Robot Picassos ... ART or SCIENCE?

Meet the new artists of the 21st century. The artists to whom artistic brilliance comes automatically … the artists who are literally 'hardwired' for success!

A It is 2076. The world's leading artist is just about to show his latest collection of paintings in London. Tickets for his exhibition are selling like hotcakes and promoters expect him to be besieged by fans requesting autographs. But there is something special about this artist. Something that makes him different from every single artistic genius who has gone before him. This artist was producing works of brilliance from the moment he was born. The reason? He's a robot.

B Paul, the one-armed robot, is just one of a new wave of robot artists that are starting to challenge our perceptions about what makes someone – or something! – an artist.

C Paul is the creation of Patrick Tresset, a French scientist and artist who is based in London. Blurring the already thin line between art, robotics and computing, Paul is a robot that can sketch people's portraits. Consisting of a camera 'eye' and a single robotic arm, Paul begins the drawing process by scanning a room and looking for people. When a human face is spotted, Paul uses an edge detection technique called 'Gabor filter' to pick out the most prominent lines. Paul's robotic arm, gripping a standard ballpoint, then goes to work.

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It draws out those lines on paper, does a spot of shading and the process is complete – all in less than 30 minutes.

D Tresset calls Paul an "obsessive drawing entity", and does not pretend he is in any way human. Paul "does not know what a face is," states Tresset. Nevertheless, he has programmed Paul to have some human-like qualities: in perhaps the most charming part of the picture drawing process, Paul adds his signature to his portraits once he completes them. If hooked up to the Internet, Paul will even post his sketches to Facebook or tweet about them.

E Surprisingly – for such a relatively simple robot – Paul produces interesting and often unexpected drawings. More remarkably, however, Paul's drawings are of considerable quality. Paul's drawing skills probably outstrip the majority of people who sit for him! Interestingly, the untidy nature of Paul's sketches is all part of his design. "I try to make robotic installations that move people," explains Tresset. "I believe that a robot that slightly fails is more interesting … more touching. It encourages empathy in the viewer." Paul's imprecision also adds a certain individual style to his drawings and gives them a more human quality.

F Since June 2011, Paul has been exhibited in London, Istanbul and New York, and he has sketched more than 450 individuals. The response from the general public, not to mention artists and other art professionals, has been very positive. "Many artists have praised the quality of work produced by Paul," Tresset says.

G Currently, Paul's lack of 'awareness' of what he is actually drawing severely limits his drawing ability. Tresset explains that future models of Paul will already have knowledge of what a face is, and how to represent it. They will also incorporate visual feedback systems so they can self-monitor and improve their drawings. Tresset is also hopeful he can tweak Paul so that he can develop a style of drawing that is all his own. "A few years ago I would have said this was impossible. But I now believe that a robot can be created that is able to develop its own style."

H The day when the greatest artist in the world is not made of flesh and blood but of metal could be a long way off. Or, it might never even come. But not if Tresset and researchers like him have anything to do with it.

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1 Read the text and for questions 1-6 choose the correct answer A, B, C or D.

1 Paul is making people question
- **A** what an artist is.
- **B** what makes a good piece of art.
- **C** if a robot can ever become like a human.
- **D** how much robots can achieve.

2 Paragraph four focuses on
- **A** ways in which Paul could be improved.
- **B** how Paul's art is different to human art.
- **C** why Paul surfs the Internet.
- **D** what ways Paul resembles a human.

3 The fact that Paul's art isn't perfect
- **A** makes it difficult to sell.
- **B** makes people happier to sit for him.
- **C** is something Tresset wants to change.
- **D** was a feature planned by Tresset.

4 We can infer from paragraph five that
- **A** Tresset has more than one model of Paul.
- **B** the public are more impressed with Paul's work than artists are.
- **C** Paul's drawing abilities have improved since 2011.
- **D** people have been surprised that a robot can draw so well.

5 Tresset would like future Pauls to
- **A** help others improve their drawing skills.
- **B** sketch more than just portraits.
- **C** have more advanced abilities.
- **D** become less untidy.

6 What is the writer's attitude towards the world's most famous artist being a robot?
- **A** It will probably happen.
- **B** It's possible but not soon.
- **C** It's quite unlikely.
- **D** It's uncertain but possible.

Find words in the text with a similar meaning to the following words/phrases. CHECK

- **Para A:**
  - selling very well
  - talent
- **Para B:**
  - impressions
- **Para C:**
  - looking around quickly
  - spot
  - holding firmly
- **Para D:**
  - pleasing
- **Para E:**
  - are better
  - moving
- **Para F:**
  - expressed approval of
- **Para G:**
  - include
  - make small changes to

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3 **Find words in the text which mean the opposite of the following words.** CHECK

- failure ≠ _____
- unnoticeable ≠ _____
- least obvious ≠ _____
- complex ≠ _____
- exactness ≠ _____
- common ≠ _____
- amateurs ≠ _____
- minority ≠ _____

Fill in:

ability | artistic | collection | general | wave

1 The exhibition will go on display to the _____ public at the National Gallery.

2 The artist is about to exhibit his latest _____ of paintings in Paris.

3 She is just one of a new _____ of young artists to have appeared on the British art scene.

4 The artist's hand injury severely limited his drawing _____ for weeks.

5 Renoir's _____ genius was recognised at a young age.

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