





The featured piece by translator **Maddalen Subijana** states that 'creating is producing something that did not exist before' and also that 'artificial intelligence's functioning is based on combinatorics'. Philosopher **Daniel Innenarity**, for his part, explains that human creativity is inimitable and unrepeatable, and that it 'always implies, albeit minimally, a certain amount of transgression'.

It has been a long time since we learnt from Alain Badiou that novelty is a hole that a subjective truth punctures the system. Novelty brings about rejection – contempt – since it questions the established knowledge (in science), aesthetics (in beaux arts) and status (in politics).

Creators (scientists, artists and revolutionary politicians) must always favour newness, question the status quo and launch transformative movements, with no trepidation for the obstacles.

If the creator manages to turn dissension into consensus, then the new aesthetics will have a place in museums, the new scientific theory will be thought by the Academy and the new political ideas will reach institutions, i.e. what was once unspeakable will become communicable.

Badiou contrasted the Musée D'Orsay and the Centre Pompidou. The former is a compilation of the aesthetic movements that have been successful throughout history: the impressionists and art nouveau, neoclassic and abstract art. By combining styles that were transgressive at some point, they intend to give an impression of novelty. It cannot be denied that Musée D'Orsay is quite aesthetically pleasing, but it does not offer anything new. On the other hand, Centre Pampidou proposed a new aesthetic at the time: it is a seemingly unfinished building: the pipes are in plain sight and the staircase is on the outside. Pampidou transgressed the architectural concepts of that time and was severely criticised; D'Orsay has never been.

In this issue of Baque Writing, you will find remarkably interesting reflec-

tions by writers Harkaitz Cano and Irati Elorrieta, researcher Igor Leturia and science educator Ana Gala-rraga. Don't miss it!





Laura Mintegi, Writer Basque PEN President





Artificial Inteligence and Literary Creativity

Artificial Intelligence (AI) has progressed so much in the last few years, that anything we say today may become obsolete in the blink of an eye. Nevertheless, the topic is not new; it has been around for several decades now. In fact, it was in 1956, after John Mc-Carthy organised the Dartmouth Summer Research Project on Artificial Intelligence (Hanover, New Hampshire), when AI began to consolidate as a field of science.

Al has fully entered myriad sectors of our lives including culture, arts, medicine, education, and its influence on the area of language is especially significant. Language technologies have become everyday tools: automatic translators, search engines, digital readers, automatic transcriptions and subtitles, Al assistants...

Among recently developed tools, **ChatGPT** has been one of the most talked about. This chatbot developed by OpenAI has an extraordinary capacity to interact with people and **has shown a higher level of accuracy in its responses than other engines**. Until now, AI could only complete one task at time; however, ChatGPT is able to combine several at the same time: it searches and selects information, quickly gives structured answers, shortens texts and it can even 'create' new texts.

These new technologies have substantially facilitated some of our everyday tasks and work, but they have also put some jobs at risk, as many actions that could solely be carried out by humans in the past can now be performed by AI. It is thought that this trend will grow in the coming years, and consequently, AI is expected to completely transform some jobs, including those based on creativity. This reality has caused concern in some professional fields, and the strike carried out by Hollywood writers earlier this year was a proof of that. Thus, it is essential to point out both the advantages and disadvantages of AI. As these technologies develop, experts are identifying some ethical issues, since all that glitters is not gold. AI is not impartial -- it reflects the current society. It is not perfect and sometimes it even spreads misinformation; in some languages its productions are more mediocre than in others, etc.

In any case, it is undeniable that AI is rapidly devel-

oping, and its results are getting better every day. Experts are sending a clear message: Al is here to stay and we had better learn how to coexist with it.

AI and Basque language

According to experts, **Basque is also surfing the Al wave**. Language technologies in Basque have surged in the last few years, and several tools featuring our language have been developed lately. This surge has mainly come from institutions and research teams such as **Elhuyar taldea, HITZ Basque Center for Language Technology, IXA taldea, Orai NLP zentroa**. Recently, we have gotten used to learning about new Basque initiatives that are being launched in the field, so our language is clearly paving its own path in the Al world.

Looking to the future, there will predictably be more and more AI-related resources and training available, as the University of the Basque Country has already set up a master's degree in Language Analysis and Processing and various conferences and workshops are also being conducted on the topic. The journey will not be easy, as Basque is immersed in a diglossic reality that has an effect on all linguistic aspects, including AI, but there are reasons to feel optimistic about it.



Successful development of language models: some key elements

As mentioned above, language models are developing very fast, and ChatGPT has been a landmark in that process. But how do they work? Here are some clarifications:

1) **Deep neural networks**. Neural networks mimic the architecture of the human brain. They are a group of algorithms, and depending on the context, they can predict the probability of the next word in a sequence. Based on that probability, they put words together to form meaningful texts.





2) **Previous training**. Engines receive previous training that enables them to make more accurate predictions, i.e. so that they can produce texts that are as accurate as possible. How do they do that? Neural networks are fed with massive text corpora (big data), so that they can analyse them and learn linguistic structures and patterns. **Once they have learned these patterns, they are capable of mimicking language.** This field has also progressed significantly, as current networks are able to process larger quantities of big data in a shorter space of time.

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3) Reinforcement learning with human feedback. In a second learning phase, language models receive human feedback: they are fed with human opinion in order to make their language and conversation as natural as possible and to perfect the results.

Intelligence and creativity: two complex terms

This issue of Basque Writing explores the connexions between AI and literary creation. These two complex terms are presented from the very beginning of this issue, in fact, they are part of the title. But what is intelligence? What is creativity? Let us resort to dictionaries for the answers.

The Unified Dictionary of the Basque Language Academy states that intelligence is: 'the ability to understand and learn; a person's capacity to be aware of themselves and their environment using thought'. On the other hand, Harluxet Dictionary establishes that, in IT, artificial intelligence is 'an engine that simulates human intelligence; a science that develops the capacity of computer systems to express knowledge, learn, self-correct and make decisions'.

The Unified Dictionary defines 'creativity' as 'the capacity to create'. The verb 'create' is defined as 'the act of producing something that has never existed before'. Harluxet dictionary tells us that 'creative capacity' is 'the ability to create something that did not previously exist using one's mind or imagination to materialise or produce it in reality'.

So, is artificial intelligence able to create?

All of this raises some questions:

• The functioning of these technologies is based on combinatorics. Therefore, is there any

kind of creativity involved? Are machines able to create? **Or should we say that they are only able to combine?**

- Regarding language models, the function of these technologies is to mimic language. Mimicking is acting the way another person/animal/object does, i.e. they merely replicate what others do. Thus, in this context, **is it fair to say that machines can create?**
- Intelligence is the ability to understand and learn. As we mentioned before, AI is able to 'learn' linguistic patterns such as grammatical or lexical rules, but language is also the tool we use to express feelings and emotions, and literature is often used to this end. Will AI be able to understand and express these feelings and emotions?
- Creating is producing something that did not exist before. Does AI create texts that had never been created before? If we have a look at the way language models function, this is certainly a questionable assumption.
- After all, creativity needs to be groundbreaking, as it is the act of creating something new that was not there before. **Is AI able to innovate?**
- Let's suppose AI develops total ability to create. Would it be interesting for humanity to leave literary creativity or any other artistic field in its hands? Would it be of interest to push our writers aside?



Maddalen Subijana Translator and Basque PEN member







Al for Basque language: current state, risks and opportunities, and future challenges

Unlike other cultural trends and technological revolutions, **the Basque language caught the wave of AI in time.** Research activity has been ongoing since the mid-1980s, but the explosion of language and speech technologies for Basque –and other languages– came about 6-7 years ago with the deep neural networks approach. Al-

nificant advantages: we can have any content produced in other languages translated into Basque by technology and **Basque content crea**tors and media don't have to turn to other languages to reach a global audience. All in all, the negative consequences of not having these technologies for Basque would surely be far worse.



though these require a great deal of data to train and Basque is a language with (relatively) lessresources, we have managed to develop highquality NLP technology for Basque that is available to the public in various web services like the subtitling/transcription service Aditu, the machine translation service Elia and the speech synthesis service TTS Neuronala. This combination of tools also allows for (semi-)automatic dubbing of some audiovisual content. Of course, we still have a lot of work to do in terms of translating literature, transcribing dialects and informal conversations, expressive speech synthesis, dubbing movies, etc. However, all of this is local technology to the Basque Country (big tech has seldom developed NLP for languages like ours).

This new scenario has raised some concerns in the Basque society. If everyone can have any written or audiovisual content automatically translated from Basque or dubbed into their language, there is a risk that the Basque language will become invisible and that non-Basque speakers will lose their motivation to learn the language. However, there are also sigNow, this last year we have all seen generative AI, LLMs, ChatGPT, Whisper, etc. do many advanced things and yield amazing results. Many of these commercial products from big tech also work in Basque, but they lack linguistic correction and answer questions about Basque history or culture incorrectly. And their use raises the usual concerns about privacy, technological sovereignty, etc. Therefore, it is important to keep working to have similar local technology that works well for Basque. **So far, we**

have been able to deal successfully with the particularities and added difficulties of our language, and we are confident that we will be able to do so in the future as well.



Igor Leturia ORAI NLP Technologies







No fairy tale; no going back

Shelley, the AI bot that created horror stories, was unveiled in 2017. It was developed in the MIT Media Lab, and apart from writing stories, it was able to discuss those narrations with people on Twitter.

In fact, Shelley would ingest information from those discussions, as the main goal of the developers was not only to perfect the program, but to see if the bot was able to stir up emotions in humans.



Today, there is no doubt about that last point, since, for instance, more and more people admit to having fallen in love with their chatbot. Chatbots are AI programmes that create text and voice, and they can "remember" conversations they have had with their owners, as they are able to learn. They also get to know their owners fairly well, since they can obtain all the details they need (what they have bought, where they have been, what they have liked on social media to name a few) and are therefore able to anticipate the user's every desire and craving. Who wouldn't fall in love with such a partner?

Given that one of the main goals of literature is to touch, enchant, scare, seduce, encourage readers, it appears that AI is already able to create literature.

But are AI programs able to create good literature? And, more precisely, are they able to create good literature in Basque? While the answer to the former question may be disputable, the answer to the latter is undoubtedly no, because these programs do not yet have the knowledge required to write good literature in Basque, although they might in the near future.

This supposed progress, however,

entails one major risk, among others: considering that artificial intelligence reproduces and magnifies the hegemonic perspective of its developers, who are mainly far right, misogynistic, heteropatriarchal, racist, ultraliberal, monolingual anglophones, it is not hard to imagine what kinds of texts these bots will create, albeit with a Basque touch, at the user's request. Al is no fairy tale, but also, there is no going back.



Ana Galarraga Aiestaran (ph. Iñigo Ibañez) Science educator





Bringing chaos

When you finish writing your book, a beautiful title comes to mind. You search for it on the internet to ensure that it has not been used before. No results found in Basque or Spanish. You cross your fingers and introduce the same expression in English. Merde! You are not the first one. You will have to find a new title... because Google is, in fact, the tarot of the hipsters.

But, truly, what has changed since Kasparov lost that chess game to Deep Blue in 1996 and expressed that he was 'ashamed'? Just one thing: **we do not know if Kasparov is a human anymor**e. The solution could be to create an organic certificate the same way recycled paper and eco products are certified: 'The author of this article is a certified non-robot'.

The internet has gradually inserted new automatisms and impulses into us. Some of them are slight, others are not. We have long been, and still are, writing about what is established by the oracle. I once heard the cartoonist Antton Olariaga say that there was a time when each illustrator would keep their own folders. For instance, over the years, they would cut out images of dogs from magazines and include them in their 'dogs' folder. They then would turn to that folder and choose a dog when they needed to draw one. Now, we search the word 'dog' on Google and choose one of the first ten hits. Paradoxically, even though the internet has the largest collection of dog images ever, all the draughtspeople are drawing the same exact dogs. As the editor Jaume Vallcorba used to say, the infiniteness of the internet, just like any other material infiniteness, is all too similar to the desert. That is to say, the worst thing is not that AI is doing our work, the worst thing is that we have been doing the tasks that IA finds too tedious to complete for a long time now.

Automatic translators were much more fun in the beginning because they made mistakes. If you introduced a mediocre poem, they would improve it, because through some kind of Dadaist operation, the engine would add a touch of absurdity to the text. But now that toys have become tools, everything is duller. Thus, could it be that our function as humans is to find and promote those systemic errors – excep-



tions?

One of the main reasons behind the Hollywood writers' strike was that they were afraid AI would steal their jobs. **Obviously, machines can imitate us, but we have the capacity to predict what machines will appear in the future, don't we?** As Kurt Vonnegut once said: Let others bring order to chaos. I would bring chaos to order, instead, which I think I have done.



Harkaitz Cano (ph. Dani Blanco) Writer





The question is why?

Writing is a way to seek contact. We use it to get out of ourselves and coalesce with our environment. We write because we feel we can classify, understand chaos, that's what we think. We write because we expect to find someone on the other side, because we expect to leave loneliness behind.

We have been doing these things since the very beginning of our existence. Newborn babies do not want to be on their own; they seek to feel closeness (yes, exactly, Bowlby's attachment). The baby will only be able to create emotional bonds in the future if they receive that closeness in their early stages. Note that the verb 'create' has already made its first appearance in this text. And that we've already connected affective bonding with the ability to create. Affective bonding is not intrinsic, such connections are forged through two people's actions. These bonds cannot be seen, but they create a symbolic space between the people involved.

Without that symbolic space forged by emotional bonds and mimicked by different types of creations, we would live an isolated, lonely life. And that is what is at stake.

We don't write out of boredom, or because we want fame, let alone wealth. As Joan Didion once said, 'we tell ourselves stories in order to live'. Amen to that. **Storytelling is our fundamental tool for self-creation,** as well as a resource with which to face difficulties. We train in that every day from the very early stages of life.

A long, long time ago, our ancestors added a cultural technique to storytelling: writing. A technique to speak in silence, a technique that exceeds time and space. Almost magic.

Did those silent accounts start in the caves? Thanks to images such as representations of past experiences, memories, distorted horses and mares, all those elements that were not there could be present in the space of the cave. Those images were also almost magic. They are proof of early artists' freedom and technical prowess: some bison were painted purple, taking the art beyond reality. Taking it far away. To fiction.



We write about what we have experienced in life to create variations. To taste a metamorphosis of reality. There is a vast distance between those mares, bison, lions and our books, but there is also a strong connection. They are so close to us, and we are so close to them. Magic.

Those who write have no interest in delegating the task. Those who write only need more time to write.

If AI was developed based on our interests, it should help us have more time to live.



Irati Elorrieta (ph. 528 Bearbeitet) Writer





Artificial intelligence's creativity

Artificial intelligence programs are reaping great success in specific fields such as song writing, visual process design, TV, architectural design and story writing. This advance has led to widespread speculation that humans will soon be replaced in various fields, including creativity. The question of whether artificial intelligence can produce art is both fascinating and unsettling for most of us. Artistic creativity was probably one of the last domains that differentiated humans from computers, but given the circumstances, we can say that wall has also been broken down and we are now entering an era of non-human authors.

Those who enthusiastically celebrate that possibility argue that no one is able to distinguish between a piece created by a machine from those with a human author. This coincides with the strict logic behind the Turing test: intelligence consists of imitating humans in a certain property without questioning the nature of that property. The fact that a performance is indistinguishable from a piece created by a human only demonstrates that machines are expert imitators and that humans have trouble making the distinction, but the performance makes no contribution to the definition of that property considered exclusively human. We would be confusing being with seeming, with 'successfully impersonating', artistic creativity would be a form of expertise that technologically perfects the resemblance.

Careful analysis of what these technological productions actually do is significant. The 'artificial creation' is made from the analysis of the available historical material, **extracting patterns from artistic works of the past in order to recombine them to produce more pieces.** We could ask these programs to create a new album by the Beatles, a picture in the style of Chagall or Monet or a short story that could have been written by Henry James. In this way, **we manage to have more than we did in the past, but not exactly anything different.** Algorithms can extract configuration rules from databases; creativity, however, is not present in that formulation but in the data on which it was based. The seemingly creative pieces made by digital technology are in fact human inventions of the past that machines extract and emulate.

'Artificial art' consists of modelling the creative moment as a product of certain stochastic functions. In many architectural projects, designs, scripts and TV shows you will find stylistic idiosyncrasies, characteristic colourings, particular phraseology or compositional figures that are typical of past authors. That is called mimicry and is exactly what an apprentice artist does: copy and perfect other artists' work instead of working on an original and personal style. Strictly speaking, human creativity cannot be either imitated or reproduced, as it always implies, albeit minimally, a certain transgression that is not reducible to rules or statistical aggregations. Creativity always entails a certain irregularity. However, those computational creations that appear to be based on free combinations, are always algorithmically determined;

there is no innovation, neither is there any radical novelty to it, so it could only be seen as creativity from a generic and inaccurate point of view. Human inventiveness is not comparable to computational innovative capacity.

Creativity cannot be algorithmically imitated through probabilistics, randomisation, genetic recombination or data analysis.



Daniel Innerarity Philosopher

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