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THE TRANSLATION OF FICTION WITH ARTIFICIAL INTELLIGENCE

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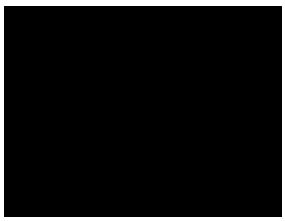
Signatura 

Abstract

Artificial Intelligence has been developing rapidly over the past few years and it has inevitably become an essential (if not indispensable) tool used in practically all professional fields and all aspects of our lives. Needless to say that Translation has not escaped this technology's scope. While AI is clearly proving that it can come to be a near substitute for human trasnslators when it comes to non-fiction works, I will discuss in this paper the challenges that said technology faces when it comes to ethics and also in order to fully embrace and display all nuances, feelings and hues of a fictional text. In order to do so, I will be using idiomatic expressions from Claire Keegan's "Small Things Like These", together with its existing translation into Spanish by Jorge Fondebrider, my own and AI generated examples.

Keywords: Artificial Intelligence (AI), Translation, Ethics, Fiction, Idiomatic Expressions.

Resumen

La Inteligencia Artificial se ha desarrollado rápidamente durante los últimos años, convirtiéndose inevitablemente en una herramienta esencial, si no indispensable, utilizada en prácticamente todos los campos profesionales y todos los aspectos de nuestras vidas. No hace falta decir que la Traducción no ha escapado al alcance de esta tecnología. Mientras que la IA está demostrando claramente que puede llegar a ser un sustituto de los traductores humanos cuando se trata de obras de no ficción, en este trabajo discutiré los retos y dificultades a los que dicha tecnología se enfrenta en cuanto tanto a cuestiones éticas como a la hora de abrazar y mostrar todos los matices, sentimientos y tonos de un texto de ficción. Para ello usaré expresiones idiomáticas de "Cosas Pequeñas Como Esas" de Claire Keegan, junto con la traducción de la novela de Jorge Fondebrider, la mía propia y ejemplos de traducciones generadas por IA.

Palabras Clave: Inteligencia Artificial (IA), Traducción, Ética, Ficción, Expresiones Idiomáticas.

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1. Introduction

Human beings have shown profound interest and great fascination for non-human devices or human-like creations throughout their history. One of the oldest known representations of such artifices appeared in Homer´s *Iliad* some 3000 years ago. When visited by Thetis, who wants the lame blacksmith Hephaestus to build a shield for her son Achilles, we are told that

> he put on a tunic, took up his thick staff, and went out the door, limping; and supporting their master were attendants made of gold, which seemed like living maidens. In their hearts there is intelligence, and they have voice and vigor,and from the immortal gods they have learned skills. These bustled about supporting their master. (Homer, 18. 416-421)

Artificial characters continued to be featured in other literary works, such as the bronze giant Talos, who fought the Argonauts in Apollonius of Rhodes´ *Argonautica* and was "specifically built to defend the island of Crete from invaders" (Dihal, 2020). Automatons are known to have been built since ancient times both in Europe and in the Arabian world. Dating back to the 9th century, the *Book of Ingenious Devices*, written by the Banu Musa brothers, describes "a collection of 100 gadgets like trick jugs that dispense three types of liquid (including boiling water) and dancing fountains." (Roos, 2023), and within *One Thousand and One Nights*, in *The Story of the City of Brass*, a mechanical horseman made of brass is encountered.

And so, literature continued providing characters that could perform human-like tasks more or less autonomously, until, in the 19th century, Mary Shelley went beyond intelligently-limited automatons. In 1818´s *Frankenstein*, the protagonist of this classic gothic novel assembles a creature made of real human parts that is capable of not only move and perform physically like a person, but also of learning from outside inputs and eventually developing reason and critical thinking (thus becoming "artificially intelligent"), which inevitably leads to the question of ethics and morale, further discussed in this paper.

Numerous examples of man-made creations that develop self-awareness and pose a danger to humankind followed. Take, for instance, Karel Čapek´s 1920´s *Rossum´s Universal Robots*. Or Kubrick´s 1968 film *2001: A Space Odyssey*, where HAL 9000 (a computer onboard a

spaceship) plots to take revenge on humans. And well into the 20th century, the so-called replicants in Ridley Scott´s 1982 film *Blade Runner*, humanoids identical to humans who possess superior intelligence that they use to rebel against humans.

However, all the above-mentioned representations belong in the realm of fiction. It was not only until the 1930s that science began its quest to artificially create and develop some kind of intelligence resembling our own.

2. Some history.

2.1. Brief history of Artificial Intelligence (AI).

According to the Collins English Dictionary, the adjective `artificial´ relates to what is "produced by man; not occurring naturally" or "made in imitation of a natural product". When describing the word `intelligence´, we read that it is "the capacity for understanding" or "the ability to perceive and comprehend meaning". Therefore, we can state that what originally motivated scientists to create and develop a real artificial intelligence was the will to find devices capable of storing, processing and understanding information by imitating the way human brains do so.

The idea of automatized machine changed when the first attempts to make a machine process information and decide for itself were made. In 1939 John V. Atanasoff and Clifford Berry created the ABC (Atanasoff-Berry Computer), which could simultaneously solve a number of mathematical equations. Ten years later, Edmund Berkeley published *Giant Brains: Or Machines that Think,* thus hinting at the idea that machines can reason. Enter Alan Turing. His paper *Computing Machinery and Intelligence,* published in 1950 in *Mind* magazine, addressed the question "Can machines think?". In order to answer, Turing came up with the Imitation Game (Turing´s Game), in which players A and B (one male, one female) are interrogated by another player, who, according to the written answers they obtain must decide the gender of the players (they never get to see each other).

> We now ask the question `What will happen when a machine takes the part of A in this game?´ Will the interrogator decide wrongly as often when the game is played like this as he

> does when the game is played between a man and a woman? These questions replace our original, `Can machines think?´ (Turing, 1950, p. 434)

Turing opened the door to research and development of computers that could make choices and decide, having been given the necessary information and whose "strategy is to try to provide answers that would naturally be given by a man." (Turing, 1950, p. 435) and proposed the concept of `learning machines´, the same way that humans act following guidelines previously learned from books but changed accordingly when having to be applied to different tasks:

> The idea behind digital computers may be explained by saying that these machines are intended to carry out any operations which could be done by a human computer. (Turing, 1950, p. 436)

He also compared the functional system of computers to that of the human brain, since "importance is often attached to the fact that modern digital computers are electrical, and that the nervous system also is electrical." (Turing, 1950, p. 439). By applying his theories, intelligent computers became a reality, making his 1950 paper the sarting point of what was to be called Artificial Intelligence.

Research advanced and in 1956, at the Dartmouth Summer Research Project Workshop, John McCarthy spoke of AI for the first time ever, thus coining the term. Whereas Turing´s article can be rightly considered the seminal paper, the Dartmouth workshop can be called "the founding event in the history of AI" (Dia, 2024), since there gathered researchers from all fields, such as Mathematics, Science, Psychology or Engineering, who, with their work, turned AI into a new scientific discipline.

The next two decades (the 1960s and 1970s) are considered the Golden Age of AI. Computers developed quickly, becoming smaller, faster and cheaper. Algorithms were examined and used more effectively. Promising advances led to government participation in research programmes. "Optimism was high and expectations were even higher" (Anyoha, 2017).

Marvin Minsky, considered one of the fathers of AI, even went as far as telling *Life Magazine´*s journalist Brad Darach that "in from three to eight years we will have a machine with the general intelligence of an average human being" (1970).

However, mainly due to the lack of space to store information and the slow speed at which computers processed at that time, the initial enthusiasm gradually diminished, causing funding to go down, and consequently, research reached bottom. For a decade, developmnent run at a very low pace. But the little work done during that decade proved fruitful in the next one. Researchers concluded that the solution fell on two words: `specialty´and `knowledge´. It was needed to run away from generalization on one hand, and on the other, AI had to be founded on `knowledge´.

> A new class of knowledge-based AI systems began to emerge. These so-called expert systems used human expert knowledge to solve specific, narrowly defined problems. Expert systems provided evidence that AI systems could outperform humans in certain tasks, and perhaps more important, for the first time, they showed that AI could be applied to problems of commercial interest – AI suddenly showed the potential to make money. (Wooldridge, 2021)

With money on the horizon, AI research was invigorated. Funds came in the millions, and it allowed development of different schemes, such as `knowledge representation´ which was based on simple rules, representing examples in an `if-then´ form, so that computers could apply examples to different problems, and so, keep learning. Things kept looking up until funding, once again, stopped due to the impossibility to meet many of the set goals.

Since the basis of AI had already been established, major problems had been solved and companies realized the potential to make millions thanks to the Internet, AI entered the 21st century at full blast. Deep Learning technology has not ceased to improve and is used in all kinds of applications. Language and communication are at the core of this technology, which of course means that the field of Translation has not escaped its tentacles.

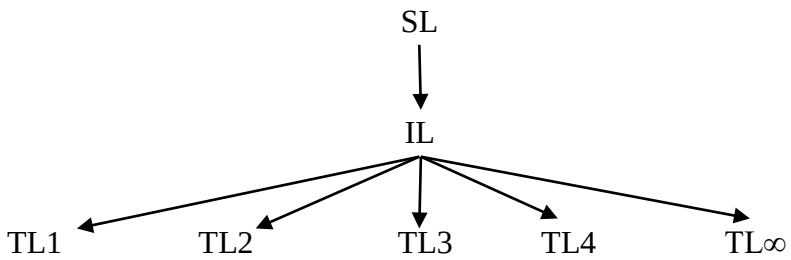
2.2. AI and Translation.

The interest to use translation machines to translate was "first dreamt of in the seventeenth century" (Hutchins, 1995, p. 431) but it was not until the 20th century that the

dream came true. The first attempts at creating `computer-aided translations´ (CAT) aiming at `machine translations´ (MT) showed that this was not science-fiction material.

Different approaches to the kind of input machines needed were regarded. On one hand, the linguistic category to be included (vocabulary only, or both vocabulary and grammar); on the other hand, which specialist target field the translation was aimed at, which determined the type of restricted vocabulary and expressions needed (e.g. chemistry as completely different from surgery or bridge engineering). Also, a third consideration was to include already marked structures with "indicators of prefixes, suffixes, word divisions, phrase and clause boundaries, or of different grammatical categories (e.g. the noun *cónvict* and its homonymous verb *convíct*)" (Hutchins, 1995, p. 431). In all cases, the output had (and still has) to be revised by a human translator, in order to correct and/or polish aspects such as style, pragmatic issues, ambiguity, polysemy and other linguistic problems that machines may pose.

Directionality was another key point. If the translation was between only two languages, the choice could be unidirectional or bidirectional. In this case, the system is known as `direct translation´ and all inputs concern only the two languages involved, thus being fed with a bilingual dictionary. Alternatively, a broader interlingua approach was also implemented. This system consisted of a multilingual directionality. That is, translations from a source language (SL), into more than one target language (TL). This much more complex strategy needed an intermediary, an interlingua (IL) into which the SL had to be first translated in order to be able to then translate into the different chosen TLs:



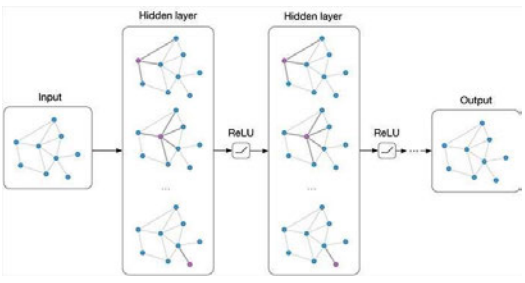
In terms of functionality, strong foundations are needed, and a number of common features to all languages becomes necessary:

> Interlinguas may be based on an artificial language, an auxiliary language such as Esperanto, a set of semantic primitives presumed common to many or all languages, or a 'universal' language-independent vocabulary. (Hutchins, 1995, p. 432)

Early MT systems used direct translation strategies. This veered towards interlingua approaches where indirect translation was favoured. Both approaches used rule-based systems until the end of the 20th century, when a more corpus-based method took over, leading to nearly complete hybrid machines that combined all existing methodologies. This allowed for a more complex output, which, with the advent of `neural machine translation´ (NMT), has offered results that were unthinkable not so long ago.

The way NMT is done does not differ much from the way human brains work. It mirrors the natural neural network in order to predict words, sentences or any pattern using statistics of use in all languages involved. A process of learning is needed, making it necessary to feed machines with as much information as possible, which should include items belonging to all aspects of the linguistic field. Thus, this automatic learning technique has been called `deep learning´.

As said, this artificial system mirrors the intricate neurological human brain in terms of neurones connecting to other neurones that themselves keep connecting to other ones. As explained by Oliver (2024) these artificial neurones become key elements in a network consisting of mathematical functions that receive numerous inputs which are transformed into linguistic items following a pre-programmed formula inserted in each artificial neurone. The neurone then gets activated when it identifies the given input and connects to another neurone akin to that input and so on, until the system calculates and puts out the desired translation. This way, a neural network is created, which itself can be connected to other networks, thus creating a super network:



https://tkipf.github.io/graph-convolutional-networks/

An already existing network creates a number of hidden layers of other pre-exixting networks, which through the use of a rectified linear unit (ReLU) that "introduces the property of nonlinearity to a deep learning model and […] interprets the positive part of its argument" (Krishnamurthy, 2024), delivers an output that becomes again the subject of feeding or the final result.

So far we have looked at the different approaches taken since the dawn of artificial translation. Let us now broadly travel along the various phases it has gone through. According to Hutchins (1995), the history of automatic translation can be split into the following stages:

- **Precursors and pioneers (1933-1956)**
  George Artsrouni and Petr Smirnov-Troyanskii come up with their proposals and the first automatic-translation-machine patents are registered. The term Machine Translation (MT) is coined by Warren Weaver in 1949. The first public demonstration of such a system happens in January 1954. Although very limited, it managed to translate 49 sentences from Russian into English by using a dictionary consisting of 250 words and 6 grammar rules (Oliver, 2024).

- **High expectations and disillusions (1956-1966)**
  The limited but promising evidence experienced during the previous decade raises great enthusiasm among researchers, who create the first MT systems, which were capable of translating short sentences. There were devoted teams in The United States and Mexico, as well as in both Western and Eastern Europe, and Japan. Despite the initial high hopes, and as a result of continuous failures, particularly regarding semantics, disillusion takes over.

- **The ALPAC report (1966)**
  The Automatic Language Processing Advisory Committee is created in 1964 in the United States. After two years it concludes that MT is "slower, less accurate and twice as expensive as human translation" rendering it useless and therefore seeing no further need for funding, recommending that translators rely on aids such as automatic dictionaries. The effects of this report are devastating and its influence

"was profound. It brought a virtual end to MT research in the USA for over a decade and MT was for many years perceived as a complete failure." (Hutchins, 1995)

- **The quiet years (1967-1976)**

  Research moves to Europe and Canada. The European Community was growing and the need for fast and efficient translations between European languages became an incentive. In Canada, a system to translate English into French, Météo, is developed and Russia keeps investing in interlingua projects.

- **Operational and commercial systems (1976-1989)**

  The 1980s witness a fast advance in the development of operational systems, mainly due to the realization of their commercial uses and related financial benefits. MT diversifies and begins travelling in different directions, and systems such as Systran (Russian to English and English to French), Logos (which was originally based on direct translation approaches, but later on applied semantic features) and METAL (developed to translate texts related to telecommunications and data processing) flourish. Japan sees the greatest commercial activity, since companies begin incorporating automatic translation tools in their personal computers´ hardware.

- **Research based on corpus and statistics (1989-2014)**

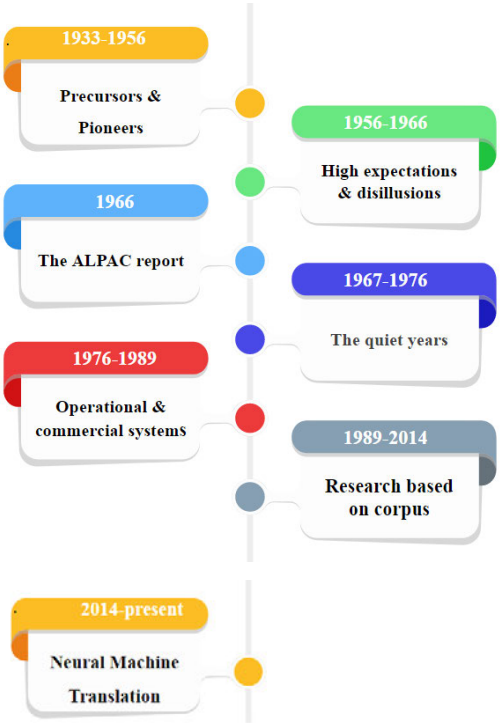
  A significant switch from rule-based to corpus-based systems takes place at the end of the 1980s. An approach to statistics carried out by IBM triggers this tendency, which succesfully demonstrated that a system based on the use of a large corpora of not only words, but also sentences or full texts with parallels in the target languages was capable of producing very good translations, resembling the ones done by human translators. This strategy is followed until the second decade of the 21st century, and as Oliver (2024) states, other strategies are adopted, developing systems such as Apertium, based on superficial syntactic transfer, and Moses, a complete free toolkit that trains automatic translation systems based on statistics.

- **Neural Machine Translation (2014 to the present)**

  According to Oliver (2024) this approach really takes flight in 2014. It is then that the first functional systems appear and become the core of all research and development.

Although still posing challenges, numerous translation memories and applications are already in use, having become an everyday tool to everybody, not just to professional translators.

Timeline of Machine Translation History at a glance:



2.3. Overview of some AI translation tools and memories: MateCAT, Deepl, Google, Chat GPT.

In a globalized world, effective communication has become key and a decissive tool for companies, which depend on productive interaction with foreign partners who might not always be able to use a lingua franca. Therefore, translation has become a necessary part of life. Translations need to be produced as fast as possible and as accurate and specialized to the client´s needs as can be. Computer companies have come up with solutions promptly. Although there are a number of language tools in the market, I have chosen four very prominent and popular examples. Here is a glimpse at them.

- **Google Translate**

  Founded by Sergey Brin and launched in 2006, Google Translate has undergone abysmal transformations between then and now. At first, its translations were based on rule-based statistical methods, which forced human intervention in the output in order to refine them. It took developers ten years to turn to neural machine translation (NMT), and since then, this tool has not stopped improving. It offers translations in over 133 languages and according to Turovsky, as of 2016, Google claimed more than 500 million users.

- **DeepL**

  Back in 2007 Linguee was created by Gereon Frahling and Leonard Fink in Germany. It did not offer just word-for-word translations: the outcome was a context-based solution, where the word or phrase requested appeared in contextual instances retrieved from a database of linguistic structures where the word or phrase in question appeared. The number of languages increased and research delved into neural networks. This led to the foundation of DeepL in 2017, which has kept growing thanks to a deep learning system called Transformer, which allows for highly effective and wide-range translations, and can use a one-word-attention gear that attends "to all words in a sentence simultaneously, capturing both local and global dependencies." (Forman, 2023).

- **ChatGPT**

  Released in 2022 by OpenAI, it went viral after its first users shared their experiences. "Within five days, the chatbot had attracted over one million users" (Marr, 2023). Based on generative pre-trained transformer technology (GPT), improvement can be observed on a daily basis, thanks to a deep learning method that feeds from every single piece of information that has been introduced by both engineers and users. Although there is still room for improvement, translations are accurate and very semantically acceptable, thanks to the ability to retrieve input from context-based samples.

- **MateCAT**

  This translation tool is more professional-oriented. It is the result of a three-year (2011-2014) research and development project funded by the European Union, and far from aiming at only-machine-produced translations, its web page claims that "Matecat envisions a future where machines and humans work together." This is actually what makes this tool widely used by professional translators and translation companies, since it not only draws from an immense database, but it also functions as a memory where all translations are kept, enabling users to improve them and allowing for specialization. Each change is registered and by deep learning, the output offers flowing diversity. This way, human translations combine forces with both MTs and translation memories (TM). Accuracy and effectiveness are assured thanks to a combination of context-based translations, statistical MT, neuron machine translation and real-time processing.

Even considering that there is still a need for human work to correct and fill the gaps left by machines, automatic translation has posed a big challenge to translators. Other than purely linguistic matters, ethical considerations have arised.

3. On Ethics.

Mankind has always had an interest in creating devices that could mirror and perform human tasks. Theoretically, those inventions were intended to help and improve the condition and life of their creators. However, when those intentions went beyond mere mechanical motion, and entered the realm of human minds, big concerns began rising. Dating back to the 19th century, we already find instances of the limits of science being questioned in Hoffmann´s short story *The Sandman*, where he tackles ethical dilemmas such as the manipulation, agency or even identity of automatons for the sole benefit of their creator. More famously, Mary Shelley makes us reflect on how far a scientist should be allowed to go when she has Victor Frankenstein utter that "one man's life or death were but a small price to pay for the acquirement of the knowledge which I sought." (p. 17).

3.1. Ethical implications of AI.

Let us consider the definition of the concept of ´human´. The Collins English Dictionary tells us that it is "characterizing, or relating to man and mankind", and also "having the attributes of man as opposed to animals, divine beings or machines". Therefore, a machine could never be considered human, and so, all its decisions and actions are to be attributed to human power, which is no more than the offspring of human intelligence. This idea is supported by Patricia Ventura (Bosch, 2023) when she states that the term `artificial intelligence´ is in itself an oximoron. In other words, no machine or computer can possibly reason by itself.

Then, would the question "Can machines think?" (Turing, 1950) be at all pertinent? Perhaps it should be reformulated as "Could instantiating a program, the right program of course, by itself be a sufficient condition of understanding?" (Searle, 1980, p. 422). The plain and simple answer would be a resounding `no´:

> "Because the formal symbol manipulations by themselves don't have any intentionality; they are quite meaningless; they aren't even symbol manipulations, since the symbols don't symbolize anything. In the linguistic jargon, they have only a syntax but no semantics. Such intentionality as computers appear to have is solely in the minds of those who program them and those who use them, those who send in the input and those who interpret the output." (Searle, 1980, p.422)

Searle talks about intentionality, understood as the wish for an objective, a will to achieve that can only be generated by beliefs:

> "real beliefs, beliefs with direction of fit, propositional content, and conditions of satisfaction; beliefs that had the possibility of being strong beliefs or weak beliefs; nervous, anxious, or secure beliefs; dogmatic, rational, or superstitious beliefs; blind faiths or hesitant cogitations; any kind of beliefs." (1980, p.420)

And beliefs are directly and naturally linked to feelings: the former make the latter possible to exist and viceversa. So, if machines can only function on the basis that they must be designed, fed, taught and trained by humans, how can we possibly make them `feel´ when we are still not fully capable of understanding how we ourselves do so?

Moreover, feelings and beliefs spring up from our experiences, or rather, how we experience our environment. As a result, we come to conclusions, draw scenarios, outline our understanding of reality and consequently, make decisions. Decisions that will ultimately have an effect not only on ourselves but also on others. This raises yet another question: could a machine reach such level of autonomy as to be capable of `learning´ how to make choices by itself? Engineers, researchers and big data companies such as OpenAI pride themselves on having been able to create machines that can. As Jonathan Shaw puts it:

> "Artificial intelligence" refers to systems that can be designed to take cues from their environment and, based on those inputs, proceed to solve problems, assess risks, make predictions, and take actions. In the era predating powerful computers and big data, such systems were programmed by humans and followed rules of human invention, but advances in technology have led to the development of new approaches. One of these is machine learning, now the most active area of AI, in which statistical methods allow a system to "learn" from data, and make decisions, without being explicitly programmed. (2019)

Still, even those decision-making paths, as much deductive and intuitive as they might be, must be inducted somehow, or at least, they must come from a pre-programmed pattern full of instructions on how to be able to make associations, and come to conclusions to ultimately make choices, which at a last stage, will have an effect and achieve what the human being behind the whole process desires or wishes for. This takes us back to the question of intentionality. "If there is bias in the data used to make the decision, the decision itself may be biased." (Shaw, 2019). This statement is to be considered deeply and very seriously. As Patricia Ventura points out in her report for the Information Council of Catalonia (Consell de la Informació de Catalunya), AI is already taking part in decisions in the fields of human resources, medical diagnosis, education, or even justice, adding an element of opacity since the algorithmic procedures to carry out these decisions often turn out to be `black boxes´, making them impossible to explain due to their complexity. Therefore, who can assure us that the algorithms implied are not purposedly designed to manipulate the final recipient of the output in order to obtain personal or corporate benefits? And where should the line between humans and machines be drawn?

Enter Ethics and Philosophy. Hubert Dreyfus tells us that

> The human world, with its recognizable objects, is organized by human beings using their embodied capacities to satisfy their embodied needs. There is no reason to suppose that a world organized in terms of the body should be accessible by other means. (1974, p. 21)

Special attention must be paid to the term `needs´ from the above quote, since it is key to understand the importance of differentiating machines from humans:

> Interests and goals cannot be simulated on a digital machine whose only mode of existence is a series of determinate states and which has, at best, specific targets rather than needs. (Dreyfus, 1974, p. 30)

If need fulfilment is equalled to problem solving, our goal is unknown until we reach it. We focus on the process, and in order to understand it, a phenomenological approach is needed. To summarize Edmund Husserl´s original idea in a very simple and short sentence, our behaviour is very much based on how we describe individual experience and how we analyze it in a conscious way. In other words, our perceptions are caused by information obtained through senses, which are then processed in a cognitive way that makes us understand

> that all of our evidence about the external world comes through sense data that we process into a coherent picture of reality. It should be clear that this coherent picture is the informational output of processes that transform the input of sense data into a world representation. (Beavers 2002. p. 78)

This view reinforces the argument that since machines do not have real senses, they can not possibly create real experiences. However, they can re-create them, which shows that whichever output and processes used to achieve goals or solve problems, the intervention of human beings will always be needed in order to successfully work out how to do so.

Hence, it all comes down to human intervention, and we all know too well that human beings (or at least a percentage of the species), nest a potential capacity to do harm. When it comes to artificially made devices, boundaries to where to stop or rather, what uses artificial intelligence must be applied to (so it serves and helps fulfill universal needs and it benefits the whole of mankind) become not just a need, but a must. Regulation has to be issued. Given

the high speed at which technology is advancing, any attempt is sure to fall behind new discoveries and applications, but at least some recommendations regarding ethics and governance have been made. In 2022, UNESCO published its *Recommendation on the Ethics of Artificial Intelligence*, where a call for "respect for and protection of cultural diversity" is made and urges all States to "facilitate fair access to AI technologies and address the challenges that they bring to diversity and interconnectivity of cultures and ethical systems, to mitigate potential misuse, to realize the full potential that AI can bring, especially in the area of development, and to ensure that national AI strategies are guided by ethical principles."

3.2. Ethical implications of AI in the translation of fiction.

How does all of the above reflect on and affect the automatic translation of fiction? Ethics must play a significant role in the field of AI and CAT, and therefore, we can not ignore the importance of ethical implications that everybody involved in the process of translating fictional works should observe, from computer scientists to even the reader at the final stage.

Ethical positions have been present in the translation process since human beings developed language in order to communicate. It would be very naïve to assume that the figure of the interpreter/translator has always been honest and that they never altered their version, so through time, an agreement of some kind had to be made regarding what was acceptable and what was not when translating. This is specially relevant when dealing with legal documents, international and diplomatic relations, politics, history, and anything that might have the potential to generate conflict due to misinterpretations (whether intentional or accidental). Some might argue that such relevance need not apply to works of fiction, since, at the end of the day, a story is not real. Well, let us not underestimate the power of fiction, since its influence on readers can be as strong as any other non-fiction work. Even though the same ethical principles should apply to both kinds of texts, there are some specific areas that I believe are key in the world of machine fiction translation: input, censorship, professional identity and copyright (authorship), and human substitution.

Let us remember that all computers must be fed and programmed in order for them to know what to do with the data that has been introduced in their systems, and even how to learn

from that load and also self-generated data in order to make their own choices. Inevitably, the output will be based on the input, thus presenting "major drawbacks, limitations, and new challenges, like the hidden biases of AI translation systems and their undesirable results" (Bo 2023, p. 529). These "undesirable results" come from lack of or wrong information (data) inside the machine, so it all comes down to the person responsible to feed the computers. Bias, unfortunately, can be deliberate and intentional, and could lead to purposedly discredit an author, influence audiences on gender issues, political tendencies, religious beliefs, morals, or ethics. The list of possible ways to manipulate readers is endless, even if the bias in question is not originally intended by a human being, as Michal Měchura explains:

> Modern machine translation, which is mostly statistical and neural, effectively performs subsymbolic word sense disambiguation (WSD) from clues in the text. But what if there *are* no clues? What if there is nothing in the text to indicate that [a] student is male or female or that the *you* person should be addressed formally or informally? In such a situation the machine typically picks whichever translation is statistically more likely, based on what it has seen more frequently in its training data. In other words, the machine makes an assumption. And assumptions lead to bias, for example when the machine assumes we're talking about a male student when in fact we're talking about a female one. (2022, p. 2)

A very clear instance of the (mis)use of translated fiction is censorship, typically imposed and implemented in dictatorial regimes. Novels that pose a threat to the stability of dictatorships, (due to their content showing or questioning precisely what the regime in question needs to demonize or hide so the tyrannical ideals can be believed, followed and praised by the population) are systematically shortened or modified content-wise when translated, so that they portray a friendly or innocuous message fully in line with the ideals, beliefs or laws that rule. Professor Marta Ortega delves into this matter in her paper of 2023, where she analyses the Spanish translation of Charlotte Brontë´s *Jane Eyre* under Franco´s dictatorship in Spain. The character of Bertha Mason becomes tamed and domesticated in said translation by Juan G. de Luaces in order to abide by the deep and strong conservative, catholic and patriarchal standards of that dictatorship:

> "These [modifications] affect three levels of her identity: her subversive definition as a woman far from the celebrated stereotype of the "angel in the house," her Creole origin, and what the text refers to as her "madness" […] [T]hese three factors constitute Bertha's

> otherness and place her at the bottom lower vertex in terms of gender politics, ethnicity and capability." (p. 343, my translation)

Thus, readers saw an image of an obedient, subdued, sexually passive and well-mannered lady, differing widely from the original Bertha and Brontë´s intentions.

Whereas it may be logical to think that censorhip is implemented by the authorities in charge of supervising literary works, it is noteworthy that in this case, the section responsible did not have anything to do with Bertha Mason´s transformation. The translated text was "authorized exactly as it was presented for inspection" (p341) so

> [c]onsidering that the censor who evaluated the translation of Charlotte Brontë´s text did not suggest any changes, it can be deducted that the numerous modifications found in the Spanish version were made prior to the authorization request, probably carried out by the translator or suggested by the editor."

From which we can infer that this is actually a case of self-censorship, in order to secure the publication of the book . Sadly, this is another consequence of biased translation., which makes us consider the implications of this unethical praxis if applied to machine translation: in 1942, a manipulated Bertha Mason featured in "3000 copies, a usual amount back then" (Ortega 2023, p. 341). Nowadays, the total sum of physical and electronic copies that would end up circulating would be infinite, reaching readers by the millions.

The Collins online dictionary informs us that authorship is "the activity or job of writing books or articles" and that "the authorship of a piece of writing is the identity of the person who wrote it." Two words are worth highlighting in these two definitions: `writing´ and `person´. On one hand, since we are dealing with translations, to what extent can we consider the translator a writer? On the other hand, if we only accept that a person can have an identity, where do human translators stand? In other words, who can claim the copyright of machine-translated texts? As Bo reminds us:

> Copyright law was established to encourage authors, artists, and others to create and share their works by granting them specific exclusive rights in their works. Copyright infringement

> is both a legal and ethical transgression. AI-enabled literary translation involves ethical obligations from agents in the translation process. (2023, p. 534)

Another very important fact must be added. As we have seen, huge amounts of data are constantly being fed to translation memories, among which, both original texts and their already existing translations, which, according to the quote above, necessarily raises copyright issues. On top of that, "with a wide variety of authors and users as data and feedback providers, tracing the origin of some data is almost impossible, thus posing considerable challenges for copyright identification and protection." (Bo 2023, p.536). If we mix all this with the obscurity (the `black boxes´ mentioned in section 3.1) with which many companies work, the difficulty to identify cross-cultural features and the still-to-be implemented pragmatic nuances of language, we are in for the birth of a new cocktail, which could easily be called Biased-Mary. This takes us back to to the beginning of this section, where I mentioned that any type of data (legal or illegal, moral or amoral, ethical or unethical, acceptable or unacceptable, reasonable or unreasonable) can be the input of a translation machine and therefore contribute to a never-ending whirlpool of bias issues and legal matters, which adding to the already complex situation, are different in different countries.

I have not forgotten about the question of the translator´s right of authorship. A translation is considered a derivative work, and so, a creation (or a re-creation). Translators are not just mere transporters of words, they are also writers in the target language. Professor Rion, a translator herself, clarifies this idea:

> […] the translated text can be seen […] as a meeting place of two cultures […]. We all have our own idiolect, our preference for certain vocabulary and structures, and our idea of register may vary slightly or dramatically according to our experiences and readings and we pour all that into our translations. (2009, p. 168)

Thus, translators are a bridge figure, mediators, as well as writers in their own right, maybe not being faithful to the original text but being "loyal to the people [they]´re working with: loyal to the author, loyal to the receiver or loyal to your client" (Pym 2011, min. 04.30). In a word: authors.

Would it be ethical, then, to give the right of authorship to a machine whose work is to process already authored material and to produce a translated text based on patterns originally generated by human beings? Do you remember the case Naruto vs. Slater? Very briefly explained, a monkey took a selfie using Naruto´s left-behind camera in a reserve. Some time later, Slater published the photo and claimed copyright of something created by a non-human individual. The US Supreme Court denied it. Following this evidence, the answer to the question opening this paragraph is a clear NO.

The final consideration in this section is that of human substitution. Ever since machines began to take over and started performing tasks previously done exclusively by humans, people have argued that the end of mankind is near. This fear is completely understandable, since many jobs were lost during the Industrial Revolution and many are seeing a parallel situation now, during the technological revolution we are witnessing and being part of. It is true that in both historical moments, money-making and optimization or resources are at the bottom line of the matter:

> […] if the LMT output is fairly similar to the human output, a utilitarian reasoning tends to favor the cheaper and quicker solution, especially because that was the very reason why the MT system was developed in the first place. (Costa 2020, p. 230)

This, of course, puts productivity before quality, and supports the idea of those who claim that translations should always be of a high standard of language and other linguistic and cultural aspects, or in Costa´s words:

> […] considering that a text is produced within a reduced amount of time and is readable enough to be published is very different from considering it artistically conceived, aesthetically relevant and/or well-mediated – which are accolades often applied by specialized critics to describe literary translations. (2020, p. 231)

So what is to be done? It may be too soon to find solutions, but due to the vertiginous rise of technology, perhaps an embracing attitude would be more advisable than a dystopian one. That is to say that instead of fighting a reality that has already proved invincible, translators should contemplate working hand in hand with machines, considering technology a useful tool in a process of re-invention of the profession. This approach is deeply explored by José

Francisco Ruiz Casanova in his book "Do translators dream of electric sheep?" (2023, my translation), a pun using Philip K. Dick´s dystopian classic "Do Androids Dream of Electric Sheep?". In his book, Ruiz encourages translators to bury the idea that "an automatic translator will never be able to translate literature" (p. 62) since AI will sooner than later reach the levels of excellence humans have already achieved. This is not to say that human translators should position themselves as surrogates. Rather, since automatic translation keeps improving and is unstoppable and ever-learning , he concludes:

> When all of these realities (as we are talking about realities and not dystopias) are shuffled with other considerations of an industrial, commercial or economic nature, yes, translators - including literary translators - will have to start foreseeing a world in which their activity will live on but will coexist with AI translations. (p. 62)

4. Fiction and its automatic translation: a challenge.

From what has been said in the previous section, I believe we can conclude that translators are to be considered artists. Once again, the dictionary comes to our aid when defining what an artist is. Collins defines the concept as "a person who creates novels, poems, films, or other things which can be considered as works of art.". The first thing to notice from this definition is the use of the word `person´, which is followed by `creation´ and `art´. I believe that these are the three key concepts that need to be taken into consideration when it comes to consider why translating fiction or literature is, to say the least, a challenge.

We can go as far back as ancient Greece to find instances of the importance given to art. Even though many a classic philosopher did tackle the issue, I would like to mention Aristotle and his belief that art´s purpose was not just to represent or imitate the outer world, but also to encapsulate deeper meanings and a true essence, expressing in his *Nicomachean Ethics* that "the aim of art is to represent not the outward appearance of things, but their inward significance." When applied to the art of writing and translating (since we have established that translators are also writers), the "outward appearance of things" would be represented by words, whereas "their inward significance" would refer to their meanings, understanding meaning not as literal, but as that which springs out of the most and deepest

areas of our minds, or, if you prefer, our souls, which also "need to be fed with humanistic disciplines that talk to us about what we are, where we come from, where we are heading to, what we are made of, what our concerns are, what has to do with the search of beauty, of knowledge, of truth. […] When such disciplines are restricted […] what is specifically human becomes exctinct, the soul becomes gradually killed" (Prada 2024, min. 29:28). In short, technology can not substitute what is humanly intrinsic.

When looking at the concept of `creation´, or `creativity´, we need to understand it as the source of all artistic expressions. "Creativity is inherent in action: to act is to introduce the new into the world, to start something unexpected and unpredictable." (Arendt 1958), thus clearly being an exclusively human action, triggered by the necessity to introduce unknown and new ideas or views to enchance and enrich the human experience and so, contribute to human agency, a characteristic that machines fully lack, as also supported by Sawyer when stating that creativity requires "something novel and appropriate, from a person, a group or a society" (2006, p. 33).

One of the main goals of Literature (if not the only one) is no more and no less than to convey this contribution of creativity and art to the growth of the human spirit and mind, two areas that as much as technology may attempt to replicate, will always remain the property of human beings. Regarding translations, and in line with the idea of novelty, Bayer-Hohenwarter and Kussmaul (2020, p. 312) explain that "a creative translation is a translation that often involves changes (as a result of shifts) when compared to the source text, thereby bringing something that is new and also appropriate to the task that was set, i.e. to the translation assignment (to purpose)". The decision to make changes depends completely on the translator´s considerations, and those will logically be made on the grounds of a proper transposition of not only grammatical features, but most importantly, the intention of the original author. "The genre and author's style plays a fundamental role, since these texts are not as homogeneous as technical texts." (Guerberof-Arenas and Toral 2022, p. 4) That is to say that while automatic translation may have reached a level of efficiency very close to human performance, "perhaps acceptable for the purposes of travel communication, business transactions, or even media and news reports" (King 2019, p. 2), a commitment to keep and transmit the essence of the source text must always be respected:

> The challenge regarding the integration of AI in the field or translation relates to the ways in which we can ensure the faithful translation of literary works, while preserving the inherent artistic value akin to the original. (Škobo and Petričević 2023, p. 319)

And not only in terms of aesthetics, but also regarding semantics and pragmatics and other linguistic fields:

> A word may have multiple meanings in the translation process, so the translator needs to choose the best meaning that is faithful to the text, acceptable to the reader, and conveys the connotation and emotion that the author wants to convey. This means that translations need to meet the translation standard of faithfulness, expressiveness, and elegance needs to be satisfied in the translation process. (Wang, L. 2023, p. 1)

An appropriate example to illustratre Wang´s quote is provided by Katherine M. King:

> The statistical model analyze[s] word or phrase pairs from massive databases and f[inds] common pairings. In other words, if "perro" in Spanish [is] most often associated with "dog" in English in the corpora, the algorithm w[ill] select "dog" rather than "hound" or "pup". Language is much more complex than simple word pairing; thus sentence structure, syntax, grammar, and register [are] beyond the reach of MT algorithms. (2019, p. 10)

Translating fiction or Literature goes beyond language. Since language is a consequence of the need to communicate between members of a society and its culture, its written literature will inevitably reflect all the idiosyncracies of such culture, making the art of translation complex and "unique because it is linguistically sophisticated, artistically creative, culturally embedded, and socially contingent." (Wang, n. 2023, p. 438). This places the figure of the translator in a position of mediator:

> As a conduit for bridging cultural divides and fostering cross-cultural comprehension, literary translation assumes a profound role in cultivating cultural interchange and understanding across national borders. (Škobo and Petričević 2023, p. 318)

Cultural variety is shown in texts through the use of, among other resources, metaphors, rethoric figures, ambiguities, sense of humour and irony. So far, the challenge automatic

translation of fiction faces is to achieve the expertise and skills that a human translator posseses in order to translate preserving those qualities:

> [T]he nuances and intricacies of literary texts present formidable obstacles for automated systems. Literary works often contain […] forms of figurative language that require a deep understanding of the source language and its cultural context. Translating literary works demands not only linguistic proficiency but also the sensitivity to capture the author's style, tone, and artistic intentions. Machine translations, despite their efficiency, may struggle to replicate the subtleties and nuances of the original text, potentially diminishing the richness and depth of the literary work. (Škobo and Petričević 2023, p. 321)

As seen, the translation of fiction requires a high and deep level of sensitivity. It all comes down to understanding feelings and emotions, which are mirrored in the written text of a literary work. The ability of machines to comprehend and make decisions so that the target audience captures the original nuances and subtleties originally intended by the author, is still to be proved and demonstrated.

4.1.The challenge of Idiomatic Expressions.

One of the best expressions of each culture is the production, invention and use of idiomatic expressions. This is the reflection of the manner in which people convey the way certain situations are or have been experienced. Logically, these ways differ widely between the many cultures that inhabit our world and consequently, the translation of idiomatic expressions has always ranked high on the list of a translator´s worries, to the point of sometimes rendering themselves (this type of expressions) untranslatable due to reasons that "have to do with […] historical and social circumstances, not something inherent in the language." (Rion 2009, p. 166)

Many researchers, translators and scholars have tried to offer solutions and strategies to ease the task. But why is it so challenging to translate idiomatic expressions? The answer lies in the very own nature of this kind of expressions. According to Adelnia and Dastjerdi, they are "culturally specific and thus the pragmatic meaning must be much more prized than the literal meaning. If they are to be translated literally or word for word, they lead to extreme confusion." (2011, p. 879) To which they add:

> Idioms are linguistic expressions or lexical items representing objects, concepts or phenomena of material life particular to a given culture. They are necessary to any language in order to keep the local and cultural color of that language (p. 879)

Mona Baker defines idioms as "frozen patterns of language which allow little or no variation in form and often carry meanings which can not be deduced from their individual components. (1992, p. 63). For Beekman and Callow, idiomatic expressions are "the combination of at least two words which cannot be understood literally and which function as a unit semantically" (1974, p.49). To these definition, and following Adelnia (2011), idiomatic expressions could be subdivided into `colloquialisms´ (only used orally or informally); `proverbs´ (a concrete way of speaking expressing common sense); `slang´ (extremeley informal speech far from standard language); `allusions´ to institutions, events, places or works of art; and `phrasal verbs´, which have meanings very different from the original verb.

From all the above we can conclude that despite having different approaches to translation methods, all professionals coincide and agree that idiomatic expressions need a special treatment and different strategies may be applied when dealing with this figurative form of language and before opting for complete omission. Baker suggests using an idiom of similar meaning and form (or dissimilar form), paraphrasing or compensating.

Bearing in mind that the final purpose of a translating fiction must be to render a satisfactory experience for the reader in the target language, it should be clear that it all comes down to decision-making and that a good job "demands the translator's mastery of both languages, as well as an astute penchant for creativity and imagination" (Škobo 2023, p. 322). When faced with a challenging idiom, an array of paths are presented in front of the translator, such as cultural idiosyncracies and avoidance of conflict or bias. Also, the challenge could be turned into an opportunity to enrich readers at the end of the process:

> When a literary work is included in a new context, there can be new qualities perceived which had not been seen before, and translation is the perfect example of this phenomenon. (Rion 2009, p. 166)

Cultural contexts are inseparable to their languages and more precisely to their idiomatic expressions. They not only carry semantic meaning but they also bear a heavy load of emotion, societal implications, territorial identity and pragmatic nuances, which only naturalness can convey when being translated. In order to preserve and transpose those characteristics and avoid confusion and nonsense, the translator must be very skilled and very clever when making decisions. AI is taking giant steps by the minute, but to the best of our knowledge it is still uncapable of making the necessary decisions in situations like the ones mentioned above. I am not saying that it will never be capable to do so, but it will first have to be able of understanding human emotions, which no matter how well equipped with the best algorithms it might be, it is still machines barely replicating instructions given by human beings.

4.2. The case of idiomatic expressions in Claire Keegan´s "Small Things Like These"

To illustrate the challenges mentioned above, I have chosen 4 examples from Claire Keegan´s *Small Things Like These*. In her novel, set in Ireland during the 1980s, she denounces the abuse that young girls suffered in the hands of the nuns that ran Magdalene Laundries and how this was hidden even by the locals. I have used Jorge Fondebrider´s existing translation into Spanish, and DeepL´s, as well as my own.

Example 1

"instead of giving his mother her **walking papers**" (Keegan, p. 5)

"en lugar de **despedirla**" (Fondebrider)

"en vez de darle a su madre sus **papeles de salida**" (DeepL)

"en lugar de poner a su madre **de patitas en la calle**" (my translation)

For this colloquialism, Fondebrider does not opt for an equivalent, and chooses the meaning of the expression, avoiding the informal register. DeepL gives a quite literal translation, although the idea of "leaving a place" is suggested. However, I think that keeping the informality of the expression mirrors what this girl´s family did to her when they kicked her out after getting pregnant, and so it conveys the girl´s environment and the dramatism of the situation better.

Example 2

"We were about to call the **Gardaí"** (Keegan, p. 62)

"Estábamos a punto de llamar a la **Gardaí**" (Fondebrider)

"Estábamos a punto de llamar a la **Gardaí**" (DeepL)

"Estábamos a punto de llamar a los **Mossos**" (my translation)

This is an allusion to the state police of Ireland. DeepL keeps its name, and so does Fondebrider, who adds a note explaining what it is, instead of translating it for `policía´, since the original text does not say `police´. I understand that Keegan uses the Irish word as it has been incorporated into the English spoken in Ireland, a habitual use of the language in bilingual communities, such as Catalonia. Hence, I have chosen the name of the Catalan police.

Example 3

"these nuns **have a finger in every pie**" (Keegan, p. 95)

"esas monjas **están metidas en todo**" (Fondebrider)

"estas monjas **tienen un dedo en cada pastel**" (DeepL)

"estas monjas **están en todos los ajos**" (my translation)

DeepL translates literally word for word and even though this expression has an equivalent in Spanish, Fondebrider chooses to go for its semantic meaning. It may be a case of Argentinian Spanish not having such equivalence, but in Castillian Spanish the fixed phrase even encapsulates the link to illicit activities, which is what the nuns are doing.

Example 4

"Where's there's muck, there's luck" (Keegan, p. 64)

"No es inoportuna la fortuna" (Fondebrider)

"Donde hay mugre, hay suerte" (DeepL)

"Boda mojada, novia afortunada" (my translation)

This proverb has been by far the most challenging for me to translate. Once again, DeepL translates word for word, but this time Fondebrider also uses a proverb. However, after searching for it both in proverb dictionaries and online, I could not find it. I am not saying that it does not exist, but it might be either a very Argentinian saying, or Fondebrider may

have made it up himself. As much as it keeps the meaning of welcoming luck no matter where it comes from, it did not sound natural to me, at least in Castillian Spanish. So, after reasearching for longer than an hour, refranerocastellano.com offered something resembling the relationship between something negative or disgusting and good luck. The context has nothing to do with the original, but the message of both proverbs is kept.

All four examples, and most definitely the fourth one, demonstrate that idiomatic expressions can not be translated literally or word for word. As seen when comparing the existing translation and mine, it all comes down to decision-making after taking into account cultural, geographic and even political considerations, a process that "requires creativity and the skill, willingness, and perseverance" (Kováks 2016, p. 62). So far and as close as it may be, automatic translation is still not capable to carry this task out satisfactorily, or at least as accurately as human translators can.

5. **Conclusion**

Automatic devices, robots, automatons or any such machine have always been a desire, a dream, a fantasy or a concern for human beings. As we have seen, the dream started to materialize centuries ago, but artificial intelligence as we know it nowadays only became a reality less than a hundred years ago. Whether we liike it or not, AI is here to stay, and those who stubbornly throw tantrums trying to stop it from advancing had better invest their energy in understanding this fact and coming to terms with it. Whenever machines have taken over, there have been voices against them. The Industrial Revolution was to leave entire populations jobless and oil paintings were doomed to be swept off the planet after the birth of Photography, but we still enjoy both arts and jobs were transformed into different versions of themselves or new ones.

Mankind has reached the point we are at thanks to progress, but an eye has to be kept on the way it is achieved and great care must be taken when deciding what price we are willing to be paying in order to keep improving our lives, which today are highly dependant on technology regarding most every single aspect of our existence. That is why a line must be drawn to clearly mark where technology ends. We can not forget that no matter how

technological we may be, we are still human, and being human implies keeping our essence as such. Throughout history we have managed to survive as a species thanks to a tacit agreement that has made it possible to live in some kind of relative harmony, and that agreement has come along with morale and ethics. Despite being a very broad term, there is something that must always be remembered: that we have feelings and machines do not. It is those feelings that allow for what we must preserve above all progress and technology: respect. We all know that this has been ignored many a time, which calls for a necessary regulation coming from institutions and governments. In spite of the rapid speed at which AI is improving and its taking over more and more fields, the international community must take action to ensure that a humane approach to technology is taken, as the European Union already did when passing the Artificial Intelligence Act in March 2024, which ensures "a high level of protection of health, safety, fundamental rights" while supporting innovation.

A good ethical praxis is particularly relevant in the field of Translation. Language is a very powerful tool, which can be lethal in the wrong hands when manipulated or misunderstood by the use of censorship or the implementation of bias of any kind. All linguistic aspects, from syntax to morphology, are to be considered, but perhaps semantics is the most vulnerable one, and amongst the wide array of meaningful structures, idiomatic expressions may pose the highest challenge, due to their nature, exclusive and unique to each and every culture and their corresponding languages. This is where the figure of the translator comes to play an essential role. As we have seen, machines are told what to do and how to do it, even when they can do so autonomously. This implies that any input could be misused in order to obtain a biased effect, which means that any output should be supervised by a human translator who must make sure that undesired, wrong, unnatural or potentially harmful translations do not reach their target readers. Ideally, translators must be "chameleonic and respectful of the otherness of the text, conscious of the changes and aware that there has to be a reason for them, that they ought to come from a deliberate choice" (Rion 2009, p. 169). A choice that has to ultimately be made by a human being.

All in all, I support Shaw´s view advocating for a future combining high-end technology with natural human sensitivity and skills, instead of one where humans and machines are constantly fighting each other. In one word, coexistence. Time will tell if fully and traditionally translated fiction by humans becomes a collector´s piece, a delikatessen, limited editions of works that not so long ago were mass-produced and affordable for everybody.

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