

impossible — unlikely — possible — probable — certain — inevitable

Working in groups, imagine you live(d):

- a) in the Middle Ages (The times of Inquisition)*
- b) in 1917*
- c) in our time*
- d) in 2050*

Talk about the probability of artificially creating people from the point in time you have chosen, using the above-mentioned adjectives.

Time to Talk

I. In groups, discuss the following question.

How can a quest for a ‘pure race’ be made through cloning? Who would be interested in this?

II. A. Translate the following paragraph into English.

Несомненно, маленькая овечка Долли вызвала психологический шок во всем мире. О масштабах потрясения свидетельствовала немедленная реакция правительств, ученых, церкви. Президент США выступил со специальным заявлением, в котором назвал эксперимент сомнительным с точки зрения морали. Британский парламент одобрил резолюцию, согласно которой любые подобные работы не должны выйти за стены лаборатории. Ватикан осторожно высказал мнение, что эти опыты достаточно опасны. Огромная армия журналистов начала охоту за наиболее сенсационными прогнозами дальнейшего использования открытия.

Так началась “гонка клонирования”. Уже с первым блеянием овечки Долли джинн был бесповоротно выпущен из бутылки. Прогресс науки остановить невозможно. Это не под силу ни инквизиторам, ни КГБ и ФБР, ни парламенту, ни церкви. Прогресс — явление стихийное, подобное землетрясению, и его нельзя автоматически приравнивать к прогрессу человеческой цивилизации. Наука, как природа, добру и злу внимает равнодушно. Все дело в том, в чьих она руках, кому и чему служит.

B. Continue the text giving at least 5 sensational ideas for using cloning technology.

UNIT 3

A STORM OF CONTROVERSY: MORAL ASPECT OF CLONING

Terms of Discussion

Before reading the texts, explain the following notions.

- ethics/ethicists
- morality/morals
- scientifically ethical
- identity
- the Hippocratic Oath
- DNA
- gene pool
- transplant
- mutation

Question Time

Using your background knowledge, answer the following questions.

1. What effective ways of coping with serious diseases are available to modern medicine?
2. Why does society need medical ethics? Could we do without it?

Time for Reading

Cloning and Beyond

The benefits of this bold technique outweigh the risks, and the danger is not what you think.

An elderly man develops a disease that destroys vision. To bolster his failing eyesight, he receives a transplant of healthy retinal tissue – cloned from his own cells and cultivated in a lab dish.

A baby girl is born free of the gene that causes a genetically inherited disease, even though both her parents are carriers. The reason? In the

embryonic cell from which she was cloned, the flawed gene was replaced with normal DNA.

These futuristic scenarios are not now part of the debate over human cloning, but they should be.

There are dangers, but not the ones everybody is talking about. Cloning is the technology that will finally make it possible to apply genetic engineering to humans. First, parents will want to banish inherited diseases. Then they will try to eliminate predispositions to alcoholism and obesity. In the end they will attempt to augment normal traits like intelligence and athletic prowess. Cloning could be vital to that process.

Perhaps now would be a good time to ask ourselves which we fear more: that cloning will produce multiple copies of crazed despots, as in the film “The Boys from Brazil”; or that it will lead to the society portrayed in “Gattaca”, the recent science-fiction thriller in which genetic enhancement of a privileged few creates a rigid caste structure. By acting sensibly, we might avoid both traps.

Did You Know?

How long will I be able to live if I clone myself?

Cloning extends your lifespan by exactly zero. The clone, when he/she grows up, will look like you, but will only be a copy in appearance (and even this can vary considerably, according to lifestyle). In any case, whatever happens to the clone will not affect you. You yourself will die, sooner or later, unless someone develops drugs to halt the ageing process. Think of cloning as “just another way of having babies.”

Will my clone have a soul?

If human beings do indeed have souls in a spiritual sense — this depends on your metaphysical perspective — then it follows that any clone, as a human being, will have a soul. If ‘creation by God’ refers to ‘procreation via sex between parents’ (since the difference between clones and non-clones is whether or not the parents had sex) and sex is thus a prerequisite for the creation of a soul, then

those born via in-vitro fertilisation should also be considered soulless — a rather strange thought since some of the hundreds of thousands of test-tube babies born since 1978 have gone on to become priests, nuns, and soul musicians.

Could some lunatic clone Hitler if human cloning were perfected?

Just possibly — but they wouldn’t get what they wanted. First, they would need some living cells from his body — unless it was frozen or otherwise preserved soon after death they would probably be unusable. More importantly, because of differences in the environment and upbringing clone Hitlers would not act, think or even look necessarily like the original.

Could people be cloned without conscious brains (so that their body parts could be harvested with fewer moral qualms)?

No. Whatever consciousness is, it doesn’t reside in brain structure or set of genes that could be easily removed from the clone before or during its development. Moreover, attempting to surgically or genetically erase someone’s “consciousness” is itself morally dubious.

Could cloning help gay couples to conceive and make men unnecessary for procreation?

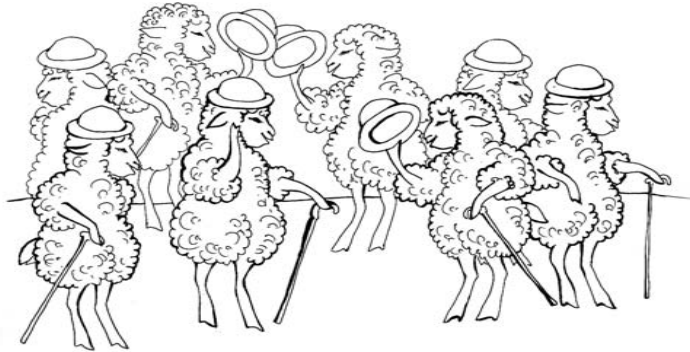
In principle, yes. Of course a clone would have to be the identical twin of one or the other partner — it would be difficult to duplicate any of the mixing of genes that occurs during sexual reproduction using cloning techniques.

What if we end up all alike?

The global population is 6 billion. Even if 500,000 people are cloned a year, that would still be less than 0.01 per cent of the population. Gene pool diversity remains unaffected.

Should people be interfering with nature?

If you didn't believe in interfering with nature, you wouldn't see a doctor when you get ill, you wouldn't take any sort of pills, you wouldn't use contraceptives, and you would be living in the woods instead of sitting here!



Society versus the Individual

Medical ethics traces its roots to several early codes of ethics such as the ancient Greek Hippocratic Oath, which required physicians above all to “do no harm”; professional codes of ethics such as the one written by an English physician Thomas Percival in the 18th century that provided a foundation for the first code of ethics established in 1846; and the Nuremberg Code for research ethics on human subjects that was established during the war crime trials at the close of World War II in response to the gross abuses in human experimentation performed in Nazi Germany.

The advent of new medical and reproductive technologies after the 1950s further complicated the moral and societal issues of medical research and practice. Many new questions of medical ethics have occurred as a result of developments in medicine. Most of the issues concern the rights of humans to control their bodies.

Bioethics
Medical Ethics or Bioethics is a study of moral issues in the fields of medical treatment and research. The term is also sometimes used more generally to describe ethical issues in the life sciences.

In 1978 the birth of the first so-called test-tube baby was an important technological breakthrough. Not surprisingly, in vitro fertilisation has raised significant ethical questions, including some about the safety and access to the costly technique. Another issue involved is the right of parents to design their descendants.

Medical ethics issues are also posed by conflicts between society and individuals. In most situations, medical ethicists are working to establish codes that balance the interests of society with the rights of individuals.

New genetic technologies promise to make medical ethics an even more central part of social decision making.

Medical ethicists are debating whether or not genetic information is the exclusive property of patients, or is instead the concern of society. Some have wondered about whether the manipulation of human cells through genetic engineering is somehow contrary to the laws of nature or religion; others have proposed that it will lead to the manipulation of human genes for eugenic purposes (improving the hereditary qualities of a race). This issue remains unresolved and continues to challenge medical ethicists in the 21st century.

The cloning technology opens a Pandora's box of ethical questions and has sparked a storm of controversy around the world.

Those seeking new ways to have families saw remarkable new options take shape following the breakthrough in biotechnology in 1997. Ethicists worried that cloning would present the opportunity for families to replicate rather than reproduce, and that families with cloned children would thus not allow their children to have freedom to explore their own horizons. Others suggested that while cloning might be appropriate for some families, allowing cloning technology to be governed by the market seemed fundamentally unfair. Still other ethicists worried of the possibility that cloning technology might be used by tyrants or military forces to create engineered humans.

Ethicists emerged who were willing to defend human cloning. It was argued that cloning is less morally problematic than families created by in-vitro fertilisation, because cloned children are at least products of their families' DNA.

Everyone feared that this technique might be used by someone irresponsibly, and doubts emerged about the ability of any country or the United Nations to police biotechnology.

Should We Be Cloning Around?

Read the following text and separate the arguments for cloning from those against it.

Cloning is merely a different way of making babies

The possibilities of cloning are endless. Its goals and purposes range from making copies of those that have deceased to better engineering the offspring in humans and animals. Cloning could also directly offer a means of curing diseases or a technique that could extend means to acquiring new data for embryology and development of organisms as a whole. Cloning could also massively improve the agricultural industry.

Scientists also ponder the idea of cloning endangered species to increase their population. They foresee the cloning of pigs that will produce organs that will not be rejected by humans. Cloning provides better research capabilities for finding cures to many diseases. There are possibilities that nuclear transfer could provide benefits to those who would like to have children. For instance, couples who are infertile, or have genetic disorders, could use cloning to produce a child. Equally important, women who are single could have a child using cloning instead of in-vitro fertilisation or artificial insemination. Nuclear transfer could also help children who need organ transplants to have a clone born to donate organs. Cloning could also provide a copy of a child for a couple whose child died.

The biggest problem with the use of cloning on a large scale is the decline in genetic diversity. If everyone has the same genetic material, what happens if we cannot clone any more? If a population of organisms has the same genetic information, then the disease could wipe out the entire population.

Besides, the technique of nuclear transfer has not been properly developed yet. For instance, it took 277 tries to produce Dolly, and Roslin scientists produced many lambs with abnormalities. In 2003 scientists issued a fresh warning about the dangers of cloning after new research found some animal clones died young. The possible negative long-term effects of cloning give cause for concern about attempts to clone humans.

Other arguments for cloning involve taking nature into our own hands by cloning animals or people. When will we draw the line for getting involved in natural events? Religious organisations consider cloning to cause men to be reproductively obsolete. This claim was deduced by the fact that cloning requires any cell, and a woman to develop in. They also

claim that cloning does not respect the fact that humans have souls. They consider cloning unnatural, and say we are taking the work of God into our own hands.

There is a debate as to the moral rights of clones. Some say this will occur because there is no birth of newness. Clones will not be received with such excitement as a child of a couple who conceived naturally. They say cloning would deprive a person of uniqueness. People also wonder what mental and emotional problems would result if a clone found out that he or she was cloned.

Did You Get It?

I. Answer the questions.

1. Can you name the medical codes of ethics mentioned above?
2. What is meant by the ancient principle 'do no harm'?
3. Why was the Nuremberg Code established?
4. What scientific developments complicated the moral issues of medical research?
5. What events of 1997 brought about new options for infertile couples?
6. Why do some ethicists consider cloning to be less morally problematic than in-vitro fertilisation?

II. Fill in the gaps with the appropriate words and expressions from the box. Note that some words can be used more than once.

A.

for the sake of; morals; cater to; human development; offspring; genetic material; objection; consequences; morally right; valuable tool; in-vitro fertilisation; transplant

On the positive side of the issue, cloning could be a _____ for the studying of _____, genetically modifying embryos, and investigating new _____ technologies. Using cloning to produce _____ for the sake of their organs is an issue that we must also face and question whether or not it is _____. No one will say that it is okay to kill a human being _____ their organs, but many have no _____ to cloning thousands of individuals that look alike. Technology seems to take away many of the _____ that we have

worked so hard to install in society. Most people only seem to want to _____ their own needs and do not bother to consider the _____ that society and the clone may have to face. The issue of _____ only leads the public to fear what may happen once cloning takes over, if it does. Many people believe that _____ is more valuable than life itself.

B.

ethicists; ethics; thaw; siblings; concept; identical; society; frequently; possibility

The issue of what parents and the clones should do and feel comes up _____ when we ask our questions about the _____ of cloning. With the _____ of cloning their children, parents for example, can build a family of clones by storing _____ identical to their child in a freezer and _____ them out later when they decide to have another child. Although these children would be of different ages, they would look _____ to one another. This _____ only increases the crazy effects that cloning can have on _____. What would one think if they were walking down the street and they saw a mother and her children walking side by side and they were _____ looking just of different ages? Many _____ maintain that parents have the right to do what they want, but others think that they should not take away any child's chance at individuality. Just think, how would you explain the _____ of cloning to your children, and what would their views about _____ be?

C.

original; turn out; sneakers; view on life; rights; nurture; figure out; personality; identical; cool

Environment plays a big part in determining how a clone may _____. For centuries, scientists have been trying to _____ which factors play the most important role in the development of the human _____. Is it nature, _____, heredity, or environment? How will it feel to be one clone – among hundreds? Probably no worse than it feels to be the millionth 17-year-old dressed in _____ baggy trousers, untied _____ and baseball cap – a feeling usually described as ‘_____’. Imagine walking down the streets and seeing hundreds of people that are _____ to

you but, just go by different names and dress differently. Cloning can be used to help certain individuals live, but what will be the cloned individuals' _____? Once cloning is done, the clone and its _____ should have the same _____ as any other people.

Words, Words, Words...***I. Explain the meaning of the following word-combinations and recall the context in which they were used in the Unit.***

1. to outweigh the risks
2. to avoid a trap
3. to trace roots
4. to do no harm
5. to provide a foundation
6. a gross abuse
7. to perform human experimentation
8. to design one's descendants
9. social decision making
10. exclusive property
11. the manipulation of human genes
12. for eugenic purposes
13. to improve the hereditary qualities
14. to be governed by the market
15. engineered humans
16. to take shape
17. endangered species
18. to be reproductively obsolete
19. to be received with excitement
20. to deprive a person of uniqueness

II. Find synonyms for the following words.

- | | |
|----------------|---------------|
| • danger | • to emerge |
| • flawed (adj) | • goal |
| • benefit | • deceased |
| • vital | • to foresee |
| • safety | • to reject |
| • to seek | • appropriate |
| • remarkable | |

III. Find antonyms for the following words.

- to create
- danger
- appropriate
- to complicate
- gross
- irresponsible

IV. Consulting a dictionary, explain the difference in the meaning of the words in the following chains. Give examples illustrating their use.

- to replace — to remove;
- to banish — to destroy;
- ancestors — forefathers — descendants — offspring — children — siblings;
- tyrant — despot — dictator — tsar — chief;
- to debate — to discuss — to argue — to reason;
- to replicate — to reproduce;
- race — nationality — ethnic group — class — caste.

V. Match each word and expression on the left with the appropriate definition on the right.

- | | |
|-------------------------------|--|
| 1. to cultivate | a) to raise a question |
| 2. to apply | b) globally |
| 3. to occur | c) to invite; arouse a matter which attracts attention |
| 4. developments in medicine | d) expensive |
| 5. technological breakthrough | e) to regulate, control, or keep in order by means of police |
| 6. to pose a question | f) to obtain |
| 7. costly | g) instrument or method used to attain a goal |
| 8. to challenge | h) to produce something and promote its growth or development |
| 9. to police | i) to put to use |
| 10. on a large scale | j) a significant consequence or event in medical science |
| 11. a means of | k) a significant or sudden advance, development that removes a barrier to technological progress |
| 12. to acquire | l) to happen |

VI. Fill in the gaps with the prepositions from the box and paraphrase the expressions in bold type.

to; for; into; to; of; for; at; to

- The **manipulation** ___ human genes has a lot of potential dangers.
- The question of who will have **access** ___ the costly new technique is **vital** ___ the discussion of the future of cloning.
- Most religious leaders claim that artificial creation of human beings is **contrary** ___ the laws of nature.
- It is still doubtful if the application of the new technology is **appropriate** ___ eugenic purposes.
- Proponents of cloning are **excited** ___ the opportunity of **taking nature** ___ **their own hands**.

VII. Improve your translation skills by translating the following passages in writing. Find the correspondences between the Russian and the English texts.

A View on Cloning

My view on cloning is that it could be ethical if the very first attempts succeeded. Otherwise, **I would think twice** about it because I fear that cloning could greatly reduce our genetic diversity. I believe if we were to interfere with this part of nature we would undoubtedly fail. In addition, mutations could occur.

Those who are afraid of cloning Hitlers, or **excited over** cloning Einstein should calm down. I would say the time and the environment produced Hitler, not his DNA. So you do not need DNA from Hitler to produce a Hitler. I guess there are Hitlers already among us.

Я полагаю, что реакция средств массовой информации на вопросы, связанные с клонированием, неадекватна. Те, кто говорит, что с помощью этой технологии будут производиться монстры-мутанты или солдаты, которыми легко манипулировать, **далеки от истины**.

Как могут появиться мутанты, если генетический материал оригинала и клона **идентичен**? Конечно, могут быть какие-то мутации, но они возможны и **при обычном способе размножения**. Мы просто не замечаем того, что среди нас живут тысячи клонов: это **однойцевые близнецы**. И они не создают никаких проблем в обществе. Ясно видно, что внешне они очень похожи, но каждый из них — личность.

The statement that the birth of a clone will **bring no newness** to nature is absurd. Anyone who would **viciously declare** that a clone is not new, and unnatural, would cause more problem to cloning than cloning itself. I mean a clone is living, it's human. How can you be disgusted by another human just on the basis of how he/she has received its genetic information?

Some scholars declare that human cloning would **alter the very meaning of humanity**. I think a clone would especially find the meaning of humanity and become unique. I think we **strive to be unique** because we are human and not because we have chromosomal DNA that is found nowhere else.

Others argue that the **random fusion** of a couple's genetic heritage gives enough distance to allow the child to be seen as a **'separate other'**. But, for example, I look exactly like my father when he was my age, though I am under the impression that **I was done the natural way**. Thus, I believe the old-fashioned way of having kids **is not giving me enough distance**. So, a natural kid like me already has the problem that a clone would have. Anyone who argues that cloning **disregards the laws of God** and the souls of humans, should **reconsider their views**. Cloning does not artificially produce copies of adult humans. The mental and emotional problems of clones would not be any different from those of any child born by in-vitro fertilisation.

I think if we were to use cloning it should **be closely monitored** as to what dangers are involved in having copies of people. Also, the ability to alter genes should only be used for improving **quality of life**, but **not quality of the being!**

Нет никаких сомнений, что социальный статус "генетического двойника" человека, если таковой когда-либо будет создан, **ничем не будет отличаться** от самого обычного человека. Ибо для его рождения необходима и яйцеклетка и ДНК, которые могут быть взяты только от конкретных доноров. Разумеется, при этом **возникнут определенные вопросы правового характера**. Но **ставить вопрос** о принципиально новом моральном аспекте существования клонов – все равно, что обсуждать "моральные проблемы" операции на сердце или удаления аппендикса.

Другое дело, что могут найтись не очень профессиональные (или не очень честные) ученые, которые могут попробовать использовать клонирование **в целях развития евгеники**. Но такие попытки предпринимались уже неоднократно и без всяких клонов. Что из этого вышло – **общеизвестно**. А то, что это **чреватое геноцидом** и другими далеко не высокоморальными действиями – то тут дело уже не в клонах и не в ДНК.

Таким образом, что из себя представляет "сенсационное" открытие? Только очередной шаг развития биологической науки, последствия которого вряд ли будут столь же велики, как раздутаая вокруг него **газетная шумиха**.

Means of Discussion

I. Study the phrases below which are used to express BELIEF and OPINION.

Phrases for expressing BELIEF:

- I'm **convinced** we've met before. (very strong feeling that you're right)
- I've always **held/maintained** that watching TV is a waste of time. (used for very firm beliefs)
- I **feel** she shouldn't be forced to do the job. (strong personal opinion)
- I **reckon** they'll get married soon. (informal, usually an opinion about what is likely to happen / to be true)
- I **doubt** we'll ever see total world peace. (don't believe)
- I **suspect** a lot of people never even think about environment. (have a strong feeling about something negative)

Phrases for expressing OPINION:

- **In my view / in my opinion / to my mind / If you ask me**, we haven't made any progress. (fairly informal)
- **From a teacher's point of view**, the new examinations are a disaster.

Use these expressions in the sentences of your own, referring to the moral aspects of cloning.

II. Using these expressions, fill in the gaps and make up at least 5 sentences of your own.

- to believe in
- to think of
- in favour of
- to be for or against
- to have (no) doubt(s) about
- (to have) views on

1. Do you _____ God?
2. What are your _____ divorce?
3. What do you _____ the possibility of scientific research in this field?
4. I'm _____ capital punishment.
5. Are you _____ long prison sentences?
6. I have _____ this plan.

Time to Talk

I. In groups, discuss the following questions, employing the vocabulary of the Unit, as well as the phrases used for expressing BELIEF and OPINION.

1. Is human cloning scientifically ethical?
2. Why is it necessary to balance the interests of society with the rights of individuals?
3. Should genetic information be the property of society or individuals?
4. What kind of body can be created to control cloning at the international level?

II. Study the following points of view obtained as a result of an opinion poll conducted in Moscow streets. Translate them into English and say if you share these opinions.

МНЕНИЯ ОПРОШЕННЫХ НА ТЕМУ “КАК ВЫ ОТНОСИТЕСЬ К КЛОНИРОВАНИЮ? ХОТЕЛИ БЫ ВЫ, ЧТОБЫ ОПЫТЫ ПО КЛОНИРОВАНИЮ ЧЕЛОВЕКА ПРОВОДИЛИСЬ И В НАШЕЙ СТРАНЕ?” РАЗДЕЛИЛИСЬ ПРАКТИЧЕСКИ ПОРОВНУ:

- Мы не должны отставать от других стран. Это научный прогресс.
- Если посредством клонирования будет проведена селекция порядочных людей, то это ускорит выход России из генетического кризиса. А определить, кто порядочный, можно путем референдума.
- Клонирование — научное открытие. Запретить его нельзя. Его судьбу должны решать ученые.
- Науку нельзя остановить никакими силовыми средствами. В истории была масса таких примеров. Тот же автомобиль. В начале века у него было очень много противников. Сейчас нашу жизнь без него нельзя представить.

- Людям не страшно будет умирать. Если человек заболит, он может сделать себе двойника. Нужна государственная сеть учреждений, в которых будут проводиться подобные опыты только при тяжелых заболеваниях для замены органов.
- Ежели запретят, богатенькие и власть имущие все равно будут делать, а нам, простым людям, ничего не достанется.
- Захотел ребенка — сделал себе подобного: хоть голубого, хоть зеленого. Человек будет только внешне похож, а мозги будут все равно другие.
- Ребенок и так наследует какие-то черты своих родителей. Что плохого, если малыш будет очень похож на маму или папу? А почему церковь вмешивается, не понимаю. Она ведь отделена от государства.
- Земля столько народу не прокормит!
- Это может привести к демографической катастрофе или исчезновению настоящего человеческого генофонда.
- Это — дьявольщина!
- Нельзя клонировать душу человека.
- Производство людей — это божий промысел. Он определяет, сколько мальчиков и девочек, сколько негодяев и хороших. Нельзя в это вмешиваться.
- Нельзя искусственно создавать людей. А как же искра божья, которая дается любому человеку при рождении?
- Это равнозначно испытаниям, которые проводили фашисты.
- Хороших людей должно быть много!

The opinion poll showed that men are mostly for cloning while women are against it. How can you explain this tendency?

III. Comment on the following statements.

1. When cloning comes about, society profits will increase, and people will be willing to pay anything for a clone of themselves. Society will do all kinds of things for money.
2. Technology seems to take away many of the morals that we have worked so hard to install in society. Most people only seem to want to cater to their own needs and do not bother to consider the consequences.
3. “Why not make a few backup copies of the embryo and keep a few in the freezer in case Junior needs a new kidney...?”
4. Cloning from an already existing human will provide the opportunity for parents to pick their “ideal” child. They will be able to pick out every

aspect of their child and make sure that it is perfect before they decide to have it.

5. A type of black market for embryos could easily develop someday.

Soul versus Body Debate

A. Study the following paragraph and express your opinion on the problem.

The Church of Scotland has already stated that to clone human beings would be ethically unacceptable as a matter of principle. To replicate any human technologically is a violation of the basic dignity and uniqueness of each human being made in God's image, of what God has given to that particular individual and no one else. This represents unacceptable human abuse, and a potential for exploitation which should be outlawed world-wide.

B. Divide into two teams and give your arguments for and against when answering the following questions.

- Is it possible to clone the soul and what will this mean?
- In contrast, if a person is cloned, but not his soul, what will this mean?
- Can a clone without a soul be destroyed without offending moral or religious beliefs?

IV. Choose one of the statements below and write a short essay on the subject.

1. The cloning technology opens a Pandora's box of ethical questions and has sparked a storm of controversy around the world.
2. The parents should not take away any child's chance at individuality.
3. Human cloning is an extremely social matter, not a question of mere personal privacy. There are three dimensions to the moral question: the wholeness of life, the individuality of life, and the respect for life.
4. Why did the Vatican condemn the technology of cloning as being perverse and unscrupulous?

UNIT 4

THE CASE FOR CLONING: LEGAL ASPECT

Terms of Discussion

Before reading the texts, explain the following notions.

- legal/illegal
- moratorium
- ban
- to legalise
- legal status
- to enact legislation
- to introduce legislation
- scientific community

Question Time

Using your background knowledge, answer the following questions.

1. Do you think the law should regulate such issues as scientific research?
2. Can a ban on cloning research stop the scientific development in this area?

Time for Reading

What do You Do with a Genie out of the Bottle?

It is impossible to reverse knowledge, but it is society's prerogative to state which pieces of knowledge should remain unused — "can do" never implies "must do".

It would appear that many are attracted by the idea of human cloning, but maybe they have not fully understood the implications. Even supposing