‘science and religion’ question is so often expressed in terms of ‘science or religion’. I find it curious that Anselm and Abelard (and others) want to give priority to either understanding or belief. Can we not acknowledge that understanding and belief are not independent; nor are science and religion? For me, the psalmist’s quest for understanding is the root of both my science and my religion; and both inform my belief.

I have studied and practised science with the dream of understanding something of the way the material world works. I study and practice religion to learn how the spiritual world works. If I have a difficulty, it is in knowing where the boundary between the two might be. As Don Cupitt put it, ‘I don’t know how to tell the difference between the natural and the supernatural’. But the search in both is the same: for truth.

The words belief and understanding are important; both hold the concept of provisionality. ‘Faith’, however much it may be a virtue,

is too often (mis)understood as certainty; ‘knowledge’ is, as all scientists know, partial.

It is important to recognise both understanding (reason) and belief (perception) as distinct but interacting. I spent much of my scientific career attempting (among other things) to teach the science of vibration to (musical) students with little mathematical background. Complex numbers were not a helpful tool! It concentrated the mind on just how to explain that the interaction of two dimensions generates so many physical phenomena. A changing magnetic field generates a changing electrical field which generates a changing magnetic field. Changes in pressure cause movements which cause changes in pressure (and without the changing, there is no wave). Depending on the circumstances, we describe matter as either a particle or a wave.

The same interaction is present in our mental, spiritual and theological processes. It is conventional to point out that the way in which religious experience is expressed is determined by religious belief – so a Roman Catholic describes a vision of Mary – and that experience in turn shapes belief. Science proceeds by acting on a hypothesis, which determines the nature of the experiment, which in turn alters the hypothesis. Psychologically, I interpret the actions of others according to what I believe is their motivation; and my experience of their action forms my perception of their motivation. Fundamental to Christianity is the Christological ‘paradox’ – it is in his human life that Jesus shows us his divinity, and in his divinity that he shows us how to be human.

I like to think of the vocation of an ordained scientist as holding together two orthogonal dimensions. Science and religion are not two separate activities, between which we look for a relationship. They are the projections in two different dimensions of the same reality, just as the measurement of voltage and current are not two separate phenomena but two ways of describing the same thing.

My discipleship is the attempt to live in accordance with my belief; but that belief is shaped by my understanding, and in turn the experience of that belief refines my understanding. I go wrong if either understanding or belief become entrenched. Both are dynamic – and that is what creates the adventure.

Contributors

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George Bolt left school at 17 to work as a laboratory assistant at the British Aluminium Co's Research Laboratories. He studied part-time for BSc (London) Physics, Pure and Applied Maths and after National Service (RAF, radar) joined a research project with Hawker Siddley Nuclear Power Co.. He entered Technical Education as a lecturer at Harrow Technical College. He moved to Derrick Technical Institute, Fiji, then back to U.K. to Chippenham Technical College. MSc.(Bath) physics by research. Salisbury & Wells Theological College; ordained deacon 1988. Curate: Kington Langley & College chaplain. Priested 1989. Priest-in-charge Aldenham, short exchange with parish Port Hills, NZ. Now retired but active in North Wales. Member of the Third Order of the Society of St. Francis.

Gail Bucher was trained in pharmacy (BS) and pharmacology (MS) at MCPHS University and Northeastern University and is a graduate of Diakonia, Boston. She worked in industry for thirty-five years before pursuing a ministry to the poor. Bucher serves as Service Deacon at University Lutheran Church and is Chaplain at MCPHS University. She is former Director of the Faith & Science Exchange, is a member and Past Chair of the Lutheran Alliance for Faith, Science and Technology and is a MCPHS University Board of Trustees member. She is Secretary/Treasurer of the SOSc-North American Province.

Dennis Cheek is the inaugural Executive Director of the National Creativity Network which works across North America to advance the skilful use of imagination, creativity and innovation to positively improve commerce, culture, education, and government. He has held leadership positions in two private foundations (Kauffman and Templeton), state education departments in NY and RI, non-profits, and churches and taught in precollege or higher education institutions in Belgium, France, Germany, Singapore, the US, and the UK. He holds BA/BS degrees in biology, history and secondary

education, an MA in history, PhD in curriculum and instruction/science education (Penn State) and a PhD in theology (Durham).

Geoffrey Cook graduated in chemistry from the University of Nottingham in 1959. He then moved to Cambridge for his PhD studies on the chemistry of cell surfaces, providing some of the first evidence for the presence of sugars at the cell periphery. After postdoctoral studies on the biosynthesis of glycoproteins at the University of Southern California School of Medicine, Los Angeles, he returned to Cambridge in 1965, where he is currently working in the Department of Physiology, Development and Neuroscience. He is a Life Fellow and former Vice-Master of St Edmund's College, Cambridge and was ordained deacon for the service of the RC Diocese of East Anglia in 1978.

David Gosling trained as a nuclear physicist and is a Life Member and former Fellow of Clare Hall, University of Cambridge. Until recently he was Principal of Edwardes College, University of Peshawar.
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Richard Hills scientific training includes MA Cambridge, Diploma Imperial College, PhD University of Manchester Institute of Science and Technology. He is a Companion of the Institution of Engineers. His training for Ordination was at St. Deiniol's Library, Hawarden and he is a former Warden of the Society of Ordained Scientists.

Rodney Holder was Course Director of the Faraday Institute from its inception in 2006 until 2013, and remains a Bye Fellow of St Edmund's College and a Faraday Associate. He read mathematics at Trinity College, Cambridge, and researched for a D.Phil. in astrophysics at Christ Church, Oxford. He remained at Oxford for a further two years as a post-doctoral fellow in the Department of Astrophysics researching accretion of intergalactic gas by the galaxy. After 14 years working for UK Ministry of Defence clients as an operational research consultant with EDS (formerly Scicon), he returned to Oxford, and took a first class degree in theology in 1996. Completing his ministerial training the following year, he then worked for four years as a curate in South Warwickshire, spent a seven month sabbatical period as chaplain of the English Church in Heidelberg, and was then Priest in Charge of the Parish of the Claydons, Diocese of Oxford, from October 2002 to December 2005.

John Kerr is a founding member and second Warden of the Society of Ordained Scientists. He holds degrees from Toronto (BASc Chemical Engineering) Leeds (MSc), Nottingham (Dip Th), and has held academic positions at Leeds and Nottingham Universities, Winchester College, Oakton College Chicago. He was Episcopal Chaplain College of William and Mary, Williamsburg VA (2007-2014).

Ian James spent most of his working life in the Department of Meteorology, University of Reading where his research focused on the chaotic, low frequency variability of the atmospheric circulation. He was ordained in 2000 and is presently House for Duty priest in charge of four small country parishes in West Cumbria. A book, with Professor Sir Brian Hoskins, on “Fluid dynamics of the mid-latitude atmosphere” is due for publication in 2014.

Maureen Palmer is a physiologist who until ordination was for 16 years on the staff of Queen Elizabeth College (now King's College), University of London. She was subsequently curate in two parishes in Hereford and Salisbury Dioceses, Chaplain/Succentor at Birmingham Cathedral and Canon Residentiary/Sub Dean at Guildford Cathedral with the brief of pastoral care and education. She is a former Warden of the Society of Ordained Scientists.

David Peat is an astrophysicist who was on the staff of the Institute of Astronomy in Cambridge for twelve years before his Ordination. He was subsequently Parish Priest and University Chaplain, and has worked in Adult Education Training for Clergy and Lay People. Most recently, he was a Research Fellow 'in the Department of Physics and Astronomy at Leeds University, and Priest-in-Charge of Headingley.

Scott Peddie holds a BSc in Zoology/marine and Fisheries Biology, and MSc in Aquaculture Business Management. His PhD from the University of Aberdeen in on fish immunology and he holds a MDiv from Queen's University of Belfast. He has held many positions in aquaculture and fisheries. He was ordained and installed by the Presbytery of Antrim as Minister of The Old Presbyterian Church Templepatrick in 2008; installed as Minister of First Presbyterian Church (NS) Crumlin in 2008.

John Polkinghorne is a theoretical physicist, theologian, writer, and Anglican priest. A prominent and leading voice explaining the relationship between science and religion, he was professor of Mathematical physics at

the University of Cambridge from 1968 to 1979, when he resigned his chair to study for the priesthood, becoming an ordained Anglican priest in 1982. He served as the president of Queens' College, Cambridge from 1988 until 1996. He has written numerous influential books on the relationship between science and religion. He was knighted in 1997 and in 2002 received the £1 million Templeton Prize, awarded for exceptional contributions to affirming life's spiritual dimension

Colin Price worked in industrial research with Shell Research Ltd. and Unilever Research Ltd. Degrees in theology (BA Hull, 1974) and in science and religion (MPhil, Hull, 1980). Head of religious education at a Bradford Girls' Grammar School; Tutor in doctrine for Congregational churches' training board. Subsequently ordained and called in 1992 to the pastoral ministry at Guilden Morden near Cambridge. He retired to Yorkshire in 2011.

Michael Soulsby is a retired parish priest who has served in parishes in Birmingham, Merseyside and in Cambridgeshire. In retirement he still frequently leads worship in some local churches. He graduated as a chemist and is still keenly interested in science and its practical applications and its impact on our world. He has been a member of the Society of Ordained Scientists since its inception and acted as secretary to the Society for seven years.

Keith Suckling is the current Warden of the Society of Ordained Scientists and Priest in Charge of St Peter's Episcopal Church, Fraserburgh. He had an academic and industrial research career in the field of cholesterol metabolism and atherosclerosis and is the author of numerous scientific papers and several books. He holds a BSc from the University of Liverpool and PhD (Cambridge) and DSc (Liverpool) and is a Visiting Professor at the University of Nottingham.

Roger Yates trained in clinical and preclinical pharmacology and medicine - with a neurological/psychiatric bias - experience of medical practice (hospital and general), teaching and research in academia before 25 full-time years in pharmaceutical research and development (with continuing clinical assistantship in NHS for the first 20) which included people and project management. Then an independent consultant in pharmaceutical medicine. Over 25 years with my collar the wrong way round! Married with 2 married "kids" – and a grand-daughter. Interests - revealing God where He

already is to those who can't/won't see Him, medicine/science/religion debates, caring for the carers.

Jennifer Zarek holds an MA in Natural Sciences (Physics), Cambridge, and a MSc and PhD in acoustical engineering, (Southampton). She did post-doctoral research in structural vibration in Liverpool. She was Principal Lecturer in musical acoustics, London Guildhall University; and researched on musical instrument vibration. She acted as adviser on sound reinforcement systems to Council for the Care of Churches. She trained for the priesthood at St. Stephen's House, Oxford, and served as Assistant Curate Caterham Team Ministry and then as Vicar of Hutton Cranswick with Skerne, Watton and Beswick. She retired in 2005.