



Ouvrage coordonné par Joël Cascade et Isabelle Vaurie



ANGLAIS

10 ANS D'ANNALES CORRIGÉES

aux épreuves d'anglais des
Grandes Écoles Scientifiques

2^e édition



This week, Blue Origin LLC, the secretive space company backed by Jeff Bezos of Amazon.com, launched an unmanned vehicle called the New Shepherd to the edge of outer space. A short time later, the rocket that propelled it parachuted down in the West Texas desert – four feet from where it took off, and all in one piece.

It was, Bezos declared, a “game changer”. That’s only a slight exaggeration.

Since the dawn of the Space Age, rockets have been treated as a regrettably disposable byproduct of getting a payload into orbit. The cost of this waste has been an impediment to expanding travel and business opportunities in space. A reliably reusable rocket could change that calculus drastically. Elon Musk – proprietor of Space X, one of Blue Origin’s competitors – thinks it could reduce expenses by a factor of 100.

As clashes of billionaires go, this is a tame and encouraging one. And it comes at a propitious time.

Space is suddenly brimming with commercial possibilities, spurred by a new generation of small and cheap satellites. A company called Planet Labs is connecting a network of satellites for use in agriculture and disaster relief. PlanetiQ wants to improve climate monitoring and

weather forecasting. Other companies hope to validate insurance claims, analyze retail trends and offer worldwide Internet access from space.

Reusable rockets could make such endeavors far cheaper. They may even make more esoteric pursuits – from asteroid mining to colonizing the cosmos – more realistic. And their best uses probably haven't occurred to anyone yet.

Bezos and Musk are at the vanguard of this revolution. They're exporting Silicon Valley's competitive ethos to outer space, spurring creative new industries and giving government space agencies a much-needed jolt. They'll surely have setbacks along the way. But that's how progress works.

<http://www.bloomberg.com>, November 25, 2015

THÈME

Un dimanche après la messe, j'avais douze ans, avec mon père, j'ai monté le grand escalier de la mairie. On a cherché la porte de la bibliothèque municipale. Jamais nous n'y étions allés. Je m'en faisais une fête. On n'entendait aucun bruit derrière la porte. Mon père l'a poussée, toutefois.

C'était silencieux, le parquet craquait. Deux hommes nous regardaient venir depuis un comptoir très haut barrant l'accès aux rayons. Mon père m'a laissé demander : « On voudrait emprunter des livres. » L'un des hommes aussitôt : « Qu'est-ce que vous voulez comme livres ? »

À la maison, on n'avait pas pensé qu'il fallait savoir d'avance ce qu'on voulait, être capable de citer des titres aussi facilement que des marques de biscuits.

On a choisi à notre place. Nous ne sommes pas retournés à la bibliothèque. C'est ma mère qui a dû rendre les livres, peut-être avec du retard.

D'après Annie Ernaux, *La Place*, 1983

EXPRESSION ÉCRITE

1. According to the article, how are current developments in the space industry “a game changer”?

Proposition de corrigé

Being able to reuse unmanned rockets evinces a breakthrough in the space industry, since it will greatly reduce costs. This, in turn, will enable the reduction of the size and price of satellites, whose cost has long been a hindrance to their development. The latter might then be used in various fields, such as agriculture, insurance, communication, or to provide help to disaster-stricken areas. Such developments offer many commercial prospects, and even the craziest space dreams might now come true.

(80 words)

2. In your opinion, why does mankind continue to be fascinated by space?

Analyse

Ce sujet invite à réfléchir sur les raisons pour lesquelles l’Homme s’intéresse toujours autant à l’espace. En effet, cet intérêt existe depuis longtemps, et s’il a été au cœur de tensions politiques lors de la Guerre Froide, il ne semble pas perdre en intensité de nos jours. L’article est une illustration de cet intérêt renouvelé : les projets des deux magnats Jeff Bezos et Elon Musk offrent de nouvelles perspectives commerciales, montrant que l’espace n’est pas seulement le lieu de découvertes scientifiques.

Il fallait donc ici répondre de façon personnelle à une question très large sur le rapport de l’humanité à l’espace. Les candidats doivent donner des exemples précis et variés pour illustrer leur propos. Il faudra veiller à respecter les noms propres en anglais, tels que *Copernicus* et *Galileo*.

Proposition de corrigé

Humankind’s enduring fascination for space is doubtless due to its unknown dimension. From Copernicus’s Renaissance discovery of heliocentrism to the 2017 Nobel Prize in physics awarded for the discovery of gravitational waves, space has always been at the heart of scientific research.

Space first seems to hold the key to our understanding of the universe, and to the origin of our species. Humanity’s natural inquisitiveness pushes people to venture ever farther, wondering, “Is there anybody out there?” This quest borders on the metaphysical and enthralls philosophers as well as stargazers.

Yet the stars also have a very down-to-earth political dimension: witness the Space Race between the USSR and the United States. As pinpointed by John F. Kennedy in his 1960 acceptance speech, these “uncharted areas of science and space” were crucial. Sending

the first man into space and managing the first Moon landing were made possible by that political struggle for scientific prowess.

Now, space actually seems to be our future, since we have depleted most of the natural resources of our planet. The possibility of colonizing space would give hope to an ever-growing population of earthlings. So our timeless fascination might be undergoing a rather pragmatic turn.

(198 words)

THÈME

Proposition de traduction

One Sunday, after mass, when I was twelve (1), along with my father, I went up the great staircase in the town hall (2). We searched for the door to (3) the public library. We had never been there before (4). I was really looking forward to it. We couldn't hear (5) any noise coming from (6) behind the door. My father pushed it open (7) all the same (8).

The place (9) was silent (10), the floorboards creaked (11). From behind a very high desk blocking access to the shelves, two men were watching us walk towards them (12). My father let me ask, "We'd like to borrow some books." Immediately, one of the men replied, "What kind of books would you like?"

At home, we hadn't imagined that you had to know in advance what you wanted and be able to give titles as easily as biscuit brands.

They chose for us. We didn't go back to the library. It must have been my mother who returned the books, possibly overdue.

Notes de traduction

- (1) Variante : *twelve years old*.
- (2) Variante : *city hall*.
- (3) À éviter absolument : le calque de la préposition. C'est l'idée d'accès qui est rendue par le complément de nom ici, donc traduire par *to*.
- (4) À éviter absolument : le calque syntaxique avec l'adverbe en tête de phrase.
- (5) Penser à employer le modal *could* avec les verbes de perception.
- (6) Penser à étoffer (enrichir) avec un verbe, en anglais.
- (7) Penser à cette structure idiomatique en anglais qui souligne le résultat de l'action.
- (8) Variante : *However, my father pushed it open*.
- (9) Variante : *All was silent*.
- (10) À éviter absolument : le calque lexical. En anglais il faut expliciter en étoffant, c'est-à-dire en ajoutant un élément qui clarifie le sens.
- (11) Variante : *were creaking*.
- (12) À éviter : le calque syntaxique. Réorganiser les éléments de la phrase pour plus de naturel en anglais.

*Expression écrite***Multitasking Is Killing Your Brain**

Our brains weren't built to multitask, they are designed to focus on one thing at a time, and bombarding them with information only slows them down.

MIT neuroscientist Earl Miller notes when people switch from one task to another, there's a cognitive cost. When we complete a tiny task (sending an email, answering a text message, posting a tweet), we are hit with a dollop of dopamine, our reward hormone. Our brains love that dopamine, and so we're encouraged to keep switching between small mini-tasks that give us instant gratification.

This makes us feel like we're accomplishing a ton, when we're really not doing much at all (or at least nothing requiring much critical thinking). In fact, some even refer to email/Twitter/Facebook checking as a neural addiction. Multitasking lowers our work quality and efficiency as it makes it more difficult to organize thoughts and filter out irrelevant information, and it reduces the efficiency and quality of our work.

A study at the University of London showed that subjects who multitasked while performing cognitive tasks experienced significant IQ drops which were similar to what you see in individuals who skip a night of sleep or who smoke marijuana.

Multitasking has also been found to increase production of cortisol, the stress hormone. Having our brain constantly shift gears pumps up stress and tires us out, leaving us feeling mentally exhausted. Some studies have shown that even the opportunity to multitask, such as knowledge of an unread email in your inbox, can reduce your effective IQ by 10 points.

The constant thrill of a new email in our inbox keeps us ever-distracted. A McKinsey Global Institute Study found that employees spend 28% of their workweek checking emails. Cognitive damage associated with multitasking could be permanent.

A study from the University of Sussex (U.K.) ran MRI scans on the brains of individuals who spent time on multiple devices at once (texting while watching TV, for example). The scans showed that subjects who multitasked more often had less brain density in the anterior cortex. That's the area responsible for empathy and emotional control. No matter how you spin it, multitasking is no good.

Adapted from an article by Larry Kim
in Observer.com, 2 February, 2016

Questions

1. According to the journalist, what are the negative effects of multitasking? (80 words, $\pm 10\%$) Answer the question in your own words.
2. "Whether imposed or chosen, multitasking is a defining feature of modern society." Discuss. (180 words, $\pm 10\%$) Illustrate your answer with relevant examples.

Thème

C'était l'aube. J'étais installé sur la terrasse de la maison où vivait désormais mon oncle, à Coconut Grove. Il y avait déjà quatre ans qu'il s'était installé ici.

Il arriva sans faire de bruit et je sursautai lorsqu'il me dit :

- Déjà debout ?
- Bonjour, Oncle Saul.

Il tenait deux tasses de café et en déposa une devant moi. Il remarqua mes feuillets annotés. J'étais en train d'écrire.

- Quel est le sujet de ton nouveau roman, Markie ?
- Je ne peux pas te le dire, Oncle Saul. Tu m'as déjà posé cette question hier.

Il sourit. Me regarda écrire un moment. Puis, avant de partir, alors qu'il rentrait sa chemise dans son pantalon et serrait sa ceinture, il me demanda d'un air solennel :

- Un jour je serai dans un de tes livres, hein ?
- Bien sûr, lui répondis-je.

Mon oncle avait quitté Baltimore en 2006 pour venir vivre dans cette maison au sud de Miami.

D'après Joël Dicker,
Le Livre des Baltimore, 2015

Propositions

EXPRESSION ÉCRITE

1. According to the journalist, what are the negative effects of multitasking? (80 words, +/- 10%). Answer the question in your own words.

Proposition de corrigé

Multitasking has been shown to cause multiple issues.

First, people's IQ may dip as cerebral activity slows down. The harm caused might prove irreversible: indeed, the links between multitasking and a thinner anterior cortex are being investigated.

Moreover, multitasking has a detrimental effect on productivity: individuals focus on superficial tasks, falsely thinking that much has been achieved. Instead, the work completed tends to be inadequate due to the difficulty to concentrate.

Multitasking is a source of stress and arguably a regrettable aspect of modern life.

(85 words)

2. “Whether imposed or chosen, multitasking is a defining feature of modern society.” Discuss (180 words +/- 10%). Illustrate your answer with relevant examples.

Analyse

Le sujet porte sur un aspect particulier de la vie moderne et sur notre tendance à accomplir (ou de croire que nous accomplissons) plusieurs tâches à la fois, par choix ou par contrainte, au travail ou bien à la maison. Il ne fait en apparence appel à aucune connaissance ou notion civilisationnelle particulière mais porte indirectement sur le bien-être, les nouvelles technologies et le monde du travail. Les candidats doivent ainsi montrer leur familiarité avec les questions sociétales actuelles tout en bâtissant une argumentation pertinente. La justesse lexicale est essentielle dans un format aussi court, tout comme le choix des exemples, sur lequel insiste le libellé.

Proposition de corrigé

In the age of swiping, scrolling and constant notifications, many of us carry out multiple tasks simultaneously, either by choice or obligation. To what extent has this habit come to define how we work, communicate, consume or even establish relationships today?

Accelerated by globalization and the fast progress of information technology, multitasking has permeated every aspect of modern life, from work to shopping or even relaxing. When factory workers, waiters, teachers and of course parents have long been jacks-of-all-trades, today's hyperconnectivity means that employees and individuals always divide their attention. Thus, office workers must reply to emails whilst on the phone with customers, booking travel, updating online calendars or filling in order forms.

However, such constant juggling can lead to stress, information overload and shallow communication as they never seem to be fully “in the moment”. Consequently, burnouts are frequent as our productivity-driven society favours quantity over quality and jeopardizes our emotional well-being. Since 2017, France's right to disconnect has allowed employees to be able to ignore digital forms of communication from management outside of their defined working hours.

Multitasking might define our society but it does not have to define us.

(192 words)

THÈME

Proposition de traduction

It was dawn. I found myself (1) on the patio (2) of the house in Coconut Grove where my uncle was now living (3). It had already been four years since he had moved in (4).

He came up to me quietly and I gave a start when he said to me:

“You up already?” (5)

“Morning, Uncle Saul.”

He was holding (6) two cups of coffee and laid one in front of me. He noticed the sheets of paper on which I had scribbled some comments (7). I was in the middle of writing (8).

“What’s your new novel about, Markie?”

“I can’t tell you, Uncle Saul. You already asked (9) me the same question yesterday (10).”

He smiled. He watched me write for a while. Then, before he left, as he was tucking his shirt into his trousers and tightening his belt, he asked solemnly:

“I’ll be in one of your books one day, won’t I?” (11)

“Sure you will!” I answered.

My uncle had left Baltimore in 2006 to come (12) and live in this house in the south of Miami.

Notes de traduction

- (1) Ni *installed* ni *settled* ne sont envisageables. L’anglais décrit souvent plus précisément les postures des personnages que le français mais *sitting on the patio* signifierait que Markie est assis par terre.
- (2) *Terrace* est à réserver aux terrasses de cafés. C’est aussi en Grande-Bretagne une rangée de maisons mitoyennes.
- (3) Le prétérit en *be* + *-ing* rend bien les aspects duratif et descriptif de l’imparfait français.
- (4) Traduire le « que » comme un « depuis que ». Bilan dans le passé renvoyant à une antériorité, d’où la présence d’un double *pluperfect* (même si *It was already four years since he had moved in* est envisageable). Variante : *He had been living there for four years already*.
- (5) Guillemets et non tirets dans les dialogues en anglais. Ils n’incluent pas les verbes introducteurs de discours, seulement le contenu de chaque réplique. Noter l’ellipse du verbe qui souligne l’oralité de la question.
- (6) Variante : *carrying*
- (7) Le verbe *annotate* et son participe passé *annotated* existent mais s’emploient peu.
- (8) Variante : *typing*
- (9) Variante avec insistance : *that very same question*. *This* marque la proximité dans l’espace et dans le temps alors que *that* marque l’éloignement. *That* peut prendre une coloration affective, souvent péjorative d’agacement (“*That dog has been barking for an hour!*”)
- (10) Le prétérit s’impose puisqu’il est déclenché par l’adverbe *yesterday* datant précisément l’action.
- (11) Les *question tags* sont très fréquents dans les dialogues en anglais et leur donnent une tournure fluide et naturelle. Ne pas oublier la reprise de l’auxiliaire au même temps/aspect dans la réponse.
- (12) *To come* marque un rapprochement de l’énonciateur (ce dernier se trouve dans la maison dont il est question) et *to go* s’en éloigne.



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TELECOM PARISTECH, MINES PARISTECH,
MINES SAINT-ÉTIENNE, MINES NANCY,
IMT Atlantique, ENSAE PARISTECH.

Concours Mines-Télécom, Concours Commun TPE/EIVP.

CONCOURS 2018

ÉPREUVE DE LANGUE VIVANTE

Durée de l'épreuve : 1 heure 30 minutes

L'emploi de tous documents (dictionnaires, imprimés, ...) et de tous
appareils (traductrices, calculatrices électroniques, ...)
est interdit dans cette épreuve.

Cette épreuve est commune aux candidats des filières MP, PC, PSI.

L'épreuve de langue vivante est constituée, d'un THÈME, et d'un EXERCICE d'EXPRESSION ÉCRITE qui consiste à répondre à deux questions.

- Le thème est noté sur 8.
- La première question est notée sur 4.
- La deuxième question est notée sur 8.

La réponse à la première question devra comporter 80 mots plus ou moins 10%.

La réponse à la deuxième question devra comporter 180 mots plus ou moins 10%.

Dans les deux questions de l'exercice d'expression écrite, le candidat indiquera lui-même le nombre de mots employés dans sa réponse.

Le non respect des limites indiquées sera sanctionné.

Les candidats sont priés de mentionner en tête de leur copie la langue dans laquelle ils ont composé, qui est obligatoirement celle qu'ils ont indiquée dans leur dossier d'inscription.

Les candidats trouveront l'épreuve d'allemand à la page 1, l'épreuve d'anglais à la page 3, l'épreuve d'arabe à la page 5, l'épreuve d'espagnol à la page 7, l'épreuve d'italien à la page 9 et l'épreuve de russe à la page 11.

Remarque : les références et les titres du thème, lorsqu'ils existent, ne sont pas à traduire.

**Pour faciliter la correction de l'épreuve, les candidats écriront
leur texte toutes les deux lignes.**

Goodbye – and good riddance – to livestock farming

What will future generations, looking back on our age, see as its monstrosities? There are plenty to choose from. But one of them will be the mass incarceration of animals, to enable us to eat their flesh or eggs, or drink their milk. While we call ourselves animal lovers, and lavish kindness on our dogs and cats, we inflict brutal deprivations on billions of animals that are just as capable of suffering.

The shift will occur with the advent of cheap artificial meat. Technological change has often helped to catalyse ethical change. The \$300m deal China signed last month to buy lab-grown meat marks the beginning of the end of livestock farming. But it won't happen quickly: the great suffering is likely to continue for many years.

The answer, we are told by celebrity chefs and food writers, is to keep livestock outdoors: eat free-range beef or lamb, not battery pork. But all this does is to swap one disaster – mass cruelty – for another: mass destruction. Almost all forms of animal farming cause environmental damage, but none more so than keeping animals outdoors. The reason is inefficiency. Grazing is not just slightly inefficient, it is stupendously wasteful. Roughly twice as much of the world's surface is used for grazing as for growing crops, yet animals fed entirely on pasture produce just one gram out of the 81g of protein consumed per person per day.

A paper in *Science of the Total Environment* reports that “livestock production is the single largest driver of habitat loss”. Grass-eating livestock are a fully automated system for ecological destruction: you need only release them on to the land and they do the rest, eating tree seedlings, simplifying complex ecosystems. Their keepers augment this assault by slaughtering large predators.

One study suggests that if we were all to switch to a plant-based diet, 15m hectares of land in Britain currently used for farming could be returned to nature. Alternatively, this country could feed 200 million people. An end to animal farming would be the salvation of the world's wildlife, our natural wonders and magnificent habitats.

Adapted from www.guardian.co.uk, 4 October 2017

Question 1

According to the journalist, why should livestock farming be stopped? (80 words, $\pm 10\%$) Answer the question in your own words.

Question 2

In your opinion, are our eating habits likely to change over the coming decades? (180 words, $\pm 10\%$) Illustrate your answer with pertinent examples.

Thème

Il s'empara du téléphone et commença une série d'appels destinés à des gens dont j'ignorais l'identité. Tout en buvant mon café noir, je décidai de me passer de son approbation et de continuer à aller sur la plage pour profiter au mieux de cette parenthèse.

Nager longtemps dans une mer pure et fraîche apaisa momentanément mes craintes. Je remontai à la maison à l'heure du déjeuner et les retrouvai à l'ombre, sur la terrasse. Ils avaient l'air tous les quatre de tenir un conseil de guerre. Quand je le leur dis, Jean-Luc me lança un regard noir.

— C'est pas le moment de plaisanter, dit-il. Cournot me sourit gentiment.

Rosier et Bambam me firent un résumé de leurs démarches matinales.

Ils étaient allés voir le chauffeur de taxi attiré d'Hélène Lazareff, Émile, qui se disait prêt à nous conduire jusqu'à Paris s'il se procurait suffisamment d'essence. Selon lui, c'était possible mais pas avant deux, trois jours. Jean-Luc en fulminait d'impatience.

D'après Anne Wiazemsky, *Un an après*, 2015

Propositions

EXPRESSION ÉCRITE

1. According to the journalist, why should livestock farming be stopped?

Analyse

La question ne pose aucune difficulté majeure si ce n'est celle du terme clé «livestock». Toutefois le titre de l'extrait et son contenu permettent de l'expliciter sans aucune ambiguïté. La question ne suggère aucune nuance quant au fait qu'il faille, selon le journaliste, mettre fin à l'élevage du bétail. Il s'agit donc uniquement de relever les différentes raisons pour lesquelles ce dernier abonde dans ce sens. Une simple liste paraphrastique sans reformulation personnelle ne peut suffire pour répondre aux attentes. La réponse proposée doit s'assurer de s'être approprié les segments retenus. La reformulation ne peut se faire sans une certaine richesse lexicale, notamment dans le domaine de l'agriculture et de l'élevage pour cette question.

Proposition de corrigé

For the journalist, ending livestock farming would be ethically and environmentally reasonable.

Future generations will inevitably condemn the treatment inflicted on sentient animals as they are confined in cruel conditions for the sake of food by a society claiming to love them.

Furthermore, considering that free-range farming is ethical is nonsensical as it causes massive environmental harm through inefficiency, habitat destruction, and biodiversity loss.

With lab-grown meat offering a viable alternative, terminating livestock farming would restore land to nature and thus contribute to feeding more people sustainably.
(87 words)

2. In your opinion, are our eating habits likely to change over the coming decades?

Analyse

Le libellé du sujet sous-entend une remise en question possible de nos habitudes alimentaires et vous invite à partager votre opinion personnelle sur la question. Il faut donc proposer vos propres connaissances et analyse du sujet. Dans la mesure où l'adjectif *likely* indique une probabilité de l'ordre de 50 %, on pourrait tendre vers un plan en deux parties, mais cette approche n'est pas la seule possible. Il est toujours apprécié de nuancer les arguments et d'éviter le classique « oui-non ».

Le principal danger consisterait à reprendre les arguments présentés par le texte ou encore à tout ramener à vous en raison du « *in your opinion* ».

Proposition de corrigé

“Tell me what you eat, and I’ll tell you who you are.” This famous quote by epicure and gastronome Brillat-Savarin reflects how deeply food is linked to identity and society, suggesting our eating habits depend on our beliefs and principles.

The climate crisis and growing awareness of animal welfare are actually pushing more people, whatever their age, toward more sustainable and eco-friendly diets. Plant-based alternatives, which I chose years ago, or flexitarianism are becoming mainstream. For example, in 2023, 44 % of 25-34 year-olds in the U.S. were vegans.

Besides, as concerns over health are rising, our food choices, mine included, are influenced by the latest trends. Now that obesity is considered a worldwide epidemic, it seems consistent to turn to balanced, home-cooked meals and reduce processed food. Governments and schools are paving the way by promoting healthy eating through public campaigns and educational programs.

Yet I am aware that changing eating habits is not challenge-free. For instance, for my great-grandparents, consuming meat daily was a way to forget about the rationing and shortages that came with the war.

To conclude, I would say that however slowly eating habits evolve, they are gradually being reshaped.

(195 words)

Proposition de traduction

He picked up the phone and began a series (1) of calls to people whose (2) identities were unknown to me. (3) While sipping (4) my black coffee, I decided (5) to do without (6) his approval and to keep going to the beach, determined to make the most of this break (7).

Swimming (8) for a long time in the clear, cool sea momentarily allayed my fears (9). I went back up to the house at lunchtime and found them all in the shade (10) on the terrace. All four of them seemed to be holding a war council. When I told them so (11), Jean-Luc shot me a dark look.

“(12) This is no time for jokes,” he said. Cournot gave me a kind smile.

Rosier and Bambam summed up for me what they had done that morning.

They had gone to see Hélène Lazareff's regular taxi driver, Émile, who said he would drive us to Paris if he could get enough petrol. He said it was possible, but not before a couple of days. Jean-Luc was railing against it with impatience.

Notes de traduction

- (1) Au singulier, comme au pluriel, *series* prend toujours un « s »
- (2) Le pronom adjectif possessif *whose* sera systématiquement suivi de l'article Ø bien qu'en français « dont » soit suivi d'un article indéfini ou défini.
- (3) Variante : *he started to successively call people the identity of whom I did not know*.
- (4) La conjonction *while* permet de mettre deux actions en parallèle.
- (5) « décidai » est conjugué au passé simple et non à l'imparfait, imposant donc le choix du prétérit.
- (6) Variante : *to go without*.
- (7) « parenthèse » indique bien une pause. Une traduction littérale laisserait entendre que vous n'avez pas analysé l'extrait.
- (8) L'infinitif sujet se traduit par le gérondif *swimming* qui indique que l'action est en cours (= le fait de faire une activité)
- (9) Variante: *A long swim in the clear, fresh sea momentarily calmed/assuaged/alleviated my fears*.
- (10) La virgule entre les deux compléments circonstanciels de lieu disparaît en anglais.
- (11) Le pronom de reprise *so* remplace la proposition entière *seemed to be holding a war council*, ce qui permet d'alléger la phrase.
- (12) Il faut penser à ouvrir et fermer les guillemets à chaque incursion de dialogue.



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CONCOURS 2019

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Le non respect des limites indiquées sera sanctionné.

Les candidats sont priés de mentionner en tête de leur copie la langue dans laquelle ils ont composé, qui est obligatoirement celle qu'ils ont indiquée dans leur dossier d'inscription.

Les candidats trouveront l'épreuve d'allemand à la page 1, l'épreuve d'anglais à la page 3, l'épreuve d'arabe à la page 5, l'épreuve d'espagnol à la page 7, l'épreuve d'italien à la page 9 et l'épreuve de russe à la page 11.

Remarque : les références et les titres du thème, lorsqu'ils existent, ne sont pas à traduire.

**Pour faciliter la correction de l'épreuve, les candidats écriront
leur texte toutes les deux lignes.**

ANGLAIS

Expression écrite

A new portrait that is vaguely reminiscent of something painted by an old master is headed to Christie's New York auction block later this week, making it the first computer-generated artwork up for sale at a prestigious art house.

The print, called 'Edmond de Belamy', is a blurry depiction of what could be a 'man of the church' against a dark background, floating in the upper left corner of a gilt frame. It was created by Obvious, a Paris-based art collective that has been using artificial intelligence to make a series of 'paintings' since they began the project last year. Each image is printed on canvas with inkjet then 'framed and signed with the math formula' used to create it in the lower right corner, the group explains on its website.

"The whole process is about humans having as little input as possible in the finished piece," Gauthier Vernier, one of three 25-year-olds who comprise Obvious, told Time.

Christie's says the trio – Vernier, Hugo Caselles-Dupré and Pierre Fautrel – are "engaged in exploring the interface between art and artificial intelligence." Their primary method is the use of Generative Adversarial Networks. These are algorithms composed of two competing parts that ultimately teach themselves through trial and error, as opposed to being programmed by humans.

Caselles-Dupré explained the process has two programs — on one side, the Generator and on the other the Discriminator: "We fed the system with a data set of 15,000 portraits painted between the 14th century and the 20th. The Generator makes a new image based on the set, then the Discriminator tries to spot the difference between a human-made image and one created by the Generator. The aim is to fool the Discriminator into thinking that the new images are real-life portraits. Then we have a result."

Obvious sold its first piece, 'Le Comte de Belamy', directly to a Paris-based art collector Nicolas Laugero-Lasserre, for €10,000 (more than \$11,000) in February.

"I just find it amazing that some young people built a program allowing the creation of an original artwork, based on a selection of the 'bests' from past art history," Laugero-Lasserre, said in an interview with Artnet News. He also called the approach "grotesque and amazing at the same time."

Adapted from www.npr.org, October 22, 2018

1. According to the journalist, how was the portrait created? Answer the question in your own words. (80 words, ± 10%)
2. What impact do you think artificial intelligence (AI) is likely to have on art and culture (painting, sculpture, music, cinema, literature, etc.)? (180 words, ± 10%)

ANGLAIS

Thème

L'hypothèse extraterrestre ne fait décidément pas l'unanimité. Oumuamua, un *bolide en forme de cigare repéré en 2017 pendant sa traversée du système solaire, pourrait avoir été envoyé par des extraterrestres, ont suggéré deux chercheurs d'Harvard dans un article savant. Ils ont été vivement critiqués par la communauté scientifique.

Oumuamua a été repéré à l'automne 2017 par le télescope Pan-STARRS1 à Hawaï, d'où son nom, qui signifie « messager » en hawaïen. Il mesure environ 400m de longueur et 40m de largeur, et a été traqué par plusieurs télescopes, en sa qualité de premier objet détecté venant d'un autre système stellaire. Après avoir été qualifié d'astéroïde, une équipe de l'Agence spatiale européenne a estimé en juin qu'il s'agissait plus probablement d'une comète.

Un « scénario exotique », selon les propres mots des auteurs du nouvel article, serait que « Oumuamua pourrait être une sonde totalement opérationnelle envoyée volontairement près de la Terre par une civilisation extraterrestre ». L'idée a rapidement enflammé Twitter et la communauté scientifique.

D'après *20 Minutes Tech*, 8 novembre 2018

* Aide à la traduction :

bolide = *fireball*

Propositions

EXPRESSION ÉCRITE

1. According to the journalist, how was the portrait created? (80 words $\pm 10\%$)

Proposition de corrigé

The portrait was made using artificial intelligence, specifically a type of algorithm called a Generative Adversarial Network. This system includes two programmes: a Generator, which creates images, and a Discriminator, which tries to tell if the image is made by a human or a machine. The AI was trained using a dataset of 15,000 classical portraits. The final image was then printed on canvas and signed with the mathematical formula used, showing minimal human involvement in the creative process.

(79 words)

2. What impact do you think artificial intelligence (AI) is likely to have on art and culture? (180 words $\pm$ 10 %)

Analyse

Le sujet invite les candidats à réfléchir aux conséquences de l'IA, sujet particulièrement d'actualité, et il engage à exprimer son opinion sur les effets probables de l'IA sur l'art et la culture. On peut commencer par donner des exemples de changements opérés grâce à l'IA dans le domaine de l'art et de la culture, puis envisager des effets positifs et négatifs, avant de proposer un équilibre.

Proposition de corrigé

Artificial intelligence is already starting to transform art and culture in significant ways. In painting and sculpture, AI can generate original works based on historical (1) styles, challenging our traditional ideas of creativity and authorship. In music, AI can compose songs, mimic famous composers, or create entirely new genres. In cinema, it can assist with screenwriting, special effects, or even generate virtual actors. In literature, AI can write poems, short stories, or support authors with grammar, plot development, and editing tools.

This technological evolution raises crucial questions about the role of the artist. Is the machine the creator, or is it just a tool used by a human? While some fear that AI may replace artists, it is more likely to become a collaborative partner. AI can inspire new styles, make art more accessible, and encourage experimentation. However, there is also a risk of over-reliance on algorithms, which may reduce the emotional depth and originality of art. Ultimately, AI is reshaping creative industries and forcing us to redefine what it means to be an artist in the 21st century.

(179 words)

Note

- (1) *Historical*: qui est lié à l'histoire. *Historic*: un événement marquant dans l'histoire.

THÈME

Proposition de traduction

The extraterrestrial hypothesis is clearly far from having unanimous support. Oumuamua, a cigar-shaped fireball (1) spotted in 2017 as it passed through (2) the solar system, might have been sent (3) by aliens, suggested two Harvard researchers in a scholarly article. They were sharply criticized by the scientific community.

Oumuamua was detected in the autumn of 2017 by the Pan-STARRS1 telescope in Hawaii – hence its name, which means “messenger” in Hawaiian. It measures about 400 metres in length and 40 metres in width, and was tracked by several telescopes as it was the first object (4) ever (5) detected coming from another stellar system.

Initially classified (6) as an asteroid, a team from the European Space Agency concluded in June that it was more likely a comet. An “exotic scenario”, in the authors’ own words (7), is that “Oumuamua could be a fully operational probe (8) deliberately sent near Earth by an alien civilization.” The idea quickly set Twitter and the scientific community abuzz. (9)

Notes de traduction

- (1) *Cigar-shaped fireball*: adjectif composé formé ici d’un nom et d’un participe passé reliés par un trait d’union.
- (2) *As it passed through*: transformation du nom en verbe.
- (3) *Might have been sent*: structure hypothétique au passé et à la voix passive. *Might* indique une probabilité faible mais possible.
- (4) *As it was the first object*: utilisation d’une structure verbale exprimant la cause (« car il était »).
- (5) *Ever* insiste sur le caractère historique/unique.
- (6) *Initially classified*: traduction plus concise pour alléger la structure passive en français. L’adverbe *initially* permet de marquer l’idée d’antériorité.
- (7) *The authors’ own words*: omission du mot « article » pour permettre l’utilisation d’un cas possessif. Si on veut absolument le traduire, il faudra dire: *in the words of the authors of the new article* ou *in the new article’s authors’ own words*. Ce qui serait très lourd.
- (8) *Fully operational probe*: ne pas oublier de mettre l’adjectif et l’adverbe qui s’y rattachent avant le nom.
- (9) *Set... abuzz* = expression imagée signifiant « provoquer de vives réactions »/« faire du bruit médiatique ».

ECOLE POLYTECHNIQUE - ESPCI - ECOLES NORMALES SUPERIEURES
CONCOURS D'ADMISSION 2019

MARDI 23 AVRIL 2019 - 14h00 – 18h00
FILIERES MP, PC et PSI - Epreuve n° 6

Durée totale de l'épreuve écrite de langue vivante (A+B) : 4 heures

L'utilisation de dictionnaire et traductrice n'est pas autorisée pour cette épreuve.

COMPOSITION D'ANGLAIS **(XEULCR)**

PREMIÈRE PARTIE (A) **SYNTHÈSE DE DOCUMENTS**

Contenu du dossier : trois articles et un document iconographique pour chaque langue. Les documents sont numérotés 1, 2, 3 et 4.

Sans paraphraser les documents proposés dans le dossier, le candidat réalisera une synthèse de celui-ci, en mettant clairement en valeur ses principaux enseignements et enjeux dans le contexte de l'aire géographique de la langue choisie, et en prenant soin de n'ajouter aucun commentaire personnel à sa composition.

La synthèse proposée devra comprendre entre 600 et 675 mots et sera rédigée intégralement dans la langue choisie. Elle sera en outre obligatoirement précédée d'un titre proposé par le candidat.

SECONDE PARTIE (B) **TEXTE D'OPINION**

En réagissant aux arguments exprimés dans cet éditorial (document numéroté 5), le candidat rédigera lui-même dans la langue choisie un texte d'opinion d'une longueur de 500 à 600 mots.

A – Document 1

What do we mean by human enhancement?

The New York Academy of Sciences
May 15, 2018

Recent advances in human enhancement technologies offer new and unique opportunities to redesign ourselves. Such efforts have a long history, as people have been attempting to overcome their biological limitations or remove supposed flaws for millennia. As George Church, PhD, from the Wyss Institute at Harvard University explained, before the 21st century human enhancements included anything from: vaccines preventing smallpox, polio, and measles; to cars and jets that moved people across the world at previously unimaginable speeds and distances; to the smartphone you may be reading this article on; and the cup of coffee you drink every morning to help wake up. Dr. Church believes that the latest human enhancement efforts in fields like gene editing and artificial intelligence are only following this well-trod path.

Eventually, Dr. Church suspects that human enhancement technologies could provide resistance to diseases such as malaria, tuberculosis, and Lyme disease, allow for up-to-date diagnostic readouts in healthcare, and even reverse aging. Advancement in genome editing technologies such as CRISPR could have the greatest impact by targeting, for example, human genes like CCR5 — an essential gene for HIV virus entry into target cell — and lead to a functional cure for HIV infection.

Such promises for the future of enhancement technologies are exciting, but not without potential risk. Critics have questioned the ethics of using these technologies to fundamentally alter human biology, and have called for careful investigations of the risks and potential complications before we can safely apply these new technologies. Moreover, there may be additional considerations if these new technologies are used for non-therapeutic purposes. As Josephine Johnston, LLB, MBHL, at The Hastings Center explained, “If you have a sick person and you’re thinking about using a new drug to help them, risk is always tolerated — because the person’s life is at stake. But when you’re thinking about enhancement technology, it’s a slightly different risk-benefit calculus because that person isn’t necessarily dying or suffering, they’re receiving an enhancement.”

Additionally, she argued, “by definition, an enhancement technology claims to improve a person or a group of people. What it means to be improved, to be better, is very much a socially and culturally constructed notion. I would worry most about social pressure to conform to limited visions of the good and the improved, and our failure to adequately question and interrogate those visions.”

It is critical to discuss the principles that govern the ethical conduct of human enhancement. Dr. George Church stated that the NIH [National Institute of Health] requires grantees to teach the responsible conduct of research to young scientists. He added that “most engineering disciplines have safety and security components and a code of ethics.” However, Ms. Johnston maintained that individual scientists alone shouldn’t be required to focus on the ethics of the individual use of the technology they develop. “I don’t think they should ignore it, but that’s not primarily the work that scientists are trained to do and it would be an unreasonable thing to place on [their] shoulders.” However, she continued, “I do think that it’s crucial for scientists as a collective group to be involved in discussions for developing policy.”

While there have been, and will continue to be major technology revolutions in human enhancement, Ms. Johnston believes that human enhancement raises long standing questions about what it means to be human. “There are going to be upsides and downsides to these different enhancement technologies, but that complexity might be difficult to see at first and we might not agree on it. How will we know when we’re seeing something that really, truly can improve people’s lives? These questions about what makes for a good — or even a better — life are questions we’ve been grappling with for a long time. I’m not sure that I see a brand new question. Just new iterations of old questions about what it means to live well.”

A – Document 2

The power to upgrade our own biology is in sight — but is society ready for human enhancement?

By Raya Bidshahri
Singularity Hub
February 15, 2018

Upgrading our biology may sound like science fiction, but attempts to improve humanity actually date back thousands of years. Every day, we enhance ourselves through seemingly mundane activities such as exercising, meditating, or consuming performance-enhancing drugs, such as caffeine or adderall. However, the tools with which we upgrade our biology are improving at an accelerating rate and becoming increasingly invasive.

In recent decades, we have developed a wide array of powerful methods, such as genetic engineering and brain-machine interfaces, that are redefining our humanity. In the short run, such enhancement technologies have medical applications and may be used to treat many diseases and disabilities. Additionally, in the coming decades, they could allow us to boost our physical abilities or even digitize human consciousness.

[...]

Ethical challenges of enhancement

There are many social and ethical implications of such advancements.

One of the most fundamental issues with cognitive and physical enhancement techniques is that they contradict the very definition of merit and success that society has relied on for millennia. Many forms of performance-enhancing drugs have been considered “cheating” for the longest time.

But perhaps we ought to revisit some of our fundamental assumptions as a society.

For example, we like to credit hard work and talent in a fair manner, where “fair” generally implies that an individual has acted in a way that has served him to merit his rewards. If you are talented and successful, it is considered to be because you chose to work hard and take advantage of the opportunities available to you. But by these standards, how much of our accomplishments can we truly be credited for?

For instance, the genetic lottery can have an enormous impact on an individual’s predisposition and personality, which can in turn affect factors such as motivation, reasoning skills, and other mental abilities. Many people are born with a natural ability or a physique that gives them an advantage in a particular area or predisposes them to learn faster. But is it justified to reward someone for excellence if their genes had a pivotal role in their path to success?

Beyond that, there are already many ways in which we take “shortcuts” to better mental performance. Seemingly mundane activities like drinking coffee, meditating, exercising, or sleeping well can boost one’s performance in any given area and are tolerated by society. Even the use of language can have positive physical and psychological effects on the human brain, which can be liberating to the individual and immensely beneficial to society at large. And let’s not forget the fact that some of us are born into more access to developing literacy than others.

Given all these reasons, one could argue that cognitive abilities and talents are currently derived more from uncontrollable factors and luck than we like to admit.

[...]

Another major ethical concern is equality. As with any other emerging technology, there are valid concerns that cognitive enhancement tech will benefit only the wealthy, thus exacerbating current inequalities. This is where public policy and regulations can play a pivotal role in the impact of technology on society.

Enhancement technologies can either contribute to inequality or allow us to solve it. Educating and empowering the underprivileged can happen at a much more rapid rate, helping the overall rate of human progress accelerate. The “normal range” for human capacity and intelligence, however it is defined, could shift dramatically towards more positive trends.

Many have also raised concerns over the negative applications of government-led biological enhancement, including eugenics-like movements and super-soldiers. Naturally, there are also issues of safety, security, and well-being, especially within the early stages of experimentation with enhancement techniques.

Brain-machine interfaces, for instance, could have implications on autonomy. The interface involves using information extracted from the brain to stimulate or modify systems in order to accomplish a goal. This part of the process can be enhanced by implementing an artificial intelligence system onto the interface — one that exposes the possibility of a third party potentially manipulating individual’s personalities, emotions, and desires by manipulating the interface.

A tool for transcendence

It’s important to discuss these risks, not so that we begin to fear and avoid such technologies, but so that we continue to advance in a way that minimizes harm and allows us to optimize the benefits.

[...]

A – Document 3

Building a better human with science? The public says, no thanks

By Gina Kolata
The New York Times
July 27, 2016

Americans aren't very enthusiastic about using science to enhance the human species. Instead, many find it rather creepy.

A new survey by the Pew Research Center shows a profound distrust of scientists, a suspicion about claims of progress and a real discomfort with the idea of meddling with human abilities.

The survey also opens a window into the public's views on what it means to be a human being and what values are important. Pew asked about three techniques that might emerge in the future but that are not even close to ready now: using gene editing to protect babies from disease, implanting chips in the brain to improve people's ability to think, and transfusing synthetic blood that would enhance performance by increasing speed, strength and endurance.

The public was unenthusiastic on all counts, even about protecting babies from disease. Most, at least seven out of 10, thought scientists would rush to offer each of the technologies before they had adequately tested or even understood them.

Two-thirds say they would not want the enhancement technologies for themselves. And even though genetic manipulations appear more frightening than a chip or artificial blood, which might be removed, the public finds it slightly more acceptable to change a baby's genes than to enhance human abilities.

Religion affected attitudes on these issues. The more religious people said they were, the less likely they were to want genetic alterations of babies or technologies to enhance adults. The differences were especially pronounced between evangelical Protestants and people who said they were atheists or agnostics.

For example, 63 percent of evangelical Protestants said gene editing to protect babies from serious diseases was meddling with nature. In contrast, 81 percent of atheists and 80 percent of agnostics said it was not fundamentally different from other ways humans have tried to better themselves.

Cary Funk, an associate director at Pew and the lead researcher for the survey, said she was surprised by the extent of the public's worries. "These are appealing ideas: being healthier, improved minds, improved bodies," she said.

And she was surprised that the public seemed nearly equally worried about all three of the technologies. After all, she said, "these are three different kinds of technologies, for different purposes."

[...]

The three specific technologies noted in the Pew survey are recent advances. Gene editing has been taken up by thousands of laboratories around the world with the recent discovery of a method that allows researchers to home in on a gene of interest and delete, replace or alter it. The method, known as Crispr, is still under development — it can lead to the unintended alteration of other genes — and no one is ready to start altering genes of babies.

Even if Crispr were perfected, there are other problems with gene editing to prevent disease. For example, how and when would you alter these genes? And what diseases are you thinking of eliminating? Most involve many genes acting together in ways that are not understood, so even the

idea of altering a gene to protect a baby from disease seems, for now, to be limited to a very few disorders, like sickle cell, which involves a single mutation that can be corrected in blood cells that are easily accessible.

The idea for synthetic blood came from a report out of Britain last year that scientists were planning to start giving synthetic blood as a substitute for donated human blood. There was no thought of making people stronger or faster. But if synthetic blood could, for example, carry more oxygen, the possibility of enhancement exists. Once again, though, it is a futuristic notion.

This year, researchers reported that they had put a chip in the brain of a quadriplegic man that transmitted signals to a sleeve around his arm, allowing him to use it. Of course, that is a far cry from implanting brain chips to make people smarter or better able to concentrate, something that scientists do not know how to do.

Conversations in focus groups reflected the trends in the survey, with people saying they worried about what is natural and about the risks of altering humans. Nearly half said it would be acceptable to use synthetic blood, for example, if it simply restored a person's peak abilities. But more than three-quarters were opposed to using it to make people faster or stronger than would otherwise have been possible.

[...]

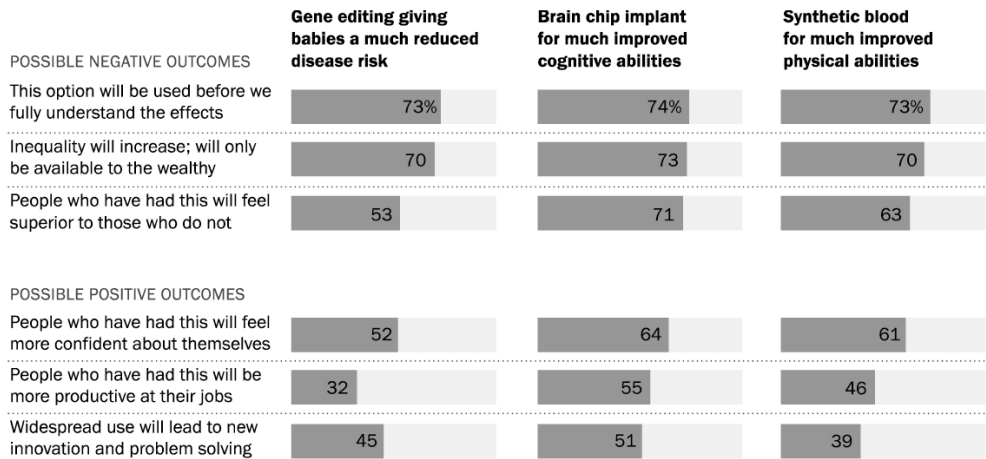
A – Document 4

U.S. public wary of biomedical technologies to ‘enhance’ human abilities

By Cary Funk, Brian Kennedy and Elizabeth Sciupac
Pew Research Center
July 26, 2016

Most Americans expect more negative than positive outcomes from each of these enhancements

% of U.S. adults who say _____ is likely to happen if each of these enhancements becomes available



Note: Respondents who said “not likely” or did not give an answer are not shown.

Source: Survey of U.S. adults conducted March 2-28, 2016.

“U.S. Public Wary of Biomedical Technologies to ‘Enhance’ Human Abilities”

PEW RESEARCH CENTER

B – Document 1

Can technology make us even more human?

By John Nosta
Fortune
April 5, 2018

Humans are on the verge of transcending their relationship with the world around them. This emergence, though, is not due to philosophical revelations or spiritual enlightenment. Instead, it's being driven by technological advances that create a new and richer reality, expanding our perceptions and introducing new sensory and computational skills to our physiology.

Without technological augmentation, we live in a world where we only experience a small part of the broader reality. Consider vision and smell, for example. These two senses reflect just small subsets of the vast reality in which we live.

We see just a very small part of the electromagnetic spectrum. This vast energy field — from X-rays to radio waves — engulfs our reality, yet we are only passive participants in this other visual world. And our sense of smell, fine-tuned for our individual needs, is certainly constrained by our biology. From mystics to physicists, the notion that we live in an illusion appears to be true.

So, then, what is the role of technology in augmenting and enhancing our human experience? Can technology facilitate a “new normal” for our broader perception of reality?

The truth is that technology is already reshaping our reality, though in subtle ways that most people don't realize. The examples are numerous. Prescription eyeglasses, contact lenses, or laser eye surgery can give us better than 20/20 vision. Hearing aids and cochlear implants now offer programmable features to allow users to modify their soundscapes and create unique aural experiences. Prosthetics now compete with limbs, in both form and function. And genomics can help rewrite our DNA source code with techniques like CRISPR.

Cognition also rests at the forefront of human enhancement. From neural implants to nootropics (drugs that can increase brain function), we are at the precipice of advances that will fundamentally expand our ability to process information and comprehend both simple and abstract ideas.

This all leads me to feel a bit sorry for our human self as it exists today, and even to question the notion that the human construct is definitive. Our human form and functionality is certainly not!

Technology allows us to expand the richness of life to experience more — more sights, sounds, thoughts, and perhaps other senses that we haven't even discovered. These experiences challenge the fundamental aspects of our being. They allow us — no, demand us — to charge forth, as in the 19th century doctrine of manifest destiny. Only this time, the uncharted territory to conquest is humanity itself.

What emerges will be something more. Dare I say, it'll be something even more human.

SYNTHÈSE

Analyse

Les différents documents abordent la question de la définition de l'augmentation de l'être humain, opposant des points de vue, et soulignant l'accélération de cette notion par le biais de technologies plus sophistiquées. Certains craignent des modifications irréversibles (avec les risques médicaux qui les accompagnent) tandis que d'autres soulignent que l'Homme a déjà commencé à modifier la nature (vaccins, par exemple). Se posent alors des questions éthiques, mais aussi d'équité sociale.

Pour un concours, il est bon de penser à regrouper les éléments convergents et divergents, et à évaluer ceux qui échappent à cette classification et qui souvent permettent de mieux structurer la synthèse, et d'éviter les plans mécaniques et binaires. Cela sera valorisé.

Proposition de corrigé

Human enhancement in the hot seat

The dossier under scrutiny is composed of a New York Academy of Sciences article of 2018, addressing the issue of what defines us, a Singularity Hub article of 2018 by Raya Bidshahri on whether we should upgrade our biology, a New York Times article of 2016 by Gina Kolata on people's response to enhancement, and a Pew Center chart from 2016 on Americans' expectations on enhancement. They all wonder how far is too far when it comes to human enhancement.

Enhancing our capabilities is nothing new, explains the NY Academy of Sciences, be it vaccines (polio) or technology (faster transports, more appliances and devices). Raya Bidshahri underlines that humankind has strived to enhance its capabilities from times immemorial, if we include everyday activities such as meditation or drugs. Blood transfusions and gene editing, as explained by Gina Kolata, are under way in myriads of laboratories, and, according to respondents with the Pew Center, with time, enhancements such as gene editing, brain chip implants or transfusions will boost patients' confidence.

The very nature of today's enhancement, however, triggers innumerable questions. Hitherto, we had chosen to err on the side of caution, and young scientists at the National Institute of Health, for example, received ethical guidelines, as explained by G. Church in the Academy of Sciences article. Gene-editing technologies or AI will follow, he adds, in the footsteps of previous enhancing techniques. While all the articles concur on the groundbreaking nature of new enhancing technologies, they are at loggerheads on whether we should greenlight them. The Singularity Hub emphasizes the immense benefits that could be derived to improve patients' resistance to malaria, Lyme disease or HIV, but also underlines that using such techniques for non-therapeutic purposes de facto raises the issue of risks and complications. Moreover, it questions how (and if) to define social constructions and norms. Raya Bidshahri highlights that enhancement would be a game

changer since our societies are supposedly built on merit. Access to these techniques would also reinforce inequalities in the best of cases, but also favour eugenics. Gina Kolata's conclusions and the Pew Center chart underline the general public's scepticism. According to the former, Americans are wary of enhancement, a direct consequence of their distrust for science, even when it comes to treating babies' genetic diseases. The degree of support is predicated on values; 63 % of evangelical Protestants consider treating genetic diseases at birth as tampering with nature, versus 81 % of atheists considering it similar to prior cures. A majority of Americans, 73 % (Pew Center), express their fear that gene editing will be relied upon before we totally master the technique, while 74 % deem that brain implants will fall into the same category and 73 % are not comfortable with the prospect of blood transfusion for enhancement purposes.

Essentially, the three articles raise the ethical issue tied to enhancement techniques. Ms Johnston, cited in the New York Academy of Sciences, underlines that the issue is correlated with our definition of humanity, while Ms Bidshahri declares it challenges the definition of the type of society we aim at: brain interfaces will raise concerns about equality but also about autonomy and potential manipulation. Such worries are backed by Americans who put a premium on not crossing a line and sticking to what is natural.

(537 words)

TEXTE D'OPINION

Analyse

L'article de John Nosta propose une vision strictement positive de l'augmentation des êtres humains, faisant l'apologie des découvertes les plus récentes et à même de nous transformer en surhommes dotés de capacités physiques mais aussi cognitives illimitées. En un sens, cette approche facilite la tâche des candidats alors que dans le débat public les questions éthiques sont soulevées avec clarté depuis des années. Pour autant, ainsi que le rappellent plusieurs rapports, adopter un point de vue doit s'accompagner de mesure.

Le rappel des arguments principaux est requis, c'est en réaction à ceux-ci que s'expriment les candidats, avec obligation pour eux d'apporter des exemples précis. Le texte d'opinion sera structuré, étayé, et rédigé dans une langue concise.

Proposition de corrigé

In a Fortune article from 2018, John Nosta sings the praises of human enhancement. Hitherto, our extended relationship to the world has to be either philosophical or spiritual. No longer the latter, technology will be a game-changer enabling us to go far beyond what our limited perception has allowed. It is already happening through enhanced vision or hearing, or even potentially through gene editing. Augmented cognitive functions – thanks to implants or nootropics – are beckoning, leading the journalist to unapologetically welcome and embrace the change.

I beg to differ on the one-sided depiction of human enhancement. That there should not be a single word on the myriad questions raised by such prospects seems concerning for the integrity of the human race. Is hubris a defining feature of humankind?

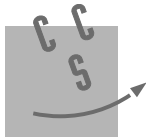
There is a thin line, as developed in the article, between progress (medical, technical) and enhancement. This is the argument developed to justify the alleged need to augment our cognitive or physical capabilities. We do indeed go beyond what nature intended when helping patients recover sight, and the discovery of antibiotics has saved millions of lives that the proponents of a “natural selection” akin to eugenics would not have saved. Bionics raises the issue of the body considered as a biological machine whose parts that do not work can be replaced or remodelled. While it is true that many conditions blighting lives could be eliminated, the society we live in abides by core values whose disappearance has long tempted transhumanists. Their ideology is premised on rejecting any form of constraints, be they individual, social, material or technological, and on the assumption that technology will always come up with a solution exempting us from the need to sacrifice our lifestyle. Not only is forced evolution exactly what they aim to usher in, they also consider issues as evidence that fear contains and muzzles us as a race, but their vision jeopardizes societies, and avoids addressing the true issue of responsibility (climate change is a case in point) and free will. They encourage people not to remain in a culture of fear and irrationality, which they find to be self-defeating. They are leading the charge to bring that improvement to the world and themselves, as Zoltan Istvan contends.

Who is going to decide on choosing technologies that enhance us, and how to make sure that funding is not the end result of vested interests? In this respect, it should be noted that J. Nosta is the founder of NOSTALAB, “a leading health think tank” in his own words. “The dark side of human nature could also be empowered through these same tools. We need a very strong ethical and cultural framework to increase the odds that we’ll use these technologies wisely” (Metzl).

As genetic editing affects the code of what it means to be human, it would be extremely foolhardy for the technology to race faster than its supervision and governance. In the context of transhumanism and the creed that “to break things and move fast” is the only way out of constraints, there are good grounds for being wary. Whatever our choices, we need to realise that while the promises are undeniable, eugenics was chosen with a view to improving society.

“The parallels between the ugly eugenics of the late nineteenth century and the first half of the twentieth and what’s beginning to happen today are not insignificant” (Metzl): let us take a leaf out of the book of past atrocities and put up boundaries to safeguard humanity.

(581 words)



CONCOURS CENTRALE•SUPÉLEC

4 heures

Calculatrices interdites

2019

Anglais

MP, PC, PSI

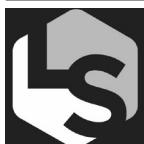
L'usage de tout système électronique ou informatique est interdit dans cette épreuve.

Rédiger en anglais et en 500 mots une synthèse des documents proposés, qui devra obligatoirement comporter un titre. Indiquer avec précision, à la fin du travail, le nombre de mots utilisés (titre inclus), un écart de 10% en plus ou en moins sera accepté.

Ce sujet propose les documents suivants :

- un article paru sur le site www.livescience.com, de HARRY T DYER, le 8 mai 2018 ;
- un extrait d'article paru dans *Pacific Standard*, de CYNTHIA LEIFER, le 30 avril 2015 ;
- la transcription d'échanges entre Ross et Phoebe au cours de l'épisode 2 de la saison 3 de la série *Friends* ;
- un dessin humoristique de Tony Auth.

L'ordre dans lequel se présentent les documents est aléatoire.



I Watched an Entire Flat Earth Convention — Here's What I Learned

by HARRY T DYER, www.livescience.com, May 8, 2018

Speakers recently flew in from around (or perhaps, across?) the earth for a three-day event held in Birmingham: the UK's first ever public Flat Earth Convention. It was well attended, and wasn't just three days of speeches and YouTube clips (though, granted, there was a lot of this). There was also a lot of team-building, networking, debating, workshops — and scientific experiments.

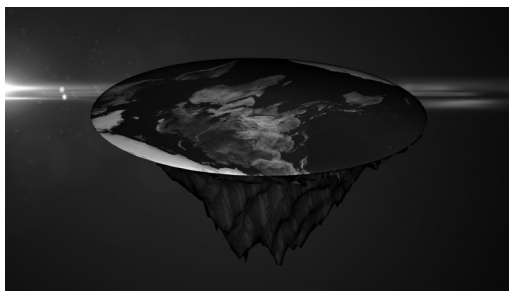
Yes, flat earthers do seem to place a lot of emphasis and priority on scientific methods and, in particular, on observable facts. The weekend in no small part revolved around discussing and debating science, with lots of time spent running, planning, and reporting on the latest set of flat earth experiments and models. Indeed, as one presenter noted early on, flat earthers try to “look for multiple, verifiable evidence” and advised attendees to “always do your own research and accept you might be wrong”.

While flat earthers seem to trust and support scientific methods, what they don't trust is scientists, and the established relationships between “power” and “knowledge”. This relationship between power and knowledge has long been theorised by sociologists. By exploring this relationship, we can begin to understand why there is a swelling resurgence of flat earthers.

Let me begin by stating quickly that I'm not really interested in discussing if the earth is flat or not (for the record, I'm happily a “globe earther”) — and I'm not seeking to mock or denigrate this community. What's important here is not necessarily whether they believe the earth is flat or not, but instead what their resurgence and public conventions tell us about science and knowledge in the 21st century.

Multiple competing models were suggested throughout the weekend, including “classic” flat earth, domes, ice walls, diamonds, puddles with multiple worlds inside, and even the earth as the inside of a giant cosmic egg. The level of discussion however often did not revolve around the models on offer, but on broader issues of attitudes towards existing structures of knowledge, and the institutions that supported and presented these models.

Flat earthers are not the first group to be skeptical of existing power structures and their tight grasps on knowledge. This viewpoint is somewhat typified by the work of Michel Foucault, a famous and heavily influential 20th century philosopher who made a career of studying those on the fringes of society to understand what they could tell us about everyday life.



He is well known, amongst many other things, for looking at the close relationship between power and knowledge. He suggested that knowledge is created and used in a way that reinforces the claims to legitimacy of those in power. At the same time, those in power control what is considered to be correct and incorrect knowledge. According to Foucault, there is therefore an intimate and interlinked relationship between power and knowledge.

At the time Foucault was writing on the topic, the control of power and knowledge had moved away from religious institutions, who previously held a very singular hold over knowledge and morality, and was instead beginning to move towards a network of scientific institutions, media monopolies, legal courts, and bureaucratized governments. Foucault argued that these institutions work to maintain their claims to legitimacy by controlling knowledge.

In the 21st century, we are witnessing another important shift in both power and knowledge due to factors that include the increased public platforms afforded by social media. Knowledge is no longer centrally controlled and — as has been pointed out in the wake of Brexit — the age of the expert may be passing. Now, everybody has the power to create and share content. When Michael Gove, a leading proponent of Brexit, proclaimed: “I think the people of this country have had enough of experts,” it would seem that he, in many ways, meant it.

It is also clear that we’re seeing increased polarization in society, as we continue to drift away from agreed singular narratives and move into camps around shared interests. Recent PEW research suggests, for example, that 80% of voters who backed Hillary Clinton in the 2016 US presidential election — and 81 percent of Trump voters — believe the two sides are unable to agree on basic facts.

Despite early claims, from as far back as HG Wells’ “world brain” essays in 1936, that a worldwide shared resource of knowledge such as the internet would create peace, harmony and a common interpretation of reality, it appears that quite the opposite has happened. With the increased voice afforded by social media, knowledge has been increasingly decentralized, and competing narratives have emerged.

This was something of a reoccurring theme throughout the weekend, and was especially apparent when four flat earthers debated three physics PhD students. A particular point of contention occurred when one of the physicists pleaded with the audience to avoid trusting YouTube and bloggers. The audience and the panel of flat earthers took exception to this, noting that “now we’ve got the internet and mass communication ... we’re not reliant on what the mainstream are telling us in newspapers, we can decide for ourselves”. It was readily apparent that the flat earthers were keen to separate knowledge from scientific institutions.

At the same time as scientific claims to knowledge and power are being undermined, some power structures are decoupling themselves from scientific knowledge, moving towards a kind of populist politics that are increasingly skeptical of knowledge. [...]

Again, this theme occurred throughout the weekend. Flat earthers were encouraged to trust “poetry, freedom, passion, vividness, creativity, and yearning” over the more clinical regurgitation of established theories and facts. Attendees were told that “hope changes everything”, and warned against blindly trusting what they were told. This is a narrative echoed by some of the celebrities who have used their power to back flat earth beliefs, such as the musician B.O.B, who tweeted: “Don’t believe what I say, research what I say.”

In many ways, a public meeting of flat earthers is a product and sign of our time; a reflection of our increasing distrust in scientific institutions, and the moves by power-holding institutions towards populism and emotions. In much the same way that Foucault reflected on what social outcasts could reveal about our social systems, there is a lot flat earthers can reveal to us about the current changing relationship between power and knowledge. And judging by the success of this UK event — and the large conventions planned in Canada and America this year — it seems the flat earth is going to be around for a while yet.

Pacific Standard

The role of doubt in science

CYNTHIA LEIFER¹, April 30, 2015

Doubt is inherently human and it has a useful purpose, but that doesn’t mean it’s OK to keep questioning climate change, evolution, and the power of vaccines.

Rand Paul, the libertarian senator from Kentucky and son of former presidential candidate Ron Paul, has himself officially announced that he will run for president. Paul obtained his Bachelor’s degree from Baylor and medical degree from Duke, and worked as an eye surgeon prior to becoming a senator. As a senator, Paul leveraged his education and experience to gain credibility to speak out on many issues, includ-

ing gay marriage, abortion, and gun rights. Yet Paul consistently rejects scientifically supported findings on climate change and often makes incorrect statements on other important issues such as vaccines. During an interview with CNBC Paul stated “I’ve heard of many tragic cases of walking, talking normal children who wound up with profound mental disorders after vaccines.”

¹ Cynthia Leifer is an associate professor of immunology at Cornell University.

But Paul is not alone in his science skepticism. A recent poll by the Associated Press-GfK showed that while most Americans believe smoking causes cancer (94 percent), at least 15 percent question the safety of vaccines and up to 40 percent don't believe in evolution or that man contributed to climate change. Skepticism is healthy, but choosing not to accept scientific evidence can have long-term consequences, and, in some instances, the consequences can be far-reaching and lethal. [...]

Some parents still refuse vaccines despite strong scientific support for their safety and effectiveness; one recent study with 95,727 children demonstrated no association between the MMR vaccine and autism. Maybe it's because they heard that vaccines were potentially harmful from educated and influential sources like Senator Paul.

Doubt is inherently human and it has a useful purpose. It often forces more rigorous scientific analysis, which can sometimes lead to amazing new ideas and discoveries. When Galileo first claimed that the Earth revolves around the sun few believed him. But because he thought he could prove his hypothesis with evidence, Galileo was compelled to spend his life observing, documenting, and calculating.

When Christopher Columbus wanted to sail from Spain to Asia in the 1400s he faced opposition over the size and roundness of the Earth and whether he would succeed. This was despite the fact that Pythagoras proposed the Earth was round over 1,000 years before. Even until 1956, just before the Soviets launched Sputnik, there was a flat Earth society that promoted skepticism about Earth's roundness.

Few people today would question whether the Earth is round or that it rotates around the sun. What were once unproven hypotheses are now undeniable fact because of scientific advancements and new technologies.

Disbelief in the theory of evolution does not have such immediate impacts on young lives like vaccine refusal; however, refusal to accept and teach scientific concepts to children can still have devastating consequences. "If evolution is not taught, students will not achieve the level of scientific literacy needed to be well-informed citizens," according to the National Science

Teachers Association. They will lack the curiosity and skills to contribute to scientific progress. Worse, they will not be informed enough to understand new developments and the potential those developments may have to improve their lives, like vaccines.

Climate change denial also may not have immediate impacts on society, but it is irresponsible to fail to prepare for the eventual effects. "Sea level rise is an inevitable consequence of the warming of the ocean," according to the 2014 Miami-Dade Sea Level Rise Task Force, and "without innovative adaptive capital planning it will threaten trillions of dollars of the region's built environment." [...]

To be sure, some doubt of science is well founded. There are unethical scientists who knowingly publish and promote incorrect information. In 2014, for example, Japanese scientists published a rapid method for producing stem cells that had the potential to revolutionize the field. In just over six months, a scientific misconduct investigation revealed data falsification. Although it is progress that such falsified studies are quickly debunked, some studies take longer to disprove and can leave deep scars in the scientific community, and in the population at large, that are hard to repair. In the case of Andrew Wakefield, who proposed the connection between vaccines and autism, it took 12 years to retract the study, and for the lead author to lose his medical license. Still, vaccine opponents like Rand Paul and Robert F. Kennedy Jr. continue to use the Wakefield study as evidence that children should not be vaccinated.

Doubt allows us to question the world around us, and promotes healthy debate about controversial issues, but we must be open to new information as it comes along.

We circle satellites around the Earth to relay information so you can read this article on your cell phone. An image from the International Space Station shows the Earth's undeniable roundness. These advances were unfathomable to Columbus, but surely would have reduced any fear about sailing off the end of the Earth.

What people deny today based on belief may be undeniable tomorrow. It is best to keep a doubtful, yet open, mind.

**Transcript - Text from *FRIENDS*, an American television sitcom,
created by DAVID CRANE and MARTA KAUFFMAN, aired on *NBC* and which lasted ten seasons.**

FRIENDS: The One Where Heckles Dies / First Aired: 5.10.1995 / Season 2 Episode 3
written by MICHAEL CURTIS and GREG MALINS.

Phoebe and Ross debate throughout the episode. Below are the transcripts of the different moments when they argue.

PHOEBE: That's fine. Go ahead and scoff. You know, there're a lot of things that I don't believe in, but that doesn't mean they're not true.

JOEY: Such as?

PHOEBE: Like crop circles, or the Bermuda triangle, or evolution?

ROSS: Whoa, whoa, whoa. What, you don't, uh, you don't believe in evolution?

PHOEBE: Nah. Not really.

ROSS: You don't believe in evolution?

PHOEBE: I don't know, it's just, you know ... monkeys, Darwin, you know, it's a, it's a nice story, I just think it's a little too easy.

ROSS: Too easy? Too ... The process of every living thing on this planet evolving over millions of years from single-celled organisms, too easy?

PHOEBE: Yeah, I just don't buy it.

ROSS: Uh, excuse me. Evolution is not for you to buy, Phoebe. Evolution is scientific fact, like, like, like the air we breathe, like gravity.

PHOEBE: Ok, don't get me started on gravity.

ROSS: You uh, you don't believe in gravity?

PHOEBE: Well, it's not so much that you know, like I don't believe in it, you know, it's just ... I don't know, lately I get the feeling that I'm not so much being pulled down as I am being pushed.

[...]

ROSS: How can you not believe in evolution?

PHOEBE: Just don't. Look at this funky shirt!

ROSS: Pheebs, I have studied evolution my entire adult life. Ok, I can tell you, we have collected fossils from all over the world that actually show the evolution of different species, ok? You can literally see them evolving through time.

PHOEBE: Really? You can actually see it?

ROSS: You bet. In the U.S., China, Africa, all over.

PHOEBE: See, I didn't know that.

ROSS: Well, there you go.

PHOEBE: Huh. So now, the real question is, who put those fossils there, and why?

[...]

ROSS: Ok, Pheebs. See how I'm making these little toys move? Opposable thumbs. Without evolution, how do you explain opposable thumbs?

PHOEBE: Maybe the overlords needed them to steer their spacecrafts.

ROSS: Please tell me you're joking.

[...]

PHOEBE: Look, can't we just say that you believe in

something, and I don't.

ROSS: No, no, Pheebs, we can't, ok, because...

PHOEBE: What is this obsessive need you have to make everyone agree with you? No, what's that all about? I think, I think maybe it's time you put Ross under the microscope.

ROSS: Is there blood coming out of my ears?

[...]

PHOEBE: Uh-oh. It's Scary Scientist Man.

ROSS: Ok, Phoebe, this is it. In this briefcase I carry actual scientific facts. A briefcase of facts, if you will. Some of these fossils are over 200 million years old.

PHOEBE: Ok, look, before you even start, I'm not denying evolution, ok, I'm just saying that it's one of the possibilities.

ROSS: It's the only possibility, Phoebe.

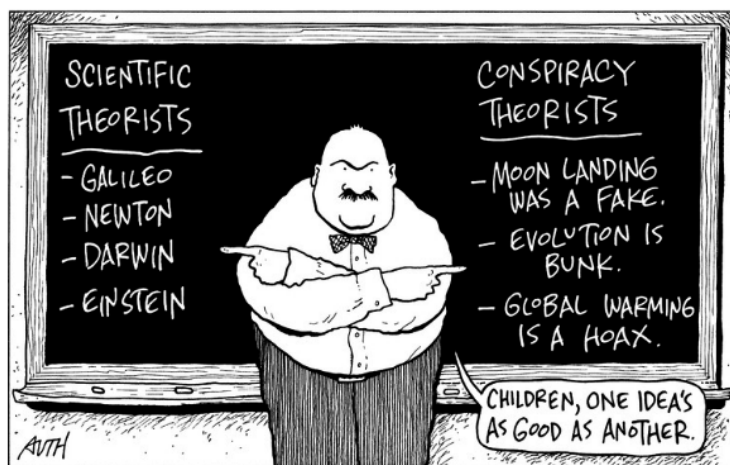
PHOEBE: Ok, Ross, could you just open your mind like this much, ok? Wasn't there a time when the brightest minds in the world believed that the world was flat? And, up until like what, 50 years ago, you all thought the atom was the smallest thing, until you split it open, and this like, whole mess of crap came out. Now, are you telling me that you are so unbelievably arrogant that you can't admit that there's a teeny tiny possibility that you could be wrong about this?

ROSS: There might be, a teeny, tiny, possibility.

PHOEBE: I can't believe you caved.

ROSS: What?

PHOEBE: You just abandoned your whole belief system. I mean, before, I didn't agree with you, but at least I respected you. How, how, how are you going to go into work tomorrow? How, how are you going to face the other science guys? How, how are you going to face yourself? Oh! That was fun. So who's hungry?



9-7-10 THE PHILADELPHIA INQUIRER, UNIVERSAL ULCER.

By American cartoonist
TONY AUTH

March 7, 2010
The Philadelphia Inquirer

• • • FIN • • •

Analyse

Les documents, publiés entre 1995 et 2018 et de nature très diverse, s'interrogent sur l'origine mais aussi sur les conséquences de la montée de mouvements exprimant un certain scepticisme, si ce n'est un rejet total, vis-à-vis de la science et de savoirs scientifiques établis. Dans ce dossier, la prise en compte des points de vue est d'une importance capitale pour restituer toutes les nuances : de l'ironie, voire du sarcasme, du dessinateur Tony Auth à l'humour de la sitcom *Friends* en passant par l'expertise de Cynthia Leifer et la position d'observateur-expert de Harry T. Dyer lorsqu'il a assisté à la conférence des platistes au Royaume-Uni. Ce dossier, au-delà de la place à accorder au doute dans la démarche scientifique, met également en lumière la question plus large de la relation entre connaissance et pouvoir dans une société en pleine évolution où internet et les réseaux sociaux permettent à chacun de partager sa propre « expertise » sans pour autant toujours en mesurer les conséquences à court et à long terme. Le dossier montre aussi comment la société au sens large et la démocratie peuvent être mises en danger lorsque des figures d'autorité – l'enseignant dans le dessin humoristique, les politiques mais aussi certains scientifiques et experts – deviennent autoritaires et donnent plus de poids au dogme qu'aux faits démontrés.

Proposition de corrigé

The ambiguous powers of doubt in science

Back in 1995 in the American sitcom Friends, the argument between Phoebe and Ross about evolution brought to light the central role that doubt can play in scientific research, for better, but also for worse, as depicted by American cartoonist Tony Auth in The Inquirer in 2010. The emergence of what has now become a global phenomenon, science scepticism, was also analyzed by experts in science, namely Professor Cynthia Leifer in an article published in Pacific Standard in 2015 and Harry T. Dyer on www.livescience.com, the latter reporting on the Flat Earth Convention he attended in Birmingham in 2018. Despite their differences in tone, all these documents raise the same question: is doubting necessarily a dubious approach to science?

What is certain is that questioning facts has always been at the heart of the scientific method: the greatest advances began with a disagreement. The names of the brightest minds in the world mentioned by Phoebe appear on the blackboard in the cartoon, and Galileo is also mentioned by Leifer. All of them – Darwin, Galileo, Newton, Einstein – defied common sense and the powerful institutions of their times to turn unproven hypotheses into undeniable facts, facts which Ross can carry in a briefcase to convince Phoebe. For the latter, but also to Leifer, doubting and keeping an open mind are part of a healthy scientific method. Dyer underlines this when describing how flat-earthers collect evidence and carry out experiments to prove their point, all this warning against blindly trusting what is told by power structures eager to control knowledge.

The very close links between knowledge and power, explored by Michel Foucault, whom Dyer quotes, are indeed fundamental for understanding the stakes of the uncertainty epidemic described in the documents. For Dyer, the rise of social media, where

knowledge can be created and shared by almost anyone, has contributed to creating an unprecedented crisis of confidence in science and expertise. Sceptics and deniers are now more numerous: like the 40 % of Americans who answered the poll quoted by Leifer, Phoebe does not believe in evolution, which, to her, is only one story among many others. They are also more vocal: while Rand Paul, a former surgeon turned politician, repeatedly denies climate change and the benefits of vaccines, flat-earthers organize conventions across the world.

The risk is that instead of nurturing science, sowing the seeds of doubt could end up undermining it, along with the very fabric of democracy. In the cartoon, the dictator-looking teacher presents scientific and conspiracy theories as equivalent. Leifer also warns against not enabling children to be informed enough to develop critical thinking, a skill which is essential to break new ground and bring progress. This threat is made even clearer when Phoebe tells Ross she did not know that fossils could actually prove the evolution of different species. For Dyer, this lack of scientific literacy, be it about climate change or vaccines, plagues society as a whole: politicians cannot even agree on basic facts anymore and reality is endlessly reinterpreted and rewritten. To avoid the worst, readers and viewers are invited to take some hindsight and to keep their minds alert, either through comedy as in *Friends*, or sarcasm as in the cartoon, or humorous puns as in Dyer's testimony.

(544 words)



ÉPREUVE COMMUNE - FILIÈRES MP - PC - PSI - TSI - TPC

LANGUE VIVANTE A ANGLAIS

Mardi 30 avril : 14 h - 17 h

N.B. : le candidat attachera la plus grande importance à la clarté, à la précision et à la concision de la rédaction. Si un candidat est amené à repérer ce qui peut lui sembler être une erreur d'énoncé, il le signalera sur sa copie et devra poursuivre sa composition en expliquant les raisons des initiatives qu'il a été amené à prendre.

L'usage d'un dictionnaire et de machines (traductrice, calculatrice, etc.) est strictement interdit.

Rédiger en anglais et en 400 mots une synthèse des documents proposés, qui devra obligatoirement comporter un titre.

Indiquer avec précision, à la fin du travail, le nombre de mots utilisés (titre inclus), un écart de 10 % en plus ou en moins sera accepté.

Vous aurez soin d'en faciliter la vérification, en mettant un trait vertical tous les vingt mots.

Toute fraude sera sanctionnée.

Vous indiquerez, en introduction, au minimum, la source et la date de chaque document. Vous pourrez ensuite, dans le corps de la synthèse, faire référence à ces documents par « doc.1 », « doc. 2 », etc.

Ce sujet comporte les 4 documents suivants qui sont d'égale importance :

- **document 1** - Whistleblowers - Heroes or traitors? Robert Hackwill, (extrait et adapté de *euronews.com*, 18/01/2017)
- **document 2** - UK Government's Plans To Silence Whistleblowers In "Full-Frontal Attack". Ryan Morwood, (extrait et adapté de *anyvoice.co.uk*, 22/04/2017)
- **document 3** - While the UK attacks whistleblowers, the EU is defending them – that is, until Brexit happens. Jean Lambert, (extrait et adapté de *independent.co.uk*, 20/02/2017)
- **document 4** - Illustration by Eduardo Fuentes from the article: Life after whistleblowing, (extrait de *timeshighereducation.com*, 31/07/2014)

Document 1 - Whistleblowers - Heroes or traitors?

Snowden, Assange, Manning. A piece of art in Berlin representing the three famous whistleblowers is meant to encourage citizens to speak out. For some people these whistleblowers (people who are known for denouncing and revealing illegal practices in government agencies and organisations) are heroes. For others, especially the US administration, they are traitors.

Chelsea Manning is the only one of the three to have served prison time. The 29-year-old transgender US army private was initially sentenced to 35 years for her role in leaking diplomatic cables to Wikileaks. Wikileaks has published sensitive information for 10 years now, but made headlines worldwide in 2010 when it released Manning's classified military documents. Especially shocking was the footage showing US soldiers who shot dead several Iraqi civilians from a helicopter. This caused a public outcry.

Wikileaks founder Julian Assange promoted the video. He remains holed up in the Ecuadorian embassy in London, because by leaving it he may risk extradition to the US. To his critics, Assange is a publicity-seeker, but to his supporters, he informed the public about the hidden damage of US military actions. "We have seen there are approximately 15,000 never previously documented or known cases of civilians who have been killed by violence in Iraq," says Assange.

Like Assange, whistleblower and former intelligence agent Edward Snowden faces a life in exile. After leaking information about the extensive internet and phone surveillance done by the National Security Agency he fled from the United States to Russia. "If we can't understand the policies and programmes of our government, we cannot grant our consent in regulating them," he insists.

Heroes or traitors? Certainly for the media world they are more often than not heroes. From Stanley Adams, who exposed corruption at Swiss drugs giant Hoffman-La Roche, a *cause celebre* in the 1970s and immortalised in song by British rock band The Fall, to Jeffrey Wigand, who exposed the fact that US tobacco companies knew how harmful their products were. He would be played by Russell Crowe in the 1999 Michael Mann movie.

Or there is Dr. David Kelly, a British weapons expert who tried to expose what he called the British government's "sexing up" of reports claiming Saddam Hussein retained a chemical and biological weapons capability, used to justify the US-led invasion of Iraq. Television, not film, has examined his case.

In any case after the Snowden publications took place, the US Congress passed a historic National Security Agency reform law. US President Barack Obama added further changes to NSA practices, and tech companies have been using encryption to better protect millions of people's privacy.

Robert Hackwill, *euronews.com*, 18/01/2017

Document 2 - UK Government's Plans To Silence Whistleblowers In "Full-Frontal Attack"

Theresa May's Conservative Government has come under fire recently due to recommendations from its legal advisers to overhaul the Official Secrets Act to include a raised maximum sentence from two to 14 years for leaking documents and data as well as expanding the definition of espionage to include obtaining or receiving sensitive data.

The proposals, which have been heavily criticised by media organisations and civil rights groups, were part of an ongoing, major overhaul of the existing Official Secrets Act (OSA). The Law Commission, an independent body set up to advise the government on law reform, recently published its draft recommendations for a replacement of the OSA, the Espionage Act, that would include the increased maximum sentences and an expanded definition of espionage.

The recommendations have been described by Jim Killock, chief executive of Open Rights Group, as a "full-frontal attack, recommending criminalising even examining secret services' material." Killock went on to state that "The intention is to stop the public from ever knowing that any secret agency has ever broken the law." Open Rights Group were one of the several organisations that the commission had apparently consulted with about the new recommendations, a consultation they claim they did not take part in.

The draft also contained suggestions to include a “Statutory Commissioner Model” of reporting illegality or impropriety, whereby those who may feel compelled to release sensitive information to the press, the public or outlets such as Wikileaks, can instead bring their concerns to the attention of a statutory commissioner. The commissioner would then have the power to investigate the concerns brought to them but would also, however, report to the Prime Minister so as to prevent the release of sensitive data to the public.

This model appears to try to further cover-up government wrongdoing by adding an extra layer of bureaucracy to the process of holding the government and its officials to account for their actions. What is most concerning, however, is the idea that the UK government seems to be heading towards a one-way street approach when it comes to data, sensitive or not.

With the Investigatory Powers Act making the mass surveillance of every viable internet user in the country legal, one might expect (or at least hope) that, in turn for our data, the government would be more transparent about its own actions and own up to its mistakes when they are recognised. These latest recommendations, however, seem to point to the opposite conclusion. Since the high-profile leaks of Edward Snowden, many western governments, the US and UK in particular, seem to be doing as much as they can in order to ensure that further leaks are prevented and whistleblowers deterred via the use of ever more draconian measures.

Ryan Morwood, *anyvoice.co.uk*, 22/04/2017

Document 3 - While the UK attacks whistleblowers, the EU is defending them – that is, until Brexit happens

In sharp contrast to the UK Government’s new approach to whistleblowing, the European Parliament this week debated and voted for EU provisions to be drafted to protect whistleblowers. The disparity between what’s happening in the UK and the European Parliament is striking. On one hand we have a Government looking at increasing the punishment of those who would seek to expose wrongdoing to draconian levels, while in the European Parliament there is support across the political groups to protect whistleblowers through the law.

The European Parliament believes that whistleblowing is essential to ensuring the accountability and integrity of the public and private sector. It’s the only way in which otherwise secret information can be brought to light, and hence it’s often the best way, at least for now, to uncover wrongdoing, corruption, and downright immoral behaviour.

Recent scandals uncovered by whistleblowers include illegal mass surveillance, industrial scale tax avoidance and the sexual abuse of children by peacekeepers. A number of those involved in exposing such cases have then faced disciplinary procedures at work and/or criminal proceedings. The biggest leak in history to date, revealed in the Panama Papers, highlighted just how important whistleblowers are for allowing in-depth journalistic investigations in the public interest.

Some months ago the EU adopted a Trade Secrets Directive that threatens to undermine future disclosures of this kind by treating almost any secretive business information as a trade secret. It was largely in response to this shift in thinking that the Greens/EFA group in the European Parliament set about proposing the text of an EU legal framework that would set out common standards for the protection of whistleblowers throughout the European Union.

On the basis of ongoing demands coming from the European Parliament for such legislation, repeated in this week’s debate and vote, the European Commission, which formally proposes all new EU legislation, has indicated it is looking at proposing a law on this issue in the course of the year.

The key issue from the Greens’ proposed Directive is that we need to ensure that there are safe ways for people to provide information and that they should be protected when doing so, not vilified and victimised. From an EU point-of-view, there needs to be a coherent body of law on protection, rather than the patchwork that currently exists. Thus far signs from the Commission are that their initial proposal will reflect these priorities. Far from being unnecessary “red tape”, EU-wide

legislation supporting whistleblowers is long overdue and essential for protecting genuine public interest.

By having at least a minimum standard of protection, the media, public servants and other workers would be more likely to speak up without fear of retaliation. In this way we both prevent wrongdoing from occurring as there is a greater likelihood of getting caught, but we also expose that which has already happened or is currently taking place. These provisions also need a wide scope – to cover environmental crimes, violations of human rights, and corruption – and should apply to both the public and private sectors.

The European Parliament has stressed the important role of investigative journalism and wants the Commission proposals to afford the same protection to such journalists as it does to whistleblowers: for both, the requirement is that their actions are to protect the public interest and that they are acting in good faith.

It is surely in the best interests of the British people that fraud and wrongdoing – in both public and private sectors – be prevented and uncovered. The public interest is not always the same as the interests of government and big business. Good legislation should protect the public interest and those who act to uphold it.

Another fundamental point, brought sharply into focus by the UK Government's proposals, is that we must reverse the current trend of increasingly clamping down on freedom of information and freedom of expression, and of granting ever greater rights to government and corporations to silence dissent. This remains just as relevant for the UK, even as it edges towards Brexit.

Even outside the EU, the UK will still be bound by the jurisprudence of the European Court of Human Rights on issues relating to freedom of expression, which has on a number of occasions ruled in favour of protection of whistleblowers.

However, Brexit – especially a hard Brexit – will create new distance and divergence between the UK and our European neighbours in many different ways. A major concern is how far this will extend to our common fundamental values and freedoms. There will be enough bad legacies arising from Brexit. We must not let this be another one.

Jean Lambert, *independent.co.uk*, 20/02/2017

Document 4 - Illustration by Eduardo Fuentes from the article: **Life after whistleblowing**



timeshighereducation.com, 31/07/2014

Analyse

Le sujet portait sur le travail des lanceurs d'alerte, les menaces pesant sur eux et les structures juridiques qui peuvent soit les protéger, soit les mettre au ban de la société. Une importante différence existe entre les institutions qui pourraient abuser de leur pouvoir (le monde politique et celui des affaires) et l'espoir, exprimé dans les domaines artistiques et journalistiques, de voir se mettre en place des protections renforcées de ces personnes à risque. Leur statut manque parfois de clarté et leur rôle, similaire à celui du journaliste, est intimement lié à la question de la surveillance. S'y ajoutent des considérations sur les institutions politiques internationales. Il était important de souligner le danger auquel s'exposent ces individus, et le fait que ce débat n'est pas terminé au moment de la publication des articles et de l'image. Les lanceurs d'alerte existent depuis un moment, mais jouent actuellement un rôle important dans une société dans laquelle la place des données personnelles et de la transparence ne cesse de croître.

Proposition de corrigé

Whistleblowers at risk

Since Snowden's whistleblowing to denounce the NSA in 2013, the very issue of the place of whistleblowers in society has been topical. The dossier under study presents four documents: three articles published in early 2017 and a cartoon dating back to 2014. The three articles, Document 1 from euronews.com, Document 2 from anywayvoice.co.uk, and Document 3 from independent.co.uk, all expose the way whistleblowers are treated by governments, especially the British government. They are defended by the EU, yet insufficiently, as the cartoon from timeshighereducation.com sums up and denounces in showing a persecuted individual. Therefore, despite varied approaches, all the documents raise the same question: who can whistleblowers count on to protect them?

Revealing hidden information can lead to punishment. The gloomy picture of a banished idealist seen in Doc. 4 echoes the facts listed in Doc. 1: Manning's and Assange's imprisonments and Snowden's exile all reveal that governments are dedicated to severely punishing whistleblowers who reveal state scandals. Doc. 2 underscores the attempts made by the British government in particular to reinforce the laws that enable this "draconian" punishment, pointing out that the UK is acting in a similar way to the US, with Doc. 3 explaining that the EU is an outlier in this respect due to its more protective legal framework.

Different whistleblowers' actions are judged according to divergent criteria, however. In contrast with potentially corrupt governmental accusations of treachery, reactions in the press and the arts reflect a differing view: Doc. 1 provides several examples of informers who have found favour with filmmakers, TV producers, artists and musicians, while Doc. 4's melancholy outsider evokes sympathy, weighed down as he is by his responsibility. Nevertheless, the legal institutions of the EU also recognize and encourage this figure, who, like investigative journalists, speaks truth to power, informing the public of illegal surveillance, child abuse and tax avoidance (Doc. 3), sentiments that are echoed in Doc. 2 by the journalist himself.

Any potential changes to the law will prove key for future whistleblowers. The main argument in Doc. 3 is that these people act for the public good, and should be protected by the law, not left burdened and imprisoned by their past actions (Doc. 4). The “common values” (Doc. 3) of the west, which can stand in contrast to those of the powerful, are being challenged by an imminent ramping-up of punitive measures: despite the ECHR, Britain’s rules may stray from these values, as the business and political spheres coordinate their efforts to quell dissent. The EU needs to solidify its laws (Doc. 3), and not follow a post-Brexit UK, which may redefine anti-spying legislation, in an attack on free speech. Ironically, this could occur as the government creates middlemen to further protect the powerful while facilitating abusive surveillance practices, unlike measures protecting civilians in the US (Doc. 1).

Ultimately, time will tell whether legal and political developments can provide succour to the alienated figure of the whistleblower.

(439 words)



Epreuve de Langue Vivante A

Durée 3 h

Si, au cours de l'épreuve, un candidat repère ce qui lui semble être une erreur d'énoncé, d'une part il le signale au chef de salle, d'autre part il le signale sur sa copie et poursuit sa composition en indiquant les raisons des initiatives qu'il est amené à prendre.

Pour cette épreuve, l'usage des machines (calculatrices, traductrices,...) et de dictionnaires est interdit.

Les candidats doivent obligatoirement traiter le sujet correspondant à la langue qu'ils ont choisie au moment de l'inscription.

Les candidats qui ne composeraient pas dans la langue choisie au moment de leur inscription se verront attribuer la note zéro.

Les différents sujets sous forme d'un fascicule sont présentés de la manière suivante :

Pages 8 à 12 Anglais

En vous appuyant *uniquement* sur les documents du dossier thématique qui vous est proposé, vous rédigerez une synthèse répondant à la question suivante :

Addressing mass incarceration issues in the US: towards a better and fairer system?

Votre synthèse comportera entre 450 et 500 mots et sera précédée d'un titre. Le nombre de mots rédigés devra être indiqué à la fin de votre copie.

Liste des documents :

1. "A matter of Justice", *Vogue*
2. "Criminal justice system reform: Trump, senators on board, so what's the holdup?", *USA Today*
3. "Some facts behind America's highest incarceration rate", *CNN*
4. "The prison penalty in unemployment", prisonpolicy.org
5. "Land of the free", Adam Zyglis