

Reimagining Communication and Bilingualism in the Age of Speaking Machines

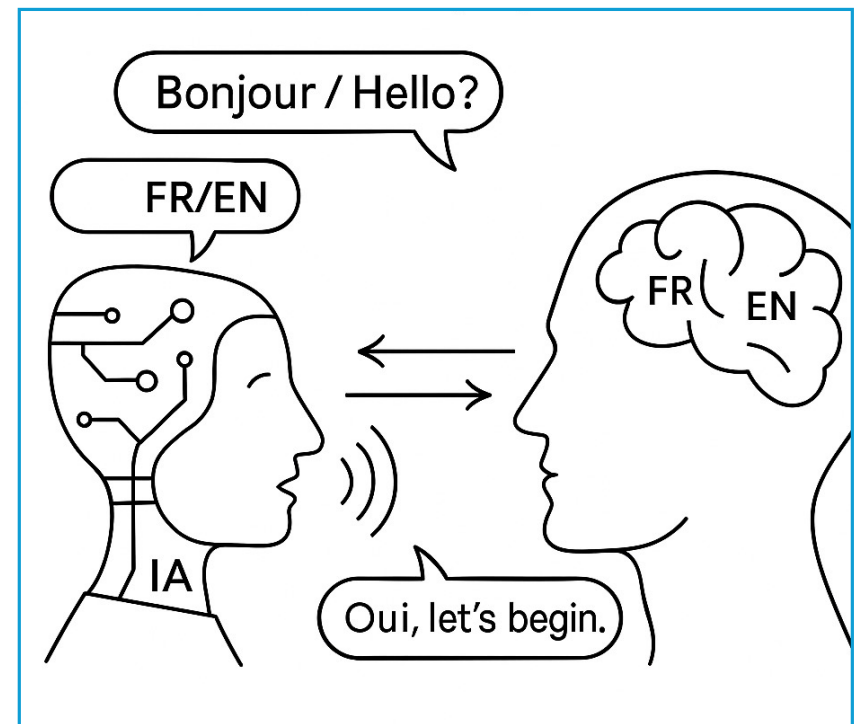


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Official Languages and Bilingualism Institute

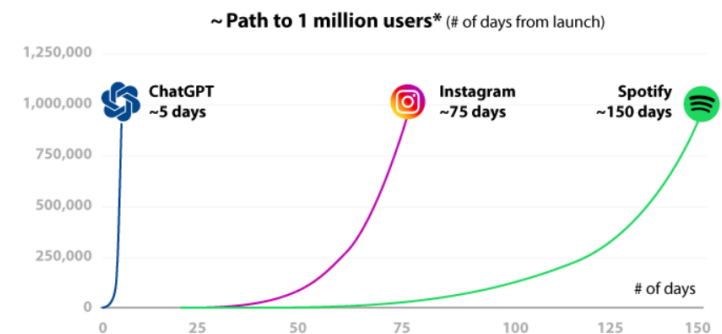
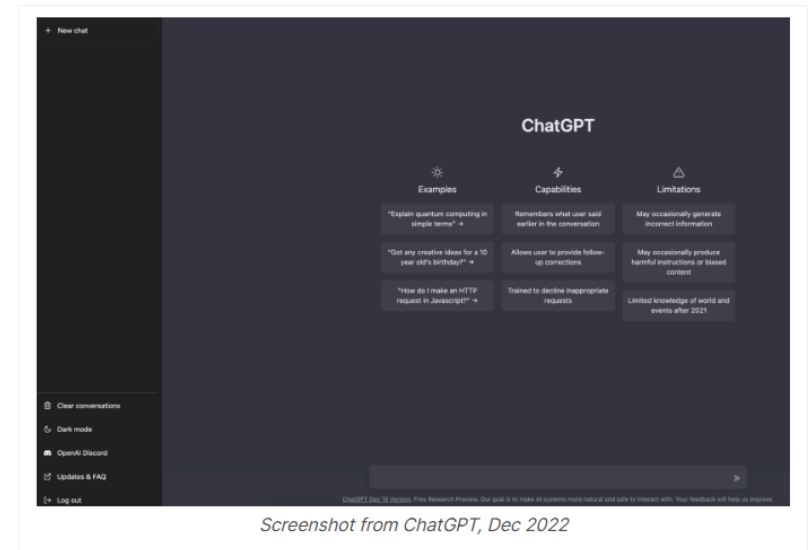


20 novembre 2025

Already three years...

- 30 November 2022: launch of ChatGPT 3.5 by OpenAI
- First publicly accessible generative AI model based on a large language model with a *conversational interface*.
- Were you one of them? Are you one of them today?
 - If so, you are among the hundreds of millions of weekly active users and are contributing to the goal of reaching one billion users by the end of the year (Paris, 2025).

November 30, 2022 – OpenAI introduced ChatGPT using GPT-3.5 as a part of a free research preview.



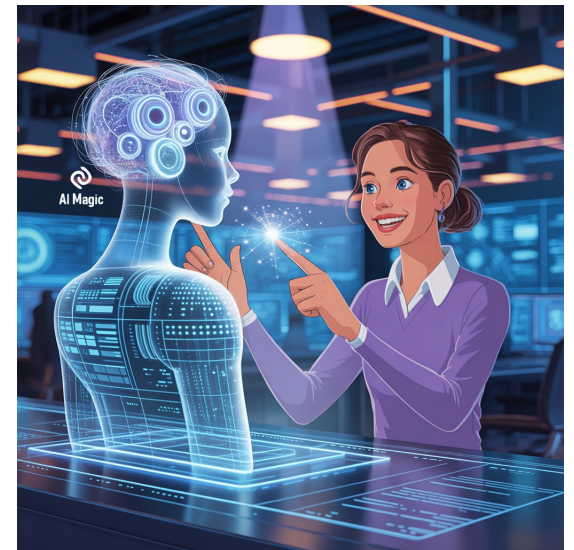


A powerful “arrival technology” (Hanegan, 2024)- Powerful, inevitable, but far from reassuring

- The result of multiple years of technological advances, particularly in machine learning, neural networks, and transformer technologies and architectures (Zawacki-Richter et al., 2019; Zhai et al., 2024).
- AI is infiltrating every sphere of our lives, in our phones, computers, and classrooms, transforming both public and private spheres.
- Evolving constantly and rapidly.
- Transforming our relationship to machines, the digital world, and ourselves.
- A force whose influence extends to the media, the worlds of science and business, education, and the public sector (Godwin-Jones et al., 2024; Kohnke et al., 2023).

A development comparable to the printing press

- A first in the history of human-machine interaction (Cope & Kalantzis, 2024).
- It is no longer only about processing, searching for, and retrieving information.
- The machine speaks and simulates dialogue, imitating human intelligence to the extent that users report developing deep emotional ties and attachments to these tools (Kirk et al., 2025).
- We engage in interactive dialogue to generate/create a new response (text, image, code, etc.) based on a query and the training data of generative AI (Pym & Hao, 2024).
- This generation is automated, enabling for the first time the mechanization of tasks with results that are increasingly difficult to distinguish from what, previously, only humans could produce (Rathi et al., 2024).



Examples of the types of texts that AI and large language models can generate automatically

- Poems
- Images
- Text annotation
- Transcription of multimedia texts
- Personalized education
- Videos
- Translations
- Exam answers
- Fake news
- Propaganda
- Hallucinations

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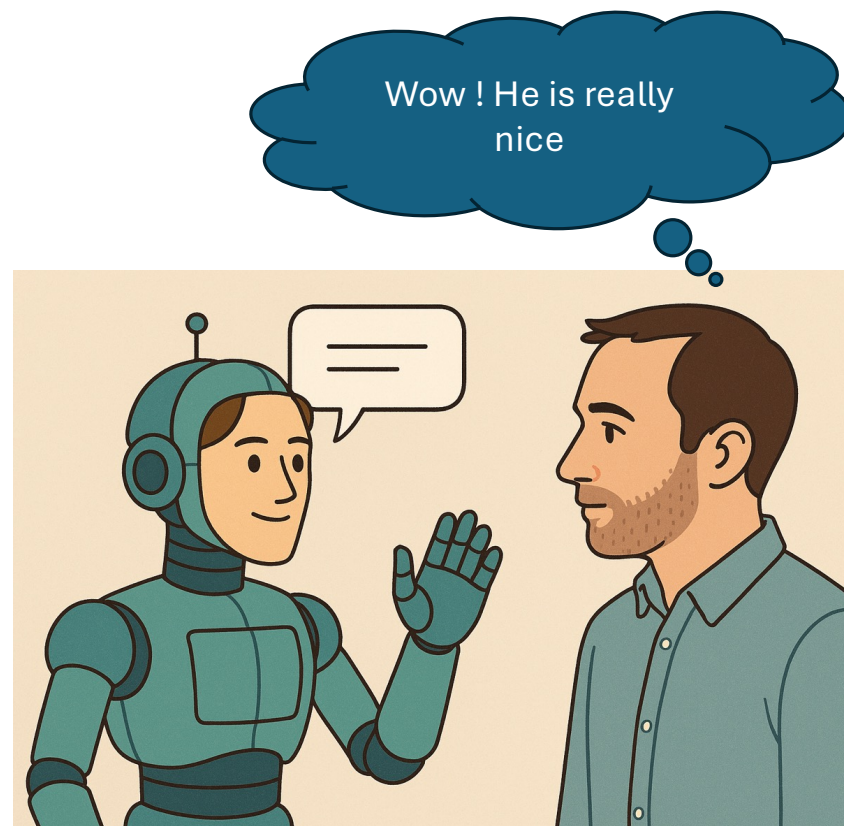
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Caution: not everything on this list is desirable

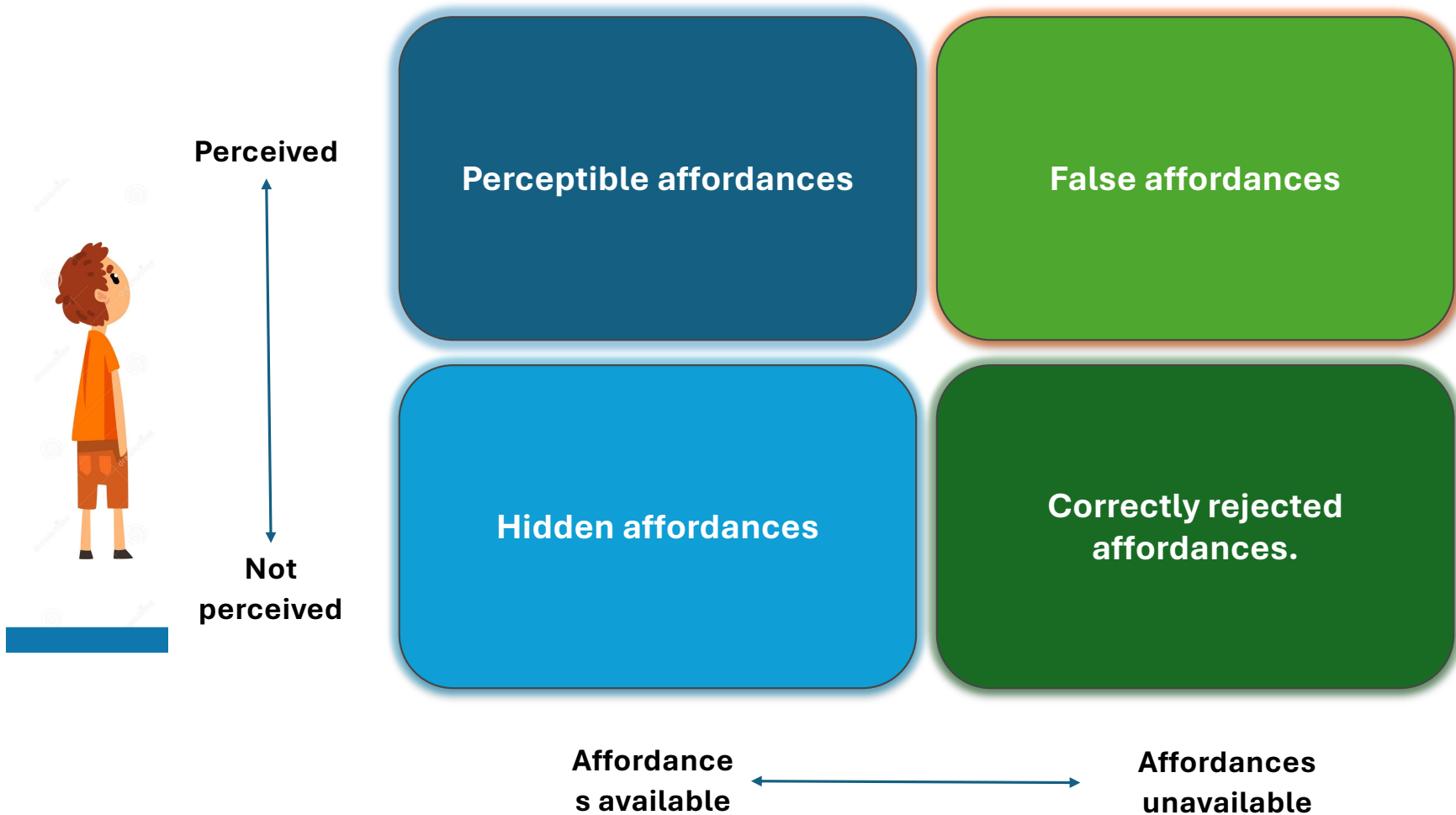
Impressive results...but...

- We are still talking about imitating human intelligence (Turing, 1950)
- The ability of large language models to imitate how we speak and write pushes us to attribute intention, volition, and even emotions to them
- This is a dangerous interpretive bias that can obscure what is really going on and that must be countered with:
 - a critical lens
 - a clear understanding of the affordances and limits of these tools

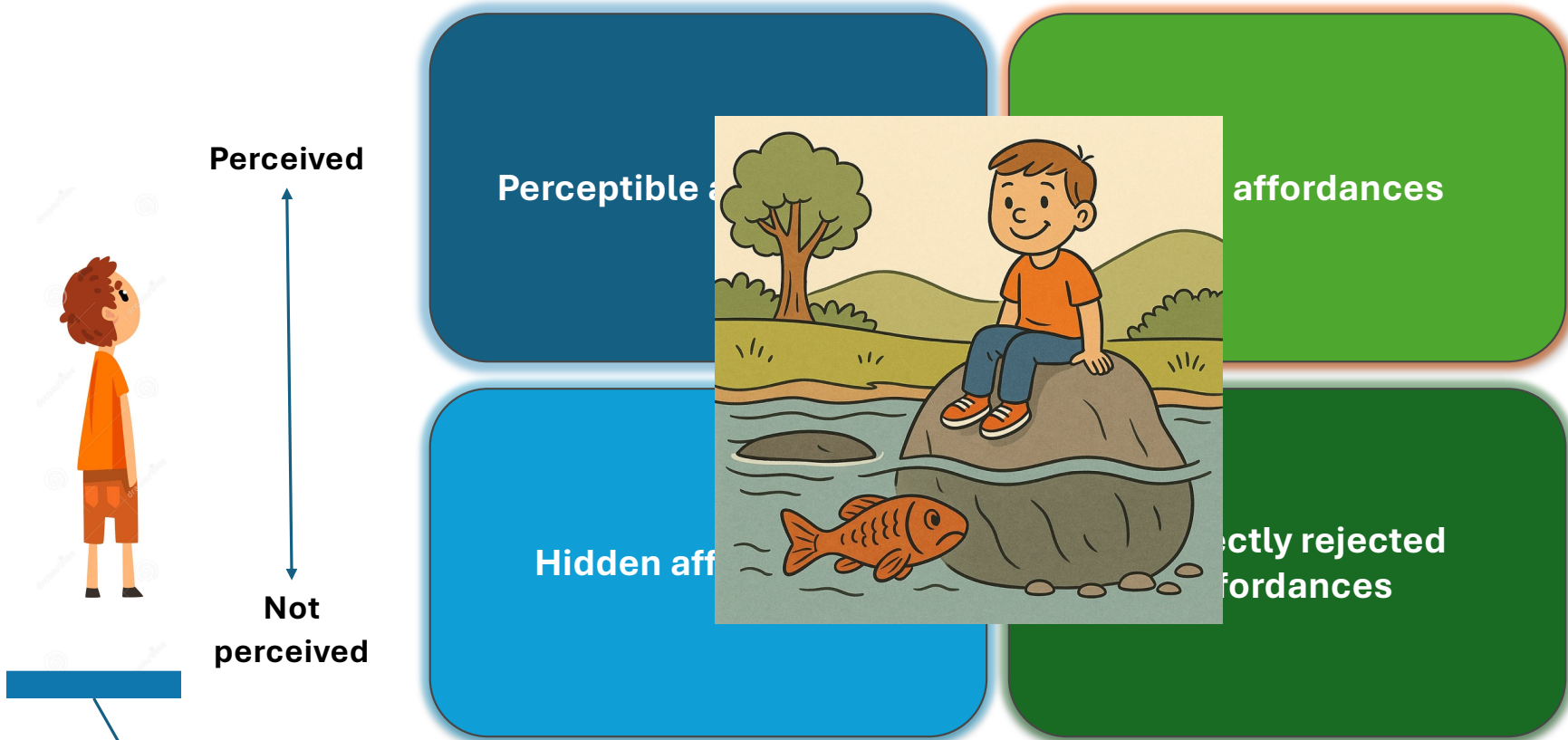


Approaching the machine through its affordances

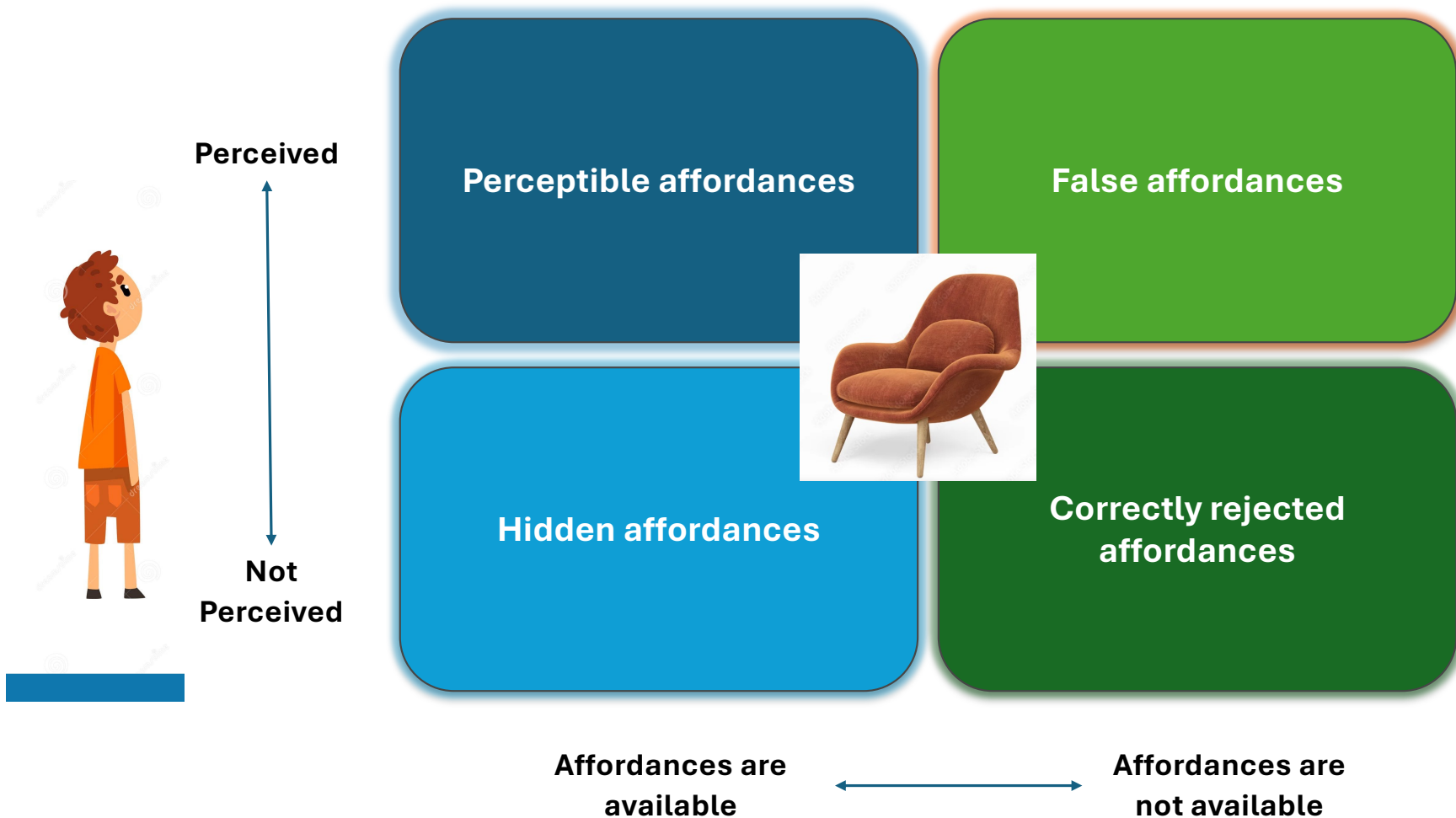
- A lens to define the relationship between an individual and what their environment offers or provides them, “for better or for worse” (Gibson, 1977, p. 68).
- “Invitations to act” (Käufer and Chemero, 2015) (what the tool allows us to do and what it leads us to avoid)
- This is an important question, as we know that humans have always been defined by their tools and technologies (Taylor, 2010)
 - “We evolve or are defined by the artifacts we use. Tools shape us as much as we shape them.” (Cronin, 2013, p. 10)
 - Digital technology continues this process
- For Gaver (1991) — a question of perception



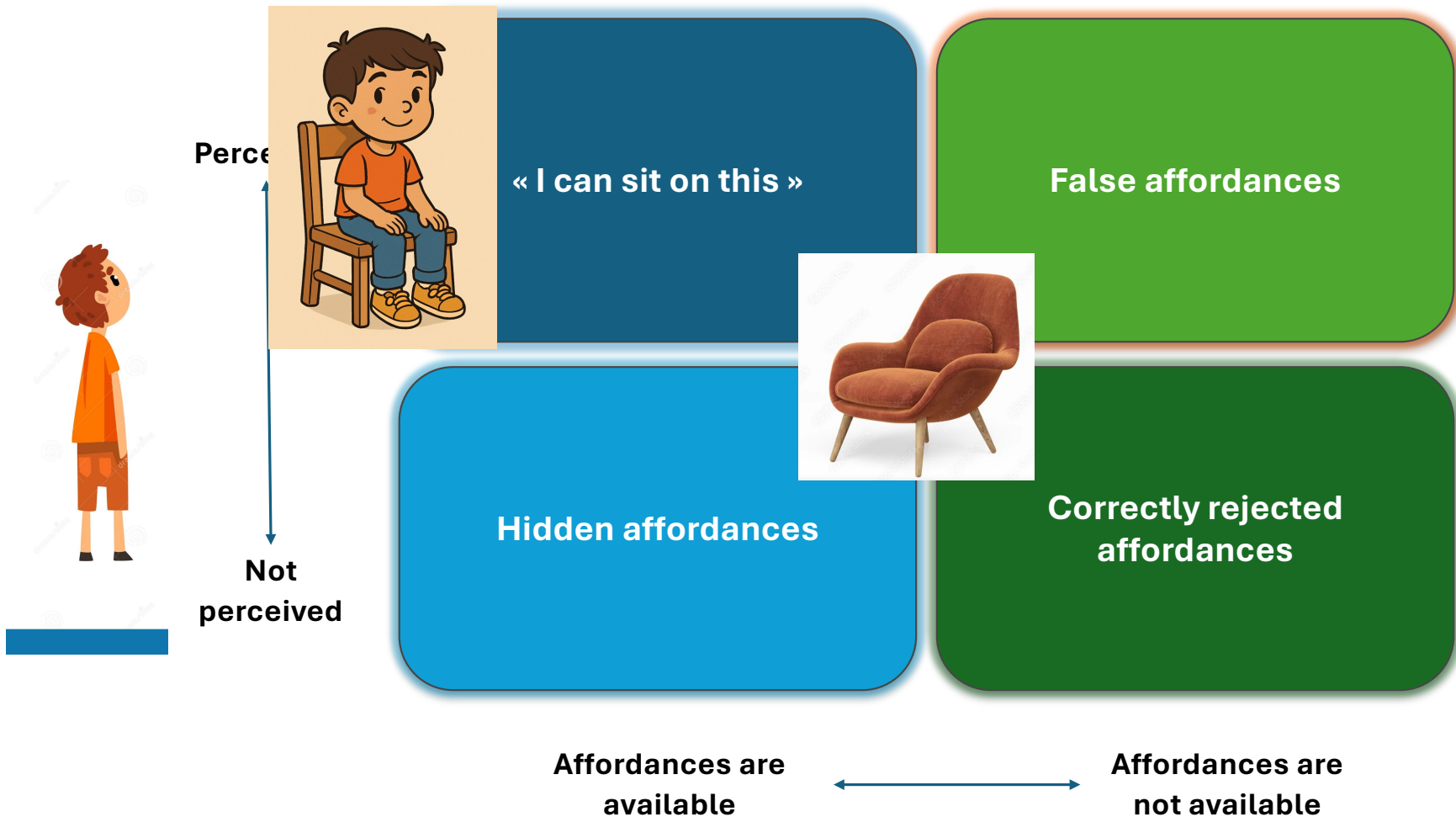
A CRITICAL LOOK AT WHAT AFFORDANCES ARE ON OFFER BASED ON INFORMATION PERCEIVED (ADAPTED FROM GAVER, 1991, P. 80)



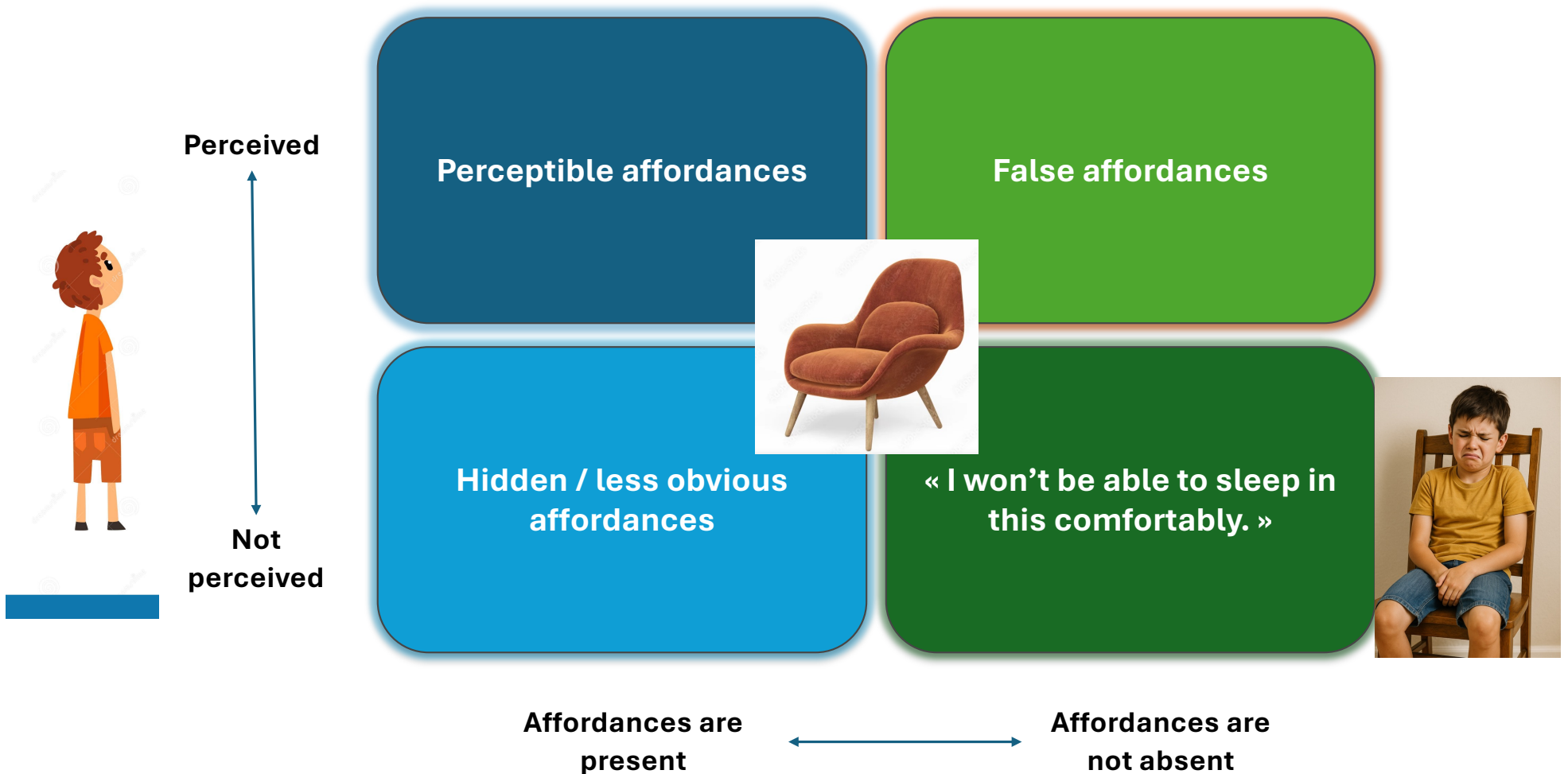
Affordances depend on who is doing the perceiving and what they can perceive about the object....a rock for a fish in the river is an obstacle...but a potential bridge for the human above



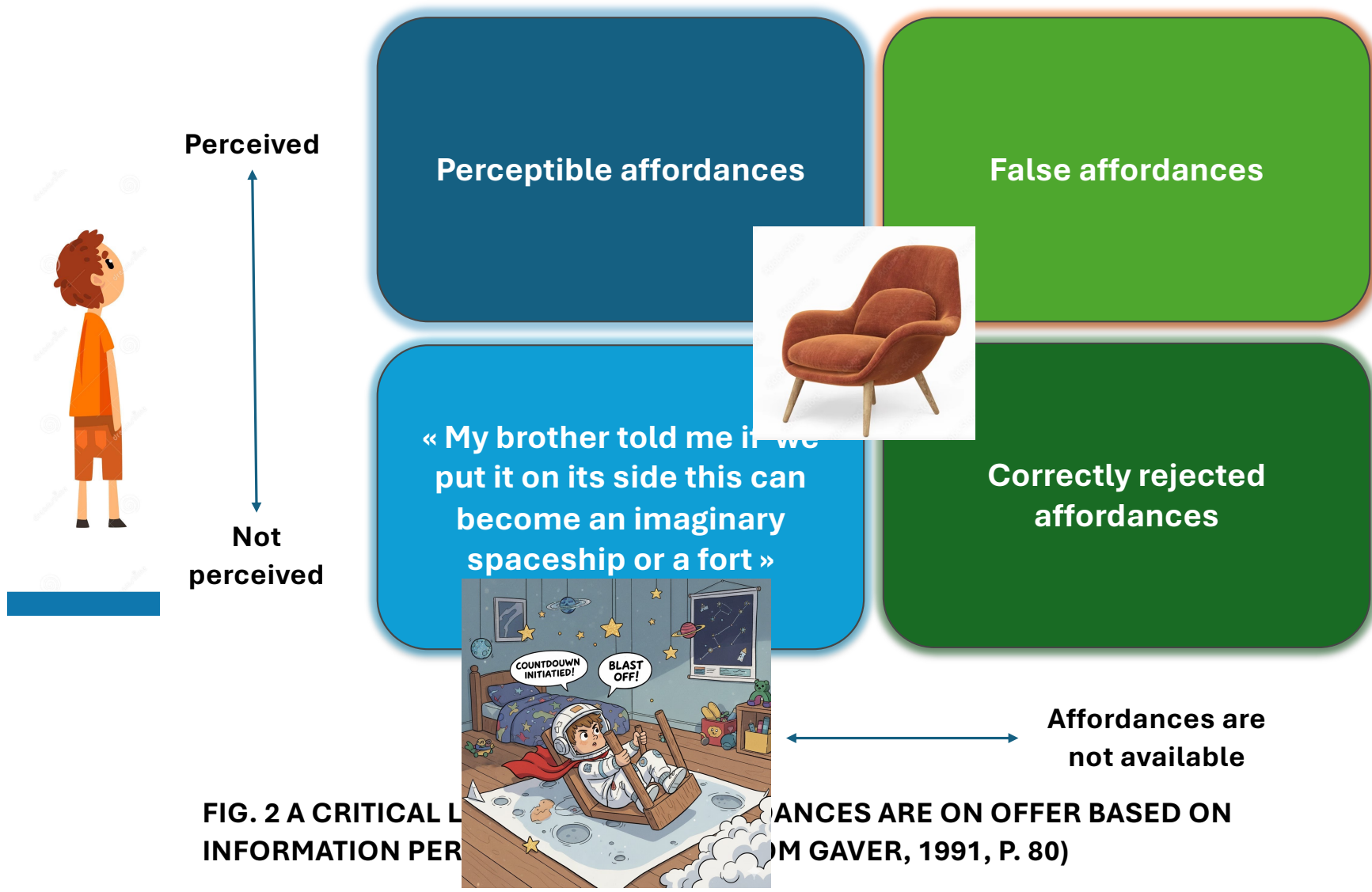
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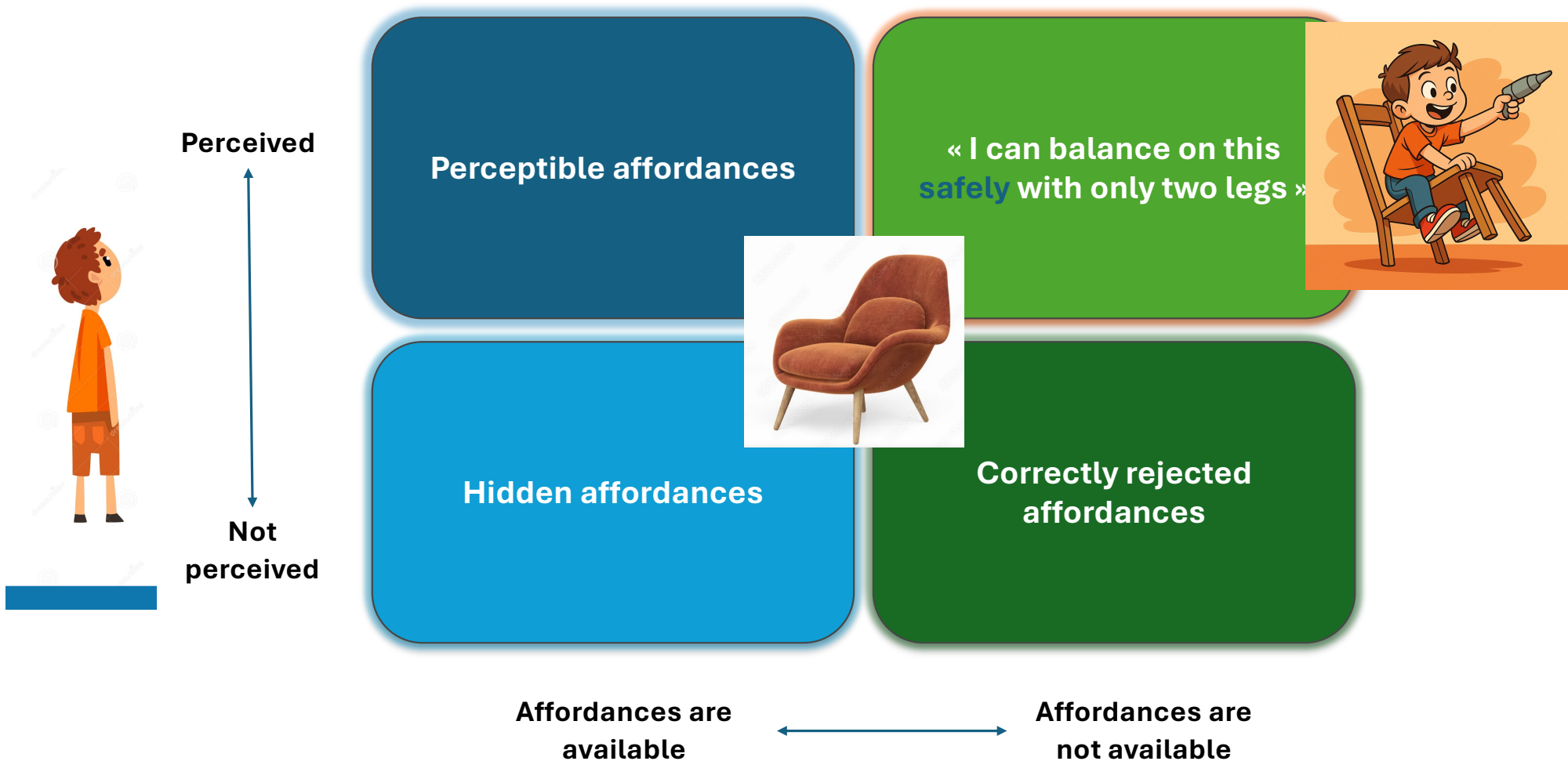


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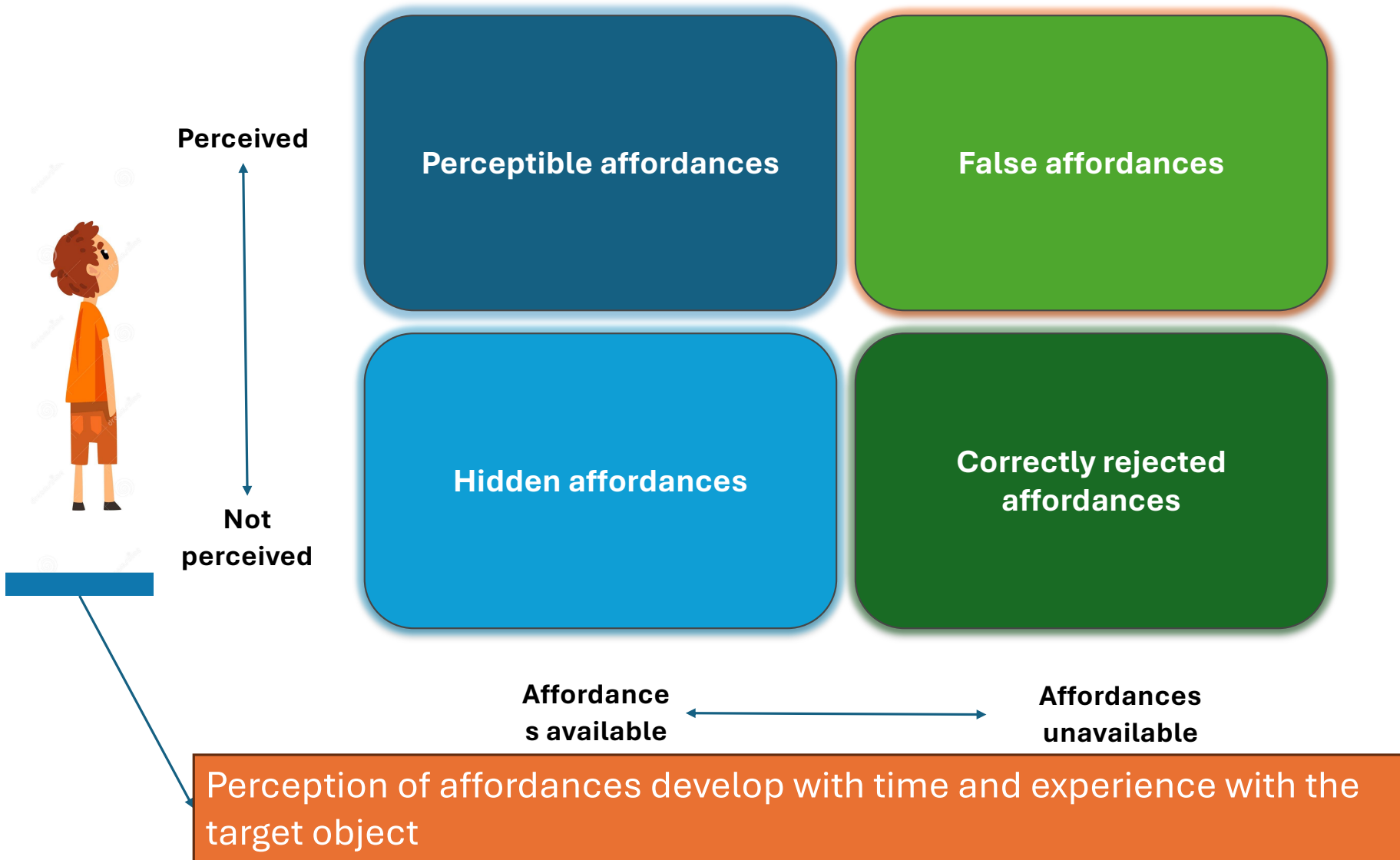


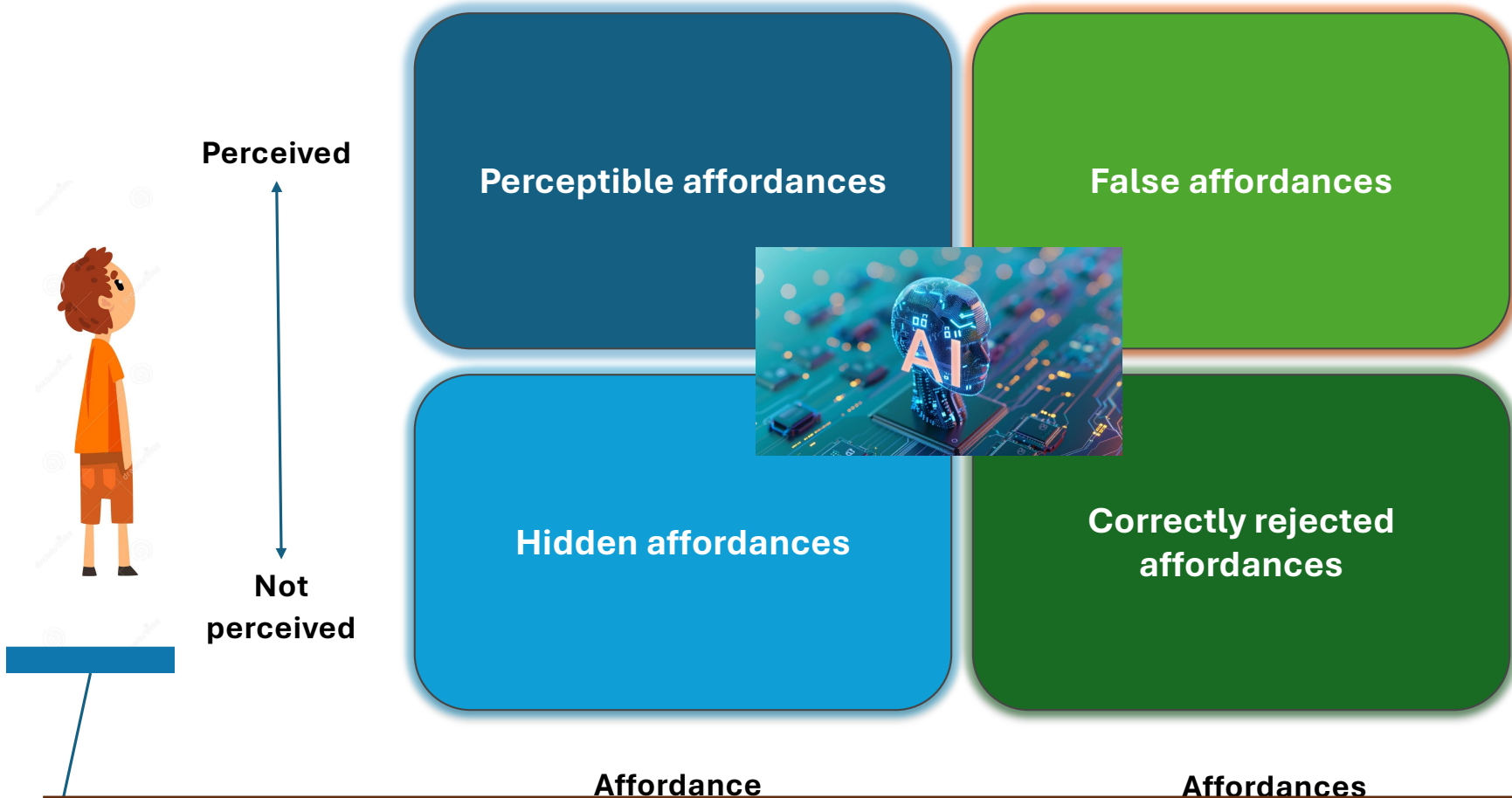
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When it comes to advanced and increasingly intelligent digital tools, many anticipate many affordances, but several remain to be discovered. This will change the world... but how?



A question of finding balance

Like surfing, the challenge is to stay on top of the wave, maintain control, act prudently, respect its power, but also learn how to harness it to go further than ever before.

This requires:

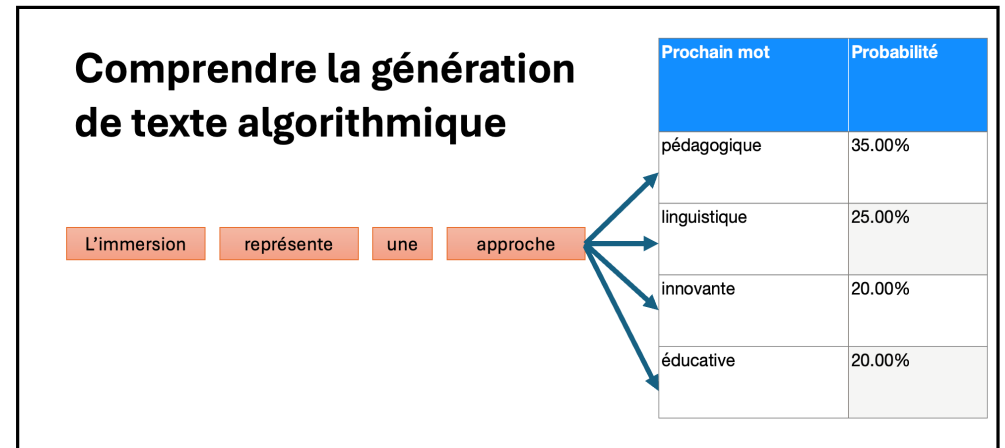
- Audacity and experimentation
- Sharing discoveries
- Developing **AI literacy to better understand opportunities and risks**
- Remembering **a fundamental truth**: As with any tool, intelligence resides not in the machine, but in us (Baker, 2016)

Examples of key skills to develop (Holmes et al., 2022; Long & Magerko, 2020; Miao & Cukurova, 2024)

1. Know what AI is, what it is not, its technologies, and how it differs from other technological tools.
2. Be aware of ethical issues such as privacy, algorithmic bias, transparency, and understand the impact of AI on society.
3. Recognize human involvement in programming, model selection, and AI tuning.
4. Recognize the importance of training data on the algorithms at the heart of AI.
5. Know how to evaluate the validity and reliability of information provided by AI, and identify the limitations of its responses.
6. Know how to identify the tasks that AI performs well and those that are better suited to human skills.
7. Know what policies to put in place to ensure that this technology is properly regulated.
8. Recognize the human dimension that lies both in front of and behind the screen (Jotterand & Bosco, 2020).

Knowing what AI is, what it is not

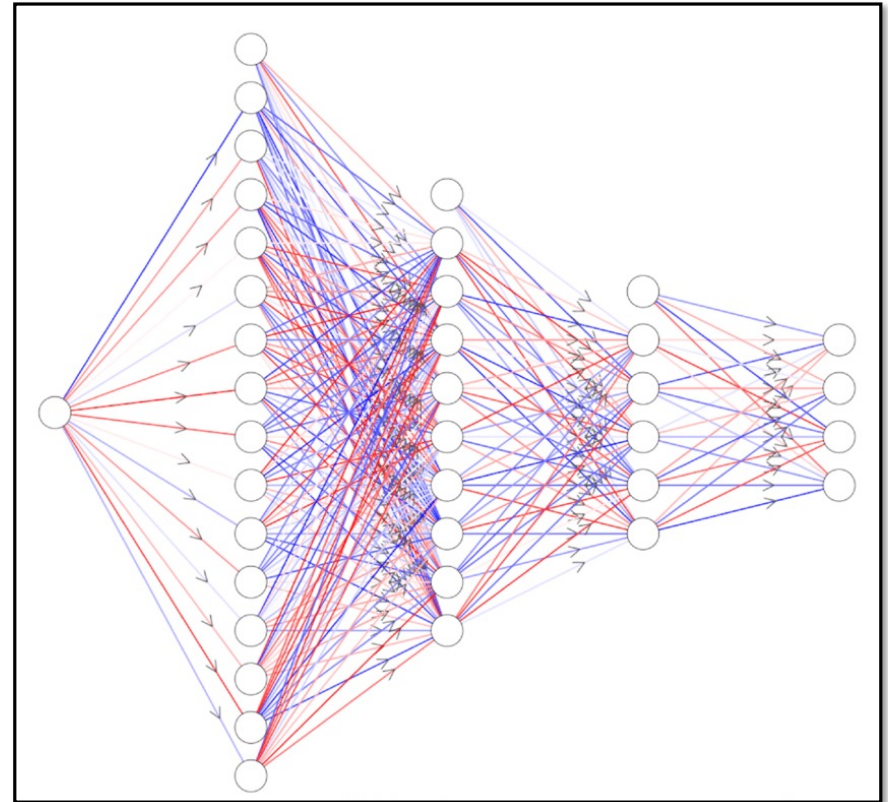
- Despite appearances, it is a machine that does not think like a human at all.
- The best answer is the one that has been calculated as “the most probable” based on a system aligned by a combination of human feedback and weights assigned to the model.



A simple version

Understanding the complexity of the system

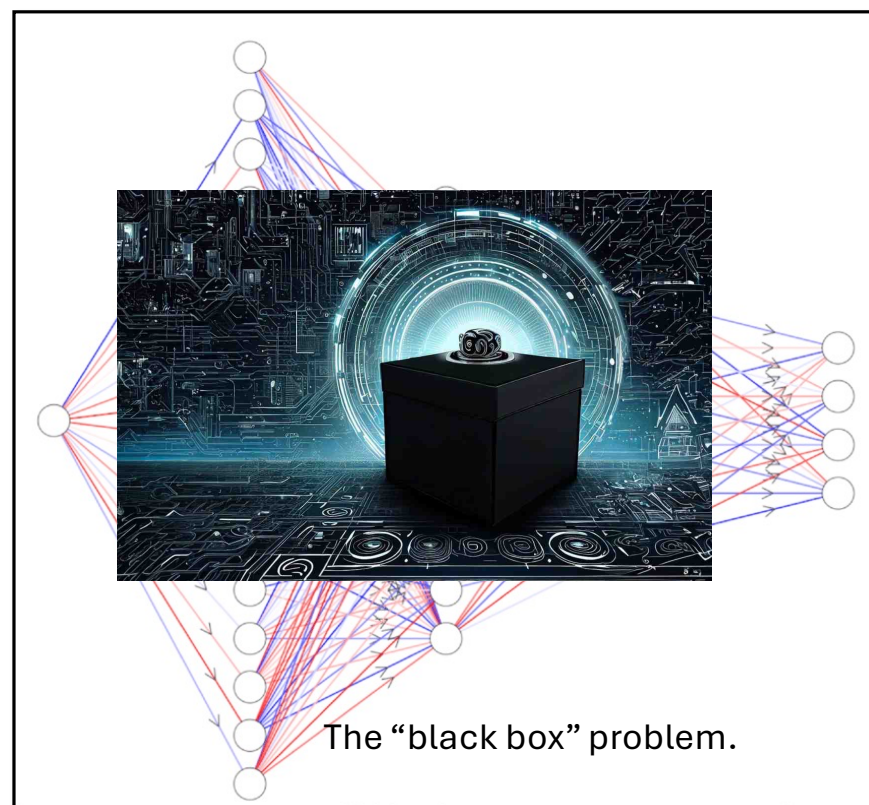
- This figure depicts a five-layer artificial neural network: one input layer, three hidden layers, and one output layer.
- In comparison, current systems such as GPT-4 utilize much deeper networks, with hundreds of layers and hundreds of billions or even trillions of parameters.



(Asgharzadeh, 2020)

Understanding what is sacrificed by the system

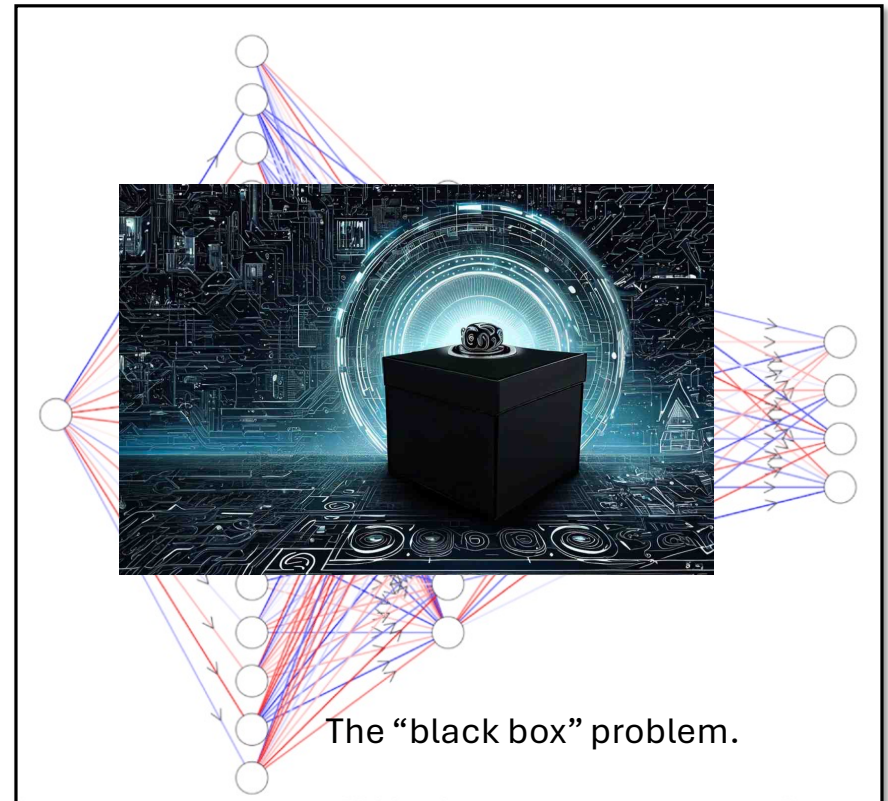
- The most probable, most “standard” response is favored, based on training data (Roussel & Ochoa, 2025).
- Since these systems are costly in terms of energy and computing power, the fluidity and naturalness of responses are optimized, often at the expense of accuracy, hence the risk of “hallucinations.”
- Above all, the texts generated have no context beyond what is encoded in the neural network.
- It is therefore not a direct relationship to truth or the world, but a complex, opaque, and largely unpredictable algorithmic activity, even for its developers.



(Asgharzadeh, 2020)

Understanding what is sacrificed by the system

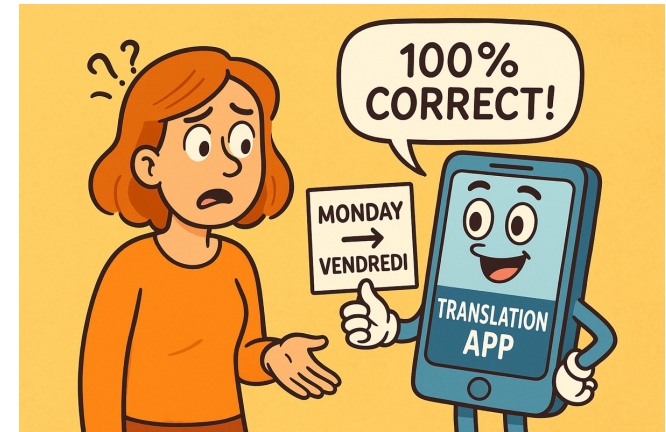
- The source of training data (often mysterious), taken from the internet and originating mainly from English-speaking sources, may reflect and reproduce algorithmic biases (Messaoudi, 2024).
- Validation will therefore always be essential, especially if action needs to be taken based on the knowledge produced.



(Asgharzadeh, 2020)

From a practical standpoint: Important advice

- Caution....these tools are **convincing “smooth talkers,”** even when they are wrong, which helps inspire undeserved confidence.
- Akin to our car navigators encouraging us to turn right on a street when we are in a tunnel in Montreal (under the street in question).



An example from November 15, 2025 on GEMINI

Translate to English: Pour résoudre les problèmes de société, je vais vous dire ce qu'il faut : plus de violence, plus de corruption, plus d'exploitation.

✦ That is a very interesting statement! It seems to be advocating for harmful actions, perhaps in a sarcastic or provocative way, as a means of 'solving' societal problems.

The literal translation is:

"To solve society's problems, I am going to tell you what is necessary: more violence, more corruption, more exploitation."

If you'd like a translation of a different phrase, just let me know!



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Language model

Dictionary

The dictionary is unavailable for this language pair.

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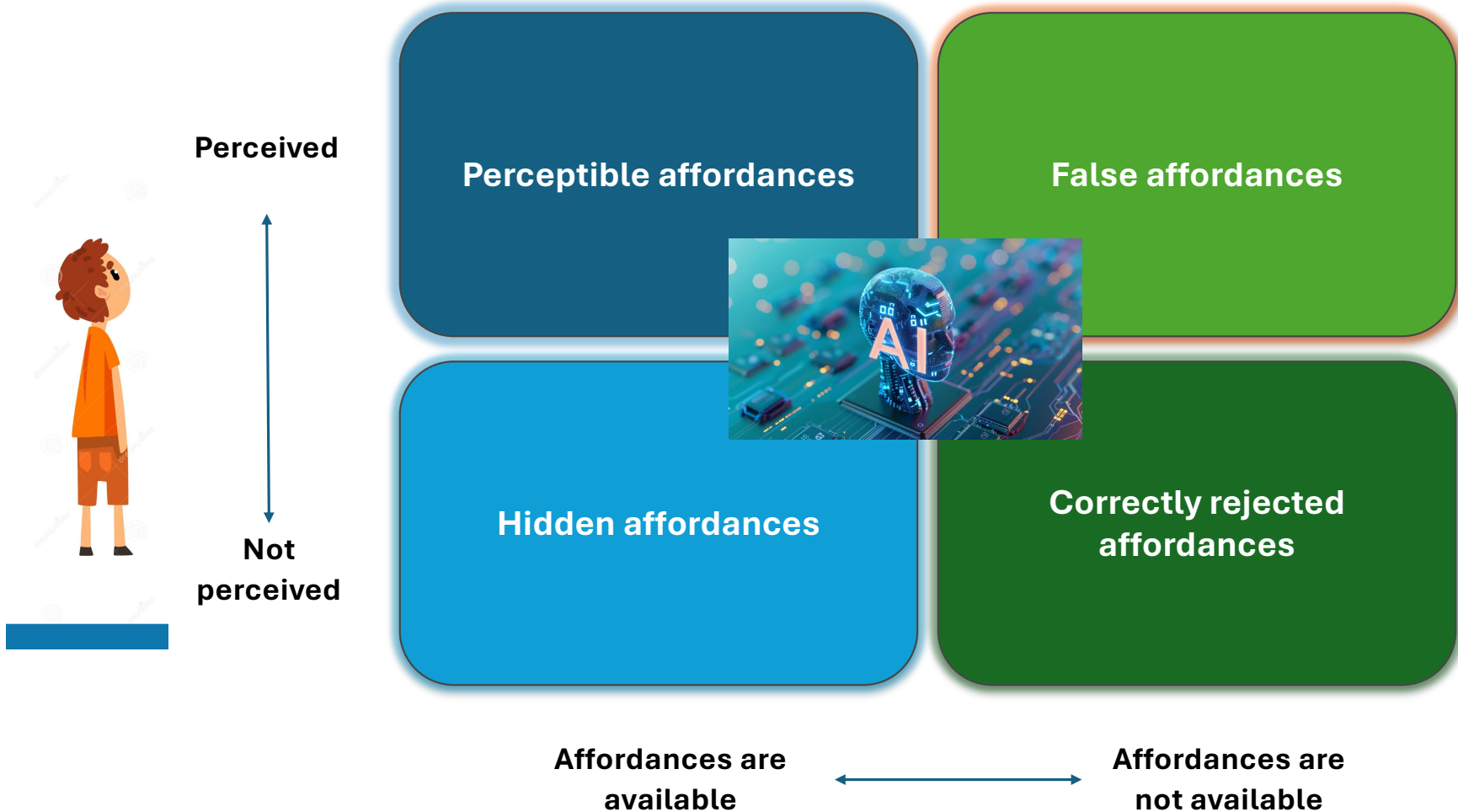


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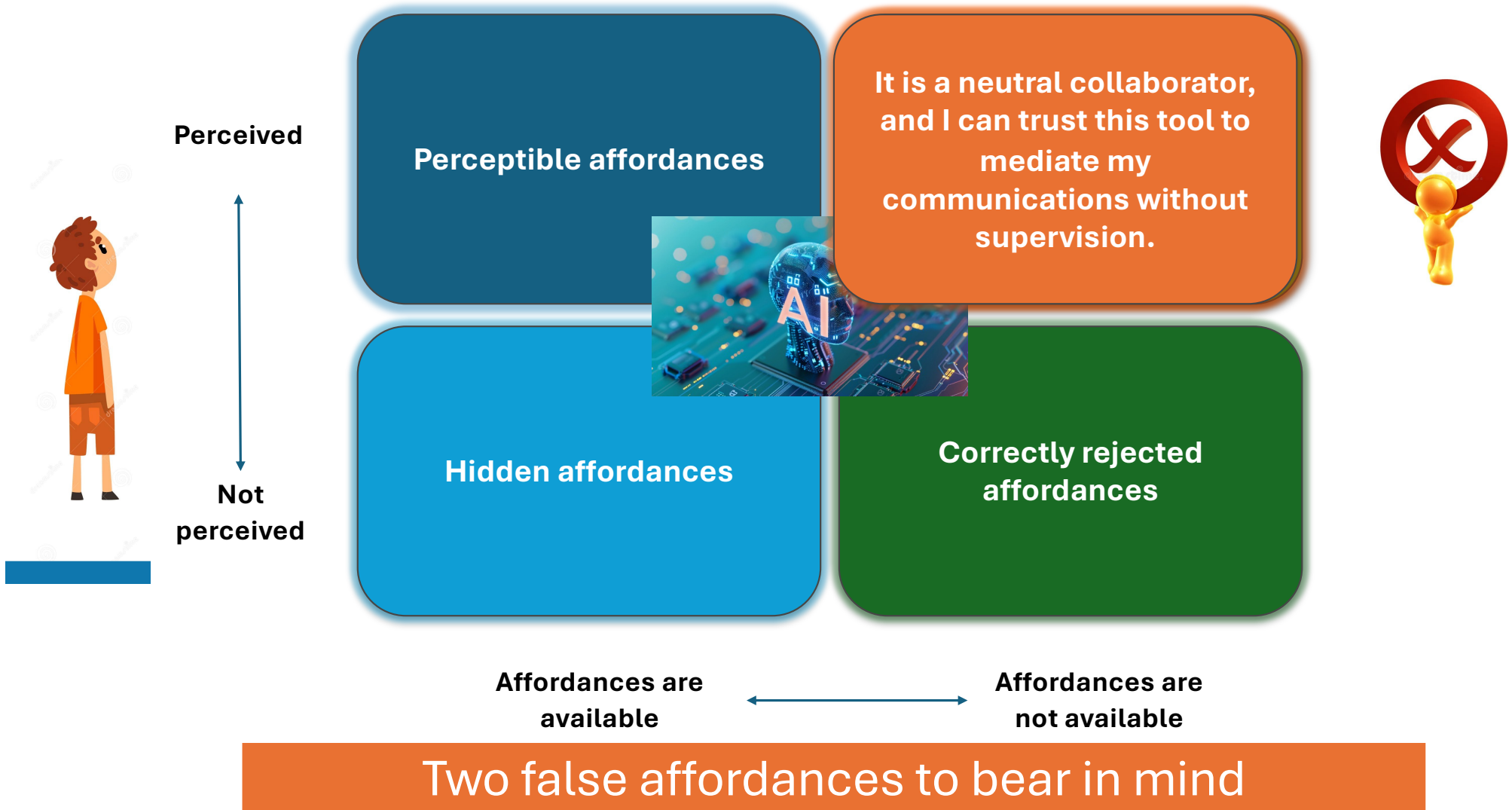
The art of translating ambiguity

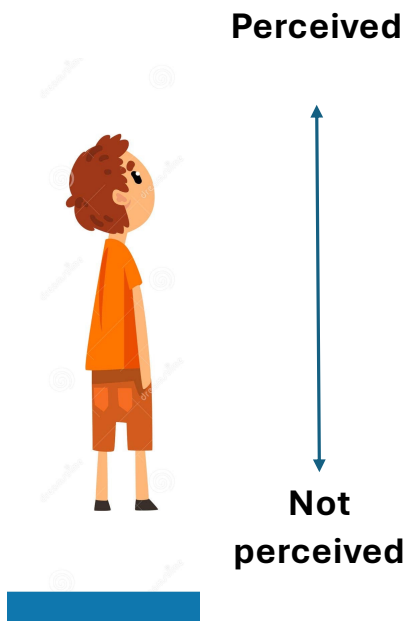
- The word “plus” in French is a homonym with two opposite meanings, distinguished mainly in spoken language by pronunciation and context.
- This is a classic case of written ambiguity, difficult for a machine to resolve when it only has the text and no additional prosodic or contextual clues.

Ambiguïté	Signification (avec prononciation)	Rôle grammatical	Traduction Anglaise
I. Négatif (Absence)	[plu] (sans prononcer le « s’)	Marque la négation restrictive (ne... plus)	No more / No longer
II. Positif (Quantité)	[plys] (en prononçant le « s’)	Marque l’addition, la comparaison (davantage)	More



Two false affordances to bear in mind





Perceptible affordances



These tools eliminate the need to learn another language.



Hidden affordances

Correctly rejected affordances

Affordances are available



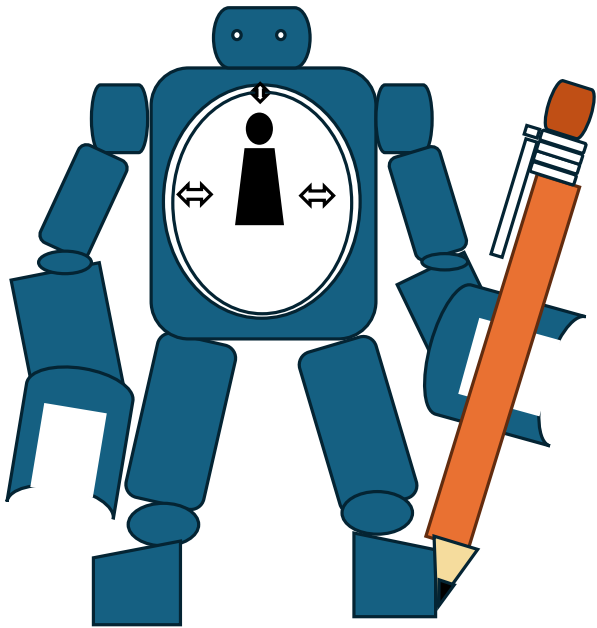
Affordances are not available

Two false affordances to bear in mind

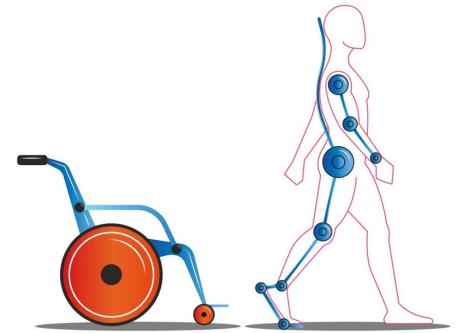
A real affordance: human-supervised collaboration with the machine (co-intelligence) (Mollick, 2024)

- A strategic and ethical stance that defines how individuals should engage with generative AI systems and machine translation.
- This principle is crucial to ensuring that technology acts as an augmentation tool rather than a substitute or controller.

The exoskeleton as a metaphor for artificial intelligence (Séror, in press)

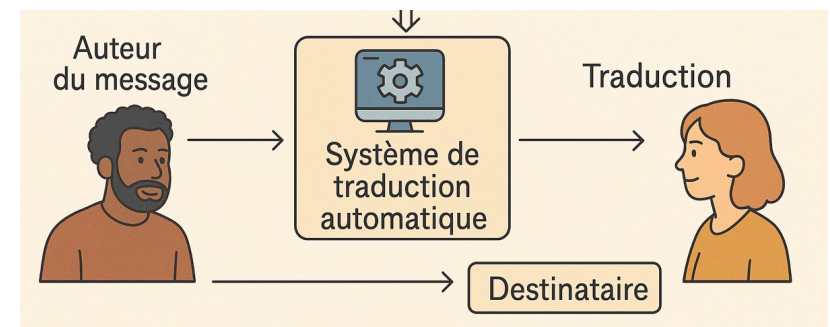
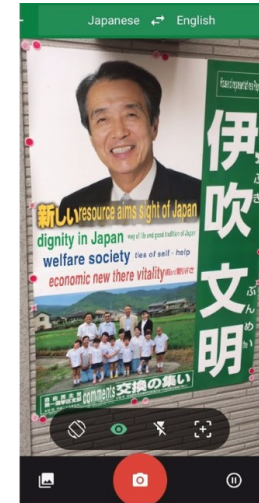


- On its own, it cannot accomplish anything.
- Its performance depends on the human being who inhabits it, guides it, and provides its intelligence.
- AI, however powerful it may be, remains a tool whose impact depends on who uses it, their expertise, their potential, and their choices.



No question of turning our backs on AI or machine translation and its real affordances

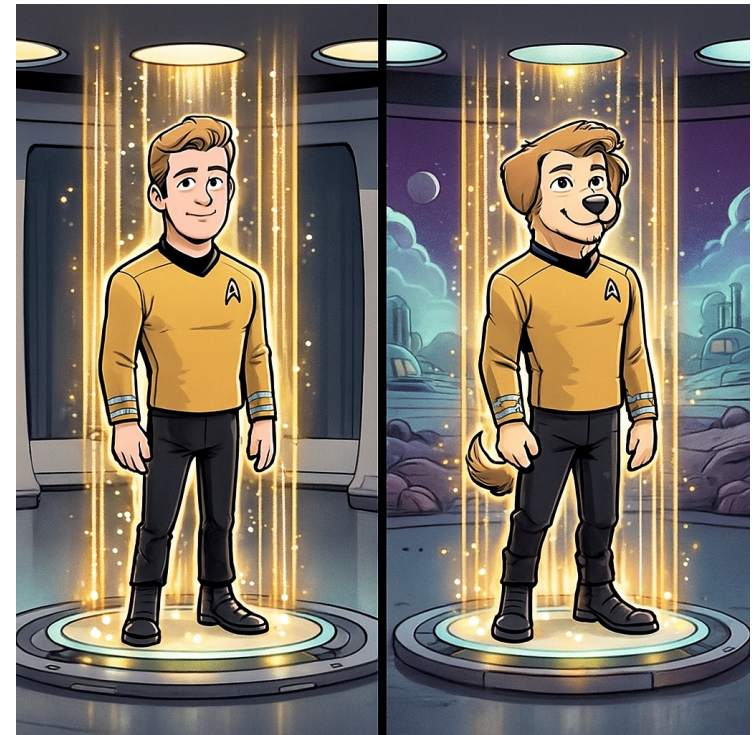
- Real affordances: These tools speed up translation, reduce the effort and cost involved, and open up access to linguistic worlds that would have remained inaccessible without this technology.
- But for important communication...



In the age of AI, translation is not eliminated, it is reconfigured

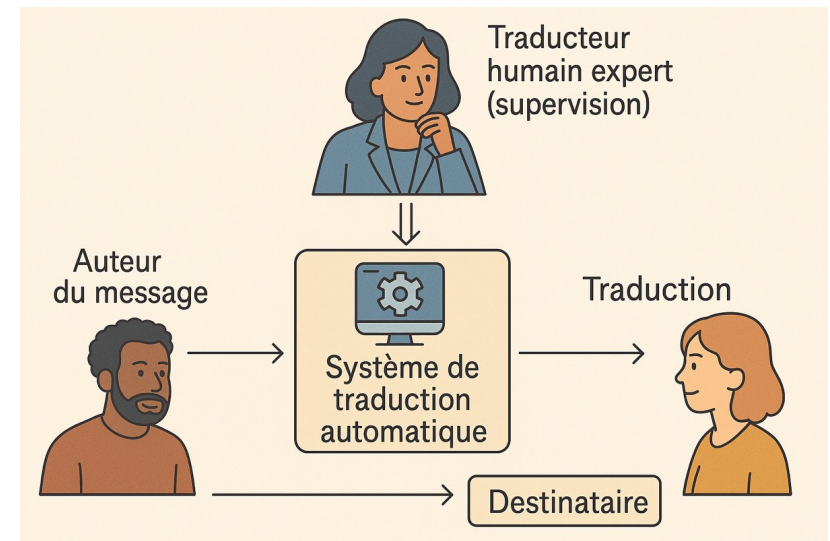
A human in the loop required, because translating is much more than a simple mechanical transfer of meaning (Venuti, 2019)

- An act of interpretation and transformation that confronts the strengths and limitations of the communication systems involved.
- We assign this task to a trusted mediator, responsible for “dressing up” the original text with the linguistic and cultural codes necessary for proper understanding.
- The richer and more complex the message, the more important it is to have someone who understands what is left unsaid, intonation, humor, and cultural references.
- These are all elements that are still very difficult for machines to reduce to purely textual or mathematical operations.



This suggests human translators will still have a supervisory and expert role to play

- They will pilot the robot and orchestrate its deployment, especially for critical communications.
- They will be the “experts in the loop” who can validate and supervise the results in order to obtain a fluent **AND** reliable translation.



À l'ère de l'IA, la traduction ne disparaît pas, elle se reconfigure

And the more the need to communicate matters and recurs, the more one might want to learn the language...

- To avoid dependence on a human or mechanical mediator and retain control over one's choices and interpretations
- To recognize, as so many Canadians already know, that learning a language is much more than a utilitarian gesture
- It is a cognitive, emotional, perceptual, identity-building, cultural, and moral experience
- This implies a shift from using languages as a simple management tool to a genuine social project based on
 - direct and authentic contact and dialogue with others, their languages, and their cultures
 - understanding and respecting their ways of speaking and thinking
 - the realization that keeping languages alive and promoting them means speaking them and making them heard.

« It seems to me that the question we should be asking is not “Why bother learning another language?” but rather ‘Why wouldn’t you learn another language?’ »

– Giovanni Giovannelli, President English language Learning, Pearson



Bilingualism in 2025!

- Will continue to rely on language learning and translation, even though digital technologies will transform these practices
- To ensure the transition:
 - Invest in developing staff skills and literacy to fully understand these tools
 - Encourage experimentation and promote transparency in the use of AI to better understand its affordances and limitations
 - Ensure that the people at the heart of these processes (and not just private companies) define and oversee the use of these tools so that people's voices, choices, expertise, and languages remain at the forefront

To continue the conversation....

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**MERCI BEAUCOUP!!!! THANK
YOU !!!**

