

How does God act in a (scientific) world: implications for prayer and suffering

The militant atheism of the past few years, on the one hand, and new developments in physics on the other have produced a lot of serious writing on this topic by theologians like Keith Ward and scientist-theologian John Polkinghorne.

Militant atheism claims that the world works **entirely** according to scientific laws with a complete chain of cause and effect so that everything can be or will be explained in terms of the laws governing the mechanics of the world. Where then does this leave room for God? Or, if there is a God, where is the room in this unbroken cause and effect chain for him to act?

The subject sounds terribly erudite and it has occupied the minds of many scientists and theologians. But actually it is a very **practical** problem: it has ramifications for prayer, suffering and healing, miracle, our ideas of the natural and supernatural, as I hope we will explore in the discussion.

1 What do we pray for? (intercessory prayer)

How do we expect God to act in response to intercessory prayer?

For weather? For healing? For good exam results? For the last parking place? (Keith Ward) For the fire engine? (rabbi)

The New Testament makes it clear that we should pray for **people** rather than **things** (passages) - why may become clearer as we proceed.

2 How does science view the world?

This view has changed with scientific progress.

Newton and Pascal left us with the idea of **deism**: that God started off the world in creation; then it ran on its own according to rigid laws. Interestingly, for Newton, while his laws predicted celestial behaviour remarkably well, there were discrepancies between theory and observation; and to him these were evidence of God's direct interference. Pascal corrected the maths and famously was asked by Napoleon where was it in his maths that God came in, receiving the famous reply "Sir, I have no need of that hypothesis". This statement is often taken as an argument for materialism. But the point that Pascal was making was that **from the scientific viewpoint** of observation and mathematical theory, no "outside" influences were required - the maths is sufficient. Newton's introduction of divine correction was a classic example of what we now call "**God of the gaps**" - the temptation to introduce God into gaps in the scientific account. This is one of the errors of creationism and ID (intelligent design). It is dangerous, because as scientific knowledge advances, the gaps shrink and eventually disappear. Where then are you left with room for God?

Now we need to do some **unpacking** here.

What do we mean when we say that the world "**runs according to scientific law**"? Are scientific laws **prescriptive** or **descriptive**? They simply describe reality in terms of mathematical models expressing the normally found regularities in nature. It is convenient to say that the world operates according to scientific laws, but all we are really saying is that that

it is how it is observed to run. It doesn't mean that there is some force or agency called **nature** that causes the world to behave in the way it does, as if it is running along prescriptive tramlines.

But how are we to get God in, with scientific integrity? There have been three main approaches:-

1) **Firstly**, Scientific theologians have in the 20C adopted a more biblical position than deism: **theism**: behind **everything**, not just at the beginning, is the hand of God. The regularity of the world observed by science is evidence of the reliability and power of its creator and upholder. Without him, **nothing would exist**. So the creative **fiat** is not simply **let us make** but **let there be**: as the hymn puts it "he has the whole world in his hands". "He is before all things and in him all things hold together" (Colossians 1: 13) . "Upholding all things by the word of his power" (Hebrews 1: 3 King James version).

Theism teaches us that we are not to look for gaps in the scientific account in which to let God in - He is there in **everything** and **without Him nothing would exist and operate**. So, in principle, we don't have to "get God in" - He is already in! But how can He act, given the "normal" regularity and lawfulness of His activity? We'll keep that for discussion!

2) **The second approach**: More recently, the advent of **quantum mechanics** and **chaos theory** has led to a humbling of 19th Century scientific certainty in scientific description and prediction. At the subatomic level, the **micro level** - the level of particle physics - one **cannot** know everything. For example if you know the location of an electron you cannot know its momentum and vice versa: there is a built in indeterminacy at the smallest level of nature. This is the famous Heisenberg's Uncertainty Principle.

Similarly at the **macro level**, **chaos theory** indicates that there is another basic unpredictability. Complex non-linear systems like our weather systems, are systems that are at inherently unstable, like a cone balanced on its point: minute perturbations can cause major unpredictable changes: the cone falls over. This is sometimes called the butterfly effect: changes to the weather in Chicago can be influenced by the fluttering of the wings of a butterfly in India. There is a basic unpredictability at the micro and macro levels.

All this has led scientific theologians like Polkinghorne (a theoretical particle physicist) to talk of what he calls the "openness" of the Universe i e not everything that happens can be predicted.

The danger with this is that quantum uncertainty and chaos theory could represent simply our current ignorance. Einstein never accepted Heisenberg's uncertainty principle - the uncertainties in quantum mechanics - and was convinced that hidden variables might have eventually come to light. "God does not play dice" he famously said.

Therefore, I find it a little too close to the God of the gaps for comfort. On the other hand, Keith Ward accommodates it in this way: that there are some situations that scientific laws do not cover; these are not gaps for God to fill, but real limits to the range and applicability of the laws of nature. There are therefore genuine unknowns, genuine unpredictabilities. In other words, the future cannot be predicted with accuracy and could be influenced by God in a way that could not be detected by science.

3) **The third approach** I find more satisfying as a neuroscientist: the human mind with its freedom of choice is probably the most obvious area where actions cannot be fully predicted.

The underlying brain mechanisms one day may be: but the mental aspects - the other side of the same coin as the brain - the side we see, the mind, does have **freedom of action**. How can we reconcile this with deterministic brain science? In the same way that the software description of a computer can demonstrate novelty yet the underlying hardware is deterministic. (Any user of modern Microsoft Windows on their computer will know what I mean - it behaves unpredictably and often contrary to what I want it to do!). What makes the difference? It is **information**. We have to regard information as important as energy and mass in a scientific description. Feed in different information into a computer and it behaves quite differently even though the electronics is entirely predictable in a cause and effect way.

What changes human behaviour? Information. For Christians this is through the word of God - "in the beginning was the Word and the Word was God": the LOGOS; his information. God's massive injection of information in the formation of the world: setting the properties of what we call nature: the constants, the forces, the relationships on which human life depends. Then was the word incarnate - Jesus. Then there is the word of God - his revelation of himself in the Bible.

For many of us, the most significant change in our lives, in our mental outlook and in our behaviour, was becoming a Christian. How? Through reading and accepting the word of God. - God's information to us. God provides the information on which the nature of the world is based and on which Christian development and discipleship is based. So the world is susceptible to information and can be altered by it without conflicting with scientific laws. If we can alter the world through the decisions of our minds and the acts of our bodies then cannot God do the same through his cosmic consciousness, his word?

So how does God act in the world? Not by interfering with what we call the laws of nature, as Newton thought, but by giving us his word - information which can change our lives by changing our minds. This is why I believe that prayer in the New Testament is directed at changing the minds of ourselves and those around us. Rom.12: 1-2.

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12/10/10

DISCUSSION POINTS

a) Theism:

- 1) How does God "disturb" the regularity of His creation to accomplish, for example, the Virgin Birth, the resurrection?
- 2) The downside of theism (cf deism) is that it appears to make God responsible for all the bad as well as all the good in nature - "nature red in tooth and claw". How do we cope with suffering in a theistic world?
- 3). What do we mean by miracle?
- 4). Can we talk about "natural" and "supernatural"? (page 268 Ward)

b) Micro and macro indeterminacy:

- 5) How do we avoid a "God of the gaps" here?

c) God acting through Information:

- 6) What is the LOGOS? How does it work?

d) Practical outworking:

- 7). What should we pray for? Not for things but for changes in mental outlook in ourselves and others? Not for a parking space but acceptance of whether we get one or not!
- 8). Should we pray for healing? Healing for a broken leg? Healing for mental illness? What do we mean by spiritual healing?

Should we pray for Christopher Hitchens that his cancer be healed? He once wrote "do not trouble deaf heaven with your bootless cries. Unless, of course, it makes you feel better!"

Further Reading

Polkinghorne, J. 1989: *Science and Providence - God's Interaction with the World*. SPCK

Ward J. 2008: *The Big Questions in Science and Religion*. Templeton Foundation Press.

Polkinghorne, J. and Beale, N. 2009: *Questions of Truth - Fifty One Responses to Questions about God, Science and Belief*. Westminster John Knox Press.