

Key terms:

Human genetic engineering: The modification of gene make-up to change the features of a human.

Sanctity of life: the belief that life is sacred (holy) because God created it.

Saviour sibling: a sibling, genetically compatible with a sick child is implanted and born to use stem cells to treat the sick child.

Cloning: To produce genetically identical copies of a biological being.

Genes

Genes are made from molecules called DNA. A string of chemicals on the DNA form a pattern.

Different genes are the result of different patterns of DNA.

Everything that comes into being through the fertilisation of an egg or a seed is a 50/50 combination of the genes of both its parents.

So genetically, each of us is a unique blend of all our ancestors.

Saviour siblings

If a child is suffering from one of certain inherited diseases, the most compatible cure would be transplanting stem cells from a sibling. The stem cells need to be collected from the sibling's umbilical cord, bone marrow or other tissue. This possibility is now offered by genetic technology on embryos and is legal in Britain under the Human Fertilisation and Embryology Act 2008. However, it is not legal to create a saviour sibling to donate organs, cells or tissues. A further issue is that unused embryos created for the purpose must be disposed of.

Does cloning work?

In 1997, Dolly the sheep became the first ever cloned mammal. Scientists in Scotland used a new type of technique. When Dolly was born months later, it had taken over 270 tries to get it right. Since Dolly, cows, pigs, monkeys, rodents, cats, mules, horses and dogs have been cloned.

Is cloning ethical?

The problem with cloning is that embryos can fail to develop. Only a small proportion will begin to develop. It is not reliable. When they were cloning sheep, they found that the cloned animals had kidney problems, they didn't develop properly so couldn't function. If we tried to clone humans, foetuses could die in the womb, there could be births of dead children and children being born without properly developed organs. If the cloning worked, people would expect the cloned child to be like the original child.

Gene technology – a religious view

- Apart from Buddhism, all the major religions believe God was responsible for creating the original life forms.
- For many people, there is nothing wrong with human genetic engineering if used to prevent disease and contribute to the birth of a healthy baby who will have a good quality of life.
- Some religious people think that it is encouraging scientists to take on the role of God as the creator. Many are also concerned about what happens to the unused embryos.
- For many believers, who believe life begins at conception, it is a problem because it can be regarded as murder, which is illegal and against the teachings of all religions.

For genetic engineering

- It can prevent diseases.
- An embryo doesn't have full human status so it is acceptable to use to prevent serious genetic conditions or diseases.
- It's a faster, more efficient way of getting the same results as selective breeding.

Against genetic engineering

- There can be negative side effects that are unexpected.
- It interferes with nature, which is not ethical.
- It is taking on the role of God as creator.
- Many embryos are discarded. These are potential human life.

Religious views on cloning

Christianity:

Most Christians have a moral issue with cloning. They believe that a life is given by God and that only He can give life. However, protestant Christians have the view that cloning Human beings is unacceptable, cloning animals i.e. sheep has its advantages.

Islam:

Islam embraces scientific progress and research, however, this progress, like everything in life, must not collide with faith. Muslims agree with cloning animals if two conditions are met: 1) it is for a genuine reason 2) the animal does not meet any harm. Human cloning is completely prohibited. This is because within Islam, God is the creator, not man.

Advantages of cloning

- Animals can easily be produced for eating
- Possibility of growing organs to use in organ transplant
- The genetic causes of diseases can be researched.
- God inspires people to develop new technology to benefit mankind.
- Diseases can be cured.

Disadvantages of cloning

- A cloned person may not have a soul..
- It is very expensive
- Cloned organisms seem more likely to develop defects
- It is against nature and against the way we were created by God.
- Cloning cells could be a 'slippery slope' which could lead to the cloning of humans.
- Cloned animals often have birth defects.
- Cloned organisms often have a shorter life span.

Quotations on gene technology:

'I, your God, give life and I take it away'

'The life of every creature and the breath of all people are in God's hands'

'Heal the sick... you received without paying; give without pay'

'Before I formed you in the womb, I knew you'

'So God created mankind in His own image, in the image of God He created them; male and female He created them'

1. Prejudice is thinking unfairly (judging someone before you know them)

2. Discrimination is acting unfairly towards someone for no just reason, especially on the grounds of race, age, sex or sexuality.

3. Equality: The state of being equal. Where everybody has the same rights and opportunities.

4. Segregation: the enforced separation of different racial groups in a country, community, or establishment.

5. Tolerance: The ability or willingness to tolerate the existence of opinions or behaviour that one dislikes or disagrees with.

6. Compassionate: feeling or showing sympathy and concern for others.

7. Adversity: A difficult or unpleasant situation

The civil rights movement: Slaves in America had been freed in 1865 but, well into the 1950's, black people had still not achieved equality with white people. There was vicious racial prejudice in the southern states of America. Many white people justified this situation by saying that black people were inferior. Many black people had suffered discrimination for so long that some had come to believe it too and did feel inferior to white people.

The civil rights movement led by MLK sought to achieve equal rights for all American people regardless of colour of skin.

The Montgomery Bus Boycott was a major event in the [Civil Rights Movement](#). It occurred in [Montgomery, Alabama](#) where the city [buses](#) were [segregated](#). [Black](#) passengers were required by [law](#) to ride in the back of the bus. On December 1, 1955 [Rosa Parks](#), an [African American](#) woman, refused to give her bus seat to a white person. She was [arrested](#) and sent to [jail](#). In protest about 40,000 black people [boycotted](#) the Montgomery city buses, refusing to ride. The boycott lasted 381 days. On November 13, 1956, the [United States Supreme Court](#) issued its decision to desegregate the buses. In response the city of Montgomery passed a law allowing black passengers to sit anywhere on the buses. The boycott ended on December 20, 1956. Many important people in the civil rights movement took part in the boycott. This included [Reverend Martin Luther King](#).

Martin Luther King was a powerful speaker. Many people say that his speeches inspired them to support the civil rights movement. The following is part of a speech which is probably his most famous. He was speaking in 1965 to a quarter of a million people who had marched to Washington to put pressure on the President to pass a civil rights bill which would give equal rights to everybody.

'I have a dream that one day this nation will rise up and live out the true meaning of its creed: 'We hold these truths to be self-evident; that all men are created equal.'

I have a dream that one day on the red hills of Georgia the sons of former slaves and the sons of former slave owners will be able to sit together at the table of brotherhood.

I have a dream that one day even the state of Mississippi, a state sweltering with the heat of injustice, sweltering with the heat of oppression, will be transformed into an oasis of freedom and justice.

I have a dream that little children will one day live in a nation where they will not be judged by the color of their skin but by the content of their character.'

Nick Vujicic – The early years

Vujicic was born in Melbourne, Australia, in 1982. He was born without fully formed limbs. An operation was performed to separate his toes so that he could use them as fingers to grab, turn a page, or do other things. He has been able to use his foot to operate an electric wheelchair, a computer and a mobile phone.

Vujicic graduated from Griffith University at the age of 21 with a Bachelor of Commerce degree, with a double major in accountancy and financial planning.

The early days were difficult. Throughout his childhood struggled with depression and loneliness. According to Nick, the victory over his struggles, as well as his strength and passion for life today, can be credited to his faith in God, his family and his friends.

Since his first speaking engagement at age 19, Nick has travelled around the world, sharing his story with millions and has accomplished more than most people achieve in a lifetime. He's an author, musician, actor, and his hobbies include fishing, painting and swimming.

Nick established Life Without Limbs ministry in 2005. Life Without Limbs (LWL) is a ministry whose purpose is to inspire the world with the Gospel and introduce the teachings of Christ through the life and testimony of Nick Vujicic, (taken from the website, 'Life without Limbs').

In 2008 in McKinney, Texas, near Dallas, he met Kanae Miyahara. They married on February 12, 2012. The couple have four children and reside in Southern California.

Life without Limbs Ministry

The Life without Limbs Ministry was set up by Nick in 1982. He believes that although he has faced with countless challenges and obstacles, God has given him the strength to do what others might call impossible. Below are some quotations from Nick Vujicic.



"I never met a bitter person who was thankful. Or a thankful person who was bitter."

"The challenges in our lives are there to **STRENGTHEN** our **CONVICTIONS**. They are **NOT** there to run us over."

"I have the choice to be angry at God for what I don't have, or be thankful for what I do have"

"The greater the struggle the more glorious the triumph"

Jesus taught that we should treat other people as we wish to be treated.

'So God created mankind in His own image, in the image of God He created them; male and female he created them'.

'There is neither slave nor free, nor is there male and female, for you are all one in Christ Jesus'.