



TASKS

1

Outline the information about surrogate technology and its impact on society today as well as in the future. (Text A)

(30 %)

2

Choose the film poster (Text B) you find most appealing to an audience your own age. Analyze it and show what aspects of Text A are reflected in it.

(30 %)

3

Choose **one** of the following tasks:

3.1

“In this wired-up world, you can be anybody you want to be through your surrogate [...].”
(Text A, ll. 3/4)

Using this quote as a starting point, comment on the advantages and risks of fake identities in virtual realities. Refer to the information about surrogates in the article as well as to your knowledge of the issue.

(40 %)

OR

3.2

Compare the idea of surrogates as presented in Text A to a vision of a future society from literature or film in which technological development changes human identities. Assess the way the characters deal with these changes.

(40 %)

OR

3.3

Using ideas from Text A as a starting point, write an article for an international youth science forum in which you reflect on the potential and risks of surrogate technology as a vision for the future.

(40 %)



Text A: Excerpt from the article

The Science of 'Surrogates'

By Alan Boyle

Bruce Willis' latest action movie takes place in a world where humans mostly stay behind closed doors and interact using lifelike cyber-substitutes. These robotic "surrogates" pass along all their sensations - during work, play and even sex - via virtual reality. In this wired-up world, you can be anybody you want to be through your surrogate: a healthier, younger
5 version of yourself, or a super-athlete, or a supermodel. (Will that be male or female?)

So "Surrogates" is meant as pure science fiction, right? Wrong. The filmmakers and futurists behind the movie say they're aiming for an only slightly enhanced version of present-day trends.

"In the near future, robots are going to start to look like humans," said James Canton, founder of the San Francisco-based Institute for Global Futures. "I think within 10 years you're
10 going to have the world of the surrogates."

You don't even have to wait 10 years to experience the kind of virtual life that eventually goes so wrong in "Surrogates," said the film's director, "Terminator 3" veteran Jonathan Mostow. [...]

"We do know just from the test audiences who have seen the movie that people are finding it very thought-provoking," Mostow said. "It's a little bit different from your typical Hollywood thriller."

How is it different? Here's an explanation from Canton, who helped out on the film project: "'Surrogates' is clearly a near-future vision when you mash up nanotechnology, and of course
20 computing, robotics and the advances in materials science. All these technologies are converging so quickly, and that convergence is what 'Surrogates' covers so well, without getting into the details."

If you want to delve into the real-life details, you can look at the research being conducted in Japan to create sociable robots suited to serve the country's aging population. More signs
25 of change can be seen on far-off battlefields, where the military is using surrogates ranging from bomb-defusing robots to bomb-dropping drones.

Other trends include the rise of online worlds such as "Second Life," where users guide avatars through activities ranging from cyber-boinking to virtual commerce to the same headaches people experience in real life. Then there's the milieu created by Twitter, Facebook and other online networks. Researchers say the personal interactions on social-
30 networking sites can be just as complicated - and occasionally just as boring - as real life.

Canton said he's already caught glimpses of the road ahead. Imagine, for instance, an extension of the force-feedback technology currently used to make video-game controllers shake and kick back in your hands. "I can tell you I've seen work in the labs that take force-
35 feedback and make it totally sensory and cognitive," he told me.

Like his fellow futurist Ray Kurzweil, Canton believes the time is fast approaching when machines will be more intelligent than natural-born humans - part of a phenomenon dubbed "the singularity". But Canton thinks the age of the surrogates - a society in which machines are used as extensions of human capabilities rather than self-actuating entities - will come
40 well before the singularity.

Baby-boom demographics could accelerate the current trend, he said.



“It’s likely that one of the key areas will be memory loss due to Alzheimer’s,” Canton told me. “Well before we have drugs to mediate memory loss, people will have both cloud- computing and wetware implants to help them with retrieving information. You’re going to see
 45 this emerge much quicker, and it’s going to be driven by baby boomers and baby- boomer economics.”

Canton isn’t saying that the approach of the singularity - or the surrogates - will be totally a good thing. In fact, that’s what the movie is all about. He said the Bruce Willis character
 50 “is challenged by a world that has been so dominated by these surrogates that the level of authenticity and humanness has been modified or even mutated.”

“That’s the big challenge,” he said. “There’s a wonderful social message in this that I think audiences will find both interesting and provocative as well as entertaining.” [...]

Even though the concepts that gave rise to “Surrogates” go back a quarter-century, Mo-
 55 stow told me the movie includes a few twists that should give today’s Twitterers, texters and Facebookers something to think about.

(696 words)

Source: <<http://www.globalfuturist.com/dr-james-canton/in-the-news/the-science-of-surrogates.html>>. [1 March 2013]

Annotations

Lines

headline	surrogate	replacement, substitute
19	to mash up	to create sth by combining elements from two or more sources
19	nanotechnology	engineering on a molecular level
23	to delve	to carry on intensive and thorough research, to investigate
26	bomb-defusing	removing the ignition from a bomb or mine
28	avatar	in digital technology a graphical image that represents a person
28	cyber-boinking	<i>vulgar:</i> virtual sexual intercourse
33	force-feedback	technology which uses the sense of touch by applying forces, vibrations, or motions to the user
38	singularity	concept describing a point in the future when machines or objects with superintelligence are able to improve themselves, accelerate technological progress, and greatly surpass cognitive abilities of human beings
39	self-actuating	starting a process without outside help
43/44	cloud-computing	use of computing resources delivered as a service over a network, i.e. the Internet
44	wetware	central nervous system of the human brain, as opposed to computer hardware or software
45	baby boomers	people born between the end of World War II and the late 1960s

Text B: Two film posters

Poster 1



Source: <<http://www.screeningmovies.ch/wp-content/uploads/2010/02/Surrogates-movie-poster.jpg>>. [1 March 2013]

Note: Illegible parts of the text on the poster are not relevant to the task.



Poster 2



Source: <http://4.bp.blogspot.com/_4HEI9T5EFjg/S7BjzQMLJI/AAAAAAAAAUo/2iK7kRPZq8s/>. [1 March 2013]

Note: Illegible parts of the text on the poster are not relevant to the task.