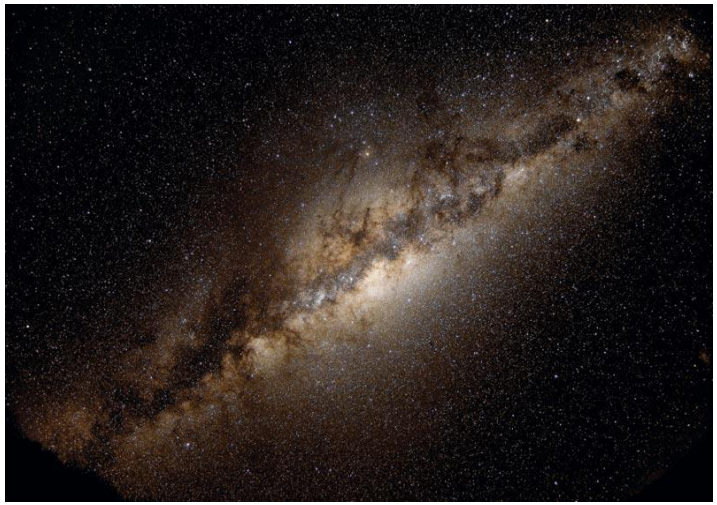
MAKING A GOD OF OUR GENES

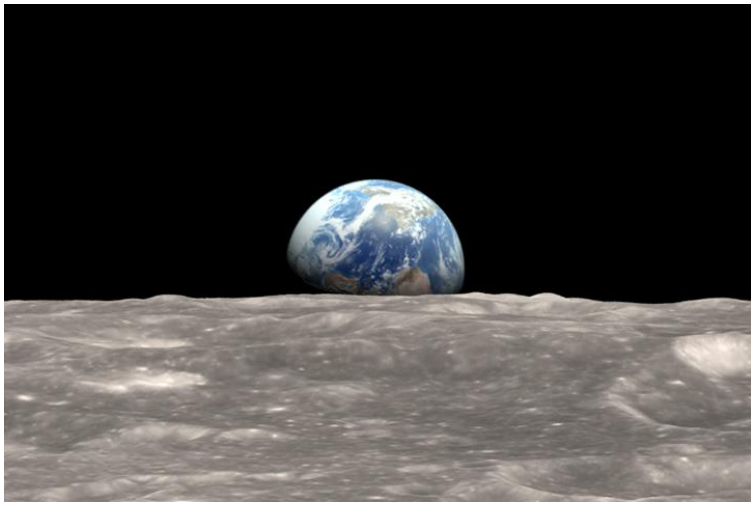
John Bryant

Lydiard Millicent, Jan 2018

IN THE BEGINNING WAS THE WORD

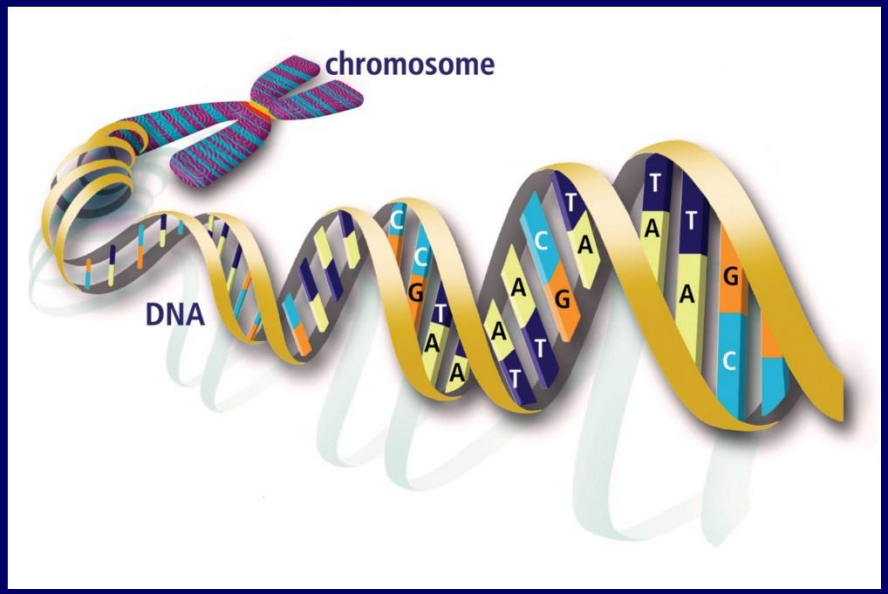
Through him all things were made





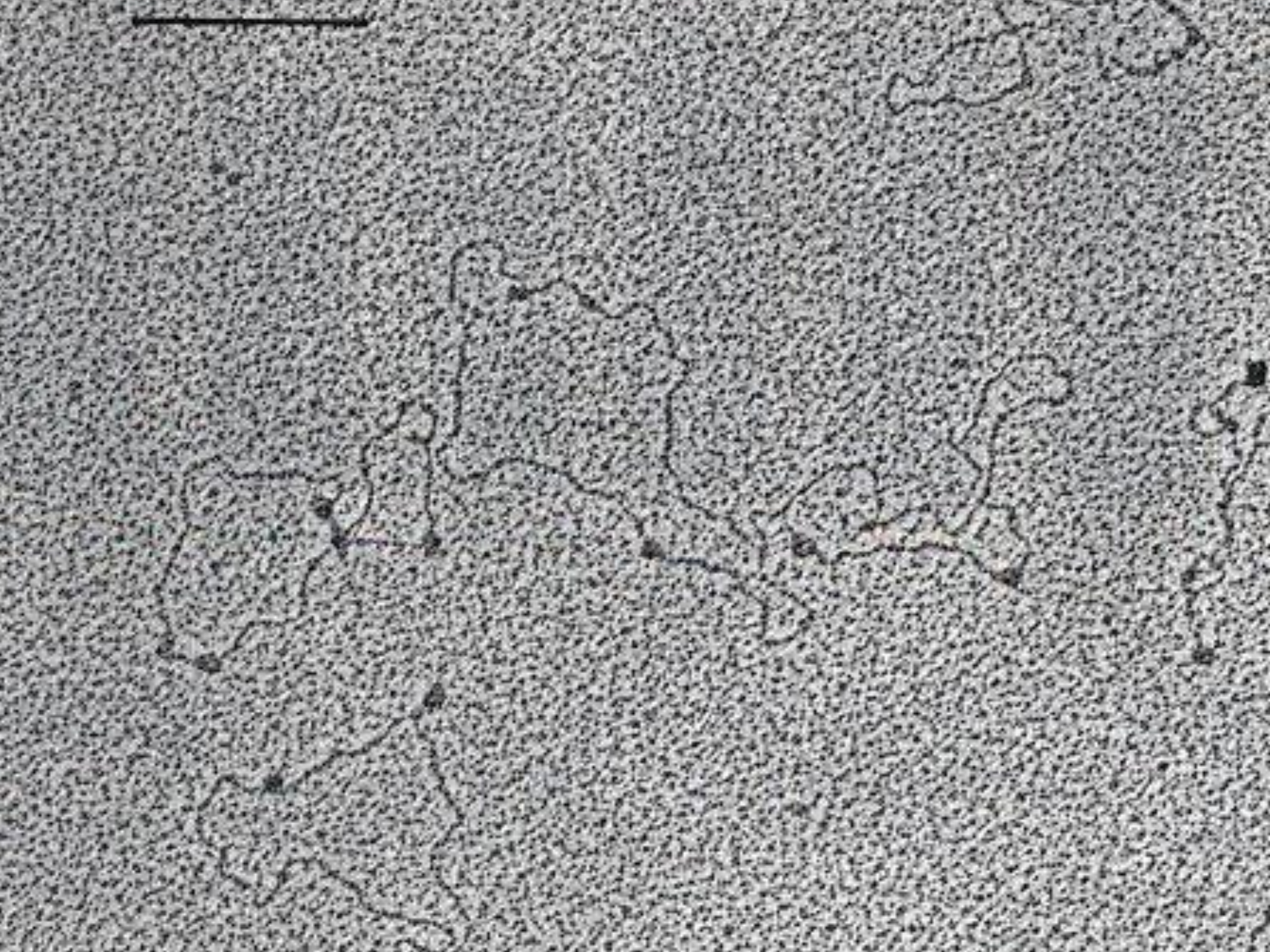
LET EVERYTHING …

- That has DNA …
- Praise the Lord

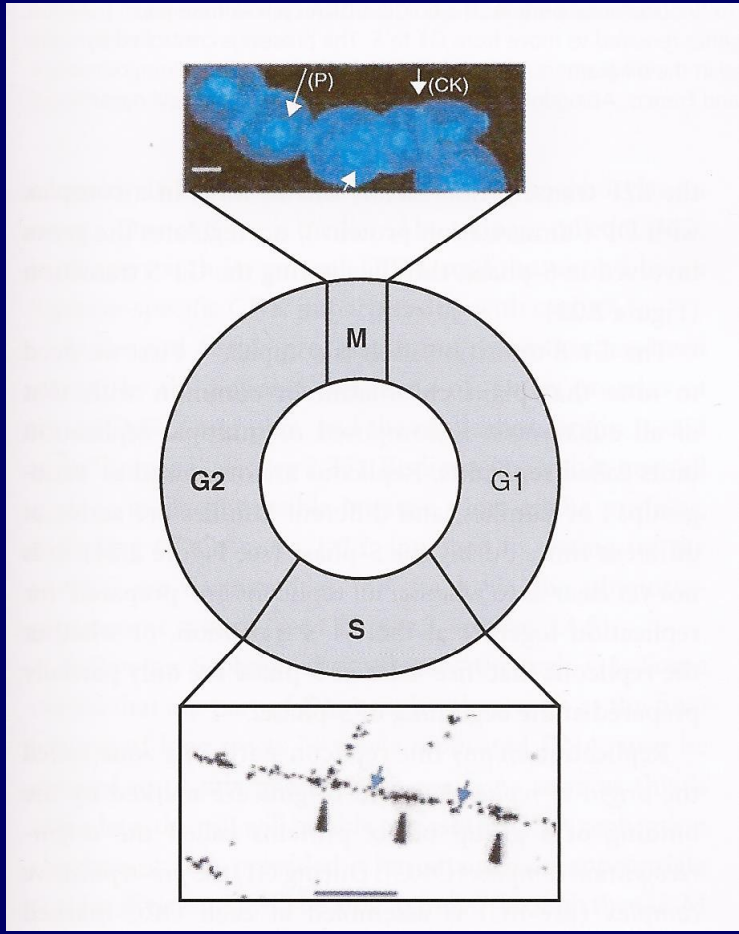


‘Stairway to heaven’

‘The finger of God’



Cell division is rather important!



BRIEF BACKGROUND

- Without DNA, this wonderful self-replicating molecule, we would not be here.
- It was only in 1944 that its key role was demonstrated
- The famous Watson and Crick papers were published in 1953
- Invention of GM and DNA sequencing in the 1970s initiated a wave of progress
- DNA finger-printing
- Human Genome Project
- New sequencing methods; personalised genome analysis
- Genome-wide association studies

PROGRESS

- For example
- Better understanding of evolution and relatedness
- Genetic control mechanisms
- Control of gene interactions
- Better understanding of animal and plant development
- Better understanding of ‘genetic’ disease
- Etc

BUT

- Where is wisdom to be found?

GENETIC DETERMINISM

- ‘Genes R Us’
  - The ‘genefer’ approach to understanding humanity
- DNA neither cares nor knows; DNA just is and we dance to its music.
  - Richard Dawkins in *River Out of Eden*

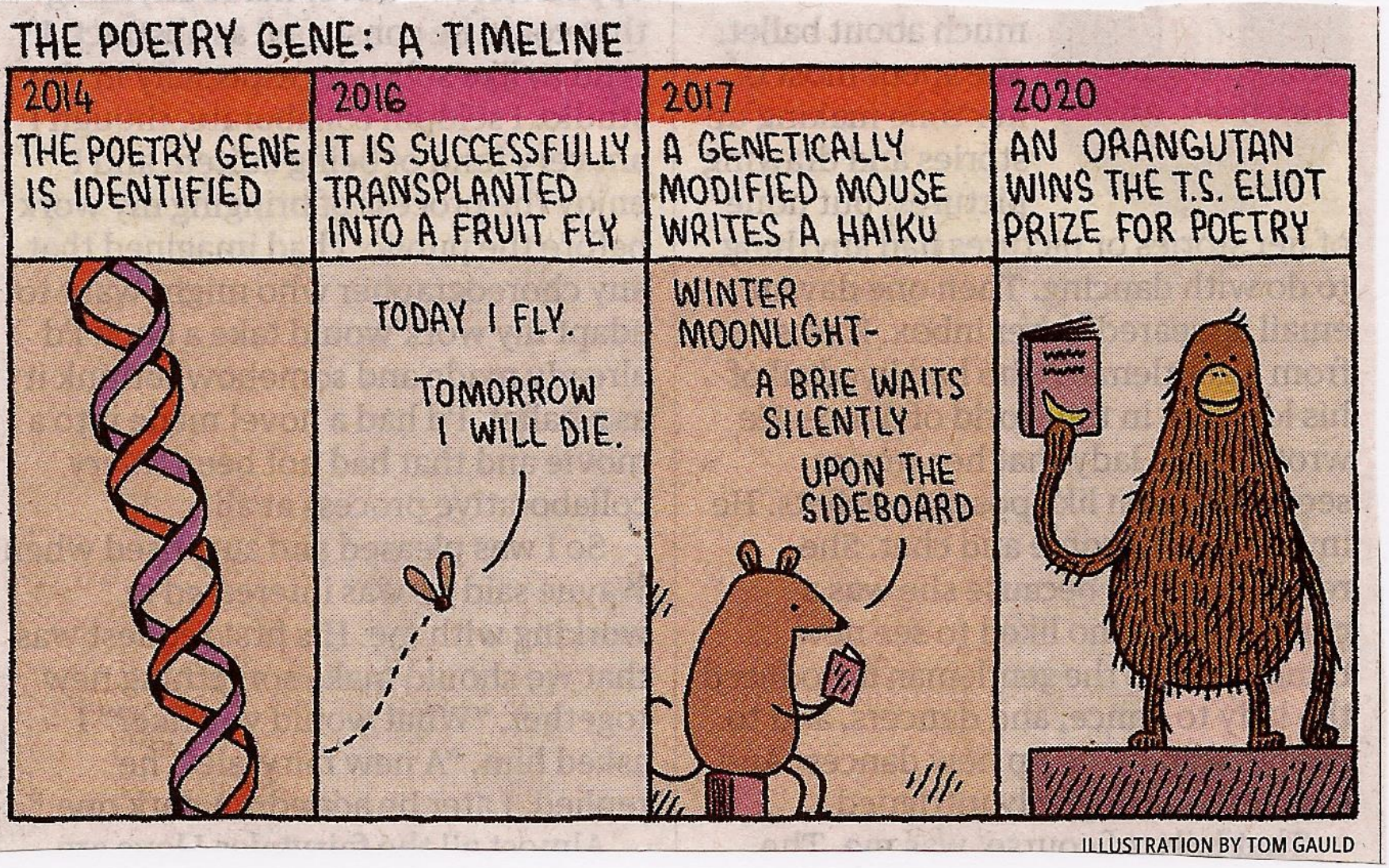
IDEAS OF DETERMINISM ARE WIDESPREAD

- ‘In the deepest sense, ***we are*** who ***we are*** because of our genes’ Ines Rothe
- ‘The sequence of the human DNA is the reality of our species’ Renato Dulbecco
- ‘Genome sequence tells us who we really are’ James Watson
- We dance to its tune Richard Dawkins

- But do ‘determinists’ live like that?

EUGENIC IDEAS

- Improvement of human *society* by selective breeding



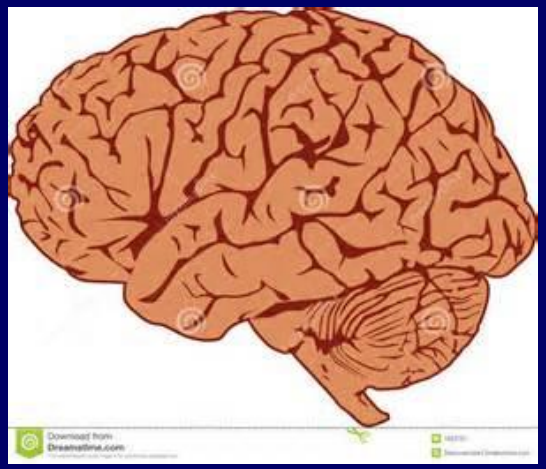
The Guardian

SO, WHAT ABOUT PERSONALITY, BEHAVIOUR, INTELLIGENCE? 1

- Brain is the centre for mind, consciousness, emotional and thought life. Its structure and molecular make-up are controlled by genes
- The number of possible inter-neuronal connections far exceeds the number of genes – genes cannot directly control these connections but genes make them possible
- Connections are made, unmade, re-made; genome is (more or less) constant

THE HUMAN BRAIN

- The most complex object we know about in the universe



- The ‘Big brain’ gene

SO, WHAT ABOUT PERSONALITY, BEHAVIOUR, INTELLIGENCE? 2

- Studies on ‘identical’ and non-identical twins, plus inter-generational studies have shown that intelligence and key features of personality have a high heritability – around 50% - but this is a simplification
- However, no individual gene contributes in major way – the inheritance of these features/traits is multi-genic
- ‘We haven’t the foggiest idea which genes …’
- ‘Nurture’ in its widest sense has a key role.
- ‘Nurture’ – gene interactions are important

IN THE BEGINNING WAS THE WORD

Through him all things were made

Humans carry ‘the image of God’

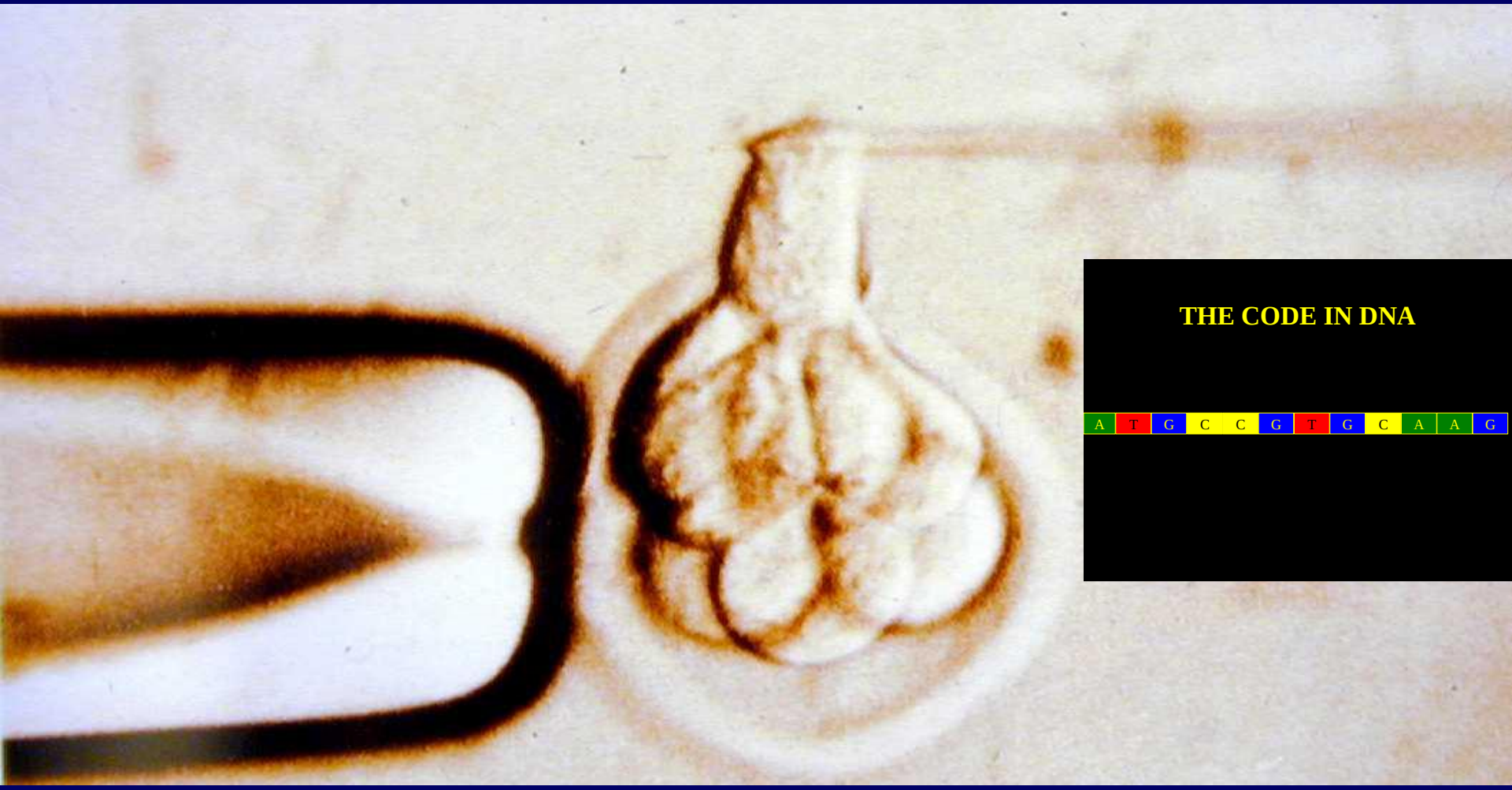
Spiritual beings who relate to the Spirit of God

Holy Spirit can work in us and with us to bring about change

GENETICS AND DISEASE

- About 10,000 ‘single-gene’ disorders
- 100,000 Genomes project

TESTING AN 8-CELL EMBRYO



WONDERFUL PROGRESS BUT …

- Danger that medicine may become ‘over-geneticised’: the genes have spoken, what else is there to say
- For most of use, post-code gives more idea of general health than does our genome
- Over the world, hunger kills more people than TB, HIV-AIDS and malaria put together

SO …

- We need wisdom and virtue in using the information that science gives us

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