

'I am become death, the destroyer of worlds.' Science, Super-nature and Christian Ethics. By The Revd Canon Dr Victoria Johnson Elv Cathedral

A brilliant nuclear physicist, with a comprehensive grasp of his field, Dr. Oppenheimer was also a cultivated scholar, a humanist, a linguist of eight tongues and a brooding searcher for ultimate spiritual values. And, from the moment that the test bomb exploded, he was haunted by the implications for man in the unleashing of the basic forces of the universe.

As he clung to one of the uprights in the desert control room that July morning and saw the mushroom clouds rising in the explosion, a passage from the Bhagavad-Gita, the Hindu sacred epic, flashed through his mind. He related it later as: "If the radiance of a thousand suns were to burst into the sky, that would be like the splendor of the Mighty One." And as the black, then gray, atomic cloud pushed higher above Point Zero, another line came to him from the same scripture "I am become Death, the destroyer of worlds"--

This is an extract from the Obituary of Robert Oppenhiemer, printed in the New York Times of 1967. The account of his life contains a terrifying narrative of how the amazing discoveries of his science brought catastrophic death to many thousands of people towards the end of the Second World War. Throughout his life he was perplexed by this knowledge, and even went on to say that "physicists have known sin; and this is a knowledge which they cannot lose." Later in his life, he changed his mind- "I carry no weight on my conscience," he said in 1961. "Scientists are not delinquents," he added. "Our work has changed the conditions in which men live, but the use made of these changes is the problem of governments, not of scientists."

I agree - Scientists are not delinquents, but it is science *neutral?* Are there moral consequences to our science that we should be mindful of, or are scientists free to discover and develop and let someone else make the difficult decisions for them about use? Oppenheimer may be called *'the father of the atomic bomb'*, but in the end, he didn't press the button. The *'problem'*, he claims, was someone else's.

I'm afraid I have no easy answers this evening. Like any good scientist, I hope I will just raise more and more questions for you to ponder. All I can begin to do is speak from my own experience as a research scientist, and my own experience as a priest. When I was in the lab testing drugs and modifying DNA and trying to determine whether I could make some small dent in the progression of cancer, questions were raised in my mind about the implications of my research. I was not immune to the ethical complexities of what I was doing. Scientists do not exist in a hermetically sealed bubble which the travails of the modern world are unable to infiltrate. I often worked in sterile conditions in the lab, but laboratories, scientific institutions and scientists are not sterile to serious spiritual, ethical or moral thought. Oppenhiemer wasn't the first, and certainly won't be the last to reach for the language of faith to articulate his feelings about science.

The complex and challenging questions that scientific research raises can't be ignored by scientists, or by society at large. This is where I suppose I might disagree with Oppenheimer, *'the problem'*, as he puts it, I believe, *is everyone's problem*. As scientists we can't just abandon our discoveries and let someone else carry the can for their use –or can we? Discuss. Karen Armstrong suggests that scientific reason needs to be balanced by compassion and empathy, in order to save itself from a moral void. The complexities of science, somehow, need to be always earthed in community, and shaped by our humanity and I would argue, because I am after all a priest, grappled with in the light of Christ and his teaching.

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Equally, as a priest, I cannot ignore the discoveries of science and the questions that those discoveries raise. I have to be open enough to stand back and reflect, on where such discoveries might take us. My Christian faith, needs to be able to embrace the complexities of science and as a Christian in the 21st century, my faith has to be relevant to the world that I see, with my own eyes, and the world I see down a microscope.

70 years on from the bombs at Hiroshima and Nagasaki, Science still seems to be able to elevate our humanity and at the same time challenge it. In the last week there is plenty in the news to make us think.

Questions are being raised about the use of Drone technology in modern warfare. Aerial un-manned devices which can literally, wipe people from the face of the earth, discreetly, and precisely whilst being directed from a control room in the english countryside. In contrast, a baby girl with leukaemia, has made a miraculous recovery thanks to genetically engineered T cells being injected into her system. The treatment had only previously been tested on laboratory animals, everyone was taking a huge risk, but the risk seems to have paid off.

In a sense, these two stories, exemplify the creation of a kind of super-nature. Where Human beings through their great intellect and perseverance have developed technologies, and made discoveries which enhance, and extend nature as we know it. We can give life, but we can also take life away. We can heal and reconcile, but we can also destroy.

There are still many people who are suspicious of anything which they cannot understand as part of the natural order, that's why GM crops are still such a controversial subject, but plainly, it's not that simple. Where would we be without chemotherapy, ipads, mobile phones, heart transplants, anti-biotics? All these 'extensions of nature' are things we gladly take for granted.

So, it's perhaps more important than ever to find a way of creating spaces for dialogue and reflection, not just for the benefit of scientists and theologians, but for the benefit of the whole community.

In this city of scientists, those working at the forefront of science, medicine and technology are raising ethical questions about their work and trying to find forums to discuss their findings and their feelings. Some of Europe's most prominent scientists have opened an annual debate with philosophers and theologians at Cern, the European Organization for Nuclear Research, in the wake of the discovery of the Higgs Boson.

It seems that we are waking up to the reality that putting science and faith in separate boxes might be an artificial separation which does neither discipline any good.

The discoveries of science can push at the limits of what we might describe as nature- it can create a supernature, a super-natural world. We can perhaps provide a place where we can examine and quiz, this supernature- because we believe in a supernatural God. A God that becomes human, a human that makes the blind see, the lame walk, the deaf hear, and the dead come back to life. A human who takes bread and wine, to be his body and blood. A human being who is cruelly tortured and killed, and through a love beyond all telling, lives again.

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The prophet Isaiah gives us a vision of a world where the natural order of things is subverted and extended, and brings life, and hope and peace. This is part of God's plan. A new kind of 'super-nature' where the wolf shall live with the lamb, the leopard shall lie down with the kid, The nursing child shall play over the hole of the asp. God brings harmony where there has been enmity, peace where there has been violence, a new kind of kingdom, a new kind of world.

It's ironic, given where I started this sermon, that one of the most poignant realizations of this vision has today been remembered in services around the country. Today we remember men and women of immense bravery, and supreme self-sacrifice, who died, not for material wealth, or gain, or power, or glory, but in the hope of peace, in the hope of a world where war is no more. In the hope of a world where the wolf shall live with the lamb.

This flies against all our expectations that the natural mode of human existence is predicated on selfpreservation and selfish genes. It doesn't have to be so. There is something else within our makeup which points to self-giving love, and sacrifice, seemingly not of this world.

We are told by St John, that Christ gives us that '*peace which the world cannot give*'. A supernatural peace, a peace which points to something else beyond what we know. His life and ministry gave us a glimpse of that supernatural order which Isaiah envisioned and perhaps that vision can be something scientists and priests can hold on to. Perhaps it is the hope of this peace, which might be able to shape our technology, and harness our science for the good.

Maya Angelou the poet who died just last year, wrote a wonderful Christmas poem called Amazing Peace which, describes Peace, as louder than the explosion of bombs. She hopes that we may learn by the shimmering light of amazing peace, how to look beyond complexion and see community.

For me, this is perhaps the best articulation of what I'm trying to say. Within a Christian ethic, might we look beyond the complexion of science, and see community? Amid all the complexities of modern science from particle physics to neuro-biology, there may be two simple questions which might help us get started to look beyond the complexity:

Could this discovery bring death and become the destroyer of worlds or could this scientific super-nature create a new world order- new life- and a new and amazing peace?

To him who is the Prince of Peace, to him who is the resurrection and the life, be all glory, and honour and praise, now and forever, Amen.

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