Engaging the Word: Science and Technology:

A case study for creating a 'Service of the Word'

In many parts of the Anglican Communion the usual weekly pattern of Sunday worship means that the principal service is a Eucharist. Services of the Word – if they are celebrated at all - usually follow the pattern for Morning or Evening Prayer.

There are times in the Christian Year, however, when we become more creative with Services of the Word: Advent and Christmas carol services lead the way, while creative approaches to Holy Week are increasingly common.

Such opportunities to extend the use of Services of the Word can be found in many places, not as 'gimmick's but thoughtful ways to enrich our worship, and open ourselves more fully to the rich resources which the scriptures offer. But how might we go about extending our use of such services? What are we trying to achieve?

This Case Study arose out of an invitation to support a science-based Christian conference with relevant scripture readings at each session, and offer a Sunday service for the ecumenical group of participants. It embraces the various ways in which the scriptures were read at the conference, and the Sunday service in particular. All were developed in close consultation with the conference planners, but ultimately were my own work, as an Anglican theologican and liturgist.

The sections in this paper are:

- 1. Background to the conference and the invitation
- 2. The text of the Service: large-print reading sheets were provided to readers, while a service outline, with hymn words, was printed on a single sheet for other participants.
- 3. A commentary on the Service
- 4. The texts as set out for reading at the Service
- 5. The texts set out for reading before each conference session.

Hopefully these resources illustrate how, with a little creative thought and liturgical know-how, the scriptures can speak into new situations, with minimal need for resources.

Charles Sherlock





1 Background

The Institute for the Study of Christianity in an Age of Science and Technology (ISCAST – is an Australian organisation whose members are Christians drawn from science and technology professions (see www.iscast.org.au). As an inter-denominational body with evangelical origins, and a membership spread across the full range of Christian traditions, those who came to the conference were committed to taking the scriptures seriously.

One member of the Australian Regional Group of the *Bible of the Life of the Church* project is deeply involved with ISCAST, and saw the possibility of using the project's resources to support an intensive weekend conference on 'The use and misuse of scripture'. I was asked to support the weekend by providing passages to be read before each sessions, and to help prepare a service on the Sunday morning for conference participants.

2 Text of the Service: Engaging the Word, Science & Technology

Sentence: Bless the LORD, O my soul!

All that is within me, bless God's holy name.

For God knows how we are made, and remembers that we are dust.

Bless the LORD, all God's works, in each and every place.

Bless the LORD, O my soul. from Psalm 103

Opening prayer: Collect for purity

First reading: Mining / geology – Job 28

Reflection, prayer

Song Together in Song 186 (tune – Once in Royal David's City)

Stars and planets flung in orbit, galaxies that swirl through space, powers hid within the atom. cells that form an infant's face: these, O God, in silence praise you; by your wisdom they are made. Life in wondrous, wild profusion, seed and fruit, each flower and tree, beast and fish and swarming insect, soaring bird, rejoicing, free: these, your creatures, join in chorus, praising you in wordless song. Humankind, earth's deepest mystery, born of dust but touched by grace, torn apart by tongue and colour, yet a single, striving race: we, in whom you trace your image, add our words to nature's song. Christ, the Word before creation as creation's final goal, once you came for earth's redemption;





by your Spirit make earth whole: then, O God, the new creation will your praise for ever sing.

Herman Steumpfle 1923 -

Second reading: (G)oddities – Joshua 10.12-13; 2 Kings 2.19-21; 2 Kings 6.1

Reflection, prayer

Psalm 8 (read together by alternate verses –from A Prayer Book for Australia):

- 1 O Lord our Governor: how glorious is your name in all the earth!
- 2 Your majesty above the heavens is yet recounted: by the mouths of babes and sucklings.
- 3 You have founded a strong defence against your adversaries: to quell the enemy and the avenger.
- When I consider your heavens, the work of your fingers: the moon and the stars which you have set in order,
- What are we, that you should be mindful of us: what are we, that you should care for us?
- 6 Yet you have made us little less than gods: and have crowned us with glory and honour.
- 7 You have given us dominion over your handiwork: and have put all things in subjection beneath our feet,
- 8 All sheep and oxen: and all the creatures of the field,
- 9 The birds of the air and the fish of the sea: and everything that moves in the pathways of the great waters.
- 10 O Lord our Governor: how glorious is your name in all the earth!

Third reading: Creation's dying and rising - 2 Peter 3:4ff

Reflection, prayer

Song: Together in Song 187

- Let all creation dance in energies sublime, as order turns with chance, unfolding space and time, for nature's art in glory grows, and newly shows God's mind and heart.
- 2. God's breath each force unfurls, igniting from a spark expanding starry swirls, with whirlpools dense and dark. Though moon and sun seem mindless things, each orbit sings: 'Your will be done.'
- 3. Our own amazing earth, with sunlight, cloud and storms and life's abundant growth in lovely shapes and forms, is made for praise, a fragile whole, and from its soul heaven's music plays.
- 4. Lift heart and soul and voice: in Christ all praises meet





and nature shall rejoice as all is made complete. In hope be strong, all life befriend and kindly tend creation's song.

Brian Arthur Wren 1936 -, based on Psalm 148

Fourth reading: Christ's deeds of power - Mark 4.35 – 5.43

Reflection

Song: Together in Song 146

- 1. God, who made the earth, the air, the sky, the sea, who gave the light its birth, God cares for me.
- 2. God, who made the grass, the flower, the fruit, the tree, the day and night to pass, will care for me.
- 3. God who made the sun, the moon, the stars, is he who, when life's clouds come on, still cares for me.
- 4. God, who sent his Son to die on Calvary, has shown how lovingly who cares for me. Sarah Betts Rhodes, 1829-1904 alt.

Intercessions,

concluding with the Lord's Prayer

Blessing / dismissal

3 Commentary

Rationale:

In view of the theme of the conference, and the ecumenical nature of participants, it was agreed that the service should consist largely of readings related to science and technology, with brief reflections worked in throughout, and some singing.

From the point of view of the *Bible in the Life of the Church* project, one aim was to expose these practicing scientists to a range of texts, and let them speak for themselves. They were arranged to be read by several voices, which involved more people – active participation being a significant value for this group of westerners – encouraged more active listening, and exposed a diversity of accents, voice tone (including both genders) and pitch.

It was requested that all songs be sung to well-known tunes, and be 'hymns' rather than 'choruses' – the choice of these was relatively easy, given the excellent indices and content of *Together in Song: the Australian Hymn Book II.* The song-words speak for themselves.

I was asked to 'preside' and lead the reflections, having heard the papers offered over the previous two days – on a very wide range of disciplines and issues, from cosmology to gene therapy!





Readings choice:

The service opened with a short responsory use of some of Psalm 103: though 'responses' might be seen as 'churchy' by some, the direct use of a psalm in this way was acceptable to all, and 'placed' us in humility before God our creator. The 'Anglican' collect for purity was read by myself, as an 'objective' opening prayer familiar to many (some joined in).

Rather than start with the 'obvious' Genesis 1, which is often 'heard' in terms of 'I wonder how so-and-so is understanding this passage' and thus invites defensiveness, Job 28 was chosen. This eases us into reflection on the wonder of *both* divine creation / wisdom *and* human ingenuity (and greed?) – points picked up in the two-minute reflection, which noted the description of mining I Job 28 as just like life in Australia's far-distant mine sites.

The second 'reading' brought together three 'miracle' texts from the Old Testament, few of which many participants knew. Joshua 10 raises big questions for cosmologists and astronomers, and the 2 Kings passages for zoologists and biochemists ... The purpose of these strange event-records – rare in kind in the Old Testament – is ethically varied: giving more killing time, healing waters, and saving someone's job! They were entitled '(G)Oddities' to point to their strangeness, and encourage an approach that did not 'explain them away' but retained a reverent curiosity, and even humour, about the scriptures. It was interesting to see some participants beginning to smile as the second text was read, then laugh after the third!

Psalm 8 offered a response which acknowledges both our human dignity and frailty, and our fellowship with our fellow creatures, in praise of the Lord our God.

The reading from 2 Peter moved participants into a future-oriented perspective, offering the biblical hope of new creation, albeit through cosmic dying, in the face of our present frailty, fears and exploration of life and death. The reflection emphasised that this letter sees creation and re-creation alike as 'by the word of the Lord': we are called to live, not least as scientists and technology-users, from God's future backwards rather than the past forwards – the latter course being a major reason why debates about 'creationism' get us nowhere in terms of Christian living.

The final reading offers a vivid slice of 'amazing' events from a day in Christ's life — his power over the sea and wind, the demonic, women's blood-life and a girl's death, all ending with a very practical command! The reflection mentioned the retention of Jesus' Aramaic words, 'talitha cum!' and the access it gives us to the event in which God's power over life and death shown in Christ: the girl was 12, just coming into puberty, and dies just as the woman threatened by her overflowing menstrual life-blood is healed.

The service closed with a time of prayer for all involved in science and technology, and a song which speaks of God's care for the large and small, and each of us as persons.

Overall, the sheer range of scriptures read and heard, in the spirit of listening and enjoying rather than trying to explain them (or explain them away) was received as quite refreshing by these mature Christian participants. I believe that through this service – coming as a focal point for the conference – they were encouraged to enjoy the scriptures, and 'given permission' to be (respectfully) curious about them, be informed and have their lives as professionals shaped by them, in ways that they had not experienced previously.





4 The Service readings, set out for diverse voices

First reading (Mining and geology) - Job 28

- V1 Surely there is a mine for silver, and a place for gold to be refined. Iron is taken out of the earth, and copper is smelted from ore. Miners put an end to darkness, and search out to the farthest bound the ore in gloom and deep darkness. They open shafts in a valley away from human habitation; they are forgotten by travellers, they sway suspended, remote from people.
- V2 As for the earth, out of it comes bread; but underneath it is turned up as by fire. Its stones are the place of sapphires, and its dust contains gold.
- V3 They put their hand to the flinty rock, and overturn mountains by the roots. They cut out channels in the rocks, and their eyes see every precious thing. The sources of the rivers they probe; hidden things they bring to light.

ALL (whispered)

But - where shall wisdom be found? ...

V2 It cannot be gotten for gold; silver cannot be weighed out as its price or in precious onyx or sapphire. No mention shall be made of coral or of crystal; the price of wisdom is above pearls. The chrysolite of Ethiopia cannot compare with it, nor can it be valued in pure gold.

ALL (loudly)

Where then does wisdom come from? ...

- V2 God understands the way to it, and knows its place ...
- V3 'Truly, the fear of the Lord, that is wisdom; and to depart from evil is understanding.'

Second reading - (G)oddities

V1 Joshua 10:12-13

When the LORD gave the Amorites over to the Israelites, Joshua spoke to the LORD and said, "Sun, stand still at Gibeon, and Moon, in the valley of Aijalon." And the sun stood still, and the moon stopped, until the nation took vengeance on their enemies. Is this not written in the Book of Jashar? The sun stopped in midheaven, and did not hurry to set for about a whole day.

V2 2 Kings 2:19-21

The people of the city said to Elisha, "The location of this city is good, but the water is bad, and the land unfruitful." He said, "Bring me a new bowl, and put salt in it." So they brought it to him. Then he went to the spring and threw the salt into it, and said, "Thus says the LORD, I have made this water wholesome; from now on neither death nor miscarriage shall come from it." So the water has been wholesome to this day, according to the word that Elisha spoke.

V3 2 Kings 6:1

As one man was felling a log, his axe head fell into the water. He cried out, "Alas, master! It was borrowed." Then the man of God said, "Where did it fall?" When he showed him the place, he cut off a stick, threw it in, and made the iron float. "Pick it





up." He reached out his hand and took it.

Third reading - Creation's dying and rising: 2 Peter 3:4ff

- V1 By the word of God heavens existed long ago, and an earth was formed out of water and by means of water, through which the world of that time was deluged with water and perished. But by the same word the present heavens and earth have been reserved for fire, being kept until the day of judgment and destruction of the godless.
- V2 But do not ignore this one fact, beloved, that with the Lord one day is like a thousand years, and a thousand years are like one day. The Lord is not slow about his promise, as some think of slowness, but is patient with you, not wanting any to perish, but all to come to repentance.
- V&2 But the day of the Lord will come like a thief, and the heavens will pass away with a loud noise, the elements be dissolved with fire, and the earth and everything done on it will be disclosed.
- V3 Since all these things are to be dissolved in this way, what sort of persons ought you to be in leading lives of holiness and godliness, waiting for and hastening the coming of the day of God, because of which the heavens will be set ablaze and dissolved, and the elements will melt with fire?
- V1&2 But, in accordance with his promise, we wait for new heavens and a new earth, where righteousness is at home.
- V3 Therefore, beloved, while you are waiting for these things, strive to be found by him at peace, without spot or blemish; and regard the patience of our Lord as salvation.

Fourth reading - Christ's deeds of power: Mark 4:35 - 5.43

- V1 They took Jesus with them in the boat, just as he was. Other boats were with him. A great wind storm arose, and the waves beat into the boat, so that the boat was already being swamped. But he was in the stern, asleep on the cushion; and they woke him up and said to him, "Teacher, do you not care that we are perishing?"
- V2 He woke up and rebuked the wind, and said to the sea, "Peace! Be still!" Then the wind ceased, and there was a dead calm. He said to them, "Why are you afraid? Have you still no faith?" And they were filled with great awe and said to one another,
- V1&2 "Who then is this, that even the wind and the sea obey him?"
- V1 They came to the other side of the sea, to the country of the Gerasenes. When he had stepped out of the boat, immediately a man with an unclean spirit met him. He lived in the cemetery; and no one could restrain him, even with a chain ...
- V2 Jesus asked, "What is your name?"
- V3 "My name is Legion; for we are many."
- V1 He begged Jesus earnestly not to send them out of the country.
- V2 Now on the hillside a great herd of swine was feeding; and the unclean spirits begged him, "Send us into the swine; let us enter them." So he gave them permission. The unclean spirits came out and entered the swine; and the herd, numbering about two





thousand, rushed down the steep bank into the sea, and were drowned in the sea ...

- V1 Jesus crossed again in the boat to the other side, and a great crowd gathered around him.
- V2 A leader of the synagogue named Jairus came, fell at his feet and begged him repeatedly, "My little daughter is at the point of death. Come and lay your hands on her, so that she may be made well, and live." So he went with him, and a large crowd followed and pressed in on him.
- V3 Now a woman had been suffering from hemorrhages for twelve years. She had endured much under many physicians, and spent all she had; and she was no better, but rather grew worse. She had heard about Jesus, and came up behind him in the crowd and touched his cloak, for she said, "If I but touch his clothes, I will be made well."
- V1&2 Immediately her hemorrhage stopped; and she felt in her body that she was healed of her disease ...
- V3 While he was still speaking, people came from the leader's house to say, "Your daughter is dead. Why trouble the teacher any further?" Overhearing them, Jesus said to Jairus, "Do not fear, only believe." ...
- V1 When they came to the house he took the child's father and mother and those who were with him, and went in where the child was. He took her by the hand and said to her, "Talitha cum," which means, "Little girl, get up!"
- V3 And immediately the girl got up and began to walk about (she was twelve years of age). At this they were overcome with amazement. He strictly ordered them that no one should know this, and told them to give her something to eat.

5 The readings for each conference session

Saturday – *first session:* Culture and tools

V1 Genesis 4:17-22

Cain built a city, and named it after his son, Enoch, the father of Irad, father of Mehujael, father of Methushael, father of Lamech, who took two wives — Adah and Zillah. Adah bore Jabal, ancestor of those who live in tents and have livestock. His brother Jubal was the ancestor of all those who play the lyre and pipe. Zillah bore Tubal-cain, who made all kinds of bronze and iron tools.

V2 Joshua 5:2-3

At that time the LORD said to Joshua, "Make flint knives and circumcise the Israelites a second time." So Joshua made flint knives, and circumcised the Israelites ...

V1 2 Chronicles 32:30

This same Hezekiah closed the upper outlet of the waters of Gihon and directed them down to the west side of the city of David. Hezekiah prospered in all his works.

V2 Proverbs 31:13

The good wife seeks wool and flax, and works with willing hands ... She puts her hands





to the distaff, and her hands hold the spindle. She is not afraid for her household when it snows, for all are clothed in crimson. She makes herself coverings; her clothing is fine linen and purple. She makes linen garments and sells them; she supplies the merchant with sashes ...

Saturday - second session: Zoology / biology

V1 Leviticus 11

From among land animals, you may eat any that has divided hoofs and is cleft-footed and chews the cud. But of those that chew the cud or have divided hoofs, you shall not eat the camel, rock badger or hare, for though they chew the cud, they do not have divided hoofs. You shall not eat the pig, for though it has divided hoofs and is cleft-footed, it does not chew the cud

- V2 Everything that has fins and scales, whether in the seas or in the streams -- such you may eat. But anything that does not have fins and scales of their flesh you shall not eat
- V1 Among the birds, these shall not be eaten: the eagle, vulture, osprey, buzzard, kite of any kind; every raven; ostrich, nighthawk, sea gull, hawk of any kind; the little owl, cormorant, great owl, water hen, desert owl, carrion vulture, stork, heron of any kind, hoopoe and bat.
- V2 All winged insects that walk on all fours are detestable to you. But among these you may eat those that have jointed legs above their feet, to leap on the ground the locust, bald locust, cricket the grasshopper. All other winged insects that have four feet are detestable to you.
- V1 Deuteronomy 22

If you come on a bird's nest, in any tree or on the ground, with fledglings or eggs, with the mother sitting on the fledglings or on the eggs, you shall not take the mother with the young. Let the mother go, taking only the young, so it may go well with you and you may live long.

Saturday – third session: Technology and manufacture

V1 Exodus 35:21ff

Everyone whose heart was stirred brought the LORD's offering for the tent of meeting. Both men and women of a willing heart brought brooches, earrings, signet rings and pendants, all sorts of gold objects, blue or purple or crimson yarn, fine linen, goats' hair, tanned rams' skins, fine leather, silver or bronze, acacia wood.

- V2 All the skillful women spun with their hands, and brought what they had spun in blue and purple and crimson yarns and fine linen. The leaders brought onyx stones and gems to be set in the ephod and the breastpiece, spices and oil for the light, the anointing oil and the fragrant incense ...
- Moses said to the Israelites: the LORD has called by name Bezalel, and filled him with divine spirit, with skill, intelligence, and knowledge in every kind of craft, to devise artistic designs, to work in gold, silver, and bronze, in cutting stones for setting, and in carving wood, in every kind of craft. God has inspired Bezalel and Oholiab to teach, filling them with skill to do every kind of work done by an artisan, a skilled designer or embroiderer in blue, purple, and crimson yarns, in fine linen, or by a weaver.





V2 And Bezalel and Oholiab, from all the freewill offerings the Israelites brought, made the Tabernacle, with its curtains, poles and frames; the ark of the covenant and the cherubim covering it; the tables, altars, lampstands, bowls and vestments; the two large bronze pillars and much else ...

Saturday - fourth session: Medicine

V1 Leviticus 13:9ff

When a person contracts a leprous disease, he shall be brought to the priest for examination. If there is a white swelling in the skin that has turned the hair white, and quick raw flesh in the swelling, it is a chronic leprous disease. The priest shall pronounce him unclean. But if the disease covers all the skin of the diseased person from head to foot, so far as the priest can see, he shall pronounce him clean of the disease. But if raw flesh appears on him, he shall be unclean. But if the raw flesh again turns white, the priest shall pronounce the diseased person clean ... and likewise treatment for boils, burns, hair diseases, itching, spots

- V2 If anyone loses the hair from his head, he is bald but he is clean. If he loses the hair from his forehead and temples, he has baldness of the forehead but is clean. But if there is on the bald head or the bald forehead a reddish-white diseased spot, the priest shall examine him ...
- V1 2 Kings 20:7

Isaiah said, "Bring a lump of figs. Let them take it and apply it to the boil, so that the king may recover."

V2 John 9:1-8

As Jesus walked along, he saw a man blind from birth. His disciples asked him, "Rabbi, who sinned, this man or his parents, that he was born blind?" Jesus answered, "Neither this man nor his parents sinned; he was born blind so that God's works might be revealed in him. We must work the works of him who sent me while it is day; night is coming when no one can work. As long as I am in the world, I am the light of the world."

V1 When he had said this, Jesus spat on the ground and made mud with the saliva and spread the mud on the man's eyes, saying to him, "Go, wash in the pool of Siloam" (which means Sent). Then he went and washed and came back able to see.

Sunday session 2: Technology and war

V1 Deuteronomy 20:19-20

If you besiege a town, making war against it, you must not destroy its trees by wielding an axe against them. Though you may take food from them, you must not cut them down. Are trees in the field human beings that they should come under siege from you? You may destroy only the trees that you know do not produce food; you





may cut them down for use in building siegeworks against the town that makes war with you, until it falls.

V2 1 Samuel 13:19-22

No smith was to be found in all the land of Israel; for the Philistines said, "The Hebrews must not make swords or spears for themselves". So all the Israelites went down to the Philistines to sharpen their plowshare, mattocks, axes, or sickles. The charge was two-thirds of a shekel for plowshares and mattocks, and one-third for sharpening axes and setting the goads.

V1 2 Chronicles 18:33

But a certain man drew his bow and unknowingly struck the king of Israel between the scale armor and the breastplate ...

V2 2 Chronicles 13

King Asa said, "Let us build cities, with walls and towers, gates and bars; the land is still ours because we have sought the LORD, and he has given us peace on every side." So they built and prospered. Asa had an army of three hundred thousand from Judah armed with large shields and spears, and two hundred and eighty thousand from Benjamin who carried shields and drew bows.

Sunday session 3: The social sciences

- V1 Ruth 4:7
 - Now this was the custom in Israel concerning redeeming and exchanging: to confirm a transaction, the one took off a sandal and gave it to the other.
- V2 So when the next-of-kin said to Boaz, "Acquire it for yourself," he took off his sandal. Then Boaz said to the elders and all the people, "Today you are witnesses that I have acquired from the hand of Naomi all that belonged to Elimelech, Chilion and Mahlon. I have also acquired Ruth the Moabite, the wife of Mahlon, to be my wife, to maintain the dead man's name on his inheritance, in order that the name of the dead may not be cut off from his kindred and from the gate of his native place; today you are witnesses."
- V1 Deuteronomy 22:8

When you build a new house, you shall make a parapet for your roof; otherwise you might have bloodguilt on your house, if anyone should fall from it.

V2 Numbers 36

The heads of the ancestral houses said, "My lord was commanded by the LORD to give the inheritance of our brother Zelophehad to his daughters. But if they marry into another Israelite tribe, when the jubilee comes their inheritance will be added to the inheritance of the tribe into which they marry; so it will be taken away from the allotted portion of our inheritance ...

V1 Then Moses commanded, according to the word of the LORD: "The descendants of Joseph are right. This is what the LORD commands concerning the daughters of Zelophehad, 'Let them marry whom they think best; only it must be into a clan of their father's tribe that they are married, so that no inheritance of the Israelites shall be





transferred from one tribe to another; for all Israelites shall retain the inheritance of their ancestral tribes ... "

V1&2 The daughters of Zelophehad did as the LORD had commanded Moses ...

Sunday session 4: Forestry / Horticulture

V1 Genesis 1:11-12

Then God said, "Let the earth put forth fruit trees of every kind that bear fruit with the seed in it." And it was so ... And God saw that it was good.

V2 1 Kings 4:33

Solomon's wisdom surpassed the wisdom of all the people of the east ... He would speak of trees, from the cedar that is in the Lebanon to the hyssop that grows in the wall ...

V1 Leviticus 19:23-25

When you come into the land and plant all kinds of trees for food, then you shall regard their fruit as forbidden; three years it shall be forbidden to you, it must not be eaten. In the fourth year all their fruit shall be set apart for rejoicing in the LORD.

- V2 But in the fifth year you may eat of their fruit, that their yield may be increased for you: I am the LORD your God.
- V1 Deuteronomy 24:20

When you beat your olive trees, do not strip what is left; it shall be for the alien, the orphan, and the widow.

V2 Isaiah 10:33-34

The LORD of hosts will lop the boughs with terrifying power; the tallest trees will be cut down, and the lofty will be brought low. He will hack down the thickets of the forest with an ax, and Lebanon with its majestic trees will fall.

- V1 Matthew 3:10
 - John Baptist proclaimed, "Even now the axe is lying at the root of the trees; every tree therefore that does not bear good fruit is cut down and thrown into the fire."
- V2 Revelation 22:1

Then the angel showed me the river of the water of life, bright as crystal, flowing from the throne of God and of the Lamb ... On either side of the river is the tree of life with its twelve kinds of fruit, producing its fruit each month; and the leaves of the tree are for the healing of the nations.

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