



**TRENDS IN SPANISH LITERATURE.
HOW NEW TECHNOLOGIES INFLUENCE
THE PROCESS OF LITERARY CREATION**

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Abstract

Spanish literature has evolved over time under the influence of technological advancements, and nowadays artificial intelligence is redefining the process of literary creation. It is helping to discover and restore lost works. In addition, algorithms can replicate the style of famous writers, generating texts similar to those of Cervantes. Automatic content generation raises questions about the authenticity and uniqueness of human creativity. Also, digital technologies transform reading into an interactive experience through augmented reality and adaptive books. Blockchain protects copyright, and artificial intelligence (AI)-assisted translation facilitates access to Spanish literature globally. This article aims to provide a comprehensive overview of how these changes are profoundly influencing the relationship between writer, text and reader, sketching a literary future in which technology and human creativity must coexist harmoniously.

Keywords: *Artificial Intelligence, digitalisation, algorithms, literacy, creativity, authenticity.*

Literature has always been strongly influenced by social, cultural and technological changes. Over the centuries, the development of the printing press, the birth of the modern novel and, more recently, the digitalisation of content have substantially modified the way works are created, distributed and consumed. In this day and age, artificial

intelligence (AI) represents one of the most challenging elements for contemporary literature. Spain, as a nation with a vast literary heritage, is at the forefront of this technological revolution, where writers, critics and readers are dealing with the impact of new technologies on the act of creation.

This study seeks to analyse the influence of technology on Spanish literature, exploring both the benefits and challenges of artificial intelligence and digitalisation. From the discovery of lost works to the automatic generation of literary texts, artificial intelligence has significantly changed the literary landscape, provoking debates about authenticity, creativity and the future of the human writer.

One of the most spectacular ways in which artificial intelligence has influenced Spanish literature is the discovery and restoration of forgotten works. A notable example is the play *La francesa Laura* ("The Frenchwoman Laura"), identified with the help of an artificial intelligence program as belonging to the dramatist Lope de Vega. This project was carried out by researchers from the Universities of Vienna and Valladolid, who used algorithms with natural language processing to compare anonymous manuscripts with the author's known style (*A.I. uncovers unknown play by Spanish great in library archive*, in Reuters.com). This technology has major implications for the study of literature, enabling not only the identification of authorship but also the discovery of intertextual influences, thematic correlations and even the re-evaluation of some writings that are thought to be lost.

In addition to discovering lost works, artificial intelligence is being used to restore and reconstruct texts eroded by the passing of time. A remarkable example is the use of artificial intelligence algorithms to fill in missing sections of medieval manuscripts, thus restoring pieces of lost cultural heritage to the world.

Likewise, in modern literature, artificial intelligence is being used to replicate the style of famous authors. Artificial intelligence has created its own version of Miguel de Cervantes' *Don Quijote*, demonstrating the potential of these technologies to reinterpret literary heritage (*El Quijote escrito por NeuroCervantes*, Instituto de ingeniería del conocimiento). In the present context of technological breakthroughs, it would be difficult to predict how the illustrious Miguel de Cervantes would react to modern communication platforms such as Twitter, Facebook or WhatsApp. There is a possibility that he would embrace these tools, perhaps even recounting his adventures through the hashtag *#madness*, posting his adventures on YouTube, wearing a GoPro camera instead of a hat and riding his trusted

scooter. Although Cervantes is no longer with us, thanks to progress in artificial intelligence, his literary style can be reproduced. This was the work of researchers at the Institute of Knowledge Engineering (Instituto de Ingeniería del Conocimiento - IIC) in Spain, who, in the context of the 400th anniversary of the author's death, created an “artificial brain” that studied the entire *Don Quijote* in detail. Using the latest profound learning technologies, this system has been able to learn the vocabulary and grammatical structures used by Cervantes, acquiring the ability to generate texts in his characteristic style. Before these generated texts, it can be seen that, although there are remarkable similarities with the authentic works, the original Cervantes maintains his status as Spain's prime literary figure. It is worth noting that the only knowledge base on which this system was trained was the alphabet. All that follows, including vocabulary, basic grammar, and punctuation rules, were learned by the algorithm by merely observing and studying the work *Don Quijote*.

A significant aspect of this *neurocervantes* is its ability to learn not only fundamental grammatical structures but also complex elements of the language that are a real obstacle for Spanish beginners, such as the construction of complex sentences linked correctly by connectors, the use of pronominal verbs and “se” constructions. Moreover, the algorithm is able to achieve agreement between noun and adjective (“infinitos caballeros andantes”) or between demonstrative and noun (“esta suerte”), even if it sometimes encounters difficulties (“los palabros”); it can take over the archaisms of the period (“desta”, “extremo”) or, when necessary, it can even create new words (“hermosuro”). Another interesting detail is the algorithm's tendency to start sentences with the conjunction “y”, a stylistic technique characteristic of Cervantes, which gives the text a particular dynamism and which has been successfully adopted by artificial intelligence. These achievements should not be underestimated, bearing in mind the complexity of Cervantes' style.

In this context, the algorithm demonstrated the ability to imitate the formal and structural aspects of the Cervantine style, generating grammatically correct sentences, however without being able to convey the necessary meaning of a complete text. To produce truly meaningful sentences, similar to those generated by the human mind, the artificial brain would need to possess a deep understanding of the meaning of words. This would represent an important future direction in the fine-tuning and perfection of neural networks, as this type of learning requires a broader semantic understanding that would

allow for the generation of texts that are not only syntactically correct but also cognitively meaningful.

One of the most controversial aspects of using artificial intelligence in literacy is automatic content generation. Advanced algorithms, such as GPT-4 or Claude, can produce complex texts from poetry to prose, imitating the style of famous authors or creating completely original stories. An example is the novel *The Day A Computer Writes A Novel* by Yurei Raita (AI program), which was nominated for a literary prize in Japan. It demonstrates the ability of artificial intelligence to compose coherent stories, putting into question the uniqueness of the human creative process.

In Spanish, there have already been published experiments in which artificial intelligence has written fragments of prose and poetry resembling those of Borges, García Márquez, Cortázar or Neruda, some of the Latin America's most influential literary voices. Despite not yet having the emotional depth of a human writer, these texts raise fundamental questions about the nature of creativity.

Artificial intelligence is also being used for literary translation, a crucial domain for Spanish literature, given the global impact of the Spanish language. Advanced algorithms are now able to provide more accurate stylistic translations, helping to spread Spanish literature around the world. Some digital books use augmented reality (AR) to add interactive elements, such as animated illustrations, ambient sounds or even alternative scenarios that can be accessed through mobile apps. This kind of innovation transforms reading into a multi-sensory experience, captivating new generations of readers.

A technological innovation impacting literature is the use of the so-called blockchain to protect copyright. Through smart contracts and decentralized registries, writers can ensure the authenticity and rights of their works, eliminating the problems of plagiarism and unauthorized use of content. With artificial intelligence, publishers can create books that adapt to the reading style of the user. This phenomenon is already being tested in children's literature, where stories can be modified according to a child's preferences. In adult literature, artificial intelligence can generate interactive books, where the reader can influence the unfolding action. This technology turns reading into a participatory experience, redefining the relationship between text and reader.

The future of Spanish literature, and of literature in general, will depend on how writers, editors and readers manage to manoeuvre these changes, maintaining the balance between

technology and human expression. If artificial intelligence is used wisely, it can become a valuable tool for literature, enhancing the creativity and accessibility of literary texts.

Bibliography:

- Bostrom, Nick (2016). *Superintelligence: Paths, Dangers, Strategies*, Oxford: Oxford University Press.
- Daugherty, Paul R., & Wilson, H. James (2018). *Human + Machine: Reimagining Work in the Age of AI*, Harvard: Harvard Business Review Press.
- Mueller, John Paul, & Massaron, Luca (2022). *Artificial Intelligence* (second edition), For Dummies Collection, John Wiley & Sons Inc.
- Popenici, Ștefan (2023). *Inteligența artificială și viitorul educației*, Bucharest: Didactica Publishing House.
- Russell, Stuart, & Norvig, Peter (2009). *Artificial Intelligence. A Modern Approach* (third edition), Prentice Hall.
- Theobald, Oliver (2017). *Machine Learning For Absolute Beginners*, Kindle Edition, Scatterplot Press.

Webography:

- A.I. uncovers unknown play by Spanish great in library archive*, in Reuters.com, last accessed: 22.06.2024, <https://www.reuters.com/lifestyle/oddly-enough/ai-uncovers-unknown-play-by-spanish-great-library-archive-2023-01-31/>
- El Quijote escrito por NeuroCervantes*, Instituto de ingeniería del conocimiento, last accessed: 23.06.2024, <https://www.iic.uam.es/wp-content/uploads/2016/04/NeuroCervantes.pdf>