Can a Scientist believe in Miracles?

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Thank you

• Peter van der Burgt: organiser of the 3 Walton Lectures
• Frank Peters, David Rea: Cork organisers
• Peter van der Burgt: Dublin organiser
• Gareth Dalzell: Belfast organiser
Ernest T S Walton

- 1903, Born in Dungarvan
- 1922-1926, Trinity College Dublin
  - Graduated in Mathematics and Experimental Science
- 1927-1934, PhD, Cambridge University. Worked with John Cockcroft.
- 1935-1974, TCD and Dublin Inst for Adv Studies
- 1951, Nobel Prize for Physics: for “splitting the atom”
  - First Irish scientist to win the Nobel Prize
  - William Campbell the second, in Medicine in 2015, but became a US citizen and research done in the USA
Ernest Walton

• Spoke on science and religion internationally
• “One way to learn the mind of the Creator is to study His creation. We must pay God the compliment of studying His work of art and this should apply to all realms of human thought. A refusal to use our intelligence honestly is an act of contempt for Him who gave us that intelligence.”
The Greatest Commandment

- Jesus said, “Love the Lord your God with all your heart and with all your soul and with all your mind and with all your strength.” Mark 12: 3
Richard Dawkins “Snake Oil and Holy Water” in *Forbes* October 4, 1999

- The Resurrection, even the Old Testament miracles, are all freely used for religious propaganda, and they are very effective with an audience of unsophisticates and children. Every one of these miracles amounts to a violation of the normal running of the natural world.
- Wikipedia: A miracle is an event not explicable by natural or scientific laws
- Hume: A miracle is a transgression of a law of nature
Augustine (AD 354-430)

- Great Christian scholar
- Bishop of Hippo
- “Miracles are not contrary to nature, but only contrary to what we know about nature”
- Augustine believed that God was the creator and the upholder of the Universe. He is a consistent God. Therefore he does not break the laws he has created
- Rowan Williams
What are Physical Laws?

• “There is a rhythm and a pattern between the phenomena of nature which is not apparent to the eye, but only to the eye of analysis; and it is these rhythms and patterns which we call Physical Laws.” Richard Feynman, *The Character of Physical Law*, MIT Press, 1965.

• Physical Laws are based upon repeated reproducible events/experiments.
What does the Bible say about miracles?

- They are called signs and wonders
  - And the Lord said to Moses: “See that you do before Pharaoh all the miracles that I have put in your power” (Exodus 4:21)
  - Then the Lord said to Moses: “though I multiply my signs and wonders in the land of Egypt …” (Ex. 7:4)
  - Jesus of Nazareth, a man attested to you by God with mighty works and wonders and signs” (Acts 2:22)
- Miracles concentrated around the time of Moses and Jesus
Two Miracles

Crossing the Jordan

The Resurrection

If they happened as described in the Bible are they miracles?

A scientific and biblical approach
Crossing the River Jordan

- The last miracle of the Exodus – the climax

- Can science throw light on this?

- Does it amount to a violation of the normal running of the natural world?
“Now the Jordan is in flood all during harvest. Yet as soon as the priests who carried the Ark reached the Jordan and their feet touched the water’s edge, the water from upstream stopped flowing. It piled up in a heap a great distance away, at a town called Adam in the vicinity of Zarethan, while the water flowing down to the sea of the Arabah (the Dead Sea) was completely cut off. So the people crossed over opposite Jericho.”
Picture the Scene

• River Jordan in flood
• Israelites on one side
• Want to be on the other side – their promised land of Canaan
• Waited forty years
• Tantalisingly can see Canaan
• Situation looks hopeless
• Suddenly raging river stills
• Water stops flowing
• Israelites cross riverbed in triumph
• Wonderful children’s story!

• Fabulous fairy tale!
• Can it be true?

• Can we know what happened 3000 years ago?

• Most people (and most biblical scholars) believe story is a legend
Curious Detail of Story

• Is the account historical fiction?

• What did the writer intend?

• What did his/her original audience understand?

• There is a curious detail in account of crossing the Jordan.
Joshua 3:15, 16

“Now the Jordan is in flood all during harvest. Yet as soon as the priests who carried the Ark reached the Jordan and their feet touched the water’s edge, the water from upstream stopped flowing. It piled up in a heap a great distance away, at a town called Adam in the vicinity of Zarethan, while the water flowing down to the sea of the Arabah (the Dead Sea) was completely cut off. So the people crossed over opposite Jericho.”
The miracle occurred elsewhere!

- Water stopped flowing miles upstream at a town called Adam.
- What stopped the water flowing at Adam?
- Can we find out 3000 years later?
Geography of Jordan Crossing

- Careful attention in text
- Writer wants to point to precise spot
- Crossed Jordan opposite Jericho
- Water stopped a great distance away at a town called Adam in vicinity of Zarethan
- All these places upstream from Dead Sea
- Writer wanted to root crossing in history and geography: intended story to be factual
Where was Adam?

- No town called Adam on modern map.
- Can we find after 3000 years?
- Ancient Hebrew texts – only consonants
- When read, vowel sound used
- Mobile phones: text is txt
- In original Hebrew text Adam was ’dm
Where was Adam?

- When modern Arabic words replace ancient Hebrew, the initial ’ is usually dropped and an Arabic ending added.
- Need to look on modern map of State of Jordan for suitable town containing consonants dm.
- There is! Modern Damia (Damiya) on east side of River Jordan, 17 miles north of Jericho.
- Most scholars agreed ancient Adam is modern Damia.
The Clue of the Earthquakes

July 11, 1927

- Well-documented earthquake shook Jericho, buildings collapsed, walls cracked. Detected in Europe, USA, Russia
- 6.5 on the Richter scale (earthquake, Christchurch, New Zealand on February 22, 2011, killed over 200 people: was 6.3 on the Richter scale)
- Due to slippage along Jericho fault
- Runs N/S under River Jordan (part of Great Rift Valley)
What Happened at Adam?

Letter from Professor Amos Nur – Professor of Geophysics, Stanford University.

“During the 1927 earthquake, several ground cracks appeared, together with an outpouring of ground water. This soil liquefaction phenomenon has been well observed in earthquakes elsewhere. During the earthquake, mud slides occurred along the Jordan near Damia, about 30 km (18 miles) north of Jericho; these temporarily stopped the river’s flow”
Has this Happened before 1927?

• Historical records of Jordan stopping.

• Prof Amos Nur:

“Adam is now Damia, the site of the 1927 mud slides which cut off the flow of the Jordan. Such cut-offs, lasting typically one to two days, have also been recorded in 1906, 1834, 1546, 1534, 1267 and 1160. The stoppage of the Jordan is so typical of earthquakes in this region that little doubt can be left of the reality of such events in Joshua’s time.”
Was the Crossing a Miracle?

• Crossing a natural mechanism that science can explain: an earthquake-induced mud slide behind which the waters of the Jordan piled up. Broke through one to two days later.

• Can identify ancient Adam with modern Damia

• Old Testament: major miracle of God

• Consistent with Augustine’s view of miracles

• Not consistent with Dawkins, Hume, etc
Biblical hint of earthquake

• Psalm 114
  – When Israel came out of Egypt…the Jordan turned back, the mountains leaped like rams, the hills like lambs…Tremble, O earth, at the presence of the Lord.

• Israel (and Egypt, etc.) did not distinguish between natural and supernatural events

• All events due to God

• If earthquake caused Jordan to stop – just as much the hand of God as sending an angel

• Miracle of timing
Crossing the Red Sea

Best-known miracle of Exodus

Exodus 14:21

“Then Moses stretched out his hand over the sea, and all that night the Lord drove the sea back with a strong east wind and turned it into dry land.”

- Bible explicit
- Natural mechanism
- Strong east wind
Miracles of Timing

- Jordan stopped when Israelites gathered on the river bank
- Red Sea driven back when Israelites trapped there by Pharaoh’s army
Miracles as God controlling natural events

• Psalm 77
  – You are the God who performs miracles; you display your power among the peoples… Your thunder was heard in the whirlwind, your lightning lit up the world, the earth trembled and quaked. Your path led through the sea, your way through the mighty waters, though your footprints were not seen. You led your people like a flock by the hand of Moses and Aaron.
Picture the Scene

- River Jordan now not too impressive
- Large quantities of water used for irrigation since 1940
- Israelites crossed in the spring (Tenth day of first month – Joshua)
- Source of Jordan, the snowcapped Mount Hermon
- Snow melts in spring
- River floods – photograph taken in 19th century
Picture the Scene

- British expedition to Jordan in nineteenth century
- Jordan in flood half a mile wide
- This was the river the Israelites crossed
- After 3000 years know how and where crossing occurred.
Miracles of Timing

Language of Aristotle

- The efficient cause – a natural agent
- The final cause – the will of God
- Miracle revealed – by the extraordinary timing of the event

God worked in, with and through the nature he created and upholds to perform the miracle of crossing the Jordan.
Conclusion

• Some miracles are miracles of timing

• God works in, with and through nature. His footprints are not seen. God works through the ordinary things of life.

• God may interact with people to achieve miracles of timing

• People and God working together can make miracles of timing
“The scientist, even when he is a believer, is bound to try as far as possible to reduce miracles to regularities: the believer, even when he is a scientist, discovers miracles in the most familiar things.”

What if the miracle appears to be a unique event?
The Resurrection

• The most incredible event in the whole of history, or a cruel hoax

• “He appeared to over 500 of the brothers at the same time, most of whom are still living” (1 Cor 15:5). Paul writing in about AD 55, about 20 years after the Resurrection
Can Science Explain the Resurrection?

- Not with our present knowledge
- Looks like natural laws really are being broken
  - Resurrected Jesus appeared to disciples in locked room
  - Augustine wrong about all miracles being not contrary to nature
Breaking Natural Laws a problem for BOTH Scientists and Theologians

• Biblical picture of God is a consistent God

• If God created the universe and is consistent, would he break his own natural laws? (Augustine said no)
The Music Analogy
The Resurrection Revisited

• God acting capriciously?

• Peter speaking 7 weeks after the Crucifixion
  “But God raised him from the dead because it was impossible for death to keep its hold on him” (Acts 2: 24)

• If Jesus really was the Son of God then the Resurrection was inevitable not incredible

• The Resurrection is consistent with a consistent God
The Resurrection in 1 Cor. 15

- “Christ has indeed been raised from the dead. The firstfruits of those who have fallen asleep” (v. 20)
- “But someone may ask, ‘How are the dead raised? With what kind of body will they come?’” (v. 35)
- “The resurrection of the dead. The body that is sown is perishable, it is raised imperishable … It is sown a natural body, it is raised a **spiritual body** … For the perishable must clothe itself with the imperishable” (v. 42, 44, 53)
A change of key signature!

• The resurrection of Jesus was not just like a single accidental in our music analogy, it was like a temporary local change of key signature

• Old body: carbon based, DNA based, subject to disease and death

• New body: carbon based? DNA based? Person still recognisable, but no more disease and death

• Analogy with a multiverse? A “new heaven and a new earth” Resurrected body of Jesus (and us) a different form of life? Different laws of physics? A different key signature?
Biblical Miracles: 3 Types

• Type 1. Miracles of timing

• Type 2. Some miracles are like an accidental on a music score: the composer is free to do this. E.g. God provided a temporary local additional force when Peter and Jesus walked on water

• Type 3. The Resurrection! It is like a temporary local change in key signature: a glimpse of new and different physical laws for the risen Jesus
Can a Scientist believe in Miracles?

Yes!