

ANGLAIS

- Lire le texte ; les réponses aux QCM sont à reporter sur la grille de correction ; une seule bonne réponse par question.

- Les questions sont regroupées par coefficient et ne suivent pas l'ordre du texte. Le numéro de la question est indiqué entre parenthèses à la fin de la phrase ou du segment de phrase à analyser.

- Le contexte est à prendre en compte dans l'appréciation de la validité des réponses proposées.

Barème:

- bonne réponse : 2 points
- absence de réponse : 0 point
- mauvaise réponse : -1 point

WHAT MACHINES CAN TELL FROM YOUR FACE

The Economist, September 09, 2017

The human face is a remarkable piece of work. (Q.1) The astonishing variety of facial features helps people recognise each other and is crucial to the formation of complex societies. So is the face's ability to send emotional signals, whether through an involuntary blush or the artifice of a false smile. People spend much of their waking lives, in the office and the courtroom as well as the bar and the bedroom, reading faces, for signs of attraction, hostility, trust and **deceit. (Q.13)** They also spend plenty of time trying to dissimulate.

Technology is rapidly catching up with the human ability to read faces. **In America facial recognition is used by churches to track worshippers' attendance (Q.2)** ; in Britain, by retailers to spot past shoplifters. This year Welsh police used it to arrest a suspect outside a football game. **In China it verifies the identities of ride-hailing drivers, permits tourists to enter attractions and lets people pay for things with a smile. (Q.9)** Apple's new iPhone is expected to use it to unlock the homescreen.

Set against human skills, such applications might seem incremental. **Some breakthroughs, such as flight or the internet, obviously transform human abilities; facial recognition seems merely to encode them. (Q.3)** Although faces are peculiar to individuals, they are also public, so technology does not, at first sight, intrude on something that is private. **(Q.5)** And yet the ability to record, store and analyse images of faces cheaply, quickly and on

a vast scale promises one day to bring about fundamental changes to notions of privacy, fairness and trust.

- 20 Start with privacy. **One big difference between faces and other biometric data, such as fingerprints, is that they work at a distance. (Q.6)** Anyone with a phone can take a picture for facial-recognition programs to use. FindFace, an app in Russia, compares snaps of strangers with pictures on VKontakte, a social network, and can identify people with a 70% accuracy rate. Facebook's bank of facial images cannot be scraped by others, but the Silicon
- 25 Valley giant could obtain pictures of visitors to a car showroom, say, and later use facial recognition to serve them ads for cars. **Even if private firms are unable to join the dots between images and identity, the state often can. (Q.7)** China's government keeps a record of its citizens' faces; photographs of half of America's adult population are stored in databases that can be used by the FBI. Law-enforcement agencies now have a powerful weapon in their
- 30 ability to track criminals, but at enormous potential cost to citizens' privacy.

- The face is not just a name-tag. (Q.8)** It displays a lot of other information—and machines can read that, too. Again, that promises benefits. Some firms are analysing faces to provide automated diagnoses of rare genetic conditions, such as Hajdu-Cheney syndrome, far earlier than would otherwise be possible. **Systems that measure emotion may give autistic people**
- 35 **a grasp of social signals they find elusive. (Q.14)** But the technology also threatens. Researchers at Stanford University have demonstrated that, when shown pictures of one gay man, and one straight man, the algorithm could attribute their sexuality correctly 81% of the time. Humans managed only 61% (see article). In countries where homosexuality is a crime, software which promises to infer sexuality from a face is an alarming prospect.
- 40 Less violent forms of discrimination could also become common. Employers can already act on their prejudices to deny people a job. But facial recognition could make such bias routine, enabling firms to filter all job applications for ethnicity and signs of intelligence and sexuality. Nightclubs and sports grounds may face pressure to protect people by scanning entrants' faces for the threat of violence—even though, owing to the nature of machine-learning, all facial-
- 45 recognition systems inevitably deal in probabilities. Moreover, such systems may be biased against those who do not have white skin, since algorithms trained on data sets of mostly white faces do not work well with different ethnicities. **Such biases have cropped up in automated assessments used to inform courts' decisions about bail and sentencing. (Q.10)**
- 50 **Eventually, continuous facial recording and gadgets that paint computerised data onto the real world might change the texture of social interactions. (Q.17)** **Dissembling helps grease the wheels of daily life. (Q.18)** If your partner can spot every suppressed yawn, and your boss every grimace of irritation, marriages and working relationships will be more truthful, but less harmonious. The basis of social interactions might change, too, from a set of
- 55 commitments founded on trust to calculations of risk and reward derived from the information a computer attaches to someone's face. Relationships might become more rational, but also more transactional.

In democracies, at least, legislation can help alter the balance of good and bad outcomes. (Q.4) European regulators have embedded a set of principles in forthcoming data-protection

60 regulation, decreeing that biometric information, which would include “faceprints”, belongs
to its owner and that its use requires consent—so that, in Europe, unlike America, Facebook
could not just sell ads to those car-showroom visitors. Laws against discrimination can be
applied to an employer screening candidates’ images. **Suppliers of commercial face-**
65 **recognition systems might submit to audits, to demonstrate that their systems are not**
propagating bias unintentionally. (Q.11) Firms that use such technologies should be held
accountable.

Such rules cannot alter the direction of travel, however. (Q.12) Cameras will only become
more common with the spread of wearable devices. **Efforts to bamboozle facial-recognition**
systems, from sunglasses to make-up, are already being overtaken; research from the
70 **University of Cambridge shows that artificial intelligence can reconstruct the facial**
structures of people in disguise. (Q.15) Google has explicitly turned its back on matching
faces to identities, for fear of its misuse by undemocratic regimes. (Q.16) Other tech firms
seem less picky. Amazon and Microsoft are both using their cloud services to offer face
recognition; it is central to Facebook’s plans. **Governments will not want to forgo its**
75 **benefits. (Q.19)** Change is coming. **Face up to it. (Q.20)**

I. COMPRÉHENSION

Questions 1-4 : coefficient 1

1. The human face is a remarkable piece of work. (l. 1)

- A) We use our faces to accomplish a large number of tasks.
- B) The human visage is an extraordinary thing.
- C) Being a social construct, the human face is only complete when it is reworked by the perception of others.
- D) The work of a human face is of the utmost quality.

2. In America facial recognition is used by churches to track worshippers' attendance. (l. 7-8)

- A) In America facial recognition is used by churches to get information on how attentive church-goers are during church services.
- B) In America facial recognition is used by churches to keep track of church-goers' whereabouts.
- C) In America facial recognition is used by churches to get information on how regularly church-goers come to church services.
- D) In America facial recognition is used by churches to track down potential worshippers.

3. Some breakthroughs, such as flight or the internet, obviously transform human abilities; facial recognition seems merely to encode them. (l. 13-15)

- A) This technology will cause people to lose their skills little by little, and future generations will be less capable of reading social clues than today's.
- B) This technology still needs humans to interpret the data.
- C) This technology will force us to encode our facial expressions more carefully.
- D) When compared to other great inventions, this technology might not seem revolutionary.

4. In democracies, at least, legislation can help alter the balance of good and bad outcomes. (l. 58)

- A) In democracies, governments might protect the people against the evil effects of this technology.
- B) Legislators might be blackmailed by this tech more easily, especially in democracies.
- C) Democracies might alter the fragile equilibrium of society, and bring about dictatorship.
- D) Legislators should fight against the executive in order to keep balance.

Questions 5-8 : coefficient 2

5. Although faces are peculiar to individuals, they are also public, so technology does not, at first sight, intrude on something that is private. (l. 15-16)

- A) Some people have strange faces, and technology will allow us to make fun of them in public.
- B) At first blush, this technology does not change anything fundamental in the definition of what is public and what is private.
- C) This technology will transform the way individuals with peculiar faces behave in public spaces.
- D) Only people with peculiar faces will be recognized by this technology, whereas those with less distinct visages will continue to be anonymous in public.

6. One big difference between faces and other biometric data, such as fingerprints, is that they work at a distance. (l. 20-21)

- A) With facial recognition technology, one's face can be identified from far away.
- B) Facial recognition works best at a distance.
- C) Computers cannot send information about fingerprints from a distance, because they are too complex.
- D) Facial recognition data can only be interpreted at an appropriate distance, as coming too close to the camera will not allow it to work.

7. Even if private firms are unable to join the dots between images and identity, the state often can. (l. 26-27)

- A) Every picture is a puzzle that has to be solved, with a series of dots that links faces to identities.
- B) States are usually better placed than private companies to identify individuals using this technology.
- C) Private companies are almost always more capable of identifying individuals than governments.
- D) Private firms sometimes create identity papers for people identified by their software, and whenever they fail, the state can do so.

8. The face is not just a name-tag. (l. 31)

- A) Human faces betray more information than merely one's identity.
- B) Human faces do not give insight into an individual's true feelings.
- C) Our face is like graffiti, a way of proclaiming our identity.
- D) Computers will be able to link our names with our faces.

Questions 9-12 : coefficient 3

9. In China it verifies the identities of ride-hailing drivers, permits tourists to enter attractions and lets people pay for things with a smile. (l. 10-11)

- A) In China, it is illegal not to smile when paying, and the government keeps track of this using computers.
- B) In China, facial recognition technology is used in a number of ways, including using facial expressions to complete financial transactions.
- C) In China, computers flash a smiley-face at you when you pay for items.
- D) In China, you need special permission to smile in public, and the government keeps track of this using facial recognition technology.

10. Such biases have cropped up in automated assessments used to inform courts' decisions about bail and sentencing. (l. 47-48)

- A) Computers have replaced judges, and impose racially biased decisions.
- B) As expected, computers have multiplied errors when identifying non-white faces.
- C) Analysis of readings made based on facial recognition software in courtrooms has revealed difficulty identifying non-white faces.
- D) People are sent to death row on the basis of automated computer readings which are biased against non-whites.

11. Suppliers of commercial face-recognition systems might submit to audits, to demonstrate that their systems are not propagating bias unintentionally. (l. 63-65)

- A) Companies that develop such technology should be audited to make sure they don't hide their taxes.
- B) Racist companies might use their technology to propagate hatred.
- C) Such companies could be controlled by the government to try to make sure they are race-neutral.
- D) Government auditors who don't understand this technology might unintentionally do more harm than good.

12. Such rules cannot alter the direction of travel, however. (l. 67)

- A) Regulations won't stem the tide of technology.
- B) The travel industry will forever be changed by this technology.
- C) Individuals will no longer be able to go where they want.
- D) Technology won't change the movement of history.

Questions 13-16 : coefficient 4

13. deceit. (l. 6)

- A) dismay.
- B) disappointment.
- C) duplicity.
- D) dissatisfaction

14. Systems that measure emotion may give autistic people a grasp of social signals they find elusive. (l. 34-35)

- A) Computers will finally allow us to understand what autistic people are thinking.
- B) Computers may allow autistic people to react more appropriately to social situations where they currently feel lost.
- C) Computers may allow autistic people to signal what their emotions are.
- D) Computers may send out social signals that will be perceptible to autistic people.

15. Efforts to bamboozle facial-recognition systems, from sunglasses to make-up, are already being overtaken; research from the University of Cambridge shows that artificial intelligence can reconstruct the facial structures of people in disguise. (l. 68-71)

- A) People are learning to fool this technology using disguises.
- B) Hackers are taking over the machines and rebuilding them for their purposes.
- C) People are hacking into facial recognition technology using fake identities.
- D) Improvements in the technology mean that it can see through disguises.

16. Google has explicitly turned its back on matching faces to identities, for fear of its misuse by undemocratic regimes. (l. 71-72)

- A) Google has developed technology that can recognize people from behind.
- B) Google has stopped developing such technology, lest it be used for ill by unscrupulous governments.
- C) Google has developed technology that prevents dictators from controlling their populations.
- D) Google is always filming you, and sending the information to tyrants.

Questions 17-20 : coefficient 5

17. Eventually, continuous facial recording and gadgets that paint computerised data onto the real world might change the texture of social interactions. (l. 50-51)

- A) The texture of people's faces will have to change to avoid recognition by cameras.

- B) It is possible that we will relate to others differently when we're constantly being filmed and analysed.
- C) The mingling of data and reality will change the way people dress and wear make-up.
- D) We will be able to project images onto reality using computers.

18. Dissembling helps grease the wheels of daily life. (l. 51-52)

- A) A little bit of deception makes everyone's lives easier.
- B) Being behind the wheel in your car will help fool recognition technology.
- C) Lying to one's peers leads everyone into a spiral of deceit.
- D) When you lie to others, it comes back to hurt you.

19. Governments will not want to forgo its benefits. (l. 74-75)

- A) Governments will go wherever the profits are.
- B) Governments will exploit the people for profit using this technology.
- C) Governments will use this technology for the benefit of the people.
- D) It is unlikely that governments will choose not to use this technology.

20. Face up to it. (l. 75)

- A) Look up towards a bright new future.
- B) Contemplate facial cosmetic surgery.
- C) Accept it.
- D) Read about it on Facebook.

II. GRAMMAIRE / LEXIQUE (NB: ø = aucun mot)

Questions 21-24 : coefficient 1

21. ... you need ... help, it would be my pleasure.

- | | |
|-----------------|----------------|
| A) Should / any | B) Would / the |
| C) If / a | D) Would / ø |

22. Real fighters never give

- | | |
|------------|---------|
| A) away | B) over |
| C) through | D) up |

23. She is ... lawyer ... a large law firm in London.

- | | |
|---------------|---------------|
| A) the / with | B) ø / in |
| C) a / at | D) one / with |

24. I'm afraid you can't stay at ours while we're away: we're

- | | |
|---------------------------------------|--------------------------------------|
| A) having our living room redecorated | B) making redecorate the living room |
| C) making the living room redecorated | D) having our living room redecorate |

Questions 25-28 : coefficient 2

25. The president and prime minister ... furious

- | | |
|-----------------------------------|------------------------------------|
| A) are told to be / at themselves | B) are said to be / at each other |
| C) are said being / at them | D) are told to be / at one another |

26. There are ... on Earth.

- | | |
|--------------------------|-----------------------------|
| A) seven billion people | B) seven billions of people |
| C) seven billions people | D) seven billion peoples |

27. ... your previous offenses, the judge will likely hand down a strict sentence.

- | | |
|-----------------|----------------|
| A) Giving | B) Given |
| C) Having given | D) Being given |

28. Don't ever give the public ... they think they want.

- | | |
|--------------|--------------|
| A) what | B) what that |
| C) that what | D) which |

Questions 29-32 : coefficient 3

29. This isn't a real Van Gogh; it's just a(n) ... copy.

- | | |
|--------------|---------------|
| A) priceless | B) invaluable |
| C) worthless | D) unworthy |

30. ... when he learned he'd lost all his savings by investing in bitcoin!

- | | |
|----------------------------------|----------------------------------|
| A) How foolish he must have felt | B) He must have felt how foolish |
| C) How a fool he must feel | D) How he must feel foolish |

31. Reginald, ... parents were both born poor, has amassed one of England's greatest fortunes.

- | | |
|----------|----------|
| A) whom | B) who's |
| C) whose | D) his |

32. This is a big decision: you might need to take some time to think it

- | | |
|----------|---------|
| A) in | B) up |
| C) about | D) over |

Questions 33-36 : coefficient 4

33. If I hadn't been able to start the engine, I ... walk home.

- | | |
|----------------------|------------------|
| A) had to | B) must have to |
| C) would have had to | D) would have to |

34. ... the past five years, unemployment ... steadily.

- | | |
|-----------------|----------------------|
| A) For / rose | B) For / has risen |
| C) Since / rose | D) Since / has risen |

35. He insisted the celebrity

- | | |
|-------------------------------|--------------------------------|
| A) give him an autograph | B) shall give him an autograph |
| C) be giving him an autograph | D) will give him an autograph |

36. Don't call me until ... the job.

- | | |
|--------------------|---------------------------|
| A) you finished | B) you will have finished |
| C) you will finish | D) you finish |

Questions 37-40 : coefficient 5

37. Bob will never betray his political party: he's ... a Republican

- | | |
|---|--|
| A) as loyal / as you could hope to find | B) a loyal / than you could hope to find |
| C) the most loyal / you could find | D) the loyalest / there is. |

38. ... them more time to make their concerns known, we would have been better served.

- | | |
|-----------------------|-------------------|
| A) Unless we gave | B) Had we given |
| C) If we were to give | D) Should we give |

39. ... I *did* come to your party, I wouldn't be able to stay long.

- | | |
|------------|----------------|
| A) Even if | B) Even though |
| C) Despite | D) Although |

40. We have ... news from him: he is a man of ... words.

- | | |
|---------------------|---------------------|
| A) few / little | B) a little / a few |
| C) a few / a little | D) little / few |