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Artificial intelligence in journalism: Automatic translation and recommendation system in the project "A European Perspective" (EBU)

Inteligencia artificial aplicada al periodismo: traducción automática y recomendación de contenidos en el proyecto "A European Perspective" (UER)

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RESUMEN. **Introducción**: El 1 de julio de 2021, varios organismos públicos de radiodifusión europeos lanzaron oficialmente el proyecto "A European Perspective". Se trata de un servicio de intercambio de noticias en línea desarrollado dentro del ámbito de la UER - Unión Europea de Radiodifusión, que reunió a diez empresas de radio y televisión públicas de nueve países. Este proyecto utiliza la Inteligencia Artificial para la traducción y recomendación de contenidos producidos por los participantes y que pueden ser utilizados libremente en sus sitios web. Entre los objetivos del proyecto se encuentran la lucha contra la desinformación y la afirmación de los valores europeos en un contexto social en el que las redes sociales han ido ganando cada vez más influencia entre la opinión pública. **Metodología**: Este trabajo es un estudio de caso y, además de explicar cómo funciona el proyecto, hace un análisis de los contenidos compartidos en los dos primeros meses de funcionamiento en el sitio web de la televisión pública portuguesa RTP- Rádio Televisão Portuguesa. **Resultados y Conclusiones**: El proyecto está cumpliendo los objetivos inicialmente definidos por la UER, especialmente en cuanto a ofrecer diferentes perspectivas sobre temas que son objeto de procesos de desinformación, como la pandemia, y solidificando una visión europea basada en el rigor y la transparencia de la información producida por los operadores de radio y televisión pública.

PALABRAS CLAVE: Inteligencia Artificial; Periodismo; Televisión; UER; Traducción automática; Sistemas de recomendación; Una mirada europea.

ABSTRACT: **Introduction**: On July 1st, 2021, several European public broadcasters officiall launched the project "A European Perspective". It is an online news exchange service developed within the EBU - European Broadcasting Union, which brought together ten public broadcast companies from nine countries. This project uses Artificial Intelligence for the translation and recommendation of content produced by the participants and that can be freely used on their websites. The main objectives of the project are the fight against misinformation and the affirmatio of the European values in a social context in which social networks have been gaining more and more influence among public opinion. **Methodology**: This paper, a case study, explains how the project works and analyses the type of content shared in the first two months of operation on the website of RTP- Rádio Televisão Portuguesa. **Results and Conclusions** The project is meeting the objectives initially defined by the EBU, especially in terms of offering different perspectives on issues that are subject to disinformation processes, such as the pandemic, and solidifying a European vision based on rigor and transparency of the news produced by public European broadcasters.

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KEYWORDS: Artificial Intelligence; Journalism; Television; EBU; Automatic translation; Recommendation system; A European perspective.

CONTENIDO

CONTENT

Translation by **Paula González** (Universidad Católica Andrés Bello, Venezuela)

1. Introduction

Artificial intelligence (AI) is still gaining ground in society. If up to a while ago, it was only used in certain niches, today the use of AI has been widespread and accompanies us daily, even in personal items, such as mobile phones. Even so, the literature on the subject is still somewhat scarce, focusing more on the computer part and less on the impacts of AI in society, with which studies like this are important to analyze how the different sectors are using artificial intelligenc

The concept was discussed for the first time in 1956, in a congress organized by John McCarthy, in Dartmouth College. At that time, artificial intelligence (AI) was understood as the possibility that machines could imitate some aspects of human intelligence (Russell and Norvig 2016). Throughout the decades, conceptual approaches have evolved in parallel to their own application, which has allowed to distinguish different epistemological approaches of artificial intelligence. The most prevalent defends AI as a rational agent, that is, its purpose is to offer more efficien , with or without imitating human thought/behavior. In this perspective, AI is defined as "the study of agents that exist in an environment and perceive and act" (Russell and Norvig, 2016, p.7). In this formulation, the concept moves away from perspectives closer to AI as mimicry of human behavior, that is, "the art of creating machines that perform tasks that require intelligence when people carry them out" (Kurzweil, 1990, p.117).

With an important presence in various sectors of activity, artificial intelligence has also reached the field of journalism, specifically through the processing of natural language (PNL) applied to data transformation in news (Silverman, 2013, Harcup, 2014). One of its best-known applications is the automatic production of texts (Silverman, 2013, Carlson, 2015, Lokot and Diakopoulos, 2016) using bots, a situation that has led to the proposal of terms such as "robot-journalism" (Carlson, 2015). This option has been a response to the economic problems of the sector (Papadimitriou, 2016), one of which is the need to maintain or increase the production of news on a layoff scenario (Graefe, 2016). However, this situation gives rise to new problems related to the quality of the final product (Manfredi Sánchez and Ufarte Ruiz, 2019) or with ethics (Ufarte Ruiz, Calvo Rubio, and Murcia Verdú, 2021).

The first experiments with automatic news production are over a decade old. In 2010, The Big Ten Network, an association between Fox Networks and Big Ten Conference, launched an automated sports news production service (Lohr, 2011), using software developed by Narrative Science. It was not the first experience in the automatic production of journalistic texts but it was one of the first to use artificial intelligence and allowed a significant improvement in the final produc

But the frequent use of artificial intelligence in this field goes back to 2014 when Los Angeles Times launched the first bot (Flores- ivar, 2018). Shortly after, Associated Press also automated the production of news related to the economy (Brandom, 2014, Graefe, 2016, Lichterman, 2017), a situation that gave greater visibility to this form of production. The fact that the economy section was one of the first to be tested is no coincidence: it is a specialty in which there is a lot of online information and where the data is essential, which facilitates the resource to the PNL to convert them into texts. The same goes for sports information and, therefore, these are the two journalistic specialties where the data transformation in textual narratives with little or no human intervention is best done (Carlson, 2015). Artificial intelligence can also facilitate some specific activities of the news production process, such

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as the search for more objectivity to avoid errors and ambiguities (Essenfelder et al, 2019), the detection of informative trends (Steiner, 2014) to build the agenda, the collection and organization of information (Diakopoulos 2019), the automatic translation and development of news-recommendation systems (Helberger, 2019, Túñez-López et al., 2021), or in the fight against disinformation (Flew, 2012; Silverman, 2013; Manfredi Sánchez and Ufarte Ruiz, 2020). These latest reasons are directly related to the technical possibilities of the project studied in this work and coincide with some of the ten elements of journalism identified by Kovach and Rosenstiel (2014)

When analyzing a project of journalistic nature, this work crosses the two dimensions mentioned above, seeking to verify how AI allows to deepen the commitment to the truth, to make the pertinent information more interesting and relevant, contrasting sources, offering proportionality between facts and news, and, lastly, how it can contribute to the strengthening of journalism as a discussion forum. Comparing these principles enunciated by Kovach and Rosenstiel (2014), the "A European Perspective" project can help public issuers to strengthen their credibility (Túñez-Lopez, et al, 2019) and their important role in democratic societies (Balkin, 2018), in this case through their informative presence on the web.

2. Objectives

The "A European Perspective" project is described as "a collaborative news service that allows audiences to access reliable content from other countries through a selected online channel" (EBU, 2021). At this point, an initial concern arises -provide reliable information- an objective reminiscent of the first element identified by Kovach and Rosenstiel (2014) - "The first obligation of journalism is with the truth" (p.27) - because trust is umbilically connected to the veracity of the facts denounced. Complementarily, it is mentioned that access to information from other countries in the mother tongue allows the reader to compare their sociopolitical reality with that of other countries, which "will act as a counterweight to the disinformation campaigns aimed at exploiting the failures between communities" (EBU, 2021). The COVID-19 pandemic, climate change, and migration are examples of cross-cutting problems that have been manipulated and, therefore, deserve special attention from the project since quality information is one of the most important weapons to combat disinformation (Larrondo-Ureta, et al, 2021).

In this context, a first objective of the project arises: to contribute to the creation of a European public sphere sharing stories rooted in fundamental European values, using content that help citizens to contextualize their local reality in the European context. In this case, we can establish a connection with the seventh element proposed by Kovach and Rosenstiel (2014) - "it must make an effort to make the pertinent information interesting and relevant" (p.27) - since it seeks to transform the information from a given region into content that awakens the attention of users from all over Europe. As Arendt said (2005), "the reality of the public sphere has its root in the simultaneous presence of innumerable perspectives and aspects in which the common world is presented and for which it is not convenient to invent the common denominator" (p.66). The publication of these various perspectives ends up constituting a critical confrontation forum of topics that interest Europe, a matching debate space that also invokes the sixth characteristic element of journalism: "must be a criticism and public commitment forum" (Kovach and Rosenstiel, 2014, p.27). Thus, a first research question emerges:

Do the topics of the published news correspond to those that most concern the Europeans at the time of the sample?

Within the project, the part that works to answer this question is the recommendation system (PEACH). As (Helberger, 2019) recalls, algorithmic systems of recommendation, by themselves, are not good or bad for democracy: how they are used is what makes the difference. In the present case, the system proposals are complemented by the intervention of the editor, constituting a hybrid team. Confirming the publication of news on fracture issues in society, and presenting perspectives originating from different countries, the system will be contributing to the construction of a European public sphere.

The project also has the goal of combating disinformation, offering consumers truthful information with the possibility of contrasting sources. As Manfredi Sánchez and Ufarte Ruiz (2020) recall, "Veracity is a quality that requires a series of professional skills and competencies such as the practice of

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double-checking sources, quality in writing, and language management" (p. 54). In this case, besides the journalist previously fulfilling this professional requirement, the system allows users to do it by themselves. That is, users have the possibility of double-checking sources (read news about the subject that interests them published in other media outlets) and, also, do so in their own language because the system translates.

Another way to combat disinformation is to offer contextualized information, which reminds of the eighth element listed by Kovach and Rosenstiel (2014): "it must present the news comprehensively and proportionally" (p.27). Also, in this case, the offer of other perspectives functions as a second narration that makes the fact more understandable and gives a higher social value depending on the emphasis attributed to it. So, the second research question is as follows:

Do the news items published in the space "Um Olhar Europeu" (RTP) fulfill their objective of fig - ting against misinformation through the publication of content on the same subject originating from radio-television stations of different countries
In this case, it is not about the direct application of AI because we are not talking about an automatic source review system that presents a final product, but about offering different sources on the same topic for users to do their own fact-checking. In this sense, Artificial Intelligence acts in the automatic translation of the original news (EUROVOX) and the recommendation system (PEACH), with the aim that users can confirm the veracity of information previously received through another channel

Finally, among the principles of the project, the need to pay attention to "diversity and inclusion is highlighted, ensuring that the content of the news promotes the voices, opinions, and personal testimonies of the entire social panorama of Europe, including those of vulnerable or marginalized groups" (EBU, 2021). This is another principle that recalls an element identified by Kovach and Rosenstiel (2014), in this case, the sixth, which points to the need to "watch over power and give voice to those who do not have it" (p.27). So, the third research question in this paper is the following: Does "Um Olhar Europeu" offer diversified content and visibility to minority and more fragile currents of opinio
The answer to this question represents an opportunity for journalism to correct a limitation of AI systems, especially machine learning algorithms, which tend to replicate the discriminations of marginalized communities (Broussard et al, 2019). By combining an AI-based recommendation system (PEACH) with the possibility of the local editor to add their knowledge, there is "a hybrid approach, in which we treat human beings as experts and use artificial intelligence to help and augment them, instead of supplanting them" (Broussard et al, 2019, p. 683)

3. Methodology

On July 1st, 2021, RTP officiall launched the "Um Olhar Europeu" space. The project involves ten public radio and television companies and is based on the Eurovision News Monitoring Tool, a tool of the European Broadcasting Union (EBU). The companies are RTP (Portugal), RTBF (Belgium), YLE (Finland), France Télévisions (France), BR/ARD (Germany), RTÉ (Ireland), RAI (Italy), RTVE (Spain), SWI (Switzerland), and ART (France/Germany). The BBC recently joined the project but at this stage, it only provides content that can be viewed but not republished by participants. This study could have at least ten approaches, as many as the number of media involved in the project, but in this case, it is carried out from the perspective of the publications made available by RTP - Radio e Televisão de Portugal, the Portuguese representative in this project.

This work is a mixed study using two techniques: content analysis and interviews. It all started with a data collection, in this case, the collection of all the news published on the RTP website during the first eight initial weeks of the project. It was decided to start the analysis only in the third week considering that the first days are usually used to make small improvements in the system. Thus, the collection period began on July 20th and ended on September 15th, 2021. During this period, 54 news items were published from all the stations participating in the project.

Content analysis was used, following the three steps recommended by Bardin (1977): the pre-analysis, which preceded the planning of the work, that is, the period of collection of the sample, the definition of the type of data to be analyzed, and its organization in indicators; the collection and analysis of the sample; and, lastly, the processing of the data and its respective interpretation.

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Aware that some conclusions required a comment from RTP, a semi-structured interview was also used, in this case sending the questions by email to the person in charge of the project, Alexandre Brito (RTP). The first email (July 28th) to find out information about RTP's participation in the project and clarify some doubts, and the second (September 22nd) with questions to interpret some results. The choice of this technique is related to the spontaneity associated with it and because it allows better decoding of some results without a speculative interpretation by the researcher.

4. Results and Discussion

In technological terms, the Eurovision news monitoring tool is based on two instruments -EUROVOX and PEACH- systems developed by the EBU itself in close collaboration with the editors and journalists of the participating companies. According to Sebastien Noir (2021), head of the EBU's software engineering department, an attempt was made to develop a flexible and simple system because "the objective is an easy-to-use tool that does not require training and provides immediate value to the user" (p. 11).

The contents enter the server in two ways: shared by the company that produced them or through the system itself, which searches for new content in previously defined periods. After uploading these contents to the server, each unit of information is converted to a standard format that identifies the different elements: title, subtitle, lead, paragraphs, images, charts, videos, sounds, quotes, etc.

The EUROVOX tool automatically transcribes and translates content using Artificial Intelligence. This is followed by PEACH, a recommendation system that is complemented by the editors' work on news selection. Editors can choose content by searching by category/news section, source, or date. Once the choice is made, the process enters the final part of the process: publishing to websites and apps.

Each participating company chose a specific space to make these contents available. In the case of RTP (PT), RTE (IE), and RAI (IT), for example, it can be found on the "News" subpage since they are general channels; on the other hand, in Swissinfo and FranceInfo, the space appears on the home page because they are information channels. In other cases, such as RTVE, it is difficult to find the space and only a search on the site can find it.

Figure 1: Featured news on the RTP website
Soruce: RTP

Although the design and identification of the space are the same for all participants (widget), the amount of news available may vary. On one of the days in which the analysis was carried out (September 22nd, 2021), RTP offered 6 news items, RTVE had 7, Swissinfo 62 (current month and previous month), Franceinfo 24, and RTBF presented 70.

A final note to mention that in most cases the news is presented chronologically (the most recent on the left), a situation that does not occur in the RTP space: the Portuguese operator chose to publish in "random mode" to transmit the idea of renovation, comments the person in charge. Besides these two options, and within the open spirit of the project, each operator also can make a manual choice.

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4.1 Machine translation and recommendation system

EUROVOX is made up of two parts: an API, which allows the integration of the different production systems of the participants, and an interface, which performs translations using online tools (Microsoft Azure, Google, Speechmatics, DeepL, etc.) to improve the final result. This integration saves resources because it normalizes the content and generates a news flow that can provide information in different languages by pressing a button. It should be noted that, despite automation, editors can make corrections, a situation that occurred on several occasions during the analyzed period.

One of the great innovations of the system is the translation of audiovisual content. These translations are done automatically but can also be improved in terms of text, sound, and time, using a synthetic voice-off in the translations. The system is prepared to automatically produce video pills for social networks, summarizing news and translating them into other languages.

The advantages of this system are its flexibility and ease of use in the translation, transcription, and preparation of content in various languages. The contents are labeled (tags) in several languages to facilitate their identification in the recommendation systems.

For its part, PEACH - Personalization and Recommendation Ecosystem, can be summed up in the phrase used by EBU (2021): "The right content at the right time for the right person in the right device" (n/d). Through Artificial Intelligence, this recommendation system, which has been collaboratively developed, is open source and seeks to adapt the information offer to the interests of the user, combining the preferences of the audience with the information trends of each moment. There are algorithms for all types of content (text, sound, video, text, etc.), with around 20 million items being collected per day. Each content is converted into a vector representation using previously trained machine learning models, seeking to associate similar content even if its descriptors use different words. According to the EBU (2021), these vectors can have more than one hundred dimensions to improve the semantic approximation between articles and make the recommendation system more efficient. Finally, the user's own preferences, in this case, the editor or the journalist, are considered by the recommendation system.

A great advantage of this system is, once again, its flexibility, easily adapting to all platforms/systems and facilitating rapid implementation. According to the EBU, the tool is still under development and it is expected that in the future it will be able to present informative trends in real-time.

Both EUROVOX and PEACH use Artificial Intelligence to meet the objectives of the project, however, there has always been a concern to develop tools that allow editors and journalists to interfere in the translation and recommendation processes, thus avoiding more pessimistic scenarios that augur the replacement of journalists by computers (Wölker and Powell, 2021). Changes can be made to the various elements of the news item and the content descriptors themselves, following a set of editorial principles built among the EBU members participating in the project.

4.2 Location of space on the website

It is not easy to find the space "Um Olhar Europeu" on the RTP website because there is no reference on the home page. You must enter the "News" menu and scroll until you find it after several news items of the day, a promotional space for RTP's informative programs, a newsletter subscription request, and another space called Videos and Audios. The location of this space on the news page is common to all generalist channels but in some of them, it appears in a higher position. In the case of RTP, which has a website organized in two columns, it would be advisable to have at least one highlight in the right column, where the channel's app, social networks, etc. are promoted. A situation that may change after this experimental period because, according to the RTP, the "Um Olhar Europeu" space will be promoted in other parts of the website.

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Regarding news sources, the one most chosen by RTP editors was SwissInfo (SWI), with 20% of published news, half of which dealt with topics related to the pandemic. It is followed by the Irish RTE

and Eurovision NewsWire, both with 17%. It is important to explain that Eurovision Social Newswire is a platform that shares content extracted from social networks through a filtering and confirmation process and that it is usually composed of a video and a small descriptive text. According to RTP, these preferences may be related to the larger and more-varied content offer from these operators since there are no editorial indications on priority sources. "It depends a lot on the offer. It is an ongoing process as everyone tries to understand what others are looking for and why, with different points of view. In any case, in recent times we have tried to diversify as much as possible between the different countries" (Alexandre Brito, personal communication, October 6th).

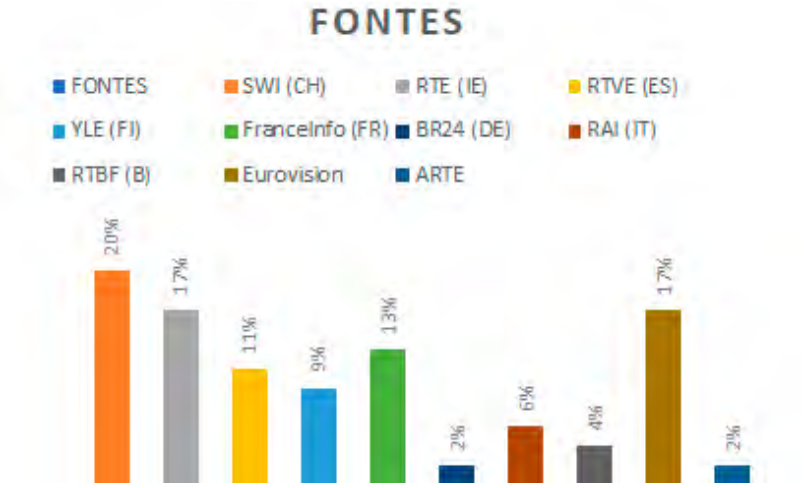

Figure 2: Company where the original news has been published
Source: Author's elaboration

The presence of information from all the operators that make up the project meets the objective of offering a variety of points of view on certain topics, resulting in a form of verification (Kovach and Rosenstiel, 2014). The diversity of public operators identified functions as a source for users to do their own fact-checking in their mother tongue, contrasting information that they considered dubious with prestigious sources such as public radio and television operators. This idea is reinforced with the analysis of the topics of the news stories published in this period, which coincide with the most discussed topics in European society at that time. The topic "Pandemic" stands out from the rest with 33% of the news published, followed by "Politics" (26%), "Fait-divers" (18%), and "Climate" (11%). A more detailed analysis reveals that 61% of the news items included in the topic "Pandemic" refer to health topics, 17% are related to education and 11% link the topic to "Politics", that is, to social protests against vaccination.

In the case of "Politics", the dominant theme is the situation in Afghanistan (50%), the rest is related to local issues or geopolitics. The topic "Fait-divers" is very varied, with a greater presence of news related to natural phenomena not associated with climate change (astronomy and volcanic eruptions) or new technologies (hackers, fined technology companies). "Education" (6%) and "Culture" (4%) are the least discussed topics, but it is important to note that education is also marginally addressed in various news stories about the pandemic.

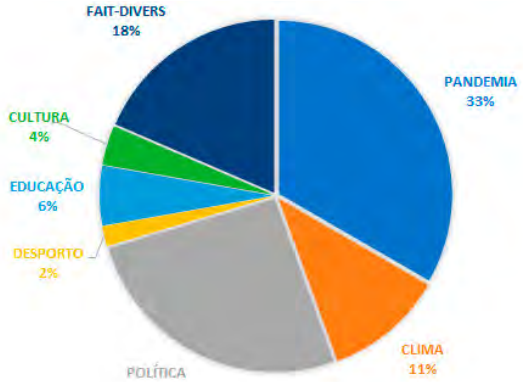

Figure 3: Company where the original news has been published
Source: Author's elaboration

This analysis allows us to verify that the topics are presented proportionally (Kovach and Rosenstiel, 2014) concerning current issues (pandemic and Afghanistan) and with the points of view of several countries, as previously commented. In the case of the pandemic, for example, there is news from seven of the nine participating television stations (the tenth is the Art channel). One of the objectives of the project - to fight against disinformation agents who seek to exploit the divisions between communities on this type of issue - is made concrete by offering points of view originating from the different European geographies. It should be noted that these two issues are among those that have been most affected by the manipulated information. The need for an environment of informative trust in this type of topic is created by the diversity of sources that provide the user with a contrast of information, a situation that combats misinformation and, simultaneously, creates the alleged public sphere based on information with the quality seal of public radio and television operators.

On the other hand, the analysis and content of the topics help to answer the third research question. It is confirmed that the objective of the diversity of topics is present, as has been seen previously, but in this period the minority currents of opinion and/or the most fragile groups have not had a significant presence, with only 15% of the news scattered on other big issues. Within the minority currents of opinion, news has been identified related to a very specific group within the pandemic, the anti-vaccines, which are present in 5% of the news, and refugees from Afghanistan, also with 5%. There is also a news story about gender inequality and another about a business run by an adolescent from an underrepresented group in the news, with which it can be concluded that this part of the project's objective has not been fulfilled during the analysis period

4.4 Original vs translated version

In general, we can say that the translation system works according to the technical requirements defined by the project but not always all the information goes from the original to the translated version. In only one situation did the editor make a significant change. It happened on July 23rd when the existential quantifier "some" was added to the title "How some vaccination skeptics endanger their children with chlorine bleach" (BR24). According to RTP, "the media outlet that publishes is responsible for what it publishes and, as such, has the right to make very slight factual changes that are sometimes lost in translation." In situations like this, editors can exchange messages through the system itself to clarify doubts" (Alexandre Brito, personal communication, September 23rd). This possibility of human intervention is a form of hybridization that refines the system (Broussard et al, 2019)

During the analyzed period, some translations that required human intervention were recorded (for example, translation of "patients en réanimation" to "patients in intensive care" when the usual expression in Portugal is "intensive care") (FranceInfo, 09/15). Although the words used do not change the meaning of the text, the use of different designations can confuse readers and, therefore, editorial correction is recommended. According to RTP, the situation has been identified but at this stage of the project, it has not been possible to allocate the necessary human resources to the project for this type of correction. The situation may change with the hiring of journalists dedicated exclusively to the project.

As mentioned in the description of the tools, the software translates by vectors but it was found that some elements of the original news disappeared in the RTP version, namely photos (20%), video (17%), charts (6 %), and even text blocks (12%). In the case of photos, the situation occurred mainly with RTE and RAI, where the photos were replaced by an image with the name of the station that originally published the news. According to RTP, "images are always a problem because newsrooms are usually not formatted to have their own photographers and, therefore, do not have original photos. When there are no rights to the photo, this indication is given and a fallback image enters automatically" (Alexandre Brito, personal communication, September 23rd). In this case, it is not a system error but a difficult related to copyright, a situation that is repeated in the case of charts and some videos (taken from Twitter, for example), since the television channel that produces the content has the rights to reproduce it only on its platforms.

In other cases, the translation was carried out but the original format was lost. What was initially an information box that required interaction to open, appears in translation as a continuous text, as can be seen in the following image.

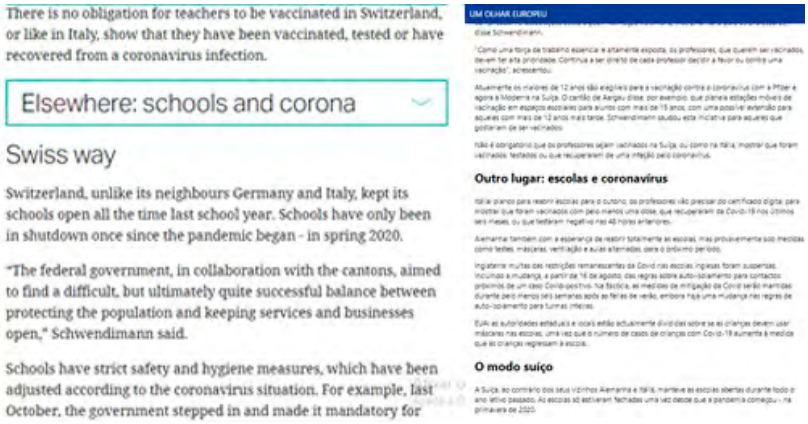

Figura 4: Original SWI (left) and translated RTP (right)
Source: SwissInfo and RTP

Something similar also happens with highlighted citations: in the original, they are an editing detail, but in the translation, they are individual paragraphs that sometimes break the logic of the text.

Figura 5: Original FranceInfo (left) y translated RTP (right)
Source: FranceInfo y RTP

These situations show that informational block translation works well for text content, but is lost in design, so there are still points for improvement in the system. However, these details do not interfere with the objectives of the project and have only been listed for future memory.

5. Conclusions

In the "A European Perspective" project, Artificial Intelligence intervenes in two moments - automatic content translation and news recommendation - seeking to achieve a set of journalistic objectives described in the editorial principles. Based on these objectives, the three research questions were born. The first research question sought to know if the published news addresses issues that cross several countries, societies, or groups, thus seeking to create a European public sphere. The analysis made it possible to verify that the news stories published on the RTP website meet this objective since the most discussed topics (pandemic and conflict in Afghanistan) were at that time of crucial importance for the European space. In the first case, because it sought to restore free movement interrupted by the pandemic (green passport and color code), a fundamental element for the recovery of the economy in Europe. In the second case, because a new refugee crisis is anticipated and Europe is a geopolitical space of reference for their reception. In this case, by presenting a system that combines content re-commendation (PEACH) with the possibility of the journalist's intervention, the project facilitates the hybrid approach where human experts rely on artificial intelligence (Broussard et al, 2019) to achieve the objective. This hybrid model has two advantages: 1) it is more efficient because, to the analysis of feelings and behaviors based on the data collected by the AI, this model adds factors that only a human can collect in their social life, something important when we talk about public opinion; 2) it removes the most pessimistic views that journalists will be replaced by computers by verifying that working

together increases the quality of the final product.

The second question is related to the objective of the project to fight against misinformation by providing perspectives from different countries on a certain controversial issue. It is confirmed that in the most conflictive topics, a variety of information sources were sought to offer readers the possibility of doing their fact-checking, creating an informative environment of trust. Once again, we have a hybrid approach because there are two levels of action: in the case of AI, initially, the automatic translation acts facilitating access to various information sources in the user's mother tongue, and then the system of recommendation, supported by predefined criteria, works; the journalistic criteria of the editor are added, which seek to offer a variety of sources and context, something allowed because the EBU has developed an open tool. In this case, the objective of combating misinformation can be fulfilled by offering various information sources that allow the user to contrast sources and contextualize the information they had previously received. More than a mechanism to directly combat disinformation processes, the project simplifies the models to guide users in the validation of information (Nguyen et al (2019), that is, in doing a self-verification of facts (user fact-checking).

Finally, the third question is connected to the obligation to offer diversified and inclusive content, to give visibility to the most varied currents of opinion and the most fragile groups. The data confirms that RTP only partially meets these goals. The channel chooses news from all partners and all topics, but on matters directed at minorities, there is no significant presence. The groups represented are connected with the two most important issues at the moment, which is why it is considered that this objective has not been achieved in this period.

We conclude that in the first steps of the "Um Olhar Europeu" space there are very positive marks of a hybrid work between artificial intelligence and journalists in the task of offering quality information. As Thurman et al (2019) well note, the effects of each technology depend on humans, in this case on the way editors and journalists decide to use it. By offering perspectives from different geographies on the most important issues at all times, the EBU project enables the user to do their own fact-checking and, in this way, combat misinformation. Furthermore, this varied thematic offer of news contributes to the construction of a European public sphere, a fundamental element in the stabilization of a common identity in this geographical space.

Finally, it is important to note that these objectives are met based on a joint work of EBU, not requiring large investments from each media outlet in human or technological resources. This situation confirms the idea of Manfredi Sanchez and Ufarte Ruiz, (2020) when defending that AI applied to journalism can be profitable.

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