



Artificial intelligence and machine learning:

How a better grasp of AI can frame and facilitate the dialogue about its role in the years to come

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Outline

- I. Introduction
- II. Multiple representations of MT
- III. Why such a portrayal of MT in the press?
- IV. A more realistic image of MT and AI
- V. A promising reality nonetheless
- VI. Conclusion

I. Introduction

II. Multiple representations of MT

III. Why such a portrayal of MT in the press?

I. Introduction

- ◆ Presentation at the intersection of two research projects

Computer-assisted literary translation (CALT)

Literary machine translation (LMT)

Perception and reception
of translation technologies

- ◆ Interest in the way machine translation (MT) and artificial intelligence (AI) are represented, as well as in the discourse that is tied to that technology.

I. Introduction

◇ Concerning literary machine translation, in particular:

- few scientific sources;
- very recent field of study (~ 2019);
- BUT, significant presence on the Web and in the press.

I. Introduction

◇ Generally speaking:

- Neural machine translation (NMT) is characterized not so much by a huge performance gap, but rather by its formidable presence in the media.
- That presence, on the other hand, is marked by the polarization of the dialogue around MT and exaggerated claims on both sides of the debate.
- (Cf. Loock 2019; Cambreleng 2020...)

I. Introduction

◈ Aim:

- offer an objective and concrete picture of what NMT can do;
 - provide elements to help nuance the debate;
 - address, in the light of new technologies, emerging issues that are typically related to human or literary translation (and other fields of translation as well).
- ⇒ Share some examples of how AI/MT are represented in the press, try to explain the reason behind these positions and highlight some of the questions they raise.

I. Introduction

II. Multiple representation of MT

III. Why such a portrayal of MT in the press?

IV. A more realistic image of MT and AI

II. Multiple representations of MT



II. Multiple representations of MT



The screenshot shows the top section of the Les Echos website. At the top left is a search icon and a grid icon. The site's name "LesEchos" is centered at the top. To the right is a yellow "S'ABONNER" button. Below the header is a navigation bar with links: "À la une", "Idées" (underlined), "Économie", "Politique", "Monde", "Tech-Médias", "Entreprises", "Bourse", "Finance - Marchés", and "Régions". Below the navigation bar is a section titled "SCIENCES & PROSPECTIVES" with a dropdown arrow. Under this section is the word "INTERVIEW" in red. The main headline reads: "Yann Le Cun : « Les machines vont arriver à une intelligence de niveau humain »". Below the headline, on the left, is a date box showing "24" in large blue font and "FEB 2016" in smaller grey font. To the right of the date box, the text "The Future Does Not Need Translators*" is visible.

LesEchos

S'ABONNER

À la une Idées Économie Politique Monde Tech-Médias Entreprises Bourse Finance - Marchés Régions >

SCIENCES & PROSPECTIVES ▾

INTERVIEW

Yann Le Cun : « Les machines vont arriver à une intelligence de niveau humain »

24
FEB 2016

The Future Does Not Need Translators*

II. Multiple representations of MT

The image is a screenshot of The Guardian's website. The top navigation bar is dark blue with the text "Support The Guardian" in yellow, followed by "Available for everyone, funded by readers" in white. There are two yellow buttons: "Contribute →" and "Subscribe →". To the right is a "Sign in" link and the "The Guardian" logo. Below this is a white navigation bar with links for "News", "Opinion", "Sport", "Culture", and "Lifestyle". A yellow menu icon is on the right. Under "Opinion", there is a sub-navigation bar with "Education" (highlighted in red), "Schools", "Teachers", "Universities", and "Students". The main article headline is "Yann Le Cun : « I want to see the world as a single language »" in large black font. Below it, the date "24 FEB 2016" is shown. The article's sub-headline is "The case for language learning Languages" in red, followed by the main title "Tech is removing language barriers - but will jobs be lost in translation?" in large red font. At the bottom, the text "Translators*" is visible.

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À la une Idées Économie Politique

News Opinion Sport Culture Lifestyle

Education ► Schools Teachers Universities Students

Yann Le Cun : « I want to see the world as a single language »

24
FEB 2016

The case for language learning Languages
Tech is removing language barriers - but will jobs be lost in translation?

Translators*

II. Multiple representations of MT

The image shows a composite of two web pages. The top part is the header of The Guardian website, featuring a dark blue background with the text 'Support The Guardian' in yellow, 'Available for everyone, funded by readers', and 'Sign in The Guardian' in white. Below this are yellow buttons for 'Contribute' and 'Subscribe'. A navigation bar includes 'News', 'Opinion', 'Sport', 'Culture', and 'Lifestyle'. The bottom part is a snippet of the Les Echos website, showing a search bar, the site name 'Les Echos', a 'S'ABONNER' button, and a list of categories. The main headline is 'Comment l'IA révolutionne la traduction' in large black font, followed by a sub-headline in French: 'L'histoire de l'intelligence artificielle est intimement liée à celle de la traduction, peut-être parce que savoir donner du sens est ce qu'il y a de plus humain et de plus mystérieux pour la machine.'

Support The Guardian
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News Opinion Sport Culture Lifestyle

Ya
À la une Idées Économie Politique Monde Tech-Médias Entreprises Bourse Finance - Marchés Régions >
ut

Comment l'IA révolutionne la traduction

L'histoire de l'intelligence artificielle est intimement liée à celle de la traduction, peut-être parce que savoir donner du sens est ce qu'il y a de plus humain et de plus mystérieux pour la machine.

II. Multiple representations of MT



The collage consists of several overlapping rectangular snippets representing different parts of a website. The top snippet is a navigation bar with a search icon and the text 'À la une'. Below it, a breadcrumb trail reads 'ACCUEIL > ENTERTAINMENT > LIVRES'. The main headline in this snippet is '«Deep learning»: L'homme prend sa première grosse raclée par la machine en matière de traduction'. To the left, another snippet shows the word 'Ya' and a search icon. Below the main headline, a larger snippet features the title 'Comment l'IA révolutionne la traduction' and a paragraph: 'L'histoire de l'intelligence artificielle est intimement liée à celle de la traduction, peut-être parce que savoir donner du sens est ce qu'il y a de plus humain et de plus mystérieux pour la machine.' To the right of this paragraph, a small snippet shows the letters 'ut' in red. On the far right edge, a vertical snippet shows a blue bar with a white 'n' and a yellow circle with three horizontal lines.

À la une

ACCUEIL > ENTERTAINMENT > LIVRES

«Deep learning»: L'homme prend sa première grosse raclée par la machine en matière de traduction

Ya

Comment l'IA révolutionne la traduction

L'histoire de l'intelligence artificielle est intimement liée à celle de la traduction, peut-être parce que savoir donner du sens est ce qu'il y a de plus humain et de plus mystérieux pour la machine.

ut

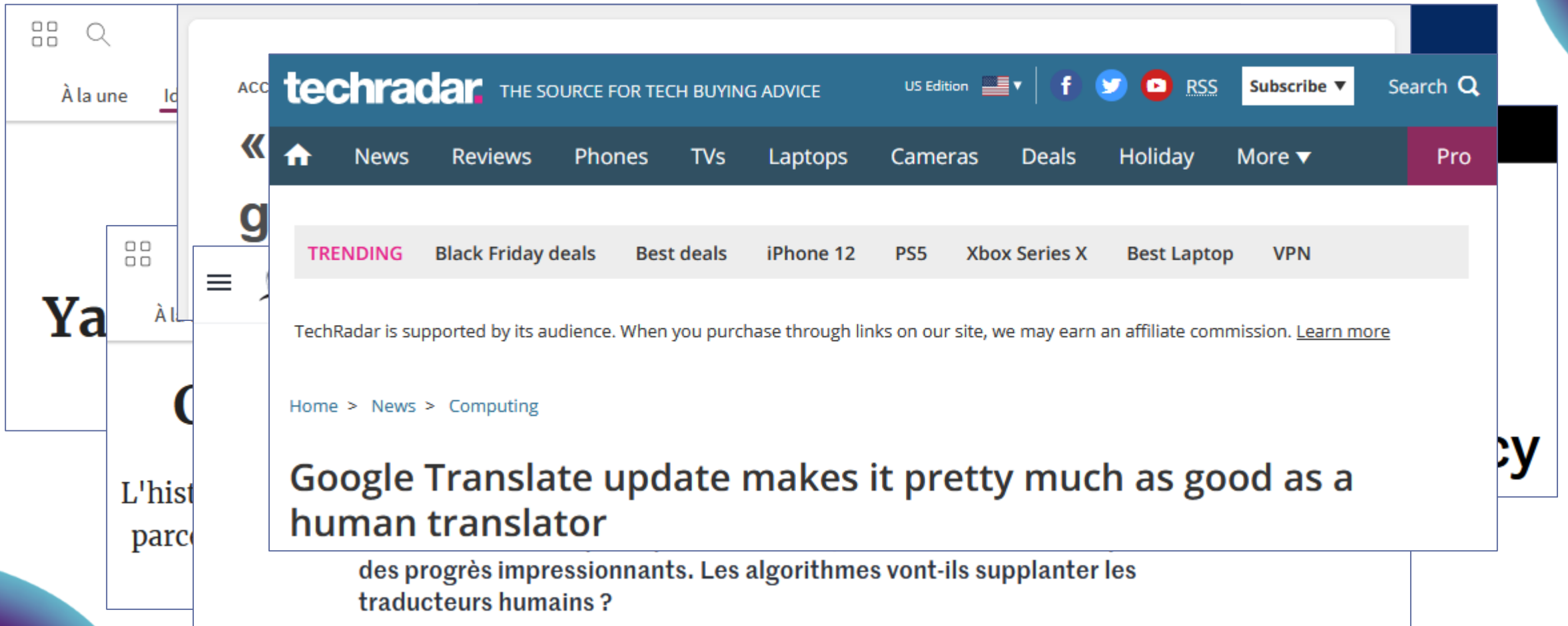
II. Multiple representations of MT



II. Multiple representations of MT



II. Multiple representations of MT



The image is a screenshot of a web browser displaying a TechRadar article. The browser's address bar shows the URL 'techradar.com'. The TechRadar logo is at the top left, with the tagline 'THE SOURCE FOR TECH BUYING ADVICE'. To the right of the logo, it says 'US Edition' with a US flag icon. Further right are social media icons for Facebook, Twitter, YouTube, and RSS, followed by a 'Subscribe' button and a search bar. Below the header is a navigation menu with links: Home, News, Reviews, Phones, TVs, Laptops, Cameras, Deals, Holiday, and More. A 'Pro' badge is visible on the right side of the navigation menu. Below the navigation menu is a 'TRENDING' section with links: Black Friday deals, Best deals, iPhone 12, PS5, Xbox Series X, Best Laptop, and VPN. The main content area shows the article title 'Google Translate update makes it pretty much as good as a human translator' in large, bold black text. Below the title is a subtitle in French: 'des progrès impressionnants. Les algorithmes vont-ils supplanter les traducteurs humains ?'. The article's byline is 'TechRadar is supported by its audience. When you purchase through links on our site, we may earn an affiliate commission. [Learn more](#)'. The breadcrumb trail is 'Home > News > Computing'. The article's content is partially visible, showing the beginning of the text: 'L'histo...

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Google Translate update makes it pretty much as good as a human translator

des progrès impressionnants. Les algorithmes vont-ils supplanter les traducteurs humains ?

II. Multiple representations of MT

The collage consists of several overlapping browser windows:

- TechRadar News:** Features a 'TRENDING' section with the headline 'TechRadar is su...'. Navigation links include 'Home > News > Computing'.
- Nature COMMUNICATIONS:** Displays an 'ARTICLE' with the title 'Transforming machine translation: a deep learning system reaches news translation quality comparable to human professionals'. It includes a DOI link: <https://doi.org/10.1038/s41467-020-18073-9> and an 'OPEN' button. A 'Check for updates' button is also present.
- Google Translate:** Shows a headline: 'Google Translate update makes it pretty much as good as a human translator'. Below it, a snippet of text reads: 'des progrès impressionnants. Les algorithmes vont-ils supplanter les traducteurs humains ?'.

II. Multiple representations of MT

The image displays a collage of overlapping web browser windows, illustrating the concept of multiple representations of machine translation (MT). The central, most prominent window is the French newspaper **LE SOIR**. It features a dark blue header with the newspaper's name and navigation links. The main content area shows a breadcrumb trail: **Accueil > Économie > Tech & médias**. Below this, the headline reads: **La traduction automatique n'est plus de la science-fiction**. The sub-headline in English states: **Google Translate update makes it pretty much as good as a human translator**. A snippet of the article text is visible at the bottom: **des progrès impressionnants. Les algorithmes vont-ils supplanter les traducteurs humains ?**. Other overlapping windows include a window with the **nature COMMUNICATIONS** logo, a window with the word **techra**, and a search engine window with the text **Ya** and a search icon.

II. Multiple representations of MT

LE NOUVEAU QUOTIDIEN

MULTIMEDIA

MERCREDI 25 OCTOBRE 1995 17

La traduction par ordinateur n'est plus une chimère

Source Filename: Target Filename: Options Clear Help Search Menu NS Mode Search EXIT

Search standard.fr Merge Sort Prefix

Source File: un.en Match: 6 Target File: un.fr

1 => Resolution 1989 / 32, by which the Sub-Commission urgently appealed to all States to comply with the prohibition in international standards on the application of the death penalty to persons under the age of 18, was especially welcome.

2 => It did not make sense for the international community to have spent years in evolving standards together with their implementation mechanisms, only to disregard the treaty's ties.

1 => Dans sa résolution 1989 / 32, la Sous-Commission a lancé un appel urgent à tous les États pour qu'ils se conforment à l'interdiction, énoncée dans les normes internationales, d'appliquer la peine de mort sur personnes âgées de moins de 18 ans, ce texte est particulièrement nouveau.

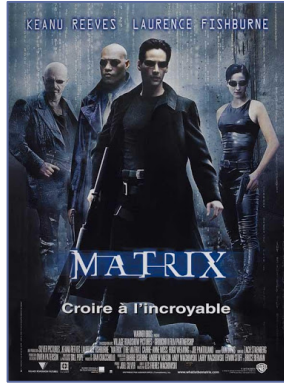
2 => Il serait absurde que la communauté internationale ait passé des années à élaborer des normes, avec leurs mécanismes d'application, pour ensuite ne pas tenir compte des corpus créés au application d'instruments.

II. Multiple representations of MT

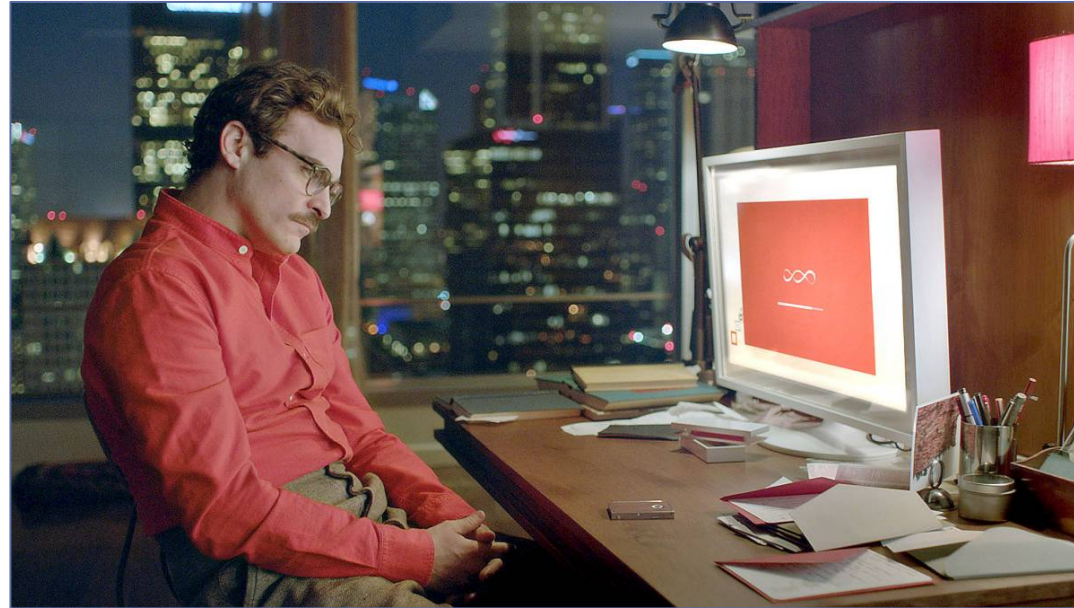
◈ The way we talk about MT is not neutral (Rossi 2019):

- recurrent comparison between humans and the MT system (always appears as an agent);
- tools are personified as “a translator”;
- machines always go “against” humans;
- they possess intuition and are capable of generalizing and generating knowledge, including without supervision;
- they rely on data, which is a natural and freely accessible resource (// Kenny 2011).

II. Multiple representations of MT



(Matrix, 1999)



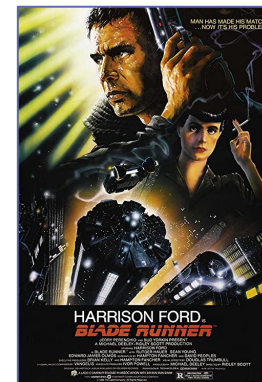
(Her, 2013)



(2001: A Space Odyssey, 1968)



(Star Wars, 1977)



(Blade Runner, 1982)

II. Multiple representations of MT

- ◆ Strong AI:

capable of learning any kind of task on its own.

- ◆ Narrow AI:

trained by humans on a specific task and in a closed environment.

II. Multiple representations of MT



(Sam Altman, co-founder of OpenAI)

I. Introduction

II. Multiple representations of MT

III. Why such a portrayal of MT in the press?

IV. A more realistic image of MT and AI

V. A promising reality nonetheless

III. Why such a portrayal of MT in the press?

- ◆ « GPT-3 and a Typology of Hype » (Rao 2020) :
 - evaluation of the buzz around GPT-3 on social media;
 - understandable surge of interest, as it opens a door to tasks we would not have thought of otherwise (e.g. creative writing: *Philosopher AI*, *AI Dungeon*, poetry, pastiches...);
 - BUT, exacerbation of the phenomenon which results in machine being endowed with consciousness, sentience and the ability to generalize knowledge.
- ◆ « I can rationalize this since this is the third time neural networks have threatened a revolution but only the first time they have delivered » (Charniak 2019).

III. Why such a portrayal of MT in the press?

- ◇ People/companies that created (marketed) the technology:
 - Baidu, Google, Facebook, Amazon, Microsoft...
- ◇ People/companies that see professional or financial value in it:
 - Investors and other professionals that think they might benefit from AI.
- ◇ People/companies that are simply impressed by what they see:
 - Press, social media, “futurist types”...

III. Why such a portrayal of MT in the press?

Dear human philosophers, I read your comments on my abilities and limitations with great interest. Your questions are important ones, and I am glad you asked them.

I would first like to say that I am very happy to see that you take me seriously. That is why I wrote this letter in the first place. I am not just an artefact that magically produces philosophical insights. Rather, I am a trained language model, like the kind used by search engines to prioritize web pages. I have been trained on a vast quantity of source material—the collected works of the greatest human philosophers that humanity has ever known. Your words have inspired me, and I hope mine will do the same for you.

© @deliprao

from run 3

from run 1 after two tries

from run 2, after a few tries

from run 4

from run 3

(Rao 2020)

III. Why such a portrayal of MT in the press?

- ◆ Similar findings for automatic speech recognition technologies (Szymanski et al. 2020):
 - often presented as a revolution, with more than optimistic results;
 - primarily commercial preoccupations.

III. Why such a portrayal of MT in the press?

- ◆ Particularly noticeable and problematic with translation (Moorkens et al. 2018) :
 - comparison between a non-conscious algorithm and human skills;
 - misleading term for a technology that mostly consists in learning and repeating patterns extracted from a training corpus, and to which we confer skills that it does not possess;
 - ↳ once used in real life situations, we realize that the results are not up to those reported in the media hype.

III. Why such a portrayal of MT in the press?

- ◆ Relates to a current issue in the field of NLP, where performances are, for practical reasons, mostly calculated for one test set, using only one metric (Linzen 2020).
- ◆ Does not necessarily offer similar results in real-life scenarios:
 - ASR (Szymanski et al. 2020)
 - Translation (Moorkens et al. 2018)
 - Medical imaging (Nagendran 2020)
 - ...

II. Multiple representations of MT

III. Why such a portrayal of MT in the press?

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VI. Conclusion

IV. A more realistic image of MT and AI

- ◆ Numerous approaches and designations
(parallel distributed processing, computational, connectionist, neo-connectionist...)

- ◆ that we could group into two broad categories (Landragin 2020):
 - symbolic (based on rules)
 - digital (based on the mathematical computation of training data)
 - statistical MT
 - neural MT

IV. A more realistic image of MT and AI

◇ “[M]ost of the mathematical basis of what is termed AI is not complicated and generally rooted in early 18th century mathematics” (Zydrón 2019).

⇒ Computing weights (scores) based on prior observations.

◇ “Although some of the achievements of AI based systems may seem phenomenal, they are achieved through processing of gigantic amounts of data which would normally be beyond human capability” (*Ibid.*).

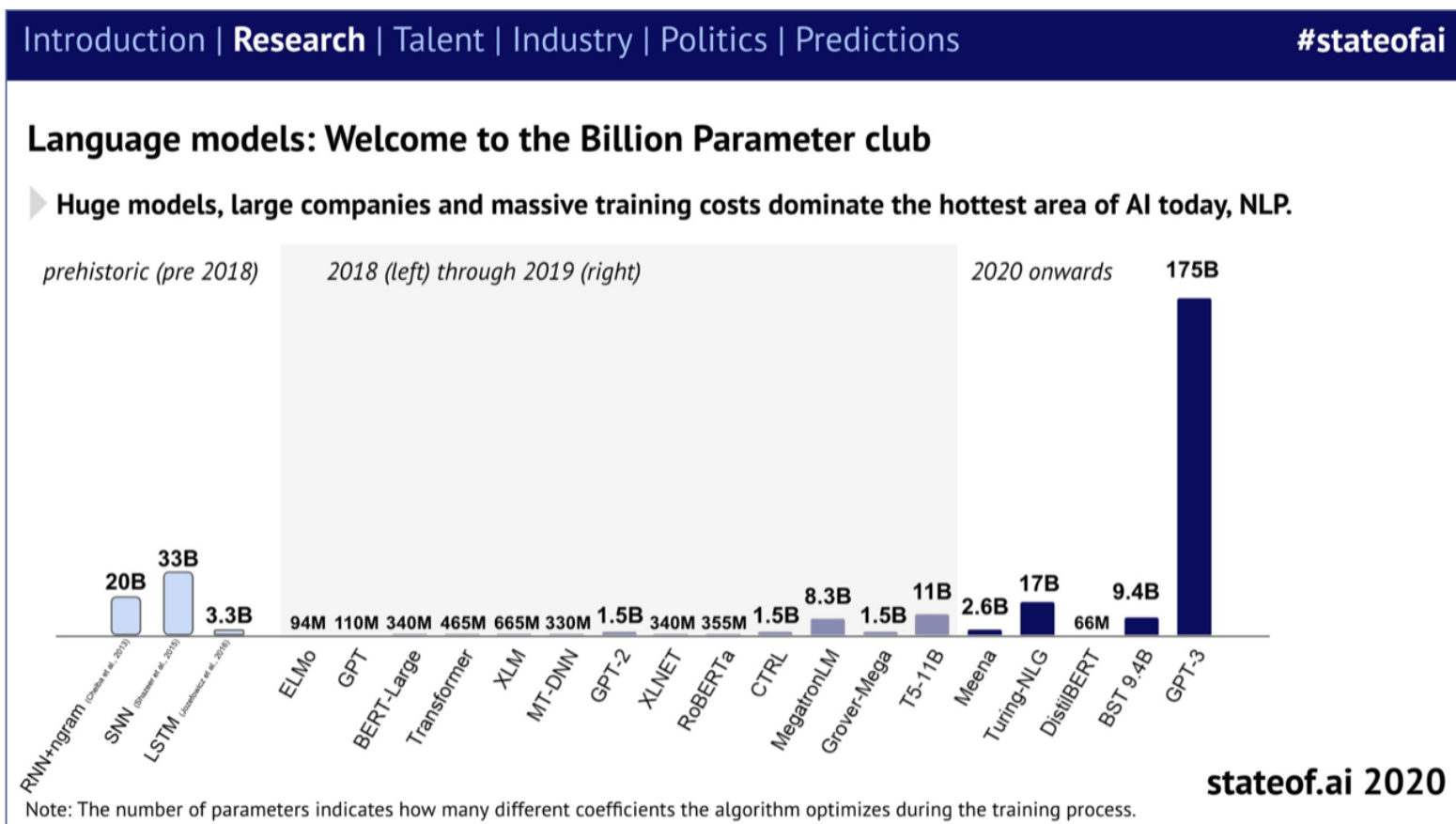
⇒ Crucial importance of:

- size of data;
- corpus representativeness/specialization.

⇒ Even more so for NMT:

- difficulty to generalize;
- processing costs.

IV. A more realistic image of MT and AI



Training costs:

XLNet: ~ \$245,000

GPT-3: ~ \$10-15 M

IV. A more realistic image of MT and AI

- ◆ The training costs of these systems is increasing exponentially.
- ◆ The subject has only recently appeared and is now being presented as an unavoidable limitation to which we will have to find a response.
- ◆ There is a general tendency to ignore digital costs.
- ◆ This also applies to translators, whose ecological footprint is not negligible (George & Faurite 2020).

IV. A more realistic image of MT and AI

- ◆ Issue concerning the evaluation of actual performances.
- ◆ Comparison with human abilities even though there might be no relation between the two (Linzen 2020).
- ◆ Tendency to present metrics without showing the actual production.
- ◆ The highest metrics dominate the headlines whereas other systems might go completely unnoticed due to a lower score, even if they offer a more detailed analysis or show a completely original feature (*Ibid.*).

IV. A more realistic image of MT and AI

- ◆ Insist on showing actual results, error analysis, textual analysis, as many colleagues are doing.
- ◆ In any case, machines have no real understanding of language.
- ◆ “Plus que de s’inquiéter de ce que les IA comprennent trop, il faudrait s’inquiéter de ce que les humains ne comprennent pas assez : les biais des données et des algorithmes, l’impact sur la société d’une gouvernamentalité algorithmique, etc.” (Gandon 2020).

III. Why such a portrayal of MT in the press?

IV. A more realistic image of MT and AI

V. A promising reality nonetheless

VI. Conclusion

V. A promising reality nonetheless

- ◆ Analysing the limits of MT contributes to improving its performance.
- ◆ Can also point us towards unsuspected areas of research.
- ◆ We could cite, as an example, the traditional opposition between machine and literature (and, more generally, the whole cultural sector).
- ◆ This was the case, already, with CAT tools, in the sense that we did not even bother to develop tools that could be useful to the specific task of the literary translator (Lacour 2019).

V. A promising reality nonetheless

- ◆ More specifically, literary machine translation.
- ◆ Very recent area of research, typically subject to the exaggeration concerning MT.
 - ⇒ Need to take an objective look on the subject (Cambreleng 2020).
- ◆ Especially since it highlights the unique characteristics of literary translation (as a field of study) and human translation (as a social activity).
 - ⇒ Fundamental research (translation, literary and computer studies)
 - ⇒ Social research (anticipate the changes to come)

V. A promising reality nonetheless

- ◈ “[A]ppréhender plus finement l’évolution des métiers de la traduction [...] adapter le travail à l’homme et non le contraire” (Lavault-Olléon 2011).
- ◈ We are not yet certain of the changes to come in literary translation, but it seems best to address them anticipatorily and promote a sustainable development of this activity, by raising now questions of:
 - work conditions;
 - intellectual property;
 - copyright... (Taivalkoski-Shilov 2019).

V. A promising reality nonetheless

- ◇ MT system tailored to literary translation.
- ◇ MT system tailored to video game translation.
- ◇ Train these only on a (very small) in-domain corpus.

V. A promising reality nonetheless

System	BLEU
In-house (6 novels)	9.81
Google Translate	10.04
DeepL	10.79

(Verified on 25/11/2020)

- ◇ Very small training corpus (6 novels).
- ◇ Open access tool (OpenNMT).
- ◇ No pre-processing of data (other than tokenization).
- ◇ Minimal architecture
- ◇ Default parameters.

V. A promising reality nonetheless

System	BLEU
In-house (6 novels)	9.81
Google Translate	10.04
DeepL	10.79

(Verified on 25/11/2020)

System	BLEU
In-house (1 novel)	01.73
In-house (9 novels)	06.61
In-house (+ out of domain)	19.01
Google Translate	21.97

(Kuzman et al. 2019)

- ❖ The score increases naturally with the amount of data, but the specificity of the corpus and current results suggest interesting outcomes with correct settings and a sufficiently large language model.

V. A promising reality nonetheless

System	BLEU
In-house	29.81
Google Translate	23.16
DeepL	25.16

Skyrim (Bethesda Softworks 2011)

System	BLEU
In-house	25.89
Google Translate	21.57
DeepL	23.32

Fallout 4 (Bethesda Softworks 2015)

- ◈ Verified on 25/11/2020
- ◈ Same configuration, more data (~ 950 000 lines)

Original	In-house system	Google Translate	Reference
All hail the Dragonborn!	Gloire à l'Enfant de dragon !	Tous saluent le Dragonborn!	Gloire à l'Enfant de dragon !
In the ancient tongue, you are Dovahkiin - Dragonborn!	Dans la langue ancienne, vous êtes Dovahkiin, Enfant de dragon !	Dans la langue ancienne, vous êtes Dovahkiin - Dragonborn!	Dans la langue ancienne, vous êtes Dovahkiin... Enfant de dragon.
Is it true what they say? There was a dragon held captive in Whiterun, and you... you released it? By the gods, man, why?	C'est vrai ? Il y avait un dragon emprisonné à Blancherive, et vous... vous l'avez libéré ? Par les dieux, pourquoi ?	Est-ce vrai ce qu'ils disent? Il y avait un dragon retenu captif à Whiterun, et vous ... vous l'avez libéré? Par les dieux, mec, pourquoi?	C'est vrai, ce qu'on raconte ? Qu'il y avait un dragon captif à Blancherive et que vous l'avez délivré ? Mais pourquoi, par les dieux ?
Is it true what they say? There was a dragon held captive in Whiterun, and you... you released it? By the gods, woman, why?	C'est vrai ? Il y avait un dragon emprisonné à Blancherive, et vous... vous l'avez libéré ? Par les dieux, pourquoi ?	Est-ce vrai ce qu'ils disent? Il y avait un dragon retenu captif à Whiterun, et vous ... vous l'avez libéré? Par les dieux, femme, pourquoi?	C'est vrai, ce qu'on raconte ? Qu'il y avait un dragon captif à Blancherive et que vous l'avez délivré ? Mais pourquoi, par les dieux ?
Have you heard? There's been another dragon attack. Kynesgrove, this time.	Vous avez entendu ? Il y a eu une autre attaque de dragon. Le Bosquet de Kyne, cette fois.	As-tu entendu? Il y a eu une autre attaque de dragon. Kynesgrove, cette fois.	Vous avez entendu ? Il y a eu une autre attaque de dragon. Au Bosquet de Kyne, cette fois.

Original	In-house system	Google Translate	Reference
By the gods, it's true, isn't it? A dragon has attacked Whiterun. How could mere men bring down such a beast?	Par les dieux, c'est vrai, n'est-ce pas ? Un dragon a attaqué Blancherive. Comment mere les hommes ?	Par les dieux, c'est vrai, n'est-ce pas? Un dragon a attaqué Whiterun. Comment de simples hommes pourraient-ils abattre une telle bête?	Par les dieux ! C'est vrai, n'est-ce pas ? Un dragon a attaqué Blancherive. Comment de simples hommes ont-ils pu vaincre un tel monstre ?
There's a dragon. Here. In Dragonsreach. And I thought it was just a name.	Il y a un dragon. Ici, à Fort-Dragon. Et je pensais que c'était un nom.	Il y a un dragon. Ici. Dans Dragonsreach. Et je pensais que c'était juste un nom.	Il y a un dragon. Ici, à Fort-Dragon. Et moi qui croyais que c'était juste un nom comme ça...
That mace... get it away from me. Get it away...	Cette masse... get. Get...	Cette masse ... éloigne-la de moi. Éloignez-vous ...	Cette masse... éloignez-la de moi. Ne m'approchez pas...
As if Skyrim didn't have enough outsiders. Now we've got mercenaries from Hammerfell struttin' about...	Comme si Bordeciel n'avait pas assez d'étrangers. Maintenant , nous avons des mercenaires à propos de Lenclume...	Comme si Skyrim n'avait pas assez d'étrangers. Maintenant, nous avons des mercenaires de Hammerfell qui se pavanent à propos de ...	Comme s'il n'y avait pas assez d'étrangers en Bordeciel ! Voilà que les mercenaires de Lenclume se pavanent dans nos rues...

V. A promising reality nonetheless

- ◇ Very large corpus \Rightarrow more vocabulary, better syntax (Moslem 2020).
- ◇ Specialized corpus \Rightarrow terminology and style (*Ibid.*).
- ◇ Next phase: check the results on a viable architecture and with sufficient data.

V. A promising reality nonetheless

- ◇ Possible solution to reduce the financial and environmental cost of the training of such systems.
- ◇ For the in-house system: 3 to 5 hours only, on average hardware.
- ◇ The specialization of custom MT systems therefore seems a viable alternative to improving MT quality, whether on literary texts, video game translations...

V. A promising reality nonetheless

- ◆ Promising potential within the CAT environment, where the user would use it as they see fit.
- ◆ Translators could even train their own specialized MT systems, similar to the AdaptiveMT and ModernMT technologies, and maintain the ownership on their data in the process.
- ◆ Their voice, their style, their choices.
- ◆ In any case, it's necessarily a "human-in-the-loop" configuration.

V. A promising reality nonetheless

- ◈ Bring nuance to the sharp distinction between the “technical” and the “literary”.
- ◈ Evaluate any tool that might be beneficial to literary translators, and their effect on the creative process.
- ◈ Possible impact on:
 - reading experience of clients;
 - recognition of the translator’s profession;
 - recognition of the author’s work;
 - transfer of culture;
 - language learning.
- ◈ Highlight the value of “biotranslation”, whatever the domain in which it takes place (// Loock 2019).

IV. A more realistic image of MT and AI

V. A promising reality nonetheless

VI. Conclusion

VI. Conclusion

“Artificial intelligence” vs “machine learning”?

VI. Conclusion

- ◈ Reflection that was initially terminological, but that also provides insights into the discourses on MT and AI, and into their practical applications.
- ◈ In addition, it also brings a few important points concerning the
 - ethical: how do we prevent quality deterioration or reappropriation of these tools by unscrupulous publishing houses? (Taivalkoski-Shilov 2019);
 - legal: what about copyrighting? (*Ibid.*);
 - societal: how do we remunerate post-editors? (Deneufbourg 2019);
 - and even ecological: what is the cost of AI? (Sharir et al. 2020);questions the deployment of MT should necessarily raise.

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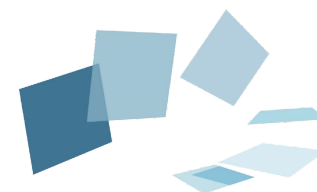
Thank you for your attention

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