

BUILDING A BETTER HUMAN

In August of 1998 Kevin Warwick put his body on the network¹. A silicon chip was implanted in his left arm. This allowed a computer at the University of Reading to track him through the Department of cybernetics, where he teaches. Over the following days, the computer greeted him each time he arrived at the main entrance. It opened his lab door for him. It turned on the lights.

Warwick's next experiment will test an implant's ability to send signals between his nervous system and a computer –a radical step toward linking brain and machine directly. And after that? "The potential for humans, in our present physical form, is pretty limited," says Warwick. "The opportunity for me to become a cyborg² is extremely exciting. I can't wait to get on with it."

"The future enters into us long before it happens", the German poet Rilke once said. This is no longer a metaphor. The future is entering us. We eat genetically modified food. We receive implanted devices³. We develop artificial bone and skin for transplantation. We are creating retinal implants to restore vision in damaged eyes. Such "smart" devices can be networked to exchange information. A subcutaneous chip, for example, will be able to send your entire medical history to a doctor living far away.

50 years ago the word "cyborg" was science fiction. Today we believe that cyborgs will be possible within 50 years or that humans will have so many artificial parts as to be virtually indistinguishable from cyborgs. This raises some fundamental questions: at what point do you cease to be human? One quarter? One third? What part of us is irreplaceably human, such that if we changed it we would become a different kind of being? The brain? Above all: are some kinds of knowledge so terrible they simply should not be explored? The answers to these questions require the unlikely cooperation of three domains –technology, politics and ethics.

Sometimes the best intentions can lead to brutal outcomes. In a recent article, Bill Joy, a well-known scientist, described advances in three fields: gene therapy can bring diseases like cancer under control, nanotechnology will enable the creation of new plant species or viruses, and robotics will make intelligent and self-replicating machines possible. These three technologies depend on the continued growth in computing power, but biological and quantum computers⁴ of 2040 will be a million times faster than today's machines.

Engineers tend to associate history with progress. But "technology is evolving a thousand times faster than our ability to change our social institutions," says Joy. Do we have confidence in our ability to keep technology away from destructive uses? Unlike 20th-century technologies, which required many resources, the new technologies will be "within the reach of individuals." The dangers to the human species are all too imaginable.

Joy's article was an instant sensation. Scientists took it seriously, especially those working on advanced weapons programs. This will be the great decision of the next decades. One way: every possibility is welcome, no matter how dangerous, because our species loves knowledge. The other: we don't want to be overcome by technology. As humans, we have a choice.

(From the press. Adapted)

¹ *network*: xarxa / red

² *cyborg*: ciborg

³ *device*: enginy, peça, accessori / dispositivo, accesorio

⁴ *quantum computer*: ordinador quàntic / computador quàntic

PART ONE: READING COMPREHENSION

Answer the following questions according to the information in the text *Building a better human*.

[1 point each correct answer]

1. Say two reasons why the writer is suspicious of new technologies
2. What is for the writer the most important question posed by the new technologies?
3. Mention three possible results of the new technologies
4. Which of these summaries describes the text best?
 - a) Self-replicating machines and new viruses are an intolerable risk. It does not matter how much enthusiasm Kevin Warwick and other scientists may put into their work. The greatest danger is that the new technologies will be at the disposal of individuals and small groups. As humans, we cannot accept the risk and need to take a radical decision.
 - b) Cyborgs will only be possible in 50 years, but the future is already with us. K. Warwick is a pioneer of machine-body communication, but somehow we are all part of technological experimentation. The new technologies promise positive results but also raise questions and create dangers. We need to decide which way to go.
 - c) Bill Joy's article has opened everybody's eyes. With implants we risk losing our human identity. What percentage of them is needed to turn us into a different being? There are two ways to go. One is to welcome all technological advances. The other one is to stop them. It is a simple ethical question. We must take a decision.

PART TWO: WRITING

Choose ONE topic. Write about either 1 or 2. Write between 75 and 100 words.

[Grammatical accuracy: 3 points. Writing fluency: 3 points]

1. What do you think of technological progress? Write a short essay about this topic.
2. Write a dialogue between two people. One is a media presenter doing an interview. The other one an important scientist.

IS IT ANY OF OUR BUSINESS?

Many people live alone. Some by choice, some out of necessity. Of all those who live alone by necessity, the most pathetically lonely are the very old. They may be tied to a room or to a small flat by rheumatism or by arthritis. They may often be deaf, sometimes blind. Their children and their friends may have died long ago. Their greatest fear, not unjustified, is to fall ill and die without anyone noticing it. They also worry about food and bills. Life is very expensive in modern towns. If these people have only the old-age pension, they can barely exist. Some, of course, could ask for special government help but they don't. They are either too proud to apply for it or perhaps don't know how to do it.

Most old people who live alone wish that someone -anyone- came to visit them regularly once or twice a week. 'Just to talk. If you never talk to anyone, it's as if you were dead' they say. After a recent debate in the parliament, the government asked local authorities to arrange more visiting, as some voluntary organizations already do.

However, all these schemes need voluntaries and there aren't many generous people who are ready to help. So, nobody does anything. Every town tries to ignore the problem, to keep these sad cases out of sight. They want to forget the worst cases of lonely old people: those people who, after years without communication with others, have stopped trying. Those people whose silent rooms smell of defeat and death.

In a London block of flats, I saw one of these rooms. It was full of dirty, evil-smelling boxes, bottles and tins which had once, months or years ago, contained food. The walls and ceiling were black with filth.¹ When you walked in the room, fragments of glass and coal crunched under your feet. Outside the door, however, life went on. The rest of the families in the block went about their own businesses and ignored all this. Inside the room it was dark and cold. There are no seasons in these gloomy places. An old man sat quietly by a fire in the gloom. He was waiting for his death. At first, he did not answer our questions. Then, in a very low and monotonous voice, he kept muttering without hope or interest that he was waiting for a hospital bed.

He will not be much brighter when he moves to one. Why? The ancient, deteriorating structures of many of our geriatric hospitals reflect our lack of interest for the old. They are no longer productive individuals and so the interest of our society in them declines. However sad, there is one good thing about being in the hospital. At least he will not be alone. But until then he and those like him live in a sad state which speaks about the inhumanity of our impatient society. They are not people, they are forgotten 'old age pensioners' waiting to die.

(From the press. Adapted)

¹ *filth*: brutícia / porquería

PART ONE: READING COMPREHENSION

Answer the following questions according to the information in the text *Is It Any of Our Business?*

[1 point each correct answer]

1. What are old people who live alone usually most anxious about?
2. What is needed to improve their situation?
3. Say two of the most usual attitudes towards the very old
4. Which of the following sentences summarises the text best?
 - a) Old people suffer mainly from loneliness, lack of communication and social indifference. No longer needed, some do not know how to solve their problems. Those in hospitals at least are not alone. The worst cases are those who have already given up and simply wait for death.
 - b) Physical disorders, economic concerns and poverty are the major problems among old people. Once in a hospital, they do not have to worry about food and bills. Well looked after, they feel much more comfortable and their health and overall physical situation improves dramatically.
 - c) Indifference towards the situation of very old people living alone is a serious problem. Towns try to keep the worst cases out of sight -those of old men and women living in dirty and gloomy rooms without hope. Governments do not take decisions because these always require volunteers.

PART TWO: WRITING

Choose ONE topic. Write about either 1 or 2. Write between 75 and 100 words.

[Grammatical accuracy: 3 points. Writing fluency: 3 points]

1. Write a short essay. Imagine a new kind of society in which old people feel really comfortable and are well looked after. Describe it. Say all the good things you would like to see and do in this new structure.
2. Write a dialogue between two people. Possibilities: a young person and an old one, a volunteer visitor and somebody old and lonely, any two people you choose. They discuss problems related to the theme of this article.