RECOGNITION OF FAKE NEWS IN SPORTS

Colonel Assoc. Prof. Petko Dimov
Rakovski National Defence College – Sofia (Bulgaria)

Abstract. This report examines the phenomenon of "fake news" and the influence which disinformation has in the contemporary sports information space. The problem, regarding their wide spread in the contemporary information space and their gradual transition from political life to the world of sports, leads to the necessity of defining and classifying fake news in the sports information space in order to offer a mechanism for their recognition and a practical tool supporting this activity. In the age of fake news, sports stars need security and real connections with the media to improve their performance.

With the help of the literary analysis of the specialized sources, examples of disinformation in sports stories have been found, and consequently definitions of fake news, propaganda and disinformation have been proposed. After a review of specialized sources, a classification of ten types of fake news in sports has been made, giving real examples from the lives of Bulgarian athletes. Hence, a simplified seven-step algorithm has been developed to support users' critical thinking and decision-making when evaluating news in the media space.

As a result of the proposed classification of "fake news" in sports and the created algorithm, a practical online tool has been created which would help the analysis of given information and the recognition of signs of fake news in online sports media. The tool has been created with the help of the HTML programming language HTML in the form of a webpage which is accessible from anywhere in the world. It is a set of applications that identify all types of fake content in the contemporary information space. This tool can be used to improve the security of athletes and even their game performance.

Keywords: fake news; tool; disinformation

Introduction

Lies spread faster than the truth! This is not an aphorism, but a title of a scientific article which examines the likelihood of spreading fake news in social networks. It examines trends in 126,000 fake news stories, most of which are sports-themed and shared by 3 million people on Twitter in the period of 2006 – 2017. It turns out that the most shared 1% of fake news spreads among 1,000 and 100,000 people, while the real news reaches 1,000 people exceptionally (Soroush 2018).

The number of scientific publications, examining this phenomenon, increased in 2014 following the events in Ukraine. They reached their peak during the Brexit referendum, the US presidential election in 2016 and the war in Syria, as a result of which fake news and disinformation became an issue of significant importance for NATO's national and allied security and the members of the European Union (Ivanov & Dimov 2020).

So far, most fake news has focused mainly on the political environment, but this will not remain so for a long time. In sports, there has already been some increase in the volume of false information. Examples of this could be the videos of goals which have never actually been scored, rumors of transfers and lies about sports stars' personal lives.

Aim

The problem of their massive spread on the Internet and their gradual spread from political life to sports has made the investigation and analysis of this phenomenon imperative in this paper. It is necessary to define and classify fake news in the sports information space, with the purpose of offering a helpful tool for their recognition. In the age of fake news, sports stars need security and real connections with the media to improve their performance.

Methodology

With the help of the literary analysis of the specialized sources and sports news it has become imperative to define and classify fake news in the sports information space. Consequently, the result is the proposition of an algorithm for their recognition and thus a creation of a practical online tool which would help with the analysis and recognition of fake news in online sports media.

In regard to the definitions, the concepts of fake news, information, disinformation and propaganda should be considered. In practice, the term "fake news" has become established, reg ardless of the difference between the words "fake" and "false". The main difference stems from the fact that while articles with fake news always have a dose of truth in them, the other case is just a lie. While *news* is an operational information message about recent or current events representing political, economic or public interests for the audience, fake news is a message stylistically created as real news, but completely false or partially false in its essence. In the words of Dr. Joseph Goebbels "a lie told a thousand times becomes truth" (Goebbels 1921).

In view of the above, we can define fake news as "*information that is completely incorrect or misappropriated, exaggerated or misrepresented to the extent that it is no longer true, presented as genuine news or deliberately disseminated misinformation with the purpose of misleading and gaining political or economic benefit*" (Yates, CNN 2018). Information, on the other hand, must carry something that af-

fects the society for which it is intended. An example of this is a sports newspaper reporting that a football team has won and giving facts and details about the match that could be of interest to those who follow the sport.

Fake news is a neologism often used for information pollution or propaganda aimed at deliberate disinformation or revenue generation from online advertising.

Propaganda is "*a deliberate attempt to shape a person's perception, to manipulate knowledge, and hence the direct behavior of the audience*" (Techau 2011).

A Statement of the European Commission of April 26, 2018 defines "***disinformation***" as "*verifiably false or misleading information that has been created, presented and disseminated for economic gain or with the intention to deceive the public, and its consequences may harm the public interest*." (European Commission 2020). Disinformation can be used against individual players on a tactical level or it can reach a specific audience and even the entire sports world.

An example of the former are competitive sports in which players attempt to deceive their opponents about their behavioural intentions by using specific body movements or deceptive postures. For example, in basketball, a player looks at one direction but passes the ball at a different direction to avoid the defensive actions of the opposing team.

An example of mass disinformation is the news spread in the world media in the summer of 2018 that the Croatian national football team is donating to charity all its 23 million dollars earned from the World Cup. A few days later, it became clear that the information was fake[1]. Its author was a Croatian journalist, who clearly wrote under the "news" that it was a dream, not a real event, a provocation in the spirit of "non-news". Unfortunately, however, no one bothered to read the text all the way through. In just an hour, thousands of Facebook users shared the news, from where it reached the major media. The example is typical of how anyone can become a source of information using social networks.

Once on the Internet, the news stays there. Let's say if you now search for "football donation", countless reports about it will pop up. The Internet is full of such untrue, forgotten posts, and it's possible that on social media years from now you'll read the same news shared by a friend, touched by it.

And if this incident is an innocent online provocation, what happens when the lie is purposeful, manipulative and pursuing a self-serving goal? The fact that a news story has been shared by many people online is a sign that we should be careful, rather than a proof of its quality. Fake news is much more captivating, it affects emotions and this makes more users spread it. By sharing them, people are much more likely to express fear, disgust or surprise, whereas with real news the emotions in their words express anticipation, sadness, joy or faith.

Today, social media such as Facebook, Twitter and instant messaging channels such as WhatsApp and Telegram are further intensifying this process (Do-

breva 2020) and becoming weapons of mass destruction by allowing their users to share any information or disinformation unchecked, which is becoming an information security issue for sports clubs. This is why phenomena such as the black lotto, widespread in Latin American countries, but affecting the rest of the world, are emerging. Even in Bulgaria, there are a number of Telegram and Facebook groups where various Nigerians offer match predictions with high success rates in exchange of a fee. They naturally prove their success with Photoshop-forged betting slips and speak the language of the reader by using Google Translate.

Therefore, the most important indicator of the reliability and credibility of a piece of information is its source, i.e., where the information originates. In general, two types of sources can be distinguished: direct (primary) and indirect (secondary).

Direct sources are an essential first-hand element – a direct participant in event or an eyewitness, a primary written document, a video recording or a photograph, providing direct evidence of an issue.

Indirect sources use one or more intermediaries. This could be a story told by a media outlet or by someone else who was not present at the event. A secondary source is an expert interpretation or processing of information from primary sources, synthesizing into itself a particular conclusion.

In practice, the so-called **anonymous sources** are often cited, but they cannot be considered as reliable sources and should not be trusted. In order to verify the reliability of any given source, the information in it should be verified by at least a few sources, as direct as possible.

In order to define information as reliable or unreliable, it is necessary to identify its source. Is it a public figure, well-known by the media, an expert in a particular field, or a completely unknown person?

According to a 2018 study by the Reuters Institute for the Study of Journalism at the University of Oxford, television is the main source of information in Bulgaria, yet Bulgarian citizens use social media and mobile messaging apps just as much. Bulgaria is among the top three countries in the world that trust news published in the social media the most – a stunning 42%, ranking only below Chile[2].

In order to make a **classification of fake news in sports**, one can draw on the types of fake news derived from the European Commission's Media Literacy Survey[3]:

1. **Political propaganda fake news.** They are used to manipulate the attitudes, values and knowledge of the electorate. They influence emotions. An example of this is the fake news story published in "Bylgarolubie" (Loving Bulgaria) that the Bulgarian Tennis Federation has refused to finance the Bulgarian team's trip to Australia, where it would participate in the new

ATP Cup tournament. Even the name of Grigor Dimitrov, who financed the players, is involved. We have all witnessed the unusually high activity in the publication of malicious and fake news about the Levski football club, which was involved in political games at the national level.

2. **Sensational headlines** – fake news that seek to make an impression and the headlines may include words as SHOCK! HORROR! INCREDIBLE! They are used to generate traffic to websites. One of their varieties is fake news using famous athletes to attract attention. For example, the chairwoman of the Bulgarian Olympic Committee, Stefka Kostadinova fell victim to the false news that she was admitted urgently for a hospital operation while on holiday in Greece with her family, and as a result of that she started to receive some strange phone calls.

3. **Sponsored content** – fake news made specially to sell something. This includes ads that intentionally look like editorial content. The fact is that sport is an industry dealing with a large amount of money. For example, news spread in the US that Michael Jordan had bet all his money which was later found out not to be the case, but simply used as an advertisement for a betting site.

4. **Satire, joke or parody publications** that make the reader laugh and often carry a political message. They do not have the potential of causing damage but are misleading. The problem arises when users misunderstand the joke, take the story out of context and start sharing it on social media. There was a similar report to the one above, about a hospital admission, but this time for Hristo Stoichkov, who had apparently had a heart attack and was in a coma in a Miami hospital. What's more, doctors barely gave him a chance to wake up. Here, however, he reacted very adequately, immediately posting on the network a video on which he was holding his branded rakia "Number 8" with an added message which was a funny wordplay in Bulgarian and it could be translated as "If you don't want your myocardium to shrink, from my rakia you should drink".

5. **Fake news that scares,** news that is born out of the audience's fears, based on myths, compromises, opinions and testimonies presented as facts causing fear. Their main varieties promote racist ideas or sexist ideas. For example, every year at least 2 – 3 major athletes have been accused of rape. Such is the case of Cristiano Ronaldo, who was accused by a woman named Kathryn Mayorga in Der Spiegel magazine. With the emergence of COVID-19, a new case appeared circulating on LinkedIn which again mentioned Ronaldo, who had apparently turned his hotels into clinics for COVID-19 patients.

6. **Error, deception or bias in material** is allowed even by major media, and the Internet is full of fraudulent websites or social networking profiles presented

as a famous brand or personality or an athlete. A very common phenomenon on social media is the opening of accounts on behalf of sports stars, aiming to raise donations without them even knowing about it.

7. **Conspiracy theory, myths and legends** are used by fake news writers because they give a simple and sufficiently interesting answer to all problems. They often use the topics of aliens, Jews, Illuminati, Reptilians, etc., who have done something secretly without offering proof of it. Details are presented as absolute proof, while arguments built on facts are questioned.

8. **Pseudoscience.** Purveyors of environmental products, miracle cures, miracle healers, as well as climate change deniers present serious scientific studies with exaggerated or false claims, often contradicting experts, without any consideration of what the benefits or consequences of these actions will be. For example, fake news of a baby boom 9 months after Iceland's victory over England in a UEFA European Championship match was published in a scientific study in Science Direct which ended up sparking a widespread public debate (Grech & Masukume 2017).

9. **Misleading information, rumor or opinion presented as a fact.** They include a combination of true, false and partially false content. Sometimes the author may be unaware that the content is false when copying verbatim and referring to false facts, or in the case of forged content. An opinion which we disagree with is not fake news, but if the opinion or testimony is presented as truth or fact, it can be extremely confusing for readers. Rumors can also spread on social media. An example of this is the case where it was spread on social media that Lionel Messi spoke against the Barcelona administration. This could cause discord within the team, disrupting the collective climate and upsetting the team's play.

10. **Content falsification and modification.** *Falsification* is an entirely fabricated content that is intentionally distributed for the purpose of disinformation. *Modification* is a deliberately altered content, such as statistics, infographics, photos or video. Manipulated YouTube videos of celebrities are among the most common examples. The term "deepfake" comes from the mechanics of deep learning and it corrects videos with the help of artificial intelligence made up of artificial neural networks. An example of this is the Sports Illustrated journal article "Who's That Girl?" which published photos of the ideal tennis player Simonya Popova describing a beautiful 17-year-old tennis star from Uzbekistan who was supposed to be the future of women's tennis and embody the "strength, attitude and sex appeal" so highly valued in the sport[4]. In the end, the photos turned out not to be real, but generated by artificial intelligence on a computer.

Results

For the purposes of practice, a news story on social media can be defined as **credible, partially credible and not credible.** Based on the analysis of the theory and in order for us to be able to distinguish them more easily, the author of this paper proposes the following recognition algorithm, creating an online tool to combat fake news, published at: https://postvai.com/fakenews/en.html[5].

The tool is a combination of applications to help athletes detect signs of faking and make decisions by answering the following seven questions:

1. What is the source?

A starting point in evaluating a news story is determining the type of its source: whether it is primary, secondary, or anonymous. On the Internet, this starts with a visual assessment of the site on which the news item is presented. The user has to observe whether the website is professionally made or if it has too many advertisements. In addition, the user has to observe questions as: Is the site using a free domain or imitating famous media outlet? Do the "About Us" and "Contact Us" pages list an existing name, address, phone numbers and email that can be easily traced in the international domain registry? Therefore, this part of the tool provides various applications helping the analysis of the history of the domain, detecting information about previous misuse and searching for various identifiers in the site code, such as Google Analytics with which users can trace the true owner of the site (Marinov 2016).

2. Who is the author of the news?

Is the observed text signed and who is its real author? Apps are provided to research the identity of the authors and their digital footprint, as well as specialized search engines for social media profiles, emails and phone numbers. With their help, a digital profile of the authors can be made in order to identify if they are experts in the field.

3. What is the message?

Does the article present different points of view, is the text unbiased or does it show only one side of the truth? For this purpose, the tool provides applications to assess the quality of the text, check for plagiarism and uniqueness of the text. Other features that assess credibility are also provided, such as checking for spelling errors, citation of appropriate sources, etc.

4. Are the provided photos legitimate?

The validation of the images used is a very important point in the verification of a news story. If signs of falsification are found in the photos used, the information cannot be true. For this purpose, the images should be checked for unnatural proportions, colors, or questionable details. Applications are provided for a reverse lookup of similar images on the Internet to pinpoint their original source. Also, applications are used to check if technical corrections have been applied to falsify the image and the EXIF information of the file; to identify mismatched details (Ivanov & Dimov 2020).

5. Are the provided video clips legitimate?

To validate video clips, the media context of the video clip should be analyzed with the help of the provided applications to retrieve images from the clip, to perform a reverse image analogy search, to verify the clip's metadata, as well as the related account information of the person who posted it on social media (Zlatkova, Nakov & Koychev 2020).

6. When and where?

When was the article, photo or video published? An undated publication may contain information that is no longer relevant or has subsequently been refuted or discredited. For example, if a video claims that the action took place in the city of Aleppo (Syria) on a certain date and the footage shows that it was rainy, we can check with the tool provided whether it was raining in that city on the date mentioned. In order to validate the location of the event, we can use Google Earth or Street View services. With their help, we can see a real view from the location of the event and whether the given street, place or building looks the same as in the specified video or photo.

7. Why was it published?

Finally, it should be asked why the news story was published in the first place. What is its purpose – to inform or to manipulate? Thinking critically, the following three basic questions have to be answered:

– Should the source and the author be trusted?

– Are there suspicious signs of tampering with the content of the text, images and videos?

– Are the answers to the "when and where" questions consistent with the time and place indicated by the author?

The answers to these questions allow for the identification of information as reliable, partially reliable or unreliable.

Conclusion

The fake news theory can be used for evil as well as for good. In today's sports world, the case also exists of using faking with good intentions, such as creating fake audiences in stadiums to improve the play of athletes. And as a result of the definitions given and the classification of the types of fake news made in sports, a suitable algorithm for analyzing the information has been proposed, and a practical online tool has been developed, based on it, with the help of which athletes can recognize fake news and disinformation. It can be used to improve the security of athletes and even their game performance.

NOTES

1. OffNews, 2018 [viewed 04 April 2020]. Available from: https://offnews.bg/futbol/
falshiva-novina-futbolistite-na-harvatia-dariha-23-miliona-evro-na-de-684600.html

2. Digital News Report, 2018, p. 68. [viewed 04 April 2020]. Available from: http://media.digitalnewsreport.org/wp-content/uploads/2018/06/digital-news-report-2018.pdf

3. Media Literacy for Citizenship. [viewed 04 April 2020]. Available at: https://eavi.eu/

4. Bleacher Report, 2013. The 15 Biggest Hoaxes in Sports. [viewed 04 April 2020]. Available from: https://bleacherreport.com/articles/1490270-the-15-biggest-hoaxes-in-sports

5. Postvai Fakenews Tool [viewed 04 April 2020]. Available from: https://postvai.com/fakenews/en.html

REFERENCES

Dobreva, H., 2020. Hybrid Distance Learning During Covid-19 in Bulgaria. *Journal of Mining and Geological Sciences.* **63**, 297 – 301. Sofia, [viewed 04 April 2021], Available from: http://www.mgu.bg/new/docs/2020/Journal%20of%20MG%20Sciences%2063-2020.pdf

European Commission, 2018. Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. [viewed 04 April 2020]. Available from: https://eur-lex.europa. eu/legal-content/EN/TXT/?uri=CELEX: 52018DC0236

Goebbels, P. J., 1921. *Wilhelm von Schütz als Dramatiker. Ein Beitrag zur Geschichte der Romantischen Schule.* [Dissertation].

Grech, V & Masukume, G., 2017. Fake news of baby booms 9 months after major sporting events distorts the public's understanding of early human development science. *Science Direct.*

Ivanov, E. & Dimov, P., 2020. *Falshivite novini*. Voenna academia "G.S. Rakovski" [in Bulgarian].

Jeff Yates – CNN [viewed 04 April 2020]. Available from: https://journalmetro.com/opinions/inspecteur-viral/1075454/mettons-les-choses-au-clair-cest-quoi-une-fausse-nouvelle/

Marinov, G., 2016. *Praktichesko Rakovodstvo za Rabota s Platformata za Distancionno Obuchenie BlackBoard.* Rakovski National Defence College, [viewed 04 April 2020]. Available from: https://rndc.bg/wp-content/uploads/2019/11/Marinov.pdf?fbclid=IwAR2pbKVatC73r6KO93sdGOsNjbFmkKz07J6mmymsJXV-40QaL0JI8SN5VwY [in Bulgarian].

Techau, Jan., 2011. What makes communication strategic? Preparing military organizations for Battle of Ideal. *NATO Defense College, Vol. 65*

Vosoughi, Soroush, Deb Roy, Sinan Aral., 2018. The spread of true and false news online. *Science*, **359**(6380), 1146-1151. DOI: 10.1126/science.aap9559

Zlatkova, D., Nakov, P. & Koychev, I., 2020. Fact-checking meets fauxtography: Verifying claims about images. *Conference on Empirical Methods in Natural Language Processing and 9th International Joint Conference on Natural Language Processing.*

✉ **Colonel Assoc. Prof. Petko Dimov**
https://orcid.org/0000-0002-0071-7787
Rakovski National Defence College
82, Evlogy and Hristo Georgievi Blvd.
Sofia, Bulgaria
E-mail: p.dimov@rndc.bg