Analysis of Digital Tools and Technologies for Debunking Fake News

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ABSTRACT

Most of the largest democratic countries like India and USA, media houses like AFP and BBC, media education institutions like Reuters Institute for the study of Journalism & Shorenstein Centres, media educationalists, trainers, researchers and techno-giants like Facebook, Google and WhatsApp are debating and discussing threats, challenges and possible solutions of fake news menace in India and abroad. This research is an exploratory study, exploring and analysing the digital tools and technologies for debunking fake news and virtual reality of media. This research paper is an in-depth analysis and review of current research, threats, trends and digital initiatives to combat with fake news on national and international level. This study also reviews the theoretical approaches and research on using digital technologies and tools for debunking fake news and virtual reality of the media. This study will help in encountering the micro-propaganda techniques by using digital immersive tools to stop spreading the hate and visibility of the virtual truth to win political rhetoric in general not in particular. This is also an attempt to identify the ways, remedies and possible solutions by using the two kinds of techniques: Human interface/intelligence and use of machine learning or artificial intelligence to curb the menace of fake news. The outcome of this research paper proposes, an in-depth review indicates the need of strong fact checking mechanism via Artificial Intelligence, increased digital literacy and machine based learning, training for newsrooms producers and journalist to make them aware about the styles and techniques of fake news, so they could simply identify and debunk the fake news. Thus, debunking fake news involves four major skills: reverse image search, smart key words search, strong observational skills and good old-fashioned journalism skills.

Key Words: Fake News, Hate, Fact Checking, Micro-Propaganda

Introduction

This research paper is an attempt to understand the fake news menace, newly occurred challenge for the mass media industry and a threat to the democratic ways of functioning of a parliamentary system in general and particularly in India. This paper identifies the ways, remedies and possible solutions by using two kinds of techniques: Human interface/intelligence and use of machine learning or artificial intelligence to curb the menace of fake news. In this research paper researcher has reconnoitre the conceptual or theoretical studies about the conceptions, origins, evolution of the fake news around the world. After in-depth analysis of various research reports, research studies and review articles, which pertain information of fake news. Fake news is a challenges for the democratic societies, political systems, spreading propaganda, inculcate hate in the mind of the people through various techniques like satire or misleading content, imposter content, fabricated content, false connection, false context, manipulated content spreading through social media: WhatsApp, Facebook, Twitter etc. (Quandt, 2018) .

The nature of social media is little different from the traditional media. It is vibrant, interactive and gives power to users to generate the digital content for circulations, but users do not own the responsibility of content. Therefore, authenticity remains doubtful on social media platforms. On the other end, traditional media users has no control over the publication of the content. Actually, newspapers and electronic media, editors own the responsibility of the fact and truthfulness of a report or news stories (Koohikamali & Sidorova, 2017) . As basic principles of the journalism are verification of the truth. But unfortunately, on social media no one owns the responsibility of the content and it is difficult to find out the originator of the fabricated content (Usher & Carlson, 2018) .

In this regard, it is extremely important for the media houses to play a pivotal role in curbing this menace. Eric Wishart, Editor, AFP, pointed out the seriousness of the rise of fake news in global south. The misinformation and fake news stories which are being circulated through WhatsApp and other social media messaging apps are indeed a threat to the journalistic trust and credibility (Kvasnička, 2014) . Many Media scholars observed that this practice has become immensely popular on messaging apps and social media platform, where people are unable to differentiate between fake and real news. Hence it is difficult to maintain the sanctity of this noble profession of media (Koohikamali & Sidorova, 2017; Quandt, 2018; Usher & Carlson, 2018) . As a result, people are distrusting the media outlets.

Scholars debate that it is very difficult for the news rooms warriors, alternative news media platforms, educators and trainers to debunk every fake news item appearing on the fake websites, viral pages and social media messaging apps (Responsible et al., 2016; Usher & Carlson, 2018) . However, it is important to debunk fake news when it comes as a threat to the democratic functioning of the society, elections and during a massive crisis like natural disasters and communal tensions between communities. Democracy like India remains the soft target of such kind of victimization of the poor or false news items.

The use of new propaganda techniques is quite famous in political communication, spreading fake news; to distort the image and goodwill of a person, organisation and institution (Veszelszki, 2017) . There are several examples of the use of fake news to distort the image of a particular person, organisation and institution in India and abroad. Though the originator is not defined in case of political satire and parody, but one can easily imagine that who is going to gain or lose reputation because of particular menace (Responsible et al., 2016) . Moreover, it is not easy to differentiate the real news item and a propaganda piece of fake news.

Defining the term Fake news
The term Fake news, misinformation and disinformation is getting noticed due to modern propaganda techniques in political warfare (Bhaskaran, 2017) . The reason for the widespread of social hoax is one's inability to identify the fake news and availability of social media and its increased used among netizens (Andrews, 2017) . Fighting the fake news is a big challenge for media outlets in India as well as in (other) countries.

The fact-checking, digital news literacy and transparency initiatives are not enough to control the tide of misinformation and low trust (Reilly, 2012) . There is strong need of changing mechanism to regulate the online content as well. The factually incorrect and false reports on social media results in decline of the trust and confidence in mass media channels (Özgöbek & Gulla, 2017) . Hence, it is necessary to investigate the causes of the rise of fake news menace in India.

Hunt Alcott and Matthew Gentzkow, they both defined fake news as a fake news story that is intentionally and verifiably false which always mislead to its readers and viewers (Allcott & Gentzkow, 2017) . Eminent media scholar Craig Silverman, criticize the media houses and hold them guilty for the spread of fake news. According to him, many publications regularly used online content, that was intentionally fake content and inaccurate news (Silverman & Singer-vine, 2016) . The term fake news has become immensely popular after the US Presidential election in 2016.

A big democratic exercise marked by huge misinformation and false news in US presidential election and general elections in India (Reilly, 2012) . A machine based Micro-Propaganda in US presidential election 2016 run by professionals against the US presidential candidates. The New York Times defined, fake news as an intentionally manufactured story with an intention to betray its reader for momentum gain (Parikh & Atrey, 2017; Press, Press, & Fund, 2017; Usher & Carlson, 2018) .

The Cambridge English dictionary defined fake news as "*false stories that appear to be news spread on the internet or using other media, usually created to influence political views or as a joke.*" After the long debate on the definitions of fake news, it can be assumed that a piece of false information which is intentionally circulated among those who have negligible access to the true information, for political

causes and of course to make money from online traffic (Guess, Nyhan, & Reifler, 2018; B. S. Mcgrew, Ortega, Breakstone, & Wineburg, 2017; Quandt, 2018) .

This could be a false information by a few journalists who do not consider it as false information, but actually, it is false. It could be false or misleading information circulated by journalists who don't realise even it's false (Holton & Belair-gagnon, 2018; Vargo, 2018) .

The Malaysian anti fake news has defined the term "fake news as 'any news', *information, data and reports which is, or are, wholly or partly false whether in the form of features, visuals or audio recordings or in any other form capable of suggesting words or ideas"* (Rubin, Chen, & Conroy, 2020) .

Edson C. Tandoc Jr. along with his co-scholars surveyed more than 34 academic articles that used the word fake news from 2000 to 2017. In his maiden attempt to understand the typology of fake news Edson C. Tandoc Jr. concludes several types of fake news or fake content like news satire, news parody, fabricated content or misleading stories, graphical manipulation for propaganda etc. (Jr et al., 2018; Tandoc, Lim, & Ling, 2018) .

As it is very difficult for a nonprofessional to differentiate between a real fact and false news item, news media outlets are unable to find out what is fake and what is real? Thus, it is a challenge for professional media outlets and they have to rely upon fact checkers and online verification tools for such kind of news items before publishing and broadcasting in India and abroad. In this tough scenario, the sole emphasis should be to help the journalism industry to maintain integrity and standards of this noble profession.

In journalism, fake news isa threat of low credibility in the digital age and; to provide the information constructively & universally available for man kindness and welfare of this world, not to ruin its social system by creating hate (Pennycook & Rand, 2018; Rubin et al., 2015) .

In the Indian context, the concept of fake news can be visualised back to Mahabharata, one of the epics of Hindu mythology, where as a way to change the course of war, Lord Krishna who was on the side of Pandavas, hatched a plan where he propagated the information that Ashwatthama, was killed.

Actually, there were two Ashwatthama; one was the son of Drona and one was an elephant. As Lord Krishna knew that Drona who was an invincible warrior from the side of Kauravas (the opponents), upon hearing the news of demise of his beloved son would be grief stricken and lose focus on the war, and hence, would be easily killed. The killing of Drona was a critical event which led to the loss of Kauravas in the battle (Bhaskaran, 2017) .

First Draft, a leading news media organization, defines seven types of Misinformation and Disinformation like satire or parody, misleading content, imposter content, fabricated content, false connection, false context, manipulated content to harm the reputation of others or to run a false propaganda against one person, community, political party and organisations:

(Table created in word for visual purpose only)

Understanding the Fake News, Lynching and Hate

According to several media reports, seven men were lynched in India after the spread of fake news item on social media messaging app like WhatsApp (Domonoske, n.d.; Reilly, 2012) . The several fake news circulated on WhatsApp children kidnapped by kidnappers in a few localities. According to thenewsminute.com, mob mistakenly lynched 65 years old women to death after the rumours of child abducting in Tamil Nadu. Another suspected child-abductor lynched to death in same state, this was second incident of mob lynching occurred in consecutive two weeks,

after the rumours of child-abduction on social media in the state.

The Quint, reported a beggar lynched to death in Hyderabad. The Hindu, reported that - Fourteen people were arrested for lynching a man to death in Rajasthan. A 24x7-news channel, News 18 reported a news story of lynching of five people in Telangana, Andhra Pradesh. Indian Express published a news item, in which one women lynched over child abduction rumours in Gujarat. The Times of India reported lynching of two young boys from Guwahati as a suspected child-abductor.

Five were lynched in Maharashtra, one died and three injured as a suspect of child lifting in Karnataka over social media rumours. In Myanmar, where the access to the internet and mobile devices, smart phones is not very common or restricted, fake news played immersive role to stoke up the Rohingya crisis and worsen it (Rubin, Conroy, Chen, & Cornwell, 2016) .This is a matter of concern for the news producers, editors, journalists and media educators/trainers. They are worried about the credibility and reputation of this journalistic profession.

Media Scene over Fake News:
A Worldwide View
In USA, several fake items appeared during the hurricanes Harvey and Irma; these fake news stories put the life of thousands of people at risk. During this natural calamity, Federal Emergency Management Agency, USA took an initiative to demystify the fake news stories on its website (Academy et al., 2018; Guess et al., 2018) . They debunked the fake news stories through observation and fact checking manually. However, unfortunately, this manual procedure of debunking the fake news is not easy, incomprehensive and time consuming. Here's the immersive need of tackling fake news menace by using modern technology, artificial intelligence or some automatic mechanism to speed up the process of debunking the fake news comprehensively and intelligently (Allcott & Gentzkow, 2017) .

During the French election, first draft created Cross Check a combined platform for debunking the fake news stories in the real time procedure. In this collaboration AFP, some other international media organisations and famous French media outlets participated

actively to debunk the fake news items. They were invited to CrossCheck the suspected stories and news content, which was suspected as hoax. When collaboratively, these journalists, editors and media trainers debunked fake news hoax, these were posted on its websites with some conclusions (Avocats, 2018) .

The first major news story which was debunked by the team of journalists was a manipulated graphic of the French presidential candidates- originally which was produced by Agence France Presse itself. Eric Wishart Editor of AFP, narrates that his first encounter with the fake news during his journalistic career happened in 1989, when he was an AFP desk editor (Avocats, 2018) . He mentioned about the fake news of massacre happened in Timisoara which lead to uprising against the dictator Nicolae Ceausescu, till the massacre was exposed as a fake incident in Timisoara, this fake news has served its function to spread hate against the Ceausescu regime.

According to the Guardian columnist, Natalie Nougayrède, fake news is not a news phenomenon in media history. She added, the use of propaganda is ancient, but the technology worked as a catalyst to disseminate it so effectively and so massively. And people are so fond of reading, sharing and discussing the sensationalised news item with their peers virtually and physically (Academy et al., 2018; Pennycook & Rand, 2018; Yang, Kahlor, & Griffin, 2014) . The sensationalism became immensely popular in Europe, Britain and United states after the invention of newspapers printing technology. The newspapers came up with touting scoops, scandals but also with fake news items to increase their circulations (Academy et al., 2018; Dean et al., 2014; Tandoc et al., 2018) . The core idea of spreading the sensationalism in media industry was to gain the more readership and viewership. In 1835, The New York Sun's came up with "Great Moon Hoax" about an alien civilization on the moon (Avocats, 2018) . As a result, The New York Sun has become a leading profitable newspaper of its time. The Sun published this fake news photo along with a fake news items about depicting the life at Moon. After this false and incorrect news story, the sun achieved success in terms of greater revenue

and circulations. In this above mentioned photograph the graph of the popularity of 'The Suns' was raised (Avocats, 2018) .

After the invention of the television and radio in 20th century, media producer came up with satire or parody format of production, in which common people thought these programs as real news items. In 1998, a US based news website started publishing many satirical stories and presenting them as a factual (Guess et al., 2018) . But in the late 20th century or beginning of 21st century, the invention of internet and advent of the social media increased the chances of spread of fake news items, misinformation and disinformation at wider level (Coche & Ll, 2018; Koohikamali & Sidorova, 2017; Street & Street, 2018) . The fake news generator started using such news items for political gain over their opponents, spreading propaganda and hoax against them (Holt, 2018; Pennycook & Rand, 2018; Vargo, 2018) . Thus, social media became immensely popular as a tool of modern propaganda techniques for spin-doctors.

Today, it is observed that mostly duplicitous content, deceitful news items, fraudulent videos, 3D photos and GIF items are widely spread and shared with massive speed by the people without noticing its impact on societyJr et al., 2018; Kumar & Science, 2018; Popat, Mukherjee, Yates, & Weikum, n.d.) . As this fake content went viral from peer to peer and many to many within no time. Actually, these fake news items and social media hoax are a threat to democratic values, scientific thinking and communal harmony of our social institutions. Because of the low media literacy and digital media, literacy people rarely understand the difference of fake news and simple news.

Challenges in Combating the Fake News
Presently, the news rooms and media organisations are combating with number of challenges and problems due to lack of research and training in this field of online verification and fact checking (Academy et al., 2018; Rubin et al., 2020) . These viral content and fake news post become easily popular and earn huge revenues in terms of internet traffic and advertising revenue in dollars (Ä & Ñ, 2017; Koohikamali & Sidorova, 2017) . Today we are living in the information age, where the

users are a content generator now. This user-generated content is not reliable and non-scrupulous. Most of the information generated lack of trust and verification because of the lack of online verification material or fact checking. Actually, the content generation is easy but detecting the lie is difficult because no such mechanism exists except a few foreign based and a few Indian fact checking sites (Popat et al., n.d.) .

Alt News, Boom Fact Checker and SM Hoax are some prominent examples but not enough to fight against this menace until it receives massive participation from the media houses, media researcher, media trainers etc. The mainstream media is losing its credibility due to several factors like ownership control, political ownership, lack of funding opportunities and low crowd funding to meet their expenses (Kligler-vilenchik, 2018; Pesonen, 2018) . Such mainstream media outlets are purely inclined towards one political party, ideology and particular orientation. Allcot & Gentzkow (2017) said, *"The declining trust in mainstream media could be both a cause and a consequence of fake news gaining more traction"* (Allcott & Gentzkow, 2017; Kvasnička, 2014) .

On the other hand, such alternative media platforms are gaining popularity because of their massive reach and easy availability to audiences (Bhaskaran, 2017) . Such alternative platform also runs agendas, inclined towards political parties and ideologies. Hence, it generates the need of penetrate and increase the media and digital media literacy among media persons and their audiences (Albright, 2017; Greg, 2017) . The nature of such disinformation and hate campaigns is vibrant, content is unchecked or uncontrolled, emotionally appealing and polarised the sentiments of one particular community against others (S. Mcgrew, Ortega, Breakstone, & Wineburg, 2017) . These campaigns gain widespread publicity as a normal human psychology and human brain quickly respond to such phenomenon. And a democratic system can-not function properly without mutual trust among its stakeholders (Silverman & Singer-vine, 2016; Usher & Carlson, 2018; Vargo, 2018) . Millionsof people post, share and spread news stories without verifying the truth, even without thinking of the credibility trustworthiness of the content

(Horne & Adalı, 2016; Quandt, 2018) . They seem to be emotionally distressed, wounded and fumed by the content of fake news story which they read on social media messaging app and pass it to other by sharing, tagging or commenting without verifying genuineness of the content (L, Yimin, & J, 2016; Özgöbek & Gulla, 2017) .

Kyle D, Killian, PhD Scholar (2016) defines, *"the rapid rate of proliferation of a totally fake news story, or groundless claim, can make it go viral, turn it into a public pronouncement, and sway public opinion. And if the public opinion can be easily swayed they would not be able to make informed decisions."* Jim Egan, CEO, BBC Global News Ltd, sees fake news as a threat for any smooth and vital democracy in which ordinary people are unable to find out the truth and lie in normal media or social media posts. He urged for a strong mechanism to combat and debunk the fake news by using artificial intelligence in mainstream media.

Hillary Clinton expressed her deepest concern over the malicious threat of fake news and false propaganda. She urged for immediate solution of fake news and reality based solutions (Allcott & Gentzkow, 2017) . Senator Claire McCaskill, Democrat of Missouri and a long-time critic of fake news defines, *"It's the biggest crisis facing our democracy, the failing business model of real journalism."* The instantaneous nature of the online audience and their response patterns of social media network sites, it is easy to share any news items, along with this people share some false propaganda content without knowing its consequences (Reilly, 2012; Silverman & Singer-vine, 2016) . Due to the dissemination of fake news at larger scale, people started distrusting the media institutions and labelling them as low credible or inclined towards ideology (Pennycook & Rand, 2018) . It is also observed that there is significant shift in the consumptions and media habits of the people, where older generation still rely upon traditional medium, whereas new generation are more on internet based medium rather than the traditional media (Pennycook & Rand, 2018) . Whereas the traditional forms of media are concerned the participation of the media audiences were limited, but in internet based medium audience participation is relatively very high participation in term of feedback, comments, like and sharing etc. (Koohikamali & Sidorova, 2017) .

The boundaries between news production and information creation and sharing are gradually blurring in the current online news environments and social media (Chen, Conroy, & Rubin, 2015) (L et al., 2016) . With the coming of internet age, citizens participation increased to such an extent that they have now become the producers of news and sometimes the content is so viral that even the mainstream media picks it up and there lies a problem as the fact checking then goes unvisited (Bhaskaran, 2017; Domonoske, n.d.; L et al., 2016) . It can be said that the online world has made the democratization of news possible as the production and distribution of news has become more participatory in nature than ever before and this has led to the spread of news and information widely received, unquestioned and gathered from various sources (Andrews, 2017; Okoro et al., 2018; Press et al., 2017) . Especially the younger generation takes a lot of information from the social networking sites such as Facebook, Instagram, and Snapchat. Craig Silverman states, *"There is a lack of training among people in newsrooms and media houses." Journalists need to get training so that they can quickly spot fakes, and people in school should learn how to read things critically online - they should learn how to research and check multiple sources online."*

These techno giants who works to spread the fake news on social media messaging apps are hard core technologists (Academy et al., 2018; Greg, 2017) . They use technological advancements like more personalised feed determined by our social media activities, using some special algorithms to deliver content with one objective to strengthen particular belief and garner the support in favour of one ideology (Domonoske, n.d.; Pennycook & Rand, 2018; Posetti & Matthews, n.d.; Ugwuanyi, 2017) . A selective biasness is developed that they would only penetrate biased and false content to likeminded internet users to promote one cause, as social media platforms have captured the human mind and embolden users to spend higher time on social media platforms (Koohikamali & Sidorova, 2017; Potthast, n.d.) .

Combating Fake news: Digital Tools for Online Verification and Fact Checking.

News media organisations, media educators, trainers, researcher, fact checker and technology experts are finding ways to curb fake news menace, globally. Nowadays, most of the media outlets are coming with debate and discussions over the rise of fake news technology and about its possible solutions. An in-depth review indicates the need of strong fact checking mechanism, increased digital literacy, training for newsrooms producers and journalist to make them aware about the styles and techniques of fake news, so they could simply identify and debunk the fake news. Here are some possible solutions enlisted after an in-depth review and consultation with techno, journalistic and researcher:

Conclusions and Recommendations

In this research study researcher proposed that there should be some strong mechanism possibly technology based to increase the online verification and fact checking which may provide spontaneous and accurate checking of falsehoods. To debunk the health related fake news stories or rumors, subject experts or technical experts should be involved in fact checking or verification. The proper implementation of stronger regulations related to online content, awareness about hazards and punishment rules should pass among netizens.

Government must spend some sweat to conduct workshops in schools, colleges and universities. After the training, government may appoint volunteers, fake news warriors in schools, colleges and universities to train the other students about debunking fake news. There should be some rating of fake news based pages by the audience and experts of particular field, with trust score out of hundred, so audience can easily realize after watching the content of the fake post predict its trustworthiness of that particular news item. This will help to the news aggregators and technocrats to scrutinize the fake news related posts, pages, groups and websites. Even the Google's news initiative was a successful attempt to train 8000 trainers or fake news ninja training the journalists across the country.

In India, we are largest internet users in the world, and struggling with the fake news menace as threat to the communal harmony and democratic institutions due to hate etc. A new term is developed WebQuf, where people are talking about how fake news pages and portal fooled the people. There are several examples, initiatives and successful startups like Social Media Hoax Slayer, Alt News, and Boom Fact Check etc. The software tools like google image search, Tineye search, Cydral search, Yandex search and Baidu, which help you to find out the truth about the photos etc. Google Image Search can tell you, if the image is old and earlier appeared on the web, it can also tell you in which context that particular image is used and still you have to search more to find out the truth about a fake news.

A fake news spreading through the WhatsApp can be debunk by journalistic investigation skills, through machine it is difficult to find out the source or origin of one particular fake news or fake post because of its end-to-end encryption and data privacy laws. These several journalistic practices are like contacting the person concerned about whom a news story is. All of the Indian myth-busters favour google reverse image search. Google image search allows you to upload an image online and then search for where it may have appeared.

InVid helps you to find out the truth of fake videos. InVid creates several photos out of one video, which can be explore, further by using software tools like google image search, TinEye search, Cydral search, Yandex search and Baidu. Even the crop tools can help in finding the truth of one fabricated, manipulated and Photoshop photographs. Even the google time filter helps to understand the truth of photograph. Even one can simply verify the truth by using custom range and time filter during google image search. Amensty International's software tools YouTube Data Viewer helps in finding the fake videos through machine. Its use is quite easy and reliable to verify all the available videos on YouTube.

Further purely machine based artificial intelligence web crawler can be developed for quick fact checking with the engagement of experts of natural processing language, python etc. However, this artificial intelligence

based web crawler can work only in English language, developing such crawler and algorithms is a distant dream.

REFERENCES

Academy, N., Society, T. R., Posetti, J., Matthews, A., Nelson, M. S., Goben, A., … Guadagno, M. (2018). A short guide to the history of "fake news" and disinformation A LEARNING MODULE FOR JOURNALISTS AND JOURNALISM EDUCATORS. *Health Communication*, *162* (12), 412–424.https://doi.org/10.1016/j.ahj.2011.06.007.Medication

Albright, J. (2017). Welcome to the Era of Fake News, *5* (2), 87–89. https://doi.org/10.17645/mac.v5i2.977

Allcott, H., & Gentzkow, M. (2017). Social Media and Fake News in the 2016 Election, *31* (2), 211–236.

Andrews, W. (2017). Fighting Fake News :, *93* (2).

Avocats, M. (2018). The French fight against fake news.

Bhaskaran, H. (2017). Contextualizing Fake News in Post-truth Era : Journalism Education in India. https://doi.org/10.1177/1326365X17702277

Coche, A. E., & Ll, B. (2018). ' Fake news ' and online disinformation, (June), 1–36.

Dean, J. T., Arts, A., Charming, D. A., Communications, P., Arts, A., Freeman, M., … Teller, J. (2014). The Problem with Fake News The Highest Pinnacle of Research The Research Process, 1–3.

Domonoske, C. (n.d.). Students Have ' Dismaying ' Inability To Tell Fake News From Real, Study Finds.

FAKE NEWS, FALSE INFORMATION AND MORE : COUNTERING HUMAN BIASES SHAWN GOH September 2018 IPS Working Papers No . 31. (2018), (31).

Greg, S. (2017). Fake News: As the Problem or a Symptom of a Deeper Problem?, *2016* (December 2016), 33–44.

Guess, A., Nyhan, B., & Reifler, J. (2018). Selective Exposure to Misinformation : Evidence from the consumption of fake news during the 2016 U . S . presidential campaign, (682758).

Holt, K. (2018). Alternative Media and the Notion of Anti-Systemness : Towards an Analytical Framework, *6* (4), 49–57. https://doi.org/10.17645/mac.v6i4.1467

Holton, A. E., & Belair-gagnon, V. (2018). Strangers to the Game ? Interlopers, Intralopers, and

Shifting, *6* (4), 70–78. https://doi.org/10.17645/mac.v6i4.1490

Horne, B. D., & Adalı, S. (2016). This Just In : Fake News Packs a Lot in Title, Uses Simpler, Repetitive Content in Text Body, More Similar to Satire than Real News.

Jr, E. C. T., Lim, Z. W., Ling, R., Jr, E. C. T., Lim, Z. W., & Ling, R. (2018). Defining " Fake News " DEFINING " FAKE NEWS " A typology of scholarly definitions. *Digital Journalism*, *0811*, 1–17. https://doi.org/10.1080/21670811.2017.1360143

Kligler-vilenchik, N. (2018). Why We Should Keep Studying Good (and Everyday) Participation : An Analogy to Political Participation, *6* (4), 111–114. https://doi.org/10.17645/mac.v6i4.1744

Koohikamali, M., & Sidorova, A. (2017). I NFORMATION R E -S HARING ON S OCIAL N ETWORK S ITES, *20*, 215–235.

Kumar, S., & Science, C. (2018). False Information on Web and Social Media : A Survey, *1* (1).

Kvasnička, T. (2014). Asociace aterotrombózy a trombofilie - genetické aspekty. *Vnitrni Lekarstvi*, *60* (10), 880–884.

L, R. V., Yimin, C., & J, C. N. (2016). Deception detection for news: Three types of fakes. *Proceedings of the Association for Information Science and Technology*, *52* (1), 1–4. https://doi.org/10.1002/pra2.2015.145052010083

Mcgrew, B. S., Ortega, T., Breakstone, J., & Wineburg, S. (2017). The Challenge That ' s Bigger Than Fake News : Teaching Students to Engage in Civic Online Reasoning.

Mcgrew, S., Ortega, T., Breakstone, J., & Wineburg, S. (2017). 598912704.

Okoro, E. M., Abara, B. A., Umagba, A. O., Ajonye, A. A., Isa, Z. S., & Nstitute, N. A. I. (2018). A HYBRID APPROACH TO FAKE NEWS DETECTION ON SOCIAL MEDIA, *37* (2), 454–462.

Özgöbek, Ö., & Gulla, J. A. (2017). Towards an Understanding of Fake News.

Parikh, S. B., & Atrey, P. K. (2017). Media-Rich Fake News Detection : A Survey.

Pennycook, G., & Rand, D. G. (2018). Who falls for fake news ? The roles of bullshit receptivity, overclaiming, familiarity, and analytic thinking.

Pesonen, T. (2018). The effects of fake news on consumer trust in social media marketing A quantitative study on consumer mindset,

(April).

Popat, K., Mukherjee, S., Yates, A., & Weikum, G. (n.d.). DeClarE : Debunking Fake News and False Claims using Evidence-Aware Deep Learning.

Posetti, J., & Matthews, A. (n.d.). A short guide to the history of ʹ fake news ʹ and disinformation.

Potthast, M. (n.d.). A Stylometric Inquiry into Hyperpartisan and Fake News.

Press, F., Press, F., & Fund, A. (2017). Report # FakeNews : innocuous or intolerable ? Report # FakeNews : innocuous or intolerable ?, (February).

Quandt, T. (2018). Dark Participation, *6* (4), 36–48. https://doi.org/10.17645/mac.v6i4.1519

Reilly, I. (2012). Satirical Fake News and / as American Political Discourse, *35* (3), 258–275.

Responsible, A. M., Media, S. R., Community, P., States, A. M., Group, W., Values, C., … Blueprint, S. C. (2016). FRAMEWORK AND JOINT DECLARATION TO MINIMISE THE, 1–9.

Rubin, V. L., Chen, Y., & Conroy, N. J. (2015). Deception Detection for News : Three Types of Fakes.

Rubin, V. L., Conroy, N. J., Chen, Y., & Cornwell, S. (2016). Fake News or Truth ? Using Satirical Cues to Detect Potentially Misleading News ., 7–17.

Silverman, C., & Singer-vine, J. (2016). Most Americans Who See Fake News Believe It, New Survey Says An exclusive Ipsos poll conducted for BuzzFeed News found that 75 % of American adults who were familiar with a fake news headline viewed the story.

Street, S. M., & Street, S. M. (2018). Tracing Fake-News Footprints : Characterizing Social Media Messages by How They Propagate. https://doi.org/10.1145/3159652.3159677

Tandoc, E. C., Lim, Z. W., & Ling, R. (2018). Defining "Fake News": A typology of scholarly definitions. *Digital Journalism*, *6* (2), 137–153. https://doi.org/10.1080/21670811.2017.13601 43

Things, F., Do, T., Avoid, T., Fake, P., & Media, S. (n.d.). Fake News : Recommendations.

Ugwuanyi, S. U. (2017). Influence of Fake News on Public Perception of Nigeria's Online Newspapers, *17* (5).

Usher, N., & Carlson, M. (2018). The Midlife Crisis of the Network Society, *6* (4), 107–110. https://doi.org/10.17645/mac.v6i4.1751

Vargo, C. J. (2018). The agenda-setting power of fake news : A big data analysis of the online media landscape from 2014 to 2016. https://doi.org/10.1177/1461444817712086

Veszelszki, Á. (2017). Linguistic and Non-Linguistic Elem ents in Detecting (Hungarian) Fake News, 7–35. https://doi.org/10.1515/auscom-2017-0001

Yang, Z. J., Kahlor, L. A., & Griffin, D. J. (2014). I Share, Therefore I Am : A U . S . − China Comparison of College Students ʹ Motivations to Share Information About Climate Change, *40*, 112–135. https://doi.org/10.1111/hcre.12018

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