

What it means to be human

We have always understood what it means to be human by reference to the leading technology of the culture we live in.



“...His heart is the mainspring, in his head are the bells, complete with little hammers...and the soul is the tiny figure on the top listening to the music of the chimes.”

Denis Diderot (1751)

"Abstract thinking by biological brains has underpinned the emergence of all culture and science. But this activity—spanning tens of millennia at most—will be a brief precursor to the more powerful intellects of the inorganic, posthuman era."

Martin Rees

Many technological thinkers express a form  
of disgust at their own human  
embodiment

‘ We are pathetic, ludicrous, laughable  
bipeds who are only fit for survival on the  
African savannah.’

‘Our bodies are a pathetic hotchpotch of partly functioning biological engineering which is subject to frequent breakdown and inexorable decline.

Our brains are dominated by reptilian reflexes from our biological ancestors which frequently function in inappropriate ways and are maladapted to modern society.’

‘Our information processing capacity is limited and subject to frequent errors. Every time we access a memory we distort and change the encoded file, leading to gross errors.

Our perceptions of reality are highly distorted and our brains create an imaginary reality for survival purposes.’

Compared with human intelligence  
advancing machine intelligence  
seems desirable and increasingly  
better suited to the modern world.



# A two-way psychological movement

## From machine to human

We understand the working of the human brain by looking at machines, especially computing machines. Modern people increasingly understand themselves as machine-like.

## From human to machine

We understand what it means to be an intelligent machine by looking at our own humanity. We impose our humanity onto the machine - anthropomorphism

# Anthropomorphism

human



machine



Mechanical understandings of humanity

He is “*hard-wired*” to like music.

She is “*programmed*” to obey  
her parents.

Life is a “*self-replicating  
information processing system.*”

It is critically important to  
recognise the difference  
between a useful *metaphor* and  
a fundamental *description* or  
*definition*.

There are many aspects of the human brain which are *machine-like*, but it is both false and incoherent to say that the brain *is a machine*.

“Anthropomorphism”

*anthropo – morphe*

human - form

**“To see a human form  
in a non-human being”**

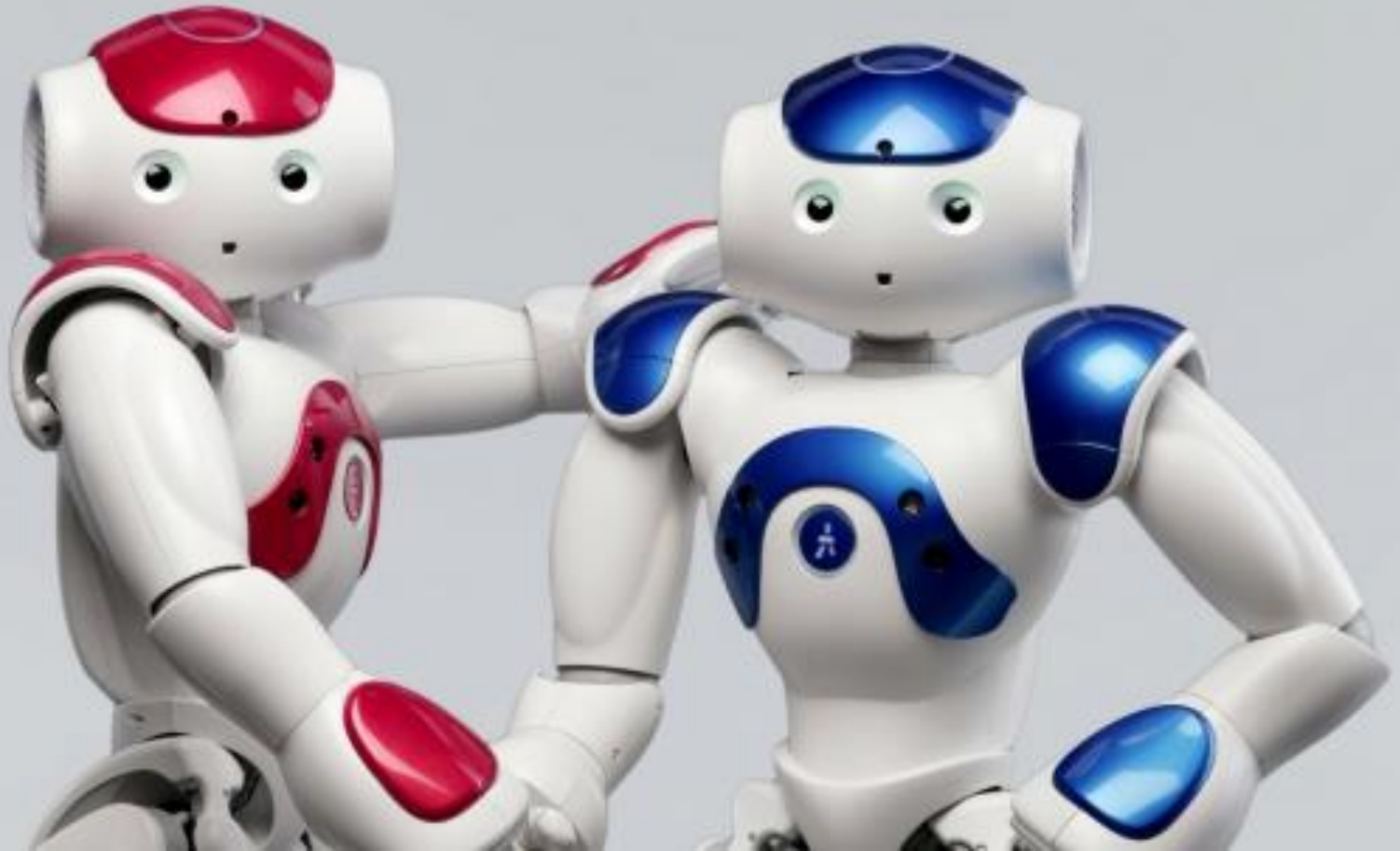
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Simulated persons will come in both embodied and disembodied forms





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# What if...



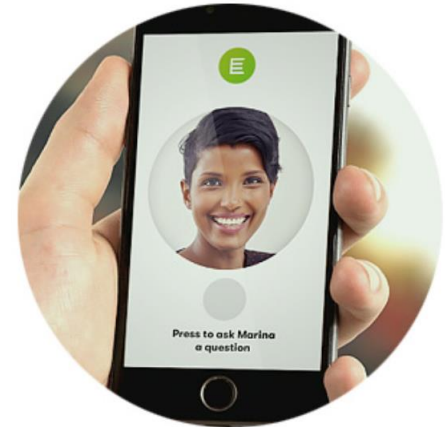
## You could preserve your parents' memories forever?

And you could keep their stories alive, for your children, grandchildren and for many generations to come?



## You could preserve your legacy for the future?

And in this way your children, friends, or even total strangers from a distant future will remember you in a hundred years?



## You could live on forever as a digital avatar?

And people in the future could actually interact with your memories, stories and ideas, almost as if they were talking to you?

Simulated persons will come in both embodied and disembodied forms



# Humans feel empathy for robots in 'pain'

ROBOTICS / 03 NOVEMBER 15 / by EMILY REYNOLDS



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The question of whether robots could be programmed to feel empathy for humans is at the heart of many debates around machine sentience. But can humans ever feel genuine sympathy for the machines?

Researchers have found the first evidence that humans *are* able to empathise with the perceived pain of robots.

A team at the universities of Toyohashi and Kyoto performed an EEG scan on 15 adults who observed pictures of either humans or robots in situations that appeared painful or non-painful -- including (non-violent) pictures of people and androids being apparently cut by a knife, or sliced by a pair of scissors



Toyohashi University of Technology

Is it morally wrong to  
torture a robot?

Anthropomorphism is a universal human tendency which is largely outside conscious control. It is part of our humanity, and brings profound positive benefits. But at the same time it renders us open to manipulation and deception.

“Human compassion can be gamed. It is the ultimate psychological hack; a glitch in human response that can be exploited in an attempt to make a sticky product. That’s why designers give AIs human characteristics in the first place: They want us to like them.....”

David Polgar

## A Christian perspective

Reality consists of more than just matter and energy. There is another foundational category of reality and that is not mind or consciousness but *personhood*.



# Cappadocian Church Fathers (4<sup>th</sup> century AD)

“God’s being is  
*hypostases in ekstasis*”

# Personhood in Trinitarian perspective

Personhood is a category of reality which is ontologically foundational.

Persons are not reducible to matter and energy and they are not limited to matter and energy.

# Personhood in Trinitarian perspective

Persons are constituted by their relations  
– their being is derived from the  
movement of communion, from the  
freedom to give oneself to the other:  
self-giving love.

To be a person is to participate in some  
sense in the divine life of the Triune God.

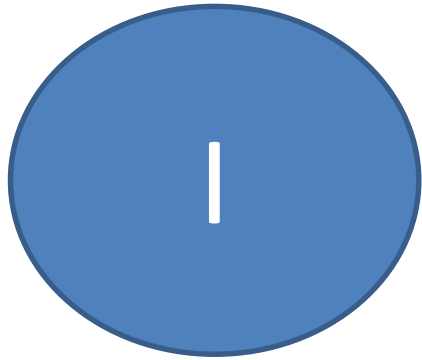
“I think therefore I am”

(Descartes)

or

“You love me therefore I am”

(Trinitarian ontology)



We believe in one Lord,  
Jesus Christ,  
the only Son of God,  
eternally born of the Father,  
God from God, Light from Light,  
true God from true God,  
*born, not made...*

Nicene Creed AD 325

# Born or made?

That which we *give birth to* is fundamentally the same as us. Our children come as *a gift* from our being, and they are equal in status and dignity to ourselves. We care for, nurture and educate our children but we cannot control them or determine their nature.

# Born or made?

That which we *make* or *create* is fundamentally different from us. It is a product of our will and is therefore ours to mould and control. We can determine *what it is for* and *what it will do*.



In Christ's physical resurrection as a recognisable, touchable human being, God has said the final *Yes* to the original model human body. He has said that this kind of embodied humanity is fit to be transformed, it will become renewed. In God's mysterious purposes, this is what human beings were always intended to become. It's all part of the plan.

# The Christian hope for the future

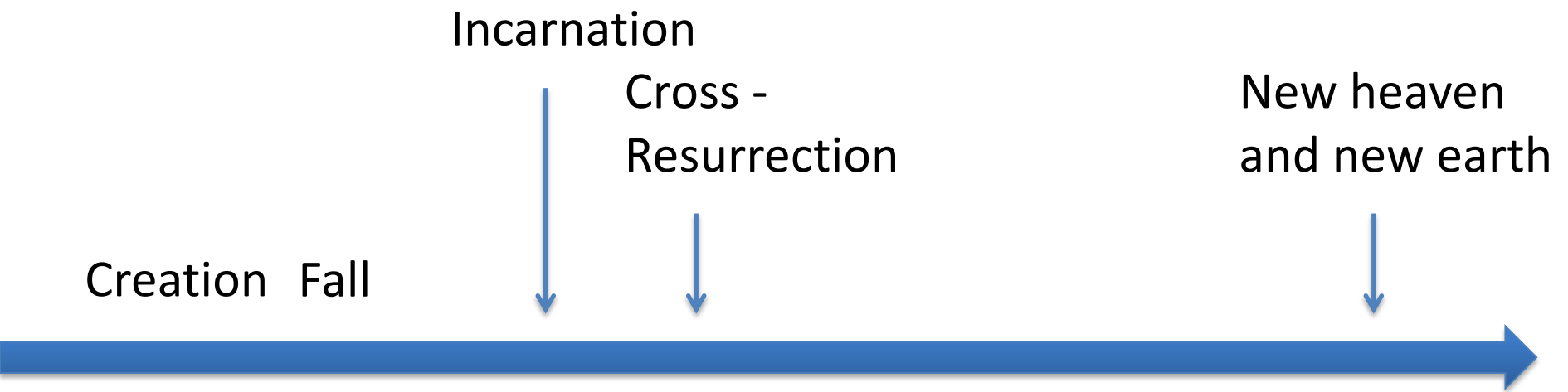
Transformation of every aspect of humanity including the physical human body.

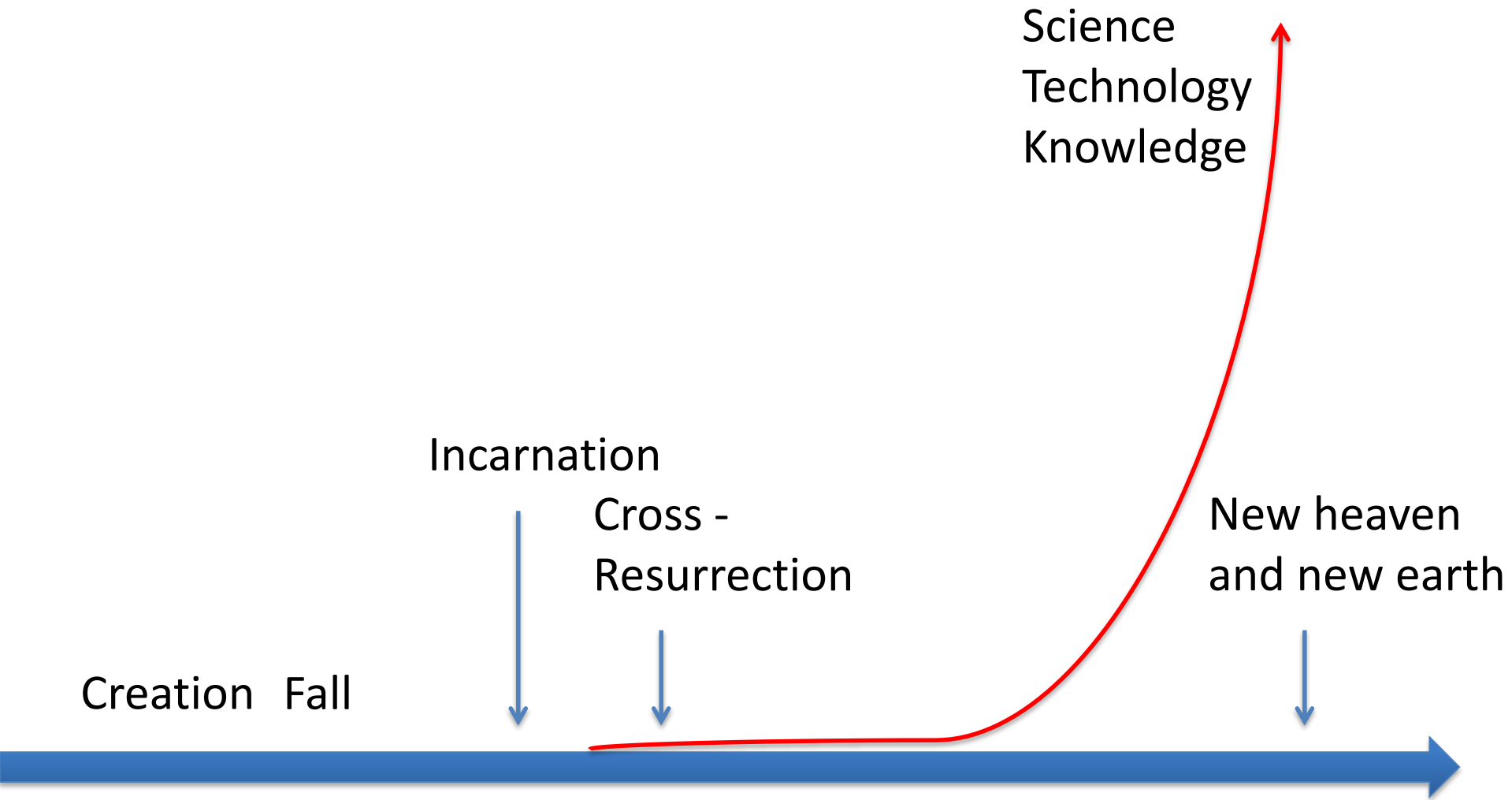
Transformation of human knowledge, awareness and consciousness.

The ultimate defeat of death, pain and suffering

Transformation of society and human relationships

Cosmic scale – new heaven and new earth





# Some preliminary responses

- **Critical vigilance** – we need to try to understand the signs of the times. “Watch and pray...”
- **“Don’t be afraid”** We can be confident that God's sovereign purposes are being worked out in the unfolding of history and we are called to play our tiny part in the great drama.
- The parable of **the wheat and weeds** – good and evil inextricably intermingled, Matthew 13:24-30

# Some preliminary responses

We need to **celebrate “original model” humanity** and un-enhanced human nature and activity because this is the form in which God became flesh.

We need to reflect on the significance of **Christ's bodily resurrection** – God's final vote of confidence in our embodied human nature.

Advances in technology will continue to raise the question of *what it means to be human* with new urgency.

In a world which will be increasingly dominated by intelligent machines, *what are human beings for?*



**The Faraday Institute for Science and Religion**

**<http://faraday.st-edmunds.cam.ac.uk>**

Human identity in an age of nearly human machines – the impact of advances in robotics and AI technology on human identity and self-understanding

John Wyatt and Peter Robinson