Term.GT / THE IDEA OF PROGRESS / Artificial intelligence

General issue question: **To what extent should we endow machines with intelligence?**

Domains: **Science & Techniques / Sociology & Economy / Beliefs & Representations**

TF: 🌐 EOC: As a candidate in the US Presidential election, you are touring the country to present your political programme. Your stop today is Silicon Valley, SF, home to the world’s largest high-tech corporations. You’ve been asked to give your opinion about the future of Artificial Intelligence. Take a stance: say what you think about its development and whether or not there should be legislation to limit its evolution.

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**S#1**

**IQ – Group discussion:** (questions type Bac oral sur l’Idée de Progrès)

1. *In your opinion, what are the most important inventions of the past 50 years?*
2. *Do you think that progress is always positive? Can there be a negative side to progress?*
3. *How has computer science changed today’s world?*

**EOC ➔ Share your views with the class**

**EOC – Brainstorming:** "AI"

When you hear the phrase “Artificial Intelligence”, what do you have in mind?

**EOC – Diaporama:** In pictures: Artificial intelligence through history:


**HW:** revoir LEX nouveau / mot de liaison WHETHER

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**S#2**

**CO – Audio seul:** What is Artificial Intelligence?

(BBC News - 14 sept. 2015)

https://www.youtube.com/watch?v=fvtRGMv7aU

1) **00:00 > 00:37** 1ª écoute sans notes / 2ª et 3ª écoutes avec notes

Compare your notes with your neighbour.
Recap what you understand in one sentence.

- Type of doc / speaker / topic
- The ultimate goal of AI is to create a computer mind that / which can imitate the complexity of the human brain.

What do you expect to hear next?

2) **00:37 > 01:14** 1ª écoute : check your hypotheses

- *AI is everywhere and has existed for years*
- *Les 2ª et 3ª écoutes avec notes : Write the examples of AI she gives + What type of AI is this? / Explain its name.*

- Narrow or simple AI = it is better than any human at doing one specific task, but it couldn’t learn by itself or think like a human.

What do you expect to hear next?

3) **01:14 > end** 2 écoutes: pay attention to stressed words

Compare & recap in 2 sentences max.

- *Experts say human or general AI (= deep learning AI) will exist by 2050.*
- *Opinions are divided as to whether it is good news or not / whether it will destroy humanity / mankind or save it.*

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IO - TII : Pair discussion: // Issue question:

[Show video if necessary] On its webpage the BBC want people to react to the video by launching an online survey.
What could the issue question be?

⇒ Share your ideas with the class.
⇒ (if time: Choose the most relevant & interesting question(s)).

HW: GRAMMAR in context #1 (exo à trous)
⇒ Linkwords + traduction du présent français : Present vs. HAVE – EN

S#3

CE - Article: Intelligent Machines: The truth behind AI fiction
(BBC News - 11 sept. 2015)

Article long: Lecture 1ère partie guidée pour aboutir à un tableau:

<table>
<thead>
<tr>
<th>Field of AI</th>
<th>Fiction</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

Puis CE en autonomie (transfert) : 1 partie différente de l'article par groupe.
⇒ Mise en commun des connaissances dans tableau-récapitulatif :

<table>
<thead>
<tr>
<th>Type of AI</th>
<th>Fiction</th>
<th>Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>The all-knowing machine</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>The killer robot</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>The helpful robot</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>The cleaning robot</td>
<td>...</td>
<td>...</td>
</tr>
<tr>
<td>The human-looking robot</td>
<td>...</td>
<td>...</td>
</tr>
</tbody>
</table>

HW: Reformuler données relevées dans le tableau en utilisant des connecteurs du contraste et de la concession

S#4

CO - Vidéo: Self-driving cars
(AFP News Agency - 25/8/2016):
https://www.youtube.com/watch?v=6MpkgzeNqLY

[OBJ: rapide intro]
2 écoutes: What are the advantages of self-driving cars

CO - Vidéo: Uber to introduce self-driving taxis
(CBS News - 18/8/2016):
https://www.youtube.com/watch?v=VUWqefxtik

Comme les élèves se sont déjà entraînés à la méthodo CO, le faire dans les conditions de l’examen, avec restitution en français (évaluation formative)
Donner titre. S’arrêter à 1’30’’ (« a good place to start »).
⇒ Méthodo BAC : comment restituer ses notes en français
⇒ Préparation au TEST de CO qui se fera dans les conditions du BAC (Doc d’env. 1’30’’; 3 écoutes séparées d’1’ + restit° 10’)

LEX : survey / opinion poll
Formulation d’une première problématique simple par les élèves
RA : Should we fear AI?

Fiction vs. reality: où en est-on de l’IA?
Méthodologie CE (paratexte, articulations du texte, inférences lexicale et contextuelle, etc.)
Guidage serré s/ partie 1
Transfert sur les autres

LEX: take over / alongside / stock exchange / harmful / helpful / useful
GRAM: contraste WHEREAS / WHILE + concession ALTHOUGH

Bons côtés de l’IA / voitures autonomes = plus de sécurité
LING: fewer crashes / more safety; sensors, radars, safety belt, etc.

Ce n’est pas de la fiction, et c’est maintenant: Volvo / Tesla / Google

PRECISIONS PROTOCOLE // BAC
LEX: a pilot programme / a test programme / a plan / launch / fully autonomous / partnerships / random
| Explication orale des attendus selon le niveau visé (A1 à B2) pour ce document. | customers / assign + EVENTUALLY (false friend) |
| Envoi du script via l’ENT avec surlignage des passages difficiles | GRAM: “you wouldn’t necessarily know WHETHER it is a self-driving one or not” |

**HW** : Se préparer au TEST de CO
- Réécouté la vidéo ; comparer ses notes avec le script (ENT) — arrêter à 1’32”

*A Ride in the Google Self Driving Car* (Google - 27/5/2014):
https://www.youtube.com/watch?v=TsaES--OTzM

| Explication orale des attendus selon le niveau visé (A1 à B2) pour ce document. | customers / assign + EVENTUALLY (false friend) |
| Envoi du script via l’ENT avec surlignage des passages difficiles | GRAM: “you wouldn’t necessarily know WHETHER it is a self-driving one or not” |

**TEST CO** - Video: *Artificial Intelligence is scary. Elon Musk explains why* (CNN Money - 10/09/2015)
https://www.youtube.com/watch?v=qmPX8-HK1os

Pour ne pas trop orienter la compréhension, notamment du point de vue, on peut éventuellement envisager de changer le titre original.
Donner à la place: « *Tesla Motors & SpaceX CEO Elon Musk talks about AI* »

*durée totale test = 20/25min - conditions BAC*

- ideas: *AI is more advanced than people realize + we must control it*

**TEST GRAM en contexte**
*durée totale test = 20/25min*

- concession: ALTHOUGH vs. IN SPITE OF / DESPITE
- alternative vs. condition: WHETHER vs. IF
- contraste: WHEREAS / WHILE vs. UNLIKE
- Traduction du présent français : Present Simple vs. Present Perfect

| Explication orale des attendus selon le niveau visé (A1 à B2) pour ce document. | customers / assign + EVENTUALLY (false friend) |
| Envoi du script via l’ENT avec surlignage des passages difficiles | GRAM: “you wouldn’t necessarily know WHETHER it is a self-driving one or not” |

**S#5**

**TEST CO** - Video: *Artificial Intelligence is scary. Elon Musk explains why* (CNN Money - 10/09/2015)
https://www.youtube.com/watch?v=qmPX8-HK1os

Pour ne pas trop orienter la compréhension, notamment du point de vue, on peut éventuellement envisager de changer le titre original.
Donner à la place: « *Tesla Motors & SpaceX CEO Elon Musk talks about AI* »

*durée totale test = 20/25min - conditions BAC*

- ideas: *AI is more advanced than people realize + we must control it*

**TEST GRAM en contexte**
*durée totale test = 20/25min*

- concession: ALTHOUGH vs. IN SPITE OF / DESPITE
- alternative vs. condition: WHETHER vs. IF
- contraste: WHEREAS / WHILE vs. UNLIKE
- Traduction du présent français : Present Simple vs. Present Perfect

| Explication orale des attendus selon le niveau visé (A1 à B2) pour ce document. | customers / assign + EVENTUALLY (false friend) |
| Envoi du script via l’ENT avec surlignage des passages difficiles | GRAM: “you wouldn’t necessarily know WHETHER it is a self-driving one or not” |

**S#6**

**Rapide correction TEST CO** ➔ Script à trous + écoute

**Annonce TF** (EOC)

**CO rapide** ➔ **OBJ:** préparer EOC:
- *Google self-driving car project:*
  https://www.google.com/selfdrivingcar/

What advantages do the testers in the video clip mention? (1 écoute)

**RAPPEL:** compare the Google Car with the Uber project of driverless taxis in Pittsburgh.

**EOC - TIZ** (micro trottoir):

**Vox pop / Street interview:**
What about you? Would you take a ride in a driverless Uber taxi? Why or why not?

**CO - Vidéo:** *The ethical dilemma of self-driving cars*

(TED-Ed - Dec. 2015):
https://www.youtube.com/watch?v=ixIoDYVfKA0

**NB:** vidéo longue (4’15”) + contenu complexe mais à visionner en entier
- images indispensables à la compréhension
- prévoir différenciation / aide lexicale
- guidage serré sur passage(s) le(s) plus important(s)
Main ideas & notions:
- Reaction vs. deliberate decision: responsibility + premeditation
- Programming to kill or spare lives? Ethics

Ex. de mise en œuvre:

<table>
<thead>
<tr>
<th>Time</th>
<th>Action</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>00:00 =&gt; 00:55</td>
<td>mute (préparer l'écoute = hypotheses + LEX)</td>
<td></td>
</tr>
<tr>
<td>00:00 =&gt; 00:55</td>
<td>with the sound on (check hypotheses + situation)</td>
<td></td>
</tr>
<tr>
<td>00:36 =&gt; 00:52</td>
<td>step by step (3 options + notion of “dilemma”)</td>
<td></td>
</tr>
<tr>
<td>00:55 =&gt; 01:06</td>
<td>mute (préparer l'écoute - anticiper le dilemme)</td>
<td></td>
</tr>
<tr>
<td>00:55 =&gt; 01:21</td>
<td>sound on (stressed words) + LEX help (if needed):</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- we were / wheel menu / manual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- whichever way / however we deliberate / delirious</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- intellectual / instinctual</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- afterthought / forethought</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- malice / police program / programmer</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- destruct / instruct</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- a sane / the same</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- it may sense / it makes sense premeditated / unpremeditated</td>
<td></td>
</tr>
</tbody>
</table>

01:21 => end | sound on (learn more about the issue) |

Follow up: Rephrase the ethical question raised in the video in your own words. [in pairs]

HW: Sum up the pros and cons of A.I. applied to the field of driving in a short paragraph.

LEX: increase / decrease / minimize harm / prioritize / favour vs. discriminate against / kill vs spare / MAKE a decision, etc. / an ethical dilemma / issue, Etc.

GRAM: BY + V-ING; IF + 2nd conditional
IF we were... IF a programmer were to...

PB: Should algorithms decide on who dies and who does not?
Is it ethically acceptable to program AIs to kill or spare?

S#7

**CO - Vidéo: Finally, He Explains Himself**
Steve Jobs interview from All Things D8 Conference 2010 on Privacy:
https://www.youtube.com/watch?v=TGLxjppFqeA

1) 00:00 > 01:05 1 à 2 écoutes sans notes / regarder expressions du visage, gestes, etc.
Type of doc / speaker / topic ⇒ Privacy
Non-verbal signs: what do you deduce from them? ⇒ a burning issue / a controversial problem
3e écoute: Références à “Mark” / à la “Silicon Valley”? ⇒ Mark Zuckerberg / Google privacy pbs / Jobs seems to disapprove of...

2) 01:05 > end Complexe = 3 écoutes / guider repérages & mise en réseaux après chaque écoute.
Focus on repetitions & on the words Jobs emphasizes
⇒ He insists that (unlike other Silicon Valley companies...) Apple cares about privacy / worries about location data and the issues of teen stalking, cloud-based storage...
⇒ Yet he thinks people should be able to choose how much data they share. They should be asked clearly when their data can potentially be sucked up into the cloud through an app.
⇒ Transparency.

**CE - Article:** Apple Releases Critical iOS Update After Unprecedented ‘Pegasus’ Spying Software Discovered

1/ Steve Jobs rassure les consommateurs / les clients Apple (2010)
LEX : location / stalking (=tracking, harassing) / privacy issues
Disapprove of / differ from / disagree with.
Insist on / emphasize / lay stress on

2/ Contrepoint (2016): la
| S#8 | **CO** - Vidéo (très rapide, juste pour présenter Hawking): Stephen Hawking Interview: Last Week Tonight with John Oliver (HBO - 15/06/2014): [https://www.youtube.com/watch?v=T8y5EXFMD4s](https://www.youtube.com/watch?v=T8y5EXFMD4s)  
**HW: EE - TI4** - Debate.org - VOTE & leave your comment (centraliser contributions des élèves s/Padlet ou via Doodle): [http://www.debate.org/opinions/will-artificial-intelligence-surpass-human-intelligence](http://www.debate.org/opinions/will-artificial-intelligence-surpass-human-intelligence) | **PB:** Should we trust AI with our personal data?  
**LEX:** to be under control vs. to be out of hands / hacking / personal data  
**GRAM:** concession EVEN IF / EVEN THOUGH / NOTWITHSTANDING / ALTHOUGH / IN SPITE OF / DESPITE  
**HW:** EOC - TI3: It is late and you have just read the Huffington Post article and realised your i-phone has potentially been hacked even though you have always been very careful about your personal data. You are getting ready to leave an angry message on the customer service hotline. Prepare a bullet-point list and be ready to phone!  
**PB:** Faille de sécurité Pegasus | 1h |  |
**EOC - TI5** - CBS News is hosting a talk show about AI in a few days. You & your partner are in charge of the teaser's voice over narration. You have 30 seconds to make viewers want to watch the show.  
**HW:** Revise for reading test | **PB:** Will artificial intelligence surpass human intelligence?  
**LEX:** to be under control vs. to be out of hands / hacking / personal data  
**GRAM:** concession EVEN IF / EVEN THOUGH / NOTWITHSTANDING / ALTHOUGH / IN SPITE OF / DESPITE  
**PB finale:** To what extent should we endow machines with intelligence? In what fields is it conceivable / possible? | 1h |  |
**HW:** Prep TF  
Envoyer correction TEST CE via l'ENT | **Question de l'IA dans l'armement + Open Letter excerpts** | 1h |  |
| S#11 | **TF - EOC:** #1  
As a candidate in the US Presidential election, you are touring the country to present your political programme. | **EVA directe** (enregistrer en cas de besoin de réécoute seulement) | 1h |  |
Your stop today is Silicon Valley, SF, home to the world's largest high-tech corporations. You've been asked to give your opinion about the future of Artificial Intelligence. Take a stance: say what you think about its development and whether or not there should be legislation to limit its evolution.

[3min / notes sous forme de liste, non rédigées et limitées à 10 mots]

Documents non utilisés en lien avec le thème

NB. les liens peuvent être envoyés via l'ENT aux élèves pour aller + loin

Neural network and conscience in fiction:
- *Ex Machina* (trailer - 2014) [https://www.youtube.com/watch?v=qyKqHOqMi4g](https://www.youtube.com/watch?v=qyKqHOqMi4g) (arrêter à 2:24)

Humanoids:
- TV series *Real Humans*
  - US version *Humans*: [https://www.youtube.com/watch?v=DQp3gJWDQg8](https://www.youtube.com/watch?v=DQp3gJWDQg8)
- Actual Japanese cyber androids [https://www.youtube.com/watch?v=3IFFv1AVouM](https://www.youtube.com/watch?v=3IFFv1AVouM)
- Hot Robot At SXSW Says She Wants To Destroy Humans | The Pulse | CNBC - 16 march 2016 [https://www.youtube.com/watch?v=W0_DPi0PmF0](https://www.youtube.com/watch?v=W0_DPi0PmF0)

Excellent timeline:
- BBC iWonder - AI: 15 key moments in the story of artificial intelligence [http://www.bbc.co.uk/timelines/zq376fr](http://www.bbc.co.uk/timelines/zq376fr) => à donner pour aller + loin sur l'ENT

Full open letter:

AI ethics:
- Isaac Asimov's Three Laws of Robotics: [https://www.youtube.com/watch?v=AWJJnQybZIk](https://www.youtube.com/watch?v=AWJJnQybZIk)

TV show: Sentient Technologies Antoine Blondeau CEO on NBC TV Show -Press Here (orthographe erronée dans le titre donné sur youtube "Antione" au lieu de "Antoine") [https://www.youtube.com/watch?v=O4lweO1OK_o](https://www.youtube.com/watch?v=O4lweO1OK_o)