



STUDY REPORT:

NEWS LITERACY AND CRITICAL THINKING SKILLS IN THE POST-TRUTH ERA

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INTRODUCTION

This study report was created within the international project *Enhancing Key Civic Competences for the Post-truth Era: News Literacy and Critical Thinking (ESSENTIAL)*. The project is implemented as a part of the EU Erasmus+ Programme (Key Action 2: Strategic partnerships in the field of adult education) by the following four organizations: Belgrade City Library (Serbia, coordinator), Hacettepe University (Turkey), National Library of Latvia (Latvia) and UPI – Ijudska univerza Žalec (Slovenia).

The overall project objective is to contribute to the development of self-aware citizens who think critically and have developed news literacy skills which is a precondition to relevantly and efficiently participate in social and democratic processes of their communities and at European level.

The study report was prepared as an initial phase of the project. It consists of two main parts. First part is about news literacy concept and characteristics of a news literate person. It was prepared based on literature – empirical and descriptive works in literature as well as best practices.

The second part is dedicated to the current state in the field of media and news literacy in partner countries. It consists of the brief reports on media and news literacy in partner countries and the analysis and findings of the news use survey conducted in the partner countries.

Conceived in this way, the study report gives us a clear picture of the situation in the field of news literacy, the main problems and needs, as well as possible courses of action to improve news literacy in partner countries, but also at the European level.

PART 1

UNDERSTANDING THE NEWS LANDSCAPE

INTRODUCTION

A functioning democracy relies on educated and well-informed citizens. However, today, people are swamped with false information (Canales, 2020). The processes by which people get information and form their opinions and beliefs are therefore crucially important (Lewandowsky, Ecker, Seifers, Schwarz & Cook, 2012, p. 107). The media and the internet provide vast quantities of information, placing the onus on the individual to sort true from false. However, on one side sharing of false information, knowingly or not, has been on the rise (Canales, 2020), on the other hand, individuals have limited time, cognitive resources, or motivation to understand complex topics. As a result, misconceptions are commonplace. Moreover, once inaccurate beliefs are formed, they are remarkably difficult to eradicate (Ecker, Lewandowsky, Swire, & Chang, 2011, p. 570). The ramifications can be serious. If a majority believes in something that is factually incorrect, the misinformation may form the basis for political and societal decisions (in areas as disparate as education, health, and the economy) that run counter to a society's best interest; if individuals are misinformed, they may likewise make decisions for themselves and their families that are not in their best interest (Lewandowsky, Ecker, Seifers, Schwarz & Cook, 2012, p. 107). Thus, "misinformation" is seen as a serious threat to democracies (Filloux, 2017) and the well-being of both societies and individuals. Understanding why it is created in the first place, how it spreads as well as the structural reasons for its effectiveness is a necessity (Wardle & Derakhshan, 2017, p. 14) to fight against misinformation.

In order to prevent people from being fooled by falsehoods, what is needed the most is training them to develop their critical thinking and news literacy skills.

THE RISE OF FAKE NEWS IN THE POST-TRUTH ERA

Post-Truth

It is now said that we live in a post-truth era. Post-truth is defined as an adjective "relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief" (*Post-truth*, 2021). The "post-" prefix here refers to the irrelevance of the "truth" notion.

In the post truth era, information consumption is mainly guided by people's emotions. In this era, people "increasingly believe information that appeals to their emotions and their personal beliefs, as opposed to seeking and accepting information that is regarded as factual and objective" (Cooke, 2018).

"Post-truth" has been announced as the word of the year in 2016 by Oxford Dictionaries. Dictionary's editors noted a big increase in the usage of the term in 2016 compared to the previous year. The reason for the sudden spike in usage was mainly politics. It was largely due to the huge number of false news stories generated during the Brexit referendum in the United Kingdom and the presidential election campaigns in the United States (Flood, 2016). The term became popular in the form of *post-truth politics* and started to appear more frequently in the news since 2016.

The role emotions play in shaping mass political behavior is well researched in political psychology (Jones, Hoffman & Young, 2012, p. 1132). Findings of these research have proven that feelings are

strong predictors for the preferences on political issues and candidates (Brader, 2005, p. 389). Most voting models are built on what voters remember and that recall of memory is highly biased. Voters more likely remember information that generates an effective reaction (Civettini & Redlawsk, 2009, p. 125). Politicians have been well aware of this and increasingly appeal to the emotions of citizens rather than reason. Critics denounce that this is manipulative as well as poisonous to democratic decision making (Brader, 2005, p. 388).

Post-truth politics thrived in a polarized environment, where “the idea of truth is already split into notions of my truth vs. your truth”. Fake news further sharpens polarization, causes corruption and damages “the fabric of democracy” (Al-Rodhan, 2017). In other words, existing political and social polarizations reinforced by fake news (Al-Rodhan, 2017). “Group polarization is an important phenomenon in social psychology and is observable in many social context” (e.g. feminism, vaccination, futbol, climate change, animal rights, abortion, politics) (*Group polarization*, 2020). Today, the Internet and social media presented a new platform for fake news and group polarization.

Fake News

In the post truth era, “people’s information consumption is being increasingly guided by the affective, or emotional, dimension of their psyche, as opposed to the cognitive dimension. This post-truth reality is one of the reasons why fake news has become so inescapable, and consequently, why it’s so hard to combat and interrupt the production and dissemination of deliberately false information” (Cooke, 2018).

World history is full of examples of fabricated content (lies, rumors, propaganda) which was used to mislead people (Wardle, 2020). Although it has a long history, the term ‘fake news’ has only recently become a buzzword. It is defined “to be news articles that are intentionally and verifiably false, and could mislead readers” (Allcott & Gentzkow, 2017, p. 213).

In a study on “academic articles that used the term ‘fake news’ between 2003 and 2017 it is noted that the term has been used to describe a number of different phenomena and related but distinct types of content from news satire, news parody, fabrication to manipulation, advertising and propaganda (Tandoc, Lim & Ling, 2018),

No matter in what form and which label it comes with (such as urban myths, hoaxes, conspiracy theories, news satire and alternative facts) proliferation of ambiguous information today is at an alarming rate. The importance of combating fake news is underlined in the literature as well as in *The Global Risks Report 2021* (The World Economic Forum, 2021) which addresses the challenges which demand immediate collective action.

Although the term “fake news” is not new at all “what’s new now is the ease with which anyone can create compelling false and misleading content, and the speed with which that content can ricochet around the world” (Wardle, 2020).

A research conducted by MIT scholars helps us better understand how fast false news spreads. Researchers have created a dataset, which includes over 100.000 news tweeted on Twitter, and classified this news as true or false based on the information available from fact-checking platforms. Investigation on differential diffusion of news stories in the dataset indicated that false news reached more people (70 percent more) and diffused faster (six times) than the truth. Researchers noted that “false news was more novel than true news, which suggests that people were more likely to share novel information” (Vosoughi, Roy & Aral, 2018).

Another analysis shows how viral fake election news stories outperformed real news on Facebook in 2016 in the US. It is “found that top fake election news stories generated more (about 15 percent) total engagement (shares, reactions, and comments) on Facebook than top election stories from major news outlets ” (Silverman, 2016b).

Fake news goes viral generally without being verified (Cooke, 2018). While propagandists, profiteers and trolls are responsible for the creation and initial sharing of much of the misleading information found on social media, this false information spreads due to actions of the general public (Vosoughi, Roy, & Aral, 2018, p. 1146). Thus, one way to reduce the spread of false information is to reduce the likelihood of individuals sharing that information (Fazio, 2020). What is worrying the most is that even if the false information is eventually disproved, the damage is done and it continues to be virtually available for future discovery (Cooke, 2018).

As Wardle (2019, p. 6) points out “our information ecosystem is now dangerously polluted and is dividing rather than connecting us”. Information pollution contaminates public discourse not only on political issues but also a wide range of other (i.e., economic, societal and health related) issues. Medical misinformation, for instance, has always posed a threat to health (Wardle & Derakhshan, 2017, p.10). Such that, the term *Infodemic*, which is a blend of "information" and "epidemic" that typically refers to a rapid and far-reaching spread of information (*Infodemic*, 2021) is re-defined by the World Health Organization (2020) to address too much information (including false or misleading) during a disease outbreak which causes confusion and risk-taking behaviors that can harm health. Furthermore, a study on climate-related conspiracy theories “found that public misconceptions about climate change can lead to lowered acceptance of the reality of climate change and lowered support for mitigation policies (Cook, Lewandowsky & Ecker, 2017).

There is an agreement in the related literature that a better alternative is needed to replace the term fake news. Because it is inadequate to describe the complexity of information pollution and fails to cover all different types of misleading content which is sometimes genuine however reframed in a new way. Thus, the use of more appropriate terms which help to make a distinction, is suggested (Wardle, 2019, p. 6; 2020).

INFORMATION DISORDER

Because the term “fake news” does not cover all of the misleading content, most of which is not even fake, Wardle and Derakhshan (2020) coined the term “information disorder” and introduced a new conceptual framework for examining the information pollution. They identified three main categories such as mis-, dis- and mal-information, which collectively called information disorder, and described the differences between these three categories by using the dimensions of harm and falseness (Wardle & Derakhshan, 2017, p. 20).

Information disorder is a complex phenomenon. “There are so many examples of the different ways content can be used to frame, hoax and manipulate. Some examples are less harmful and could be described as low-level information pollution (such as clickbait headlines, sloppy captions or satire that fools) while others are more sophisticated and deeply deceptive. Rather than seeing it all as one, breaking these techniques down can help a better understanding of the challenges" people now face (Wardle, 2019, p. 57).

Main Categories of Information Disorder

Disinformation

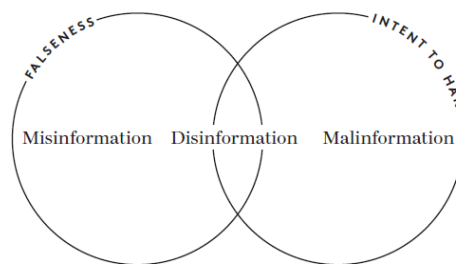
Disinformation is content that is intentionally false and designed and shared to cause harm (Wardle, 2019, p. 8; Wardle & Derakhshan, 2017, p. 20).

Misinformation

Mis-information is when false information is shared, but no harm is meant (Wardle & Derakhshan, 2017, p. 20). When disinformation is shared by a person who does not realise that it is false or misleading, it turns into misinformation (Wardle, 2019, p. 8).

Malinformation

Mal-information is when genuine information is shared to cause harm, often by moving information designed to stay private into the public sphere (Wardle & Derakhshan, 2017, p. 20). The term also describes genuine information that is warped and reframed before it is shared with ill intent (Wardle, 2019, p. 8).



Source: Wardle, 2019, p. 9

Phases and Elements of Information Disorder

“It’s important to consider the different phases (creation, production, distribution) of an instance of information disorder alongside its elements (agent, message, interpreter), because the agent that creates the content is often fundamentally different from the agent who produces it And once a message has been distributed, it can be reproduced and redistributed endlessly, by many different agents, all with different motivations. For example, a social media post can be distributed by several communities, leading its message to be picked up and reproduced by the mainstream media and further distributed to still other communities. Only by dissecting information disorder in this manner these nuances can be understood” (Wardle & Derakhshan, 2017, p. 23)

Common Forms of Information Disorder

Within the above mentioned “three overarching types of information disorder”, Wardle refers to seven categories, which help understanding the complexity of this ecosystem. She considers it as a spectrum from satire to fabricated content (Wardle, 2019, p. 12) and underlines how damaging information disorder can be in the context of elections and breaking-news events around the world.

Satire

Generally, satire is not included within the information disorder typology. Because they have no intention to mislead or cause harm. However, they have potential to fool people. When it is shared and re-shared, the original context of the content and cues get lost. Frequently over time, people do not realize the content is satire and more likely believe that it is true (Wardle, 2019, p. 14; 2020).

Wardle (2020) also underlines the fact that the agents of disinformation sometimes “deliberately label content as satire to ensure that it will not be “fact-checked,” and as a way of excusing any harm that comes from the content”.

False Connection

It is a technique, so called clickbait, used by news outlets for attracting attention and driving clicks via sensational headlines, visuals or captions which don't support the content. Although the harm is minimal it has a negative impact on people's trust and relationship with news and therefore considered as a form of information disorder (Wardle, 2019, p. 20; 2020).

Misleading Content

Misleading use of information is not new and has always been a problem not only in journalism but also in politics. It can come in many forms such as the selection of a partial segment from a quote to support a point, creating statistics that support a particular claim, deciding not to cover something because it undermines an argument or cropping a photo to frame an event in a particular way (Wardle, 2019, p. 24; 2020).

False Context

This category is used to describe content that is genuine but has been reframed and “shared with false contextual information. It often happens during a breaking news event when old imagery is re-shared, but it also happens when old news articles are re-shared as new, when the headline still potentially fits with” current events (Wardle, 2019, p. 28; 2020).

Imposter Content

This category describes impersonation of genuine sources. For instance, “the logo of a well-known brand or name is used alongside false content. ... One of the most powerful ways people judge content is if it has been created by an organization or person that they already trust”. Adding the logo of a trusted news organization or the name of an established figure or journalist to a news story (text, photo or a video) “increases the chance that people will trust the content without checking” (Wardle, 2019, p. 34; 2020).

Manipulated Content

This describes alteration of an aspect of genuine content (often photos or videos) to deceive. This is a powerful tactic, because it is based on genuine content (Wardle, 2019, p. 46; 2020).

Fabricated Content

This category describes new content that is 100% fabricated. This might be making a completely new fake social media account and spreading new content from it. This category also includes the next wave of fabricated content, the so-called deep fakes, where artificial intelligence is used to manufacture a video or audio file in which someone is made to say or do something that they never did (Wardle, 2019, p. 52; 2020).

Conspiracy Theories

Conspiracy theories can also be added to the list of common forms of misinformation. *Conspiracy theory* is “a theory that explains an event or set of circumstances as the result of a secret plot by usually powerful conspirators” (powerful people or groups) (*Conspiracy theory*, 2021).

With the outbreak of a global pandemic, a number of baseless and unfounded conspiracies and unproven claims of alternative COVID-19 treatments lacking any medical evidence have spread rapidly through social media (Canales, 2020).

Understanding the Intent and Motivation

Understanding the intent and motivation behind information disorder is important. Because there are several motivations behind the production and dissemination of false or misleading content. Disinformation (false content) and malinformation (genuine) are shared intentionally to cause harm (financial, reputational, political or even physical), while misinformation (false content) means no harm but can cause harm unintentionally (Wardle, 2020).

There are three main motivations for creating false and misleading content: The first is ideological (mainly political). False or misleading content is used for propaganda, persuasion, distraction and/or provocation. Driving force here is mainly to shape and influence public opinion and promote particular ideas, ideology, party or people (Allcott & Gentzkow 2017, p. 217; Cooke, 2018; Wardle, 2020). The second is financial. It is possible to make money from advertising on a web site through a sensational, false article or headline. Here clicks are driven to make revenue. False content is also produced to promote particular products or services while discrediting others (Allcott & Gentzkow 2017, p. 217; Wardle, 2020). Finally, there are social and psychological factors. Some people are motivated simply by the desire to cause trouble and to see what they can get away with; to see if they can fool journalists or provoke people. Others end up sharing misinformation to present a particular identity (Wardle, 2020). A need to be liked, and a need for instant gratification and attention on social media, are also among psychological motivations (Cooke, 2018).

Wardle (2020) points out that “if rumors, conspiracies or false content were not shared, they would do no harm. It is the sharing that is so damaging”.

Consequences of Information Disorder

Fake news stories are pervasive on the Internet and have the potential to mislead people around the world. A 2016 survey found that “fake news headlines fool American adults about 75 percent of the time” (Silverman & Singer-Vine 2016). In some cases, people ignore the fake news they come across, but in some cases people believe them and fake news leads to concrete actions and serious consequences such as affecting election results, harming individuals/nations/businesses and/or causing panic (Tandoc, 2018, p. 137).

“The shock of the Brexit referendum, the US election, Le Pen reaching the run-off vote in the French election and the overturning of the Kenyan election have been used as examples of the potential power of systematic disinformation campaigns. However, empirical data about the exact influence of such campaigns does not exist” (Wardle & Derakhshan, 2017, p. 14).

Research findings prove that public misconceptions about climate change can lead to lowered acceptance of the reality of climate change and lowered support for mitigation policies (Cook, Lewandowsky & Ecker, 2017).

A well-known example of widespread misinformation dates back to the 1930s, when a mass panic was sparked by the Orson Welles's "War of the Worlds" broadcast. Orson Welles narrated the story of Martian invasion in a radio news format with actors playing the roles of reporters, residents, experts, and government officials. While the intention was to purely produce a radio drama, listeners interpreted it as factual news (Tandoc, 2018, p. 138).

Pizzagate is one example of the numerous fake news stories. In 2016, a man carrying a gun walked into a pizza restaurant and fired several shots in the USA. He was investigating whether the restaurant was a secret underground human trafficking ring, involving members of the Clinton campaign as claimed in social media stories which actually proved to be fictitious (Silverman, 2016a).

Pakistan's defense minister, Khawaja Muhammad Asif, posted a menacing *tweet* in response to a false report stating that Israel had threatened Pakistan with nuclear weapons (Goldman, 2016).

On January 6, 2020, as public officials met to certify Joe Biden's victory in the Presidential Election, supporters of Donald Trump, who were united around a common falsehood: The election had been unlawfully stolen from Trump, stormed the capitol by mob, resulting in a riot that left five people dead (Hemsley, 2021). There were hundreds of injuries and more than 300 people have been charged with federal crimes (Mendoza & Linderman, 2021). The costs of repairing damages from the attack on the U.S. Capitol and related security expenses have topped millions of dollars (Chappel, 2021).

The Role of the Internet and the Social Media in the Creation of Information Pollution

Both the emergence of the internet and the social media technologies have brought about fundamental changes to the way information is produced, communicated and distributed (Wardle & Derakhshan, 2017, p. 11). First of all, "widely accessible, cheap and sophisticated editing and publishing technology has made it easier than ever for anyone to create and distribute content". Secondly, "information consumption, which was once private, has become public because of social media". And lastly, "the speed at which information is disseminated has been supercharged by an accelerated news cycle and mobile handsets" (Wardle & Derakhshan, 2017, p. 12). What we are experiencing is an exponential growth of available technology coupled with a rapid collapse of costs (Filloux, 2017).

It can be said that today mis/dis-information has found a new channel. Not only how news looks but also how it is distributed has changed. Today, a tweet, which is max. 280 characters long, is considered a piece of news, and Twitter became a platform for speedy dissemination of breaking news (Tandoc, 2018, p. 139). Not only Twitter, but all online platforms, especially social media, provide space for non-journalists to reach a mass audience, in other words they provide opportunities for citizen journalism. Non-journalists today began to engage in journalistic activities (Robinson & DeShano, 2011, p. 965), they post information, photos and videos about breaking news stories they witnessed through their social media accounts (Jewitt, 2009, p. 231).

Facebook is another social media platform which has become a place where users produce, consume, and exchange news along with personal updates and photos. Reaching mass audiences and facilitating

speedy exchange of information are the most important features of social media platforms, which unfortunately, play a key role in the spread of false information (Tandoc, 2018, p. 139).

Social media shapes the media landscape in two ways. Firstly, content from different news providers is displayed in a single location, users no longer need to select a news source; instead they select the story itself (Messing & Westwood, 2014, p. 1044). The information source is blurred, also because news/information travel fast from one person/channel to the other (Tandoc, 2018, p. 139). Secondly, endorsements and social recommendations guide the selection of the content (Messing & Westwood, 2014, p. 1044). Popularity plays an important role in the dissemination. Likes, shares, or comments trigger further likes, shares, or comments (Thorson, 2008, p. 475). Receiving information from socially proximate sources helps to legitimate the veracity of information that is shared on social networks. However, users seldom verify the information that they share (Tandoc, 2018, p. 139).

Additionally, unlike legacy news media, there is no code of ethics on sharing manipulated content on social media (Tandoc, 2018, p. 144-145) and there are difficulties (which sometimes require expertise) in the verification of information in different formats such as photos and videos.

The Trustworthiness of the Online Users (Paid Posters, Trolls and Bots)

The trustworthiness of the users of the online communities is another problem (Ortega, Troyano, Cruz, Vallejo & Enriquez, 2012, p.2884). All the tools, as well as the talent to use them, are for sale today. “Anyone can buy thousands of social media accounts that are old enough to be credible, or millions of email addresses and can hire legions of “writers”, paid posters, who will help to propagate any message or ideology on a massive scale” (Filloux, 2017). *Paid posters* on the Internet are people who get paid for disseminating false information for hidden purposes such as shaping the opinion of other people towards certain political or societal events or business markets. They may create a significant (negative/positive) effect on the online communities (Chen, Wu, Srinivasan & Zhang, 2013). Propaganda made in this way is often based on facts, but includes bias that promotes a particular product, side or perspective. The goal of such blending of news and commentary is often to persuade rather than to inform (Tandoc, 2018, p. 147).

Internet Water Army from China, for instance, is a group paid to post online comments with particular content in Internet. These people are recruited by companies to promote positive news about their products and negative news about their competitors on some online platforms (such as Weibo, WeChat and Taobao, China's eBay-like platform) (Internet Water Army, 2020). *50 Cent Party/Army*, on the other hand, is a group of commentators who are hired by Chinese authorities to manipulate public opinion to the benefit of the Chinese Communist Party. Findings of a Harvard research estimate that the Chinese government fabricates about 448 million social media posts every year (50 Cent Party, 2020).

Trolls and bots contribute tremendously to the pollution of information online. “Trolling is the act of deliberately posting offensive or inflammatory content to an online community with the intent of provoking readers or disrupting conversation. Today, the term “troll” is most often used to refer to any person harassing or insulting others online. However, it has also been used to describe human-controlled accounts performing bot-like activities” (Wardle, 2018).

Recently, Web forums have been invaded by trolls. Use of Internet trolls for opinion manipulation has become a common practice to influence people's opinions and gain popularity. A popular way to manipulate public opinion in the Internet is making controversial posts from fake profiles on a specific topic that aim to win the argument at any cost, usually accompanied by inaccurate and deceptive information (Mihaylov, Koychev, Georgiev & Nakov, 2015, p. 443).

“Bots are social media accounts that are operated entirely by computer programs and are designed to generate posts and/or engage with content on a particular platform. In disinformation campaigns, bots can be used to draw attention to misleading narratives, to hijack platforms’ trending lists, and to create the illusion of public discussion and support” (Wardle, 2018).

Currently, online platforms, particularly social media, are becoming one of the main sources of news for a growing number of individuals. A survey carried out in the United States by Pew Research Center found that a majority of adults, 62 percent, get news on social media and 18 percent do so often (Gottfried & Shearer, 2016). Another survey carried out in 37 countries in Europe, Asia and America by Oxford University Reuters Institute for the Study of Journalism in 2018 indicates that, the number of individuals who get their news from social media is increasing (Nic Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018). These findings are rather worrying, when the potential of social media for spreading misinformation is taken into account.

THE PSYCHOLOGY of MISINFORMATION

Today, on one hand, the media and the internet provide vast quantities of information and the sheer number of agents (such as propagandists, profiteers and trolls) are vying for control of our thoughts and feelings (WikiMedia UK, 2017), on the other hand, the onus is placed on the individual to sort facts from fiction. However, individuals have limited time, cognitive resources, or motivation to understand complex issues such as scientific findings or political developments, and misconceptions are commonplace. Moreover, once inaccurate beliefs are formed they are remarkably difficult to eradicate (Ecker, Lewandowsky, Swire, & Chang, 2011, p. 570). Even after people receive clear and credible corrections, misinformation continues to influence their reasoning. The ramifications can be serious. Belief in misinformation can adversely impact decision making, and has real-world implications in areas as disparate as education, health, and the economy (Swire-Thompson, & Ecker, 2018, p.2 in pre-print).

The psychology of misinformation is about the mental shortcuts, confusions, and illusions that encourage people to believe things that aren't true. It is human psychology that makes people vulnerable to misinformation and affects whether corrections work or not (Shane, 2020c).

Cognitive Mechanisms Which Make People Vulnerable to Misinformation

Psychological theories and the underlying cognitive factors that make people vulnerable to misinformation are shortly introduced here. In order to be able to prevent their harmful effects, it is important to understand these factors and separate one from the other.

Cognitive Miserliness or Intellectual Laziness

Intellectual laziness, or the so-called cognitive miserliness is the tendency to think and solve problems in simpler ways and avoid spending sophisticated cognitive effort, regardless of intelligence (*Cognitive miser*, 2020). The term addresses the “psychological mechanisms that economize on the time and effort spent on information processing by simplifying social reality, which would otherwise overwhelm” people’s “cognitive capacities with its complexity” (*Cognitive miser*, 2021).

While cognitive miserliness helps people to use their brains efficiently, it also causes people not to put enough cognitive effort when it is needed, such as when thinking about whether something they see in the news is true (Shane, 2020c).

Satisficing

“Satisficing is selecting information that is ‘good enough’ to satisfy basic needs or choosing the first ‘acceptable answer’ to a question or solution to a problem” (Cooke, 2018). It is one form of the bounded rationality, and leads people not to use all of their cognitive resources to obtain optimal outcomes, but instead use just enough to provide a sufficiently optimal outcome for the context (Metzger & Flanagin, 2013, p.213).

Satisficing could be a result of several factors such as intellectual laziness; unwillingness or inability to deal with information overload; not having the requisite information evaluation skills. Whatever the reason, it contributes to the spread of mis/dis-information by allowing low-quality information to remain in circulation and be disseminated (Cooke, 2018).

Dual Process Theory

The dual process theory of thought claims that two different systems of thought co-exist, namely fast thinking and slow thinking. Broadly speaking, fast thinking is a quick, automatic, effortless, associative, and affective-based form of reasoning. On the contrary, slow thinking is a thoughtful, and deliberative process which requires effort and the use of cognitive resources, and is based on symbolic and abstract rule manipulation (Gronchi & Giovannelli, 2018).

Because of their tendency towards cognitive miserliness, people generally use fast, automatic processing which creates the risk of misinformation for two reasons. Firstly, the easier something is to process, the more likely it is considered true. Quick and easy judgments often feel right even when they are not. Secondly, its efficiency can miss details which sometimes could be crucial. For example, one might recall something he/she read on the internet, but forget that it was debunked (Shane, 2020c).

Heuristics

Heuristic is mental shortcuts that ease the cognitive load of making a decision (Heuristic, 2021). Heuristic allows people to solve problems and make judgments quickly and efficiently (Cherry, 2021). Research proves that heuristics have an important function in helping people cope effectively with the vast quantities of information and decisions they encounter every day (Metzger & Flanagin, 2013, p. 214).

While heuristics are helpful to speed up the problem solving and the decision-making process, they can introduce errors. They can lead to cognitive biases, inaccurate judgments and incorrect conclusions. Relying on an existing heuristic can also make it difficult to see alternative solutions or come up with new ideas. Heuristics also contribute to stereotypes and prejudice (Cherry, 2021).

Cognitive Dissonance

Cognitive dissonance describes a person’s mental discomfort that is triggered by a situation in which one is confronted with facts that contradict his or her beliefs, ideals, and values. Theory of Cognitive Dissonance assumes that people strive for inner psychological consistency. Thus, when dissonance is present, they try to reduce it and achieve consonance. Additionally, they actively avoid situations and information which would likely increase the dissonance (Taddicken & Wolff, 2020, p.207).

Cognitive dissonance can lead people to reject credible information to reduce the dissonance (Shane, 2020c).

Confirmation Bias

Confirmation bias, one of the many cognitive biases which can be seen as a problematic aspect of human reasoning, connotes the seeking or interpreting of evidence in ways that are partial to existing beliefs and expectations (Nickerson, 1998, p.175). In other words, it is the tendency to seek and believe information that already confirms one's existing mental models, prior knowledge, and beliefs, as opposed to seeking information from a variety of potentially conflicting sources (Cooke, 2018).

Disinformation actors can exploit this tendency to amplify existing beliefs (Shane, 2020c). A great deal of empirical evidence supports the idea that confirmation bias is extensive, strong and appears in many guises. The evidence also supports the view that once a person has taken a position on an issue, his/her primary purpose becomes that of defending or justifying that position. This is to say that regardless of whether one's treatment of evidence was evenhanded before the stand was taken, it can become highly biased afterward (Nickerson, 1998, p.177).

Motivated Reasoning

Motivated reasoning is a form of reasoning in which people access, construct, and evaluate arguments in a biased fashion to arrive at a preferred conclusion. People use reasoning strategies that allow them to draw the conclusions they want to draw (*Motivated Reasoning*, n.d.). In other words, people use their reasoning skills to believe what they want to believe, rather than determine the truth. The crucial point here is the idea that people's rational faculties, rather than lazy or irrational thinking, can cause misinformed belief (Shane, 2020c).

Fluency

Fluency refers to how easily information is processed by people. "Repeated exposure to a statement increases the subjective ease with which that statement is processed. This increased processing fluency, in turn, increases the probability that the statement is judged to be true" (Reber & Unkelbach, 2010, p.563). In other words, people are more likely to believe something to be true if they can process it fluently (Shane, 2020c).

One of the determinants of processing fluency is repetition. "When people hear or see a statement repeatedly, they believe that this statement is more likely to be true than new statements which they have never encountered before" (Reber & Unkelbach, 2010, p.564). Things heard before are processed more easily, and therefore are more likely believed. Repetition increases the effect. So even if something is debunked, the sheer repetition of the original claim can make it more familiar, fluent, and believable (Shane, 2020c).

Selective Exposure and Selective Avoidance

The terms "selective exposure" and "selective avoidance" "are used to describe the behavior in which a person actively seeks for information that supports his/her views and avoids information that challenges him/her. In social media, selective avoidance can be easily performed by removing or hiding unwanted content/people (Malinen, Koivula, Keipi & Koironen, 2018, p. 351) while selective exposure can be performed by filtering. The selective exposure that humans tend toward is also done for them automatically by the algorithmic filtering (Wardle & Derakhshan, 2017, p. 47).

There are numerous explanations about why selective exposure occurs. Stroud (2017, p. 3-4) indicates in her overview that cognitive dissonance, motivated reasoning, confirmation bias, fluency and cognitive miserliness are among the mechanisms which operate in concert or different explanations may account for selective exposure in different circumstances.

Pluralistic Ignorance vs False Consensus Effect

Pluralistic ignorance is a lack of understanding about what others in society think and believe. There is a divergence between the actual prevalence of a belief in a society and what people in that society think others believe (Lewandowsky, Ecker, Seifers, Schwarz & Cook, 2012, p. 113). This can make people incorrectly think others are in a majority when it comes to a political view, when it is in fact a view held by very few people. This can be made worse by rebuttals of misinformation (e.g., conspiracy theories), as they can make those views seem more popular than they really are (Shane, 2020c).

The false consensus effect is the flip side of pluralistic ignorance (Lewandowsky, Ecker, Seifers, Schwarz & Cook, 2012, p. 113). In this case, people overestimate how many other people share their views (Shane, 2020c).

Third-person Effect

The third-person effect describes individuals who perceive media messages to have greater effects (influence) on other people than on themselves (Salwen & Dupagne, 1999, p. 523). Research findings indicate that people rate themselves as better at identifying misinformation than others. This means people can underestimate their vulnerability, and don't take appropriate actions (Stefanita, Corbu & Buturoiu, 2018, p. 6; Shane, 2020c).

Pseudo-profound Bullshit Receptivity

Bullshit receptivity is about how receptive people are to information that has little interest in the truth (a meaningless cliché, for example) (Shane, 2020c). "Pseudo-profound bullshit describes statements that can appear to be deep but have no real meaning" (Dolan, 2019). It is different from a lie, which intentionally contradicts the truth. Research findings showed that analytic thinking makes people less susceptible to fake news and people who are more receptive to bullshit are more susceptible to fake news (Pennycook & Rand, 2020).

Cognitive Mechanisms Which Make Misinformation Persistent and Difficult to Correct

Misinformation can lead to poor decisions about consequential matters and is persistent and difficult to correct. Debunking misinformation is an important scientific and public-policy goal, however, the process of correcting misinformation is complex and remains incompletely understood (Chan, Jones, Jamieson, & Albarracín, 2017, p. 1531). Debunking is a term defined as presenting a corrective message that establishes that the prior message was misinformation. Corrections may be partial, such as those that update details of the information, or complete, such as retractions of scientific articles based on inappropriate or fabricated evidence that the authors or the journal no longer endorse (Chan, Jones, Jamieson, & Albarracín, 2017, p. 1532).

When people are exposed to misinformation, it is difficult to get it out of their minds (Shane, 2020b). Research findings indicate that persistence is stronger and the debunking effect is weaker especially

when audiences generated reasons in support of the initial misinformation (Chan, Jones, Jamieson, & Albarracín, 2017, p. 1531).

The Continued Influence Effect

Misinformation continues to influence people even after it has been corrected. It is, in a way, the failure of corrections (Shane, 2020b). Studies have documented the pervasive effects of misinformation by showing that “it is extremely difficult to return the beliefs of people who have been exposed to misinformation to a baseline similar to those of people who were never exposed to it” (Lewandowsky, Ecker, Seifert, Schwarz & Cook, 2012, p.114). Corrections often fail because the misinformation, even when explained in the context of a debunk, can later be recalled as a fact. Which means people recall information, but forget that it was corrected (Shane, 2020b).

Mental Models

A mental model is a framework for understanding something that has happened (Shane, 2020b). “Research on mental models suggests that an effective debunking message should be sufficiently detailed to allow recipients to abandon initial information for a new model. Messages that simply label the initial information as incorrect may therefore leave recipients unable to remember what was wrong and offer them no new model to understand the information” (Chan, Jones, Jamieson, & Albarracín, 2017’dan aldim, p. 1532). Offering a well argued, detailed debunking message appears to be necessary to reduce misinformation persistence by allowing to create a new mental model (Chan, Jones, Jamieson, & Albarracín, 2017’dan aldim, p. 1532).

The Implied Truth Effect

The implied truth effect is when something seems true because it has not been corrected (Shane, 2020b). When attempting to fight misinformation using warnings, it is necessary for some third party (such as factcheckers) to examine information and either verify or dispute it. However, impossibility of fact-checking all (or even most) headlines, poses an important challenge. As a result only a fraction of all misinformation is successfully tagged with warnings. The absence of a warning has two meanings: either the headline in question has not yet been checked, or it has been verified. Research indicates that people draw the latter inference, thus, tagging some false news headlines have the unintended side-effect of causing untagged headlines to be viewed as more accurate (Pennycook, Bear, Collins & Rand, in press). Evidence proved that the implied truth effect exists when misinformation is labeled on some social media posts but not others (Shane, 2020b).

Tainted Truth Effect

The tainted truth effect is where corrections make people start to doubt other, true information. The risk is that corrections and warnings create generalized distrust of what people read from the media (Shane, 2020b). Research findings prove that retrospective, invalid misinformation warnings taint news and lead individuals to view the news as less credible. Increased skepticism produced by invalid misinformation warnings leads individuals to discard information that was in fact accurate (Freeze, Baumgartner, Bruno, Gunderson, Olin, Ross & Szafran, 2020).

Repetition

Repetition causes familiarity and familiarity is another powerful persuasive factor which leads to acceptance (Paul & Matthews, 2016, p.4). Repetition is an effective technique for getting people to accept misinformation. The more often an opinion has been encountered in the past, the more accessible it is in memory and the more familiar it seems when it is encountered again (Weaver, Garcia,

Schwarz & Miller, 2007, p. 821). Stray (2017) claims that, receiving a message via multiple modes and from multiple sources increases the message's perceived credibility, especially if the disseminating source is someone already known by the receiver (such as friends and family).

There is evidence that repetition of the same opinion also leads people to the false conclusion that the opinion is widely shared, even if all the repetitions come from the same single communicator (Weaver, Garcia, Schwarz & Miller, 2007, p. 822). Cues like 'endorsement' have a powerful influence on people's credibility judgments which is particularly problematic on social media due to techniques (like bots that automatically "like" or "share" stories) which can create false sense of popularity about content (Wardle & Derakhshan, 2017, p. 46).

Illusory Truth Effect

The illusory truth effect occurs when familiarity (fluency via prior exposure) makes something seem true when it is not (Shane, 2020b). Evidence shows that even a single exposure increases subsequent perceptions of accuracy. Moreover, this "illusory truth effect" for fake news headlines occurs despite a low level of overall believability, and even when the stories are labeled as contested by fact-checkers or are inconsistent with the reader's world views (Pennycook, Cannon & Rand, 2018).

The Backfire Effect

The backfire effect is the theory that a correction can *strengthen* belief in misinformation (Shane, 2020b). The idea behind is that, when a claim aligns with someone's beliefs, telling them that it is wrong will actually make them believe it even more strongly (Sippit, 2019). It is the most contested psychological concept in misinformation (Shane, 2020b). Because it suggests that factchecks are ineffective, or even counterproductive. There is a debate in the literature as to whether backfire effects exist at all. Studies in relevant literature indicate that the backfire effect is in fact rare and factchecking does help inform people (Sippit, 2019).

The concept has been broken down into the *overkill backfire effect*, *worldview backfire effect*, and *familiarity backfire effect*: The *overkill backfire effect* is when misinformation is more believable than overly complicated correction. This leads the correction to backfire and increase belief in the misinformation (Shane, 2020b). The *worldview backfire effect* is said to occur when people are motivated to defend their worldview because a correction challenges their belief system. So the person rejects the correction because it is incompatible with their worldview, and in doing so strengthens their original belief (Swire-Thompson, DeGutis & Lazer, 2020; Shane, 2020b). In contrast to the mechanisms of the worldview backfire effect, the *familiarity backfire effect* is presumed to occur when misinformation is repeated within the correction (Swire-Thompson, DeGutis & Lazer, 2020). The familiarity backfire effect describes the fact that corrections, by repeating falsehoods, make them more familiar and therefore more believable (Shane, 2020b).

How to Use Cognitive Mechanisms to Prevent the Influence and the Spread of Misinformation

The psychological concepts that are relevant to the prevention of misinformation, in other words how they can help by building mental (and therefore social) resilience, will be addressed in this section (Shane, 2020a).

Skepticism

Skepticism is the awareness of the potential for manipulation (hidden agendas) and a desire to accurately understand the truth (Shane, 2020a). Skepticism can reduce misinformation effects, as it involves more cognitive resources going into the evaluation of information (weighing up the veracity of both the misinformation and the correction). “The ability to maintain doubt, question evidence and scrutinize the original data—even when it aligns with one’s worldview—is conducive to avoiding reliance on misinformation, but it is a difficult task” (Swire-Thompson, & Ecker, 2018).

Alertness

Alertness is a heightened awareness of the effects of misinformation (Shane, 2020a). Research results “suggests that inducing alertness (for instance through warning people about the effects of misinformation, such as the continued influence effect) might be another effective way of reducing reliance on misinformation but that its effectiveness may be limited (Ecker, Lewandowsky & Tang, 2010, p. 1094).

Analytic Thinking

“Analytic thinking, also known as deliberation, is a cognitive process that involves thoughtful evaluation (reasoning) rather than quick, intuitive judgements” (Shane, 2020a). Misinformation researchers found that analytic thinking helps to discern (uncover) the truth in the context of news headlines (Bago, Rand & Pennycook, 2020, p.2; Shane, 2020a).

Friction

Friction is, the opposite of fluency, when something is difficult to process or perform (Shane, 2020a). Research results indicate that adding “friction” (i.e., pausing to think) before sharing can improve the quality of information shared on social media” and reduce dissemination of misinformation (Fazio, 2020, p.1). If friction is introduced in the act of sharing, in other words if people are encouraged to pause and consider the accuracy and quality of what they are posting, they are less likely to spread misinformation (Fazio, 2020, p.2).

Inoculation

Given the difficulties associated with correcting misinformation once it has been processed, an alternative approach is to neutralize potential misinformation before it is encoded, a technique called inoculation or as colloquially known “prebunking” (Cook, Lewandowsky & Ecker, 2017, p. 4).

Inoculation “refers to techniques that build preemptive resistance to misinformation. Like a vaccine, it works by exposing people to examples of misinformation, or misinformation techniques, to help them recognize and reject them in the future” (Shane, 2020a). Inoculation has been found to be effective in reducing belief in conspiracy theories and increasing belief in scientific findings and consensus (Cook, Lewandowsky & Ecker, 2017, p.4).

Nudges

Nudges are small prompts that subtly suggest behaviors. The concept emerged from behavioral science (Shane, 2020a). When it comes to building resilience to misinformation, nudges generally try to prompt analytic thinking. A recent study found that nudging people to think about accuracy before sharing misinformation significantly improves people’s discernment of whether it is true (Pennycook, McPhetres, Zhang, Lu, & Rand, 2020).

THE AGE OF ALGORITHMS

Algorithm is the set of instructions and rules used by computers on a body of data to solve a problem, or to execute a task (Head, Fister & MacMillan, 2020, p. 49). An algorithm can be seen as a mini instruction manual telling computers how to complete a given task or manipulate given data (*What is an algorithm?*, n.d.).

Algorithms curate content by prioritizing, classifying, associating, and filtering information. Prioritization ranks content to bring attention to one thing at the expense of another. Classification involves categorizing a particular entity as a constituent of a given class by looking at any number of that entity's features. Association marks relationships between entities. And filtering involves the inclusion or exclusion of certain information based on a set of criteria (Diakopoulos, 2013, p. 4-8).

Filtering algorithms often take prioritization, classification, and association decisions into account. For instance, in news personalization apps, news is filtered according to how that news has been categorized, associated to the person's interests, and prioritized for that person. Based on filtering decisions certain information is over-emphasized while others are censored (Diakopoulos, 2013, p. 4-8).

The rise of the "age of algorithms" has had a profound impact on society, on politics, and on the news. Algorithms are powerful, efficient and often questionable drivers of innovation and social change (Head, Fister & MacMillan, 2020, p. 4). Today, increasingly sophisticated algorithms are being designed to aid and sometimes completely replace human intervention in decision-making tasks. They seem to do it all at a lower cost and improved efficiency than human effort (O'Neil, 2016). The potential benefits of automated decision-making are myriad and clear, and yet at the same time, there are some risks and concerns involved (Olhede & Wolfe, 2019, p.2).

The large-scale availability of data, coupled with rapid technological advances in algorithms, is changing society markedly (Olhede & Wolfe, 2019, p.2). In our daily lives, algorithms are often used swaying decisions about what people watch, what they buy (Head, Fister & MacMillan, 2020, p. 5) and even how they vote (Epstein & Robertson, 2015). Algorithms filter search results from search engines. They may be programmed to decide who is invited to interview and, ultimately, who gets a job offer. They can be used managing social services like welfare and public safety. They might recommend which loan applicants are a good credit risk. These invisible lines of code can make medical diagnoses and may even establish the length of a criminal sentence (Head, Fister & MacMillan, 2020, p. 4-5).

Algorithms make impactful decisions that can and do amplify the power of businesses and governments (Diakopoulos, 2013, p. 29). While making decisions, algorithms might promote antisocial political, economic, geographic, racial, or other discrimination, for instance, in health care, credit scoring and stock trading (Pasquale, 2011). Algorithms exert power to shape the users' experience and even their perception of the world (Diakopoulos, 2013, p. 3). Despite the fact that their operations might sometimes cause injustice and can shape people's perceptions and affect their choices, people are often unaware of their presence because they are invisible.

Algorithmic power is not necessarily detrimental to people, it can also act as a positive force (Diakopoulos, 2013, p. 2). Algorithms, in fact, are not inherently good or bad. Rather, their effects depend on what they are programmed to do, who is doing the programming, how the algorithms operate in practice, how users interact with them, and what is done with the huge amount of personal data they feed on (Head, Fister & MacMillan, 2020, p. 4). However, it is important to recognize that

they operate with biases and they can make mistakes. The lack of clarity about how algorithms exercise their power over people is the problem. Algorithmic codes are opaque (not transparent) and hidden behind layers of technical complexity (Diakopoulos, 2013, p. 2).

Their effects are important (Barocas, Hood & Ziewitz, 2013; Hamilton, Karahalios, Sandvig & Eslami, 2014; Sandvig, Hamilton, Karahalios & Langbort, 2014). For example, search algorithms structure the online information available to a society, and may function as a gatekeeper (Granka, 2010, p. 364-365; Introna & Nissenbaum, 2000). The search results a Web search engine provides to its users have an outsized impact on the way each user views the Web (Xing, Meng, Doozan, Feamster, Lee & Snoeren, 2014). Researchers tested the effect of personalized search results on Google, and found that results differ based on several factors such as Web content at any given time, the region from which a search is performed, recent search history, and how much search engine manipulation has occurred to favor a given result (Xing, Meng, Doozan, Feamster, Lee & Snoeren, 2014).

Research has demonstrated that the rankings of search results provided by search engine companies have a dramatic impact on consumer attitudes, preferences, and behavior. Internet search rankings have a significant impact on consumer choices, mainly because users trust and choose higher-ranked results more than lower-ranked results. Given the apparent power of search rankings, researchers investigated whether they could be manipulated to alter the preferences of undecided voters in democratic elections. Findings show that biased search rankings can shift the voting preferences of undecided voters by 20% or more, the shift can be much higher in some demographic groups, and such rankings can be masked so that people show no awareness of the manipulation (Epstein & Robertson, 2015).

There is a widely held misconception of algorithms (as mathematical models) and their results being fair, objective and unbiased (O'Neil, 2016). Because algorithms are processed by computers and follow logical instructions, people often think of them as neutral or value-free, but the decisions made by humans as they design and tweak an algorithm and the data on which an algorithm is trained can introduce human biases that can be compounded at scale (Head, Fister & MacMillan, 2020, p. 49). Algorithms also take poor proxies to abstract human behaviour and churn out results. The use of poor proxies to measure and abstract reality can often be discriminative in nature. Algorithms make decisions without having to explain how they arrived at them (O'Neil, 2016). On the contrary, in the case of a human decision maker, there is a feedback loop which allows for correction of errors in judgement (O'Neil, 2016). Moreover, the algorithms that social sites use to promote content do not evaluate the validity of the content, which can and has spread misinformation (Jolly, 2014).

As a conclusion we can say that algorithms are here to stay but they need to be used with caution (O'Neil, 2016).

Life in the Age of Algorithms: The Big Picture

The world of information has been transformed in unexpected ways in the past decade. These changes can be explained, in part, by the impact of algorithms. Some of the factors driving these changes which help us to see the big picture are summarised by Head, Fister and MacMillan, (2020, p. 5-7) as follows:

1. Data collection about our daily lives is happening invisibly and constantly.
2. Advances in data science allow technologists and systems to collect and process data in real time, rapidly and on a vast scale ("big data"). Data collected from numerous sources is quickly correlated.

3. Automated decision-making systems are being applied to social institutions and processes that determine things such as who gets a job, a mortgage, or a loan, access to social services, admission to school or educational services.
4. Machine learning and artificial intelligence, increasingly used in software products that make very significant decisions, often rely on biased or incomplete data sets.
5. The disaggregation of published information and its redistribution through search and social media platforms makes evaluation of what used to be distinct sources (e.g. scholarly articles, newspaper stories), all the more difficult.
6. Profitable industries gather data from people's interaction with computers to personalize results, predict and drive behavior, target advertising, political persuasion, and social behavior at a large scale.
7. These industries appear to have difficulty anticipating or responding to unintended consequences. The rise of social media platforms which have no code of ethics contributes to distrust of established knowledge traditions such as journalism and scholarship.

The technical infrastructure that influences how we acquire information and shapes our knowledge and beliefs has changed dramatically in ways that are largely invisible, by design, to the public. There is a lack of public knowledge about who holds power over information systems as well their algorithms and how that power is wielded. Thus, understanding how information works in the age of algorithms, is of paramount importance for individuals (Head, Fister & MacMillan, 2020, p. 7-8).

News, News Feeds and Algorithms

Among other things, algorithms are also often used to filter the news we see about the world. News feeds, which provide users with frequently updated news, are one application where algorithms play an influential role. For example, Facebook News Feed displays an algorithmically curated or filtered list of stories selected from a pool of all stories created by one's network of friends (Eslami, et al, 2015, p. 153). A research conducted on Facebook users to examine their perceptions of the Facebook News Feed curation algorithm showed that more than half of the participants (62.5%) were not aware of the News Feed curation algorithm's existence at all. They believed every single story from their friends and followed pages appeared in their News Feed (Eslami, et al, 2015, p. 153).

Today, readers are increasingly discovering news through social media, email, and reading apps. Homepage traffic for news sites continues to decrease. Publishers are well aware of this, and have tweaked their infrastructure accordingly, building algorithms that change the site experience depending on where a reader enters from. As a result, people very likely see different front pages of newspapers online because they are customized for individuals. While publishers view optimizing sites for the reading and sharing preferences of specific online audiences as a good thing, because it gets users to content they are likely to care about quickly and efficiently, that kind of catering may not be good for readers (Jolly, 2014).

Algorithms make it much easier not just for people to find the content that they are interested in, but for the content to find them that the algorithm thinks they are interested in". It seems like today algorithms, driven by vast troves of data, are the new power brokers in society (Diakopoulos, 2013, p. 2).

Filter Bubbles

Filter Bubble is the intellectual isolation that occurs as a result of personalisation which facilitates avoiding exposure to information that conflicts with prior knowledge and opinions. It is the result of the curation of the user related information (such as browsing and search history, location, as well as social media feeds). Social media can easily encapsulate users into filter bubbles with the algorithms they use. On one hand, filter bubbles surround users with like-minded people who disseminate information that is aligned with their existing beliefs and opinions. On the other hand, filter bubbles can cause less contact with people who have contradicting viewpoints. Personalized search results from Google and personalized news streams from Facebook are two examples to give for this phenomenon (*Filter bubble*, 2018; Cooke, 2018).

The term filter bubble was first coined by Eli Pariser in 2011, however, the problem itself had been discussed much earlier. In Pariser's conception, the filter bubble is the world created by the shift from "human gatekeepers," such as newspaper editors who curate importance by what makes the front page, to the algorithmic ones employed by Facebook and Google, which present the content they believe a user is most likely to click on (Fitts, n.d.). The technology companies are commercial entities, and therefore to keep their shareholders happy, they need to encourage users to stay on their site for as long as possible to maximize the number of exposures to advertisements. They do so by tweaking the algorithms to deliver more of what users have liked, shared or commented on in the past (Wardle & Derakhshan, 2017, p.52). This new digital universe is "a cozy place, populated by the user's favorite people and things and ideas." (Fitts, n.d.). However, this selective exposure of information causes concern not only because of its cognitive aspects but also moral, political, and social aspects (Cisek & Krakowska, 2018).

There is no doubt that personalization helps fighting against information chaos and information overload while facilitating access to relevant, useful information and avoiding the rest (irrelevant, not useful, irritating, etc.). However, there is an important difference between self-selected personalization and preselected personalization. In preselected personalization algorithms choose the content for users while in self-selected personalization people choose and decide which content they want to see. Obviously this is not something new. People have always (and still are) experienced filter bubbles because there were/are always information gatekeepers (such as parents, governments, religions, social groups) however, there are serious concerns when these bubbles are invisible and involuntary. When people do not know that information they get is personalized, they may assume that it is complete and objective. Algorithms are gatekeepers (in other words censors) and can hinder access to content as well as awareness that there are other viewpoints. Worst of all, they do not base on ethical principles (Cisek & Krakowska, 2018). The value of the filters cannot be denied however, the potential they possess in leaving people blind to ideas or events is quite alarming (Anderson, 2016).

Negative aspects of filter bubbles are summarized as follows by Cisek and Krakowska (2018): "Creating a misleading and erroneous image of reality, an individual mental model; closure in a limited, hermetic circle of information, opinions, views, worldviews, limiting the acquisition of knowledge; confirmation bias and cognitive bias formation; promoting intellectual and emotional laziness".

Bursting filter bubbles is possible, first of all, by realizing that filter bubbles exist, and then developing critical thinking and news as well as information literacy skills. Cisek & Krakowska (2018) make the following suggestions: Seeking for information actively rather than passively consuming what algorithms have chosen; using the benefits of advanced search tools offered by search engines (the Boolean operators, commands, phrase, advanced search, etc.); using various search engines and

comparing results; using search engines that do not track users and do not personalise (such as DuckDuckGo, Qwant, StartPage); using software that helps to get out of the filter bubbles (such as Escape Your Bubble, FleepFeed, Pop Your Bubble) and also keeping in mind that there is the Deep Web.

“The ultimate challenge of filter bubbles is re-training our brains” and training people “to seek out alternative viewpoints”. Because, if/when we recognise that people seek out and consume content for many reasons beyond simply becoming informed, like feeling connected to similar people or affiliating with a specific identity, it means that pricking the filter bubbles requires more than simply providing diverse information (Wardle & Derakhshan, 2017).

Echo Chambers

Echo chamber, in news media, is a metaphorical description of a situation in which beliefs are amplified by repetitive communication inside a closed system. In an "echo chamber", people confront information which reinforces their existing beliefs and views. This can be seen as an unconscious exercise of confirmation bias which may increase political and social polarization and extremism (*Echo chamber*, 2020).

Echo chambers and filter bubbles are two close concepts which are generally used interchangeably. However, “echo chamber refers to the overall phenomenon by which individuals are exposed only to information from like-minded individuals, while filter bubbles are a result of algorithms that choose content based on previous online behavior” (*Echo chamber*, 2020). In other words, filter bubbles contribute to the creation of echo chambers which certainly have political and social consequences.

Echo chambers provide safe spaces for sharing beliefs and worldviews with others, with little fear of confrontation or division (Wardle & Derakhshan, 2017). Agents who are creating dis-information target groups inside echo chambers, “that they know are more likely to be receptive to the message” and there will be “no one to challenge the ideas. It is very likely that the message will then be shared by the initial recipient” (Wardle & Derakhshan, 2017). “As research shows, people are much more likely to trust a message coming from someone they know” (Metzger et al., 2010). This is why dis-information can be disseminated so quickly. It is travelling between peer-to-peer networks where trust tends to be high. The fundamental problem is that filter bubbles worsen polarization by allowing people to live in their own online echo chambers and leaving them with only opinions that validate, rather than challenge, their own ideas (Wardle & Derakhshan, 2017).

Repetition theory lies behind the both phenomenon and it is what makes fake news work, as researchers at Central Washington University pointed out in a study in 2012. A psychologist, Lynn Hasher, from the University of Toronto claims that "repetition makes things seem more plausible," "and the effect is likely more powerful when people are tired or distracted by other information" (Dreyfuss, 2017).

GLOBAL NEWS CONSUMPTION TRENDS

The Reuters Institute for the Study of Journalism at University of Oxford has been publishing annual reports on how news is being consumed in a range of countries since 2012. These reports are prepared based on the surveys of thousands of individuals in dozens of countries from different continents (e.g.

about 50,000 people from 26 countries in 2016, more than 74,000 people in 37 countries in 2018, more than 80,000 people in 40 countries in 2020), along with additional qualitative research, which together make it the most comprehensive ongoing comparative study of news consumption in the world. Reuters' *Digital News Reports* help understand the attitudes and habits of news audiences as well as their awareness of news related issues. Findings are used to explore not only the changing environment around news across countries but also country and time based differences and changes.

Europe remains a key focus, but countries from Asia (such as Japan, South Korea, Taiwan, Hong Kong, Malaysia, and Singapore) along with some Latin American countries (such as Brazil, Argentina, Chile, and Mexico), African countries (such as Kenya and South Africa) and North American countries (the United States and Canada) are also covered in Reuters' reports. Main findings of the last five years' reports are summarized below.

Much of the data in the 2020 report is collected before the Covid-19 virus hit many of the countries covered in the survey, so to a large extent the 2020 report represents a snapshot of the trends before pandemic. But to get a sense of what has changed, key parts of the survey were repeated in six countries (UK, USA, Germany, Spain, South Korea, and Argentina) in early April 2020 (after the pandemic outbreak). After pandemic findings will be addressed separately when necessary.

Sources of News

Between 2012-2017, a consistent pattern is seen, in most countries, regarding the sources people use for news, with television news (about 70% in 2016) and online news (about 75% in 2016) the most frequently accessed, while readership of printed newspapers has declined significantly (from about 40% to 25% in 2016). The biggest change has been the growth of news accessed via social media sites like Facebook, Twitter and Instagram (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 8; 2017, p. 10). The percentage of people saying they use social media as a source of news has risen to 46% in the United States (almost doubled from 2013 to 2016) and in Europe differences observed among countries (the UK 35% and Germany 31%, for instance). Across the entire sample from 26 countries, in 2016, at least one in ten (12%) say social media (Facebook is being the most important for finding, reading/watching, and sharing news) are their **main** source of news, with even higher figures in Australia (18%) and Greece (27%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 7-8).

Data indicates significant generational splits in the sources used for news. Across all countries, younger groups are much more likely to use social media and digital media as their main source of news, while older groups cling to the habits they grew up with (TV, radio, and print; television news being the most important). A third of 18–24s (33%) say (in 2017) social media are their main source of news – that is more than online news sites (31%) and more than TV news and printed newspapers put together (29%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2017, p. 7, 10).

Television remains as a critical source of news for many in 2018 as well, while news apps, email newsletters, and mobile notifications continue to gain in importance (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9). The most recent evaluation of the last nine years' Reuters data, on the other hand, has shown online news overtaking television as the most frequently used source of news in many of the countries covered in the survey. Printed newspapers have continued to decline while social media have levelled off after a sharp rise (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 11).

The use of social media for news has started to fall in a number of countries after years of continuous growth. In 2018, in many countries, growth has stopped or gone into reverse. Taking the United States

as an example, weekly social media use for news grew steadily from 27% in 2013 to a peak of 51% in 2017 before falling back significantly in 2018 to 45% (-6). In the UK usage grew from 20% in 2013 to 41% in 2017 before falling back to 39% in 2018. The decline in Brazil appears to have started in 2016, however usage is still over 65% (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9-10).

In 2019, in many countries, people started to spend less time with Facebook and more time with WhatsApp and Instagram than previous years. However, Facebook still remains by far the most important social network for news. A rise is seen in the use of messaging apps for news as consumers look for more private spaces to communicate. WhatsApp has become a primary network for discussing and sharing news in non-Western countries in 2019 like Brazil (53%) Malaysia (50%), and South Africa (49%). Public and private Facebook Groups discussing news and politics have become popular in Turkey (29%) and Brazil (22%) but are much less used in Western countries such as Canada (7%) or Australia (7%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 9).

There are mainly two factors driving the rapid growth of the use of messaging apps for news. Firstly, one is that people's Facebook networks have got so big over time that they no longer feel comfortable sharing content openly and moving discussion to messaging apps where they can be sure that they are talking to a close circle of friends (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 12). Secondly, one is that encrypted messaging apps like WhatsApp have proved a relatively safe place for free expression (e.g. political views). This is an important factor especially in authoritarian countries like Turkey, Malaysia, and Hong Kong. Reuters' survey findings indicate a strong correlation between use of networks like WhatsApp and self-expressed concern about the safety of posting political messages (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 13).

Media habits changed significantly during the COVID-19 lockdowns. A smaller size survey conducted only in six countries before and after the pandemic had taken effect (in both January and April 2020) has shown that: More people turned to live broadcast television news (weekly TV news consumption rose by an average of five percentage points across all six countries) and to trusted news sources online. But social media were also substantially up (+5) as more people used these networks for finding and sharing news in combination with television and online sites. Additionally, the lockdowns have also accelerated the use of new digital tools, with many people joining online groups or taking part in video conferencing for the first time (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 10-13).

Preferred Access Points (Gateways and Intermediaries) to News

The vast majority of Reuter's 2018 survey's respondents (65%) prefer to get to news through a side door, rather than going directly to a news website or app. Over half (53%) prefer to access news through search engines, social media, or news aggregators, interfaces that use ranking algorithms to select stories, rather than interfaces driven by humans/editors (homepage, email and mobile notifications) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 13). Behind the averages, however, very significant country differences were found. Two-thirds of respondents in Finland (65%) and Norway (62%) prefer to go directly to a website or app. On the other hand, preferred access is often via social media, with over four in ten in Chile (43%), Bulgaria (42%), and Malaysia (40%). In some Asian countries, aggregators or search are the main gateways. In South Korea, 47% say they prefer to access via search, 30% via a news aggregator and only 5% prefer to go directly to a news website or app. In Japan, where Yahoo! is the main news portal, the figure is just 15%. These differences in preferred access points are critical. They show that Nordic publishers still have direct relationships with their readers. Korean and Japanese publishers, on the other hand, find themselves much more dependent on third-party platforms to access audiences (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 14).

In terms of access points for online news, habits continue to become more distributed in 2020 – as more and more people embrace various digital platforms that were initially used most intensely by younger people. Across all countries, just over a quarter (28%) prefer to start their news journeys with a website or app, followed by social media (26%). Those aged 18–24 (so-called Generation Z) have an even weaker direct connection with news brands (16%) and are almost twice as likely to prefer to access news via social media (38%). Across age groups, use of Instagram for news has doubled since 2018 (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 23).

As findings indicate more people are discovering news through algorithms than editors. More than half of the survey participants (54%), in 2017, prefer paths that use algorithms (search, social, and many aggregators) to select stories rather than editors or journalists (direct, email, and mobile notifications) (44%). This effect is even more apparent for those who mainly use smartphones (58%) and for younger users (64%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2017, p. 23).

On one hand, many people are turning to social networks and news aggregators for online news. Aggregators are preferred because of both speed of update and convenience in bringing multiple sources into one place, while social networks are preferred for interactivity (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 11). On the other hand, respondents everywhere are expressing some concerns about the possible negative impact of algorithms, with Norwegians and British amongst those who most fear that key information or challenging viewpoints might be lost in an algorithmically-driven filter bubble (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 12).

News Avoidance and News Overload

Polarisation, misinformation, and low trust are not the only issues the news industry is facing today. There is also news avoidance and news overload problems. Reuters' data from the 2019 survey reveals that almost a third (32%) of participants actively avoid the news. Compared to 2017 data, avoidance is up 3 percentage points overall and 11 points in the UK, driven by boredom, anger, or sadness over Brexit. People say they avoid the news because it has a negative effect on their mood (58%) or because they feel powerless to change events or it is because they cannot rely on news to be true. News avoidance is highest in Croatia (56%), Turkey (55%), and Greece (54%). It is lowest in Japan (11%) where reading the news is often seen as a duty (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 10, 26; 2017, p. 9).

Similarly, about one-third of participants (28%) agree that there is too much news these days and constant news updates and different perspectives make it hard to know what is really going on. A common complaint is that users are bombarded with multiple versions of the same story or of the same alert. There is too much conflicting and confusing news. Perception of overload is highest in the United States (40%). It is lower in countries with a smaller number of publishers like Denmark (20%) and the Czech Republic (16%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 26).

The evidence that some people are avoiding the news or are worn out by the amount of news give rise to new initiatives such as *slow news* and *constructive or solutionsbased journalism* as well as *explanatory journalism* (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 27).

Sharing of News

Social networks encourage not only discovery, but also discussing and sharing the news. Around a quarter of internet news users (24%) share news via social media during the average week; these are people who are closely interested in subjects like politics, business, technology, or the environment. The super sharers tend to be heavy news users, often using multiple devices (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 10).

Most people share predominantly news of which they approve (Finland, Australia, and the United States) which in turn may be affecting the amount of positive news stories that people get exposed to. By contrast, sharers in the UK tend to be more combative or cynical and are comparatively more likely to share things they do not like (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 10).

Preferences for Objective News vs Partial News

Reuters' 2020 survey shows that the majority (60%) prefer news that has no particular point of view and that only a minority (28%) prefer news that shares or reinforces their views. Data across nine countries shows that the majority in each country say they prefer news with no particular point of view. This is not surprising given that traditional expectations are that journalists *should* produce neutral and detached news, but the differences between countries are striking. This preference for neutral news is strongest in Germany, Japan, the UK, and Denmark – all countries with strong and independent public broadcasters. A preference for more partial news is strongest in Spain, France, and Italy as well in the United States (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 15).

In the United States, where both politics and the media have become increasingly partisan over the years, Reuters researchers do find an increase in the proportion of people who say they prefer news that shares their point of view – up six percentage points since 2013 to 30% in 2020. On the contrary over time in the UK the proportion that prefers news that 'shares their point of view' has declined six percent (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 16).

Reuters' recent qualitative study of news behaviours amongst under-35s has shown that younger age groups in particular tend to respond well to approaches and treatments that take a clear point of view. Survey data also show that, across countries, young people are also less likely to favour news with no point of view (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 17).

In reality most people like to mix news that they can trust with a range of opinions that challenge or support their existing views. Reuters' 2020 survey reveals, however, that those with extreme political views are significantly less attracted to objective news (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 17).

Trust in the News Media

Across all countries, the average level of trust in the news in general remains relatively stable in 2018. Fewer than half of the Reuters' 2018 survey participants (44%) say they trust the media most of the time but they are more likely to trust the media they themselves use most of the time (51%). By contrast, only a third of the sample says they trust the news they find in search engines (34%) most of the time, while news in social media is seen as even more unreliable (23%). Looking at more detailed data, from 2018, on general news trust, more movement and significant variations across countries are

seen. Finland is holding steady at the top (62%) along with Portugal (62%). Greece (26%) and South Korea (25%) remain anchored at the bottom, though their scores have each increased by 2 percentage points. Trust in the news is substantially up in a number of countries, notably Ireland, Canada, the Netherlands, and Slovakia. Declining trust often seems to be linked to political tension. Trust is down 7 points in Spain (44%) after the Catalan referendum. It is also down in Austria (-4) following a divisive series of elections and in Poland (-5) where the government has been accused of cracking down on private media in the name of combating 'fake news' (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 16).

Reuters' survey also reveals the most and least trusted brands in 37 countries. Findings indicate that brands with a broadcasting background and long heritage tend to be trusted most, with popular newspapers and digital-born brands trusted least (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9).

In 2019, across all countries, the average level of trust in the news in general is down 2 percentage points to 42% and less than half (49%) agree that they trust the news media *they themselves use*. Trust levels in France have fallen to just 24% (-11) following the media coverage of the Yellow Vests movement. Trust in the news found via search (33%) and social media remains stable but extremely low (23%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 9).

Trust in the news media seems to continue to fall globally in 2020, as well. In Reuters' 2020 poll across countries, less than four in ten (38%) said they trust most news most of the time – a fall of four percentage points from 2019. Less than half (46%) said they trust the news they use themselves (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 9). Considerable country differences are seen, ranging from Finland and Portugal where over half (56%) say they trust most news most of the time, to less than a quarter in Taiwan (24%), France (23%), and South Korea (21%). Just six countries in 2020 have trust levels of more than 50%. Notable changes over the last 12 months include a 16-percentage point fall in Hong Kong (30%) following violent street protests over a proposed extradition law. In Chile, which has seen regular demonstrations about inequality, the media has lost trust (-15). There were also significant falls in the United Kingdom (-12), Mexico (-11), Denmark (-11), Bulgaria (-7), Canada (-8), and Australia (-6) where Reuters' poll coincided with bitter debates over the handling of some of Australia's worst-ever bush fires. Consequently, divided societies seem to trust the media less, not necessarily because the journalism is worse but because people are generally dissatisfied with institutions in their countries and perhaps because news outlets carry more views that people disagree with (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 14).

In terms of trust for information about coronavirus, national news organisations score relatively well, behind doctors and health organisations but ahead of individual politicians and ordinary people. At around the peak of the lockdowns, trust in news organisations around COVID-19 was running at more than twice that for social media, video sites, and messaging applications where around four in ten see information as untrustworthy (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 12).

Concerns About Misinformation and Disinformation

More than half of Reuter's 2018 global survey sample (54%) expresses concern or strong concern about 'what is real or fake', when thinking about online news. There are significant country variations, with Brazil (85%), Spain (69%), France (62%), and the US (64%) at the top end. These are all polarised countries where recent or ongoing election or referendum campaigns have been affected by disinformation and misinformation. By contrast, there is much less concern in Germany (37%) and the

Netherlands (30%) where politics tends to be less polarised and social media play a less important role as a source of news (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 18).

Global concerns about misinformation remain high in 2019 and 2020. Even before the coronavirus crisis hit, in 2020 more than half of Reuters' global sample (56%) said they were concerned about what is real and fake on the internet when it comes to news. Concern tends to be highest in parts of the Global South such as Brazil (84%), Kenya (76%), and South Africa (72%) where social media use is high and traditional institutions are often weaker. Lowest levels of concern are in less polarised European countries like the Netherlands, Germany, and Denmark (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 17). The biggest increase in concern came in Hong Kong in 2020 (+6) as the conflict between the government and student protesters continued and also in Finland (+4), where higher than average concern was seen over false and misleading information from foreign governments (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 17).

Channels of Misinformation

People see social media as the biggest source of concern about misinformation (40%), well ahead of news sites (20%), messaging apps like WhatsApp (14%), and search engines such as Google (10%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 19)

Breaking the data down further, across all countries 29% say they are most concerned about Facebook, followed by YouTube (6%) and Twitter (5%). But in parts of the Global South, such as Brazil, people say they are more concerned about closed messaging apps like WhatsApp (35%). The same is true in Chile, Mexico, Malaysia, and Singapore. This is a particular worry because false information tends to be less visible and can be harder to counter in these private and encrypted networks. By contrast, in the Philippines (47%) and the United States (35%) the overwhelming concern is about Facebook, with other networks playing a minor role. Twitter is seen to be the biggest problem in Japan and YouTube in South Korea. Facebook is used much less widely in both of these countries (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 19). Given these concerns, a number of platforms including Facebook, Twitter, and YouTube have taken down misinformation that breached guidelines (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 20).

The coronavirus crisis has shown that these networks can be used to spread all kinds of damaging misinformation, not just about politics. In Reuters' after corona survey in limited number of countries, almost four in ten (37%) said they had come across a lot or a great deal of misinformation about COVID-19 in social media like Facebook and Twitter, and 32% via messaging apps like WhatsApp (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 19).

Responsibility for Regulation of Content

Most respondents believe that publishers (media companies and journalists) (75%) and platforms (like Google and Facebook) (71%) have the biggest responsibility to fix problems of fake and unreliable news. This is because much of the news they complain about relates to biased or inaccurate news from the mainstream media rather than news that is completely made up or distributed by foreign powers (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9, 19).

But there is a much more mixed picture when it comes to government intervention. There is some public appetite for government intervention to stop 'fake news', especially in Europe (60%) and Asia

(63%). By contrast, only four in ten Americans (41%) thought that the government should do more (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9).

Evaluations of the News Media

In 2019 survey of Reuters, respondents were asked to evaluate the performance of news media in five areas: whether they think the news media focuses on the right topics, helps them properly understand current events, keeps them up to date, uses the right positive/negative tone, and does a good job of monitoring and scrutinising the powerful (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 26).

Data reveals that the news media are seen as doing a better job at breaking news than explaining it. Across countries, almost two-thirds feel the media are good at keeping people up to date (62%), but are less good at helping them understand the news (51%). Less than half (42%) think the media does good in its watchdog role in other words in holding rich and powerful people to account. There are interesting country differences in terms of these attributes. News organisations in Northern European countries like Finland (51%) and Norway (51%) tend to have the best reputation for holding the rich and powerful to account. By contrast, media in nations such as South Korea (21%), Hungary (20%) and Japan (17%) are seen to be doing a poor job in this regard (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 26).

Looking at the two other dimensions in the survey, it is found that surprisingly little criticism of the media's agenda-setting role, with only a minority (25%) feeling that the topics selected are not relevant to their lives. There seems to be more of a problem with the tone taken by the news media to those stories. Four in ten (39%) think that the news media take too negative a view of events (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 27).

Paying for Online News and Rise in Donations: A New Business Model

Although online environment has enabled many publishers to reach more people than ever before, the related business models remain extremely challenging. Traditional media companies laying off staff in the light of sharp declines in print revenue and continuing problems in monetising audiences online (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 22). Whilst around 45% of the total survey sample pay for a printed newspaper at least once a week, it has been much harder to persuade readers to pay for general news online (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 23).

Publishers who depend on digital advertising revenue have been hit the hardest. The revenue has weakened due to (a) the move to smaller mobile screens (b) the market power of Facebook and Google and (c) the rise of ad-blocking. According to Reuters' 2016 data, ad-blocking is running at between 10% (Japan) and 38% (Poland), but much higher amongst under-35s. Around a third of the survey sample say they plan to install an ad-blocker on their smartphones in the next year. There is not one single reason for ad-blocking. Mostly it reflects unhappiness with the volume and distracting nature of advertising but there are strong privacy concerns in the Netherlands and Spain (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 22).

With existing models of online advertising increasingly broken, publishers have renewed their focus on alternative forms such as branded and sponsored content. Sponsored content and its labelling is still

an emerging area with much room for confusion. In looking at six countries where the practice is most prevalent, it is found that consumers are most comfortable in Canada and the United States and most resistant in Germany and Korea, where only a fifth (21%) agreed that the labelling was sufficiently clear and a third (32%) disagreed (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2016, p. 22).

While the digital advertising revenue is at stake and not enough, on its own, to support high quality journalism, across the industry there is a push to persuade consumers to pay directly for online news through subscription, membership, donations or per-article payments. The average number of people paying for online news has edged up in 2018 in many countries, with significant increases coming from Norway (+4 percentage points), Sweden (+6), and Finland (+4). All these countries have a small number of publishers, the majority of whom are relentlessly pursuing a variety of paywall strategies. They have the added benefit of coming from wealthy societies that value news, have a strong subscription tradition, and where language and the small size of their market protects them from foreign competition (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 22). But in more complex and fragmented countries, there are still many publishers who offer online news for free (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9).

The rise of subscription has raised concerns about a two-tier system, where high-quality news is reserved for those who can afford it. This is why some news organisations prefer to keep access free but to ask for voluntary contributions (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 23). Findings indicate that relatively small numbers currently donate to news organisations – just 1% in the UK and Germany, rising to 2% in Spain and 3% in the United States. But the scale of the opportunity could be much bigger. On average a quarter of the Reuter's 2018 sample (22%) say they might be prepared to donate to a news organisation in the future if they felt it could not cover their costs in other ways (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 25). In qualitative responses, donations seem to strike a chord with those who are worried about 'fake news' and the independence of the media (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 24).

In 2019, despite the efforts of the news industry, only a small increase in the numbers paying for any online news, whether by subscription, membership, or donation, are seen. Growth is limited to a handful of countries mainly in the Nordic region (Norway 34%, Sweden 27%) while the number paying in the US (16%) remains stable after a big jump in 2017. Even in countries with higher levels of payment, the vast majority only have one online subscription. One encouraging development though is that most payments are now 'ongoing', rather than one-offs. In some countries, subscription fatigue may also be setting in, with the majority preferring to spend their limited budget on entertainment (Netflix/Spotify) rather than news (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 9).

In 2020, significant increases have been seen in payment for online news in a number of countries including the United States 20% (+4) and Norway 42% (+8), with smaller rises in a range of other countries. It is important to note that across all countries most people are still not paying for online news. Overall, the most important factor for those who subscribe is the distinctiveness and quality of the content. Subscribers believe they are getting better information. However, a large number of people are perfectly content with the news they can access for free and there are a very high proportion of non-subscribers (40% in the United States and 50% in the UK) who say that nothing could persuade them to pay (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 9).

Impact of News/Media Literacy

For the first time in 2018 Reuters researchers have measured news literacy and have identified different levels of news literacy within their online sample. Those with higher levels of news literacy tend to prefer newspaper brands over TV, and use social media for news very differently from the wider population. They are also more cautious about interventions by governments to deal with misinformation (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 9).

There is also a clear link between knowledge about how the news industry works and likelihood to pay for news in the future. Findings of Reuters' 2018 survey reveal that more than two thirds of respondents (68%) are either unaware of the problems of the news industry or believe that most news organisations are making a profit from digital news. In reality, most digital news sites are operating at a loss, subsidised by investors, alternative revenue streams, or historic profits from broadcast or print. Those that were aware that digital newspapers are making a loss (10% of the sample) are more likely to pay for a news subscription or give a donation (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 24).

One of the impacts of news/media literacy was a change of habits in news use. One positive finding of Reuters' 2019 survey is that over a quarter (26%) have started relying on 'more reputable' sources of news – rising to 36% in Brazil and 40% in the United States. A further quarter (24%) said they'd stopped using sources that had a 'less accurate reputation', with almost a third (29%) deciding not to share a potentially inaccurate news article. The interpretation of 'reputable', 'less accurate', 'dubious', and other subjective terms were left to respondents to determine. Behaviour seems to have changed most in countries where concern about misinformation is highest. Almost two-thirds (61%) in Brazil said they had decided not to share a potentially inaccurate story in social media and 40% in Taiwan after recent elections marked by misinformation – compared with just 13% in the Netherlands, the country with the lowest level of concern in the survey. The shift to more reputable sources is a bit more evenly split (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 22).

Format Preference for News (Text, Podcast, Video)

Reuters has been tracking content type preferences since 2014. Findings in 2018 indicate an overwhelming preference towards reading rather than watching. The US has pushed furthest towards video with 12% saying they mostly consume news in video (+2), but even here 62% say they mostly prefer to consume in text. This figure rises to 86% in Finland. There have been some changes over time (especially in the United States and Spain), but these have been modest given the increase in exposure to video through social media. Findings reveal a split between different countries and cultures. All Asian countries (including Japan) lean towards wanting more online news video, however still two-thirds of respondents in Asian countries say they mostly prefer text. In the United States and Northern European countries there is a strong vote for fewer online videos. Age does not seem to be a significant factor (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 28).

Looking at consumption of different kinds of video news, interesting regional differences are seen in 2020. Nine in ten of the online population say they access video news online weekly in Kenya (93%), the Philippines (89%), and Hong Kong (89%), but only around half this proportion do in Northern European countries such as Germany (43%), Denmark (41%), and the UK (39%). Across countries over half (52%) access video news via a third-party platform each week, such as YouTube, Facebook, and Twitter, with a third (33%) accessing via news websites and apps. But again, there are very significant

differences between countries. In Hong Kong three-quarters (76%) access video news via third-party platforms but this figure is less than a quarter (23%) in the UK (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 28).

Podcasts are also becoming popular across the world due to better content and easier distribution. New audio devices are making discovery easier, while advertising and sponsorship opportunities are growing (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 29). Young people are far more likely to use podcasts than listen to speech radio (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 10). Overall, a third of the entire survey sample in 2018 (34%) listens to a podcast at least monthly but there are significant country differences. Podcasts are twice as popular in Ireland (38%) as they are in the UK (18%). One theory is that podcasts tend to perform best in countries like the United States (33%) and Australia (33%) where people spend a lot of time in their cars. The lower levels of usage in the Netherlands (18%) may relate to shorter commuting distances and more bike travel. But this cannot be the full explanation. Loyalty to radio, levels of supply, and the amount of promotion are also important factors. Proportionally under 35s listen to twice as many podcasts as over 45s. This is not surprising given that this is a generation that has embraced both smartphones and on-demand services such as Netflix and Spotify. Older groups, by contrast, remain more likely to listen to radio (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 29).

The proportion using podcasts has grown significantly in 2020, though coronavirus lockdowns may have temporarily reversed this trend. Across countries, half of all respondents (50%) say that podcasts provide more depth and understanding than other types of media (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 9). Many podcasts contain an informational element (sport, lifestyle, true crime) but podcasts specifically about news and politics are amongst the most widely listened to. About half of podcast users listen to a news podcast in the United States, where the market has developed furthest. Podcast users in the United States say that the format gives greater depth and understanding of complex issues (59%) and a wider range of perspectives (57%) than other types of media (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 25). News podcasts are most popular with 25–34s (young millennials) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 26).

The Use of Smartphones and New Devices for News

The importance of smartphones – and people’s dependence on them – shows no sign of slowing down. On average 62% of survey sample in 2018 say they use the smartphone for news weekly (+6), only just behind the laptop/computer at 64%. In most countries, smartphone reach for news has doubled in six years (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 27).

The smartphone continues to grow in importance for news in 2019, with two-thirds (66%) using the device to access news weekly (+4). Mobile news aggregators like Apple News and Upday are becoming a more significant force. AppleNews in the United States now reaches more iPhone users (27%) than the *Washington Post* (23%) (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2019, p. 10).

Dependence on smartphones continues to grow. In 2020, over two-thirds (69%) of people use the smartphone for news weekly and these devices are encouraging the growth of shorter video content via third-party platforms as well as audio content like podcasts. Those who use smartphones as a main device for news are significantly more likely to access news via social networks. Usage is often highest in parts of the Global South such as Kenya (83%) and South Africa (82%) where fixed-line internet tends to be less prevalent. Access is lowest in Canada (55%), Japan (52%), and in much of Eastern Europe,

though even here the smartphone has become – or is on its way to becoming – the main platform for accessing news (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 29).

Across countries almost half (48%) use two or more devices to access news each week compared with 39% in 2014. Computers and laptops remain important for many but the convenience and versatility of the smartphone continues to win out. In the UK the smartphone overtook the computer in 2017 and is now used by around two-thirds of the survey sample. Tablets are flat in terms of usage for news (26%) with a small group of older and richer users continuing to value their larger screens (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2020, p. 30).

These trends are important because shorter audience attention spans and smaller mobile screens are affecting the type of news content produced. Pictures and videos need to be reformatted using vertical aspect ratios and often annotated with text to work in a mobile context (Newman, Fletcher, Kalogeropoulos, Levy & Nielsen, 2018, p. 27).

NEWS LITERACY

The ability and inclination to think critically about news is valued more than ever (Lai Ku, Kong, Song, Deng, Kang & Hu, 2019, p. 3), since the post-truth age is marked by an increasing amount of ambiguous information, polarizing views, heuristic thinking, and algorithmic bias (Vraga & Tully, 2021, p. 150).

Today, news is produced by more people and distributed across a greater number of platforms and technologies than ever. This new landscape of nearly unfettered participation and accessibility has contributed to an expansion of “news” to include far more than the products of professional journalism outlets. Consequently, there is a growing concern not only about proliferating misinformation but also about people’s ability to combat misinformation and to locate and distinguish relevant and high-quality information (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 1).

News literacy, today, is seen as a means to improve critical media consumption (Vraga & Tully, 2021, p. 150). When the potential of news in informing citizens and fostering civic engagement and democratic participation as well as the limitations of news media and changes in news production processes (especially on producers’ side) are taken into account the importance of news literacy becomes obvious (Ashley, Maksl & Craft, 2013, p. 7).

Concept of News Literacy

Before defining news literacy, it could be better to clarify what *news* and *literacy* mean. “News” is a broad term that means different things to different people and in different contexts, however, it can be defined as any accurate information that facilitates decision-making on both personal and social issues, thus enabling people to more effectively engage with society (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 3). Social media further extends this definition to include a variety of claims, stories and information about public affairs. Moreover, in the digital news landscape, individuals are faced with a barrage of content that looks like news but could in fact be propaganda, marketing, or misinformation, which complicates attempts to figure out what news is and what it is not (Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 3).

The simplest meaning of “literacy” is the ability to read and write. However, the concept of literacy goes beyond simply being able to read; it has always meant the ability to read with meaning, and to understand. It is the fundamental act of cognition. Today, literacy notion is used as a metaphor referring to a baseline of knowledge and competence of a field of study (Bawden, 2001, p. 220, 223). For instance, news literacy implies being conversant with news and having basic skills needed to consume and evaluate news and participate in news production (Malik, Cortesi & Gasser, 2013, p.6).

News literacy addresses the knowledge and skills necessary to become a more mindful and skeptical news consumer who understands the relationship between journalists, news production, citizens, and democracy in changing media environments. News literacy requires an understanding of both the content and contexts of news production and consumption, including the role of social media platforms and users in the news ecosystem, and the ways in which consumers’ beliefs color their selection and interpretation of news (Vraga & Tully, 2021, p. 151)

News literacy, in other words, includes an understanding of the role news plays in society; the motivation to seek out news (having a sense of the importance of following news and understanding the consequences of ignoring the news); the ability to find, identify and recognize news (this is important when the shifting boundaries of news definition is taken into account); the ability to critically evaluate news; and the ability to create news (Malik, Cortesi & Gasser, 2013, p. 8-9).

News Literacy is also defined as knowledge of the personal and social processes by which news is produced, distributed, and consumed, and skills that allow users some control over these processes (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 5).

Vraga, Tully, Maksl, Craft and Ashley (2021, p. 5) propose five domains, namely context, creation, content, circulation, and consumption, as the building blocks of news literacy.

Context

Context is defined as the social, legal, and economic environment in which news is produced. Knowledge about contexts includes identifying dominant business structures of news organizations, social media and technology firms, the roles other organizations like public relations and government play in influencing content, and the legal protections and constraints in which content producers within and outside of news organizations operate in global contexts. Skills relating to news contexts include how well individuals interpret constraints to expressive behaviour, whether that is evaluating terms of service for social media sites or deciding if constitutions or laws would protect objectionable speech. This skill, in particular, allows individuals to exercise some control over their relationship with news (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 6; Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 6-7).

Creation

Creation is defined as the process in which journalists and others engage in conceiving, reporting, and ultimately creating news stories and other journalistic content. Knowledge about news creation includes knowledge about characteristics of journalists, identifying conceptions journalists have about their roles in society as well as how those roles differ among societies, the norms that underlie their work, and the routines in which journalists engage in reporting and content creation taking into account cross-cultural similarities and differences. Creation skills involve the ability to discern newsworthiness and to use that information to create messages, such as tweets or posts that share news (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 6; Tully, Maksl, Ashley, Vraga & Craft, 2021, p.7-9).

Content

Content is defined as the qualitative characteristics of a news story that distinguishes it from other types of media content. Knowledge of news content includes recognizing news values, understanding dominant ways in which news is often presented, such as episodic or thematic frames, and recognizing key features of news, such as use of sources and evidence of verification. It also includes developing skills to identify various kinds of news content, as opposed to opinion or advertising, and evaluate the quality and credibility of news (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 6-7; Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 9-10).

Circulation

Circulation is defined as the process through which news is distributed and spread to potential audiences. Knowledge about news circulation first requires that news consumers recognize that news circulation is a process influenced by a variety of actors in a social system. Skills related to circulation include recognizing the outcome of personalization in search and social feeds or customizing social media settings. These skills reflect that users understand circulation and are able to exercise some control over their exposure (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 7; Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 10-11).

Consumption

News consumption is defined as the personal factors that contribute to news exposure, attention, and evaluation. Knowledge about news consumption involves understanding that people's personal biases and predispositions affect news exposure, attention, and evaluation. Skills related to consumption should focus on individuals' ability to evaluate their own news exposure and consumption choices, attention, and evaluation and then to curate a news diet with diverse sources that fits their information needs (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 7; Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 11-13).

Together, these five domains comprise news literacy. Focusing on and holistically addressing all these building blocks offer conceptual clarity to develop a comprehensive news literacy curriculum that keeps up with the pace of change in the news, information, and technology sectors (Vraga, Tully, Maksl, Craft & Ashley, 2021, p. 7-8).

Critical Thinking and News Literacy

Critical thinking in the post-truth era demands that news users develop and maintain a skeptical way of knowing, and cultivate the ability to discern evidence-based and unbiased information to make sound judgments (Lai Ku, Kong, Song, Deng, Kang & Hu, 2019, p. 1).

In the post-truth age, facts and objective evidence are less powerful in shaping public opinion than personal beliefs, anecdotes, and popular views (Cooke, 2017). Critical thinking is the first line of defense when information cannot always be trusted, because it guides people to hold beliefs that are consistent with available evidence. A fundamentally important characteristic of critical thinking is an ability to seek evidential foundations in justifying a viewpoint (Lai Ku, Kong, Song, Deng, Kang & Hu, 2019, p. 3).

Critical thinking plays an essential role in news literacy, which involves knowledge about the news media, and the ability to think about the credentials and quality of the news that results from such knowledge (Rosenbaum, Beentjes, & Konig, 2008). Individuals are not only required to gain knowledge

about news industries and news audiences, but they also need to learn how to apply such knowledge in reasoning about news messages. Hobbs (2010) has specified critical thinking skills central to news literacy. There is a generally agreed core set of critical skills in the domain of news: (1) understanding the standpoints and purposes of a news message, (2) evaluating the strength and quality of evidence, (3) distinguishing facts from opinions, (4) identifying biases, and (5) sharing informed points of views in a digital media environment (Lai Ku, Kong, Song, Deng, Kang & Hu, 2019, p. 4).

The perils of accepting information based on convenience, emotional appeal, popularity, or other heuristics rather than evidence or facts is amplified by digital news platforms. Social media encourages heuristics processing through consuming news occasionally and sporadically without devoting much time to understanding and evaluating the content. Such heuristic-based consumption is often done by scanning the headlines, keywords, pictures, or other highlights of the news bringing a general impression of news content without in-depth understanding of the news story and complete formation of diverse perspectives (Meijer & Kormelink, 2015). Heuristic processing of news stories is also encouraged through the social media personalized algorithms. Use of algorithms has changed the nature of news story selection from the professional judgment of editors or journalists to readers' interests and preferences (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2017). This brings risks as the algorithms control the flow of news information the public receive, with the public poorly informed about how algorithms select news for them (DeVito, 2017), and many are unaware that such algorithms exist at all (Rader & Gray, 2015). The social media algorithms contribute to a news environment that makes critical thinking difficult because information is filtered based on the user's existing beliefs and preferences: there is a risk of creating "echo chambers" where users only receive content with similar viewpoints from like-minded people. In the absence of counter and diversified viewpoints, one's opinion is constantly rewarded, which further encourages the individual to seek information that is compatible with his or her view. Critical thinking in news is essentially the elimination of heuristics processing as well as reasoning based on prior beliefs or popular beliefs (Lai Ku, Kong, Song, Deng, Kang & Hu, 2019, p. 6).

Relationship with Other Literacies

News literacy is an emerging field within the disciplines of media literacy, journalism education, information literacy, and other related areas (Kajimoto & Fleming, 2019).

Concurrent with the growth of the field of news literacy, researchers from a number of disciplines seek consensus not only on the definition of the concept but also on its components and the broader fields news literacy is related. Although it seems like researchers could not reach a consensus mainly due to the theoretical and conceptual overlap among news literacy, information literacy, digital literacy, critical literacy, and media literacy, everyone agrees that news literacy is a subset of the broader field of media literacy (Ashley, Maksl & Craft, 2013, p. 8). The difference between the news literacy and the other related literacies is often ambiguous because in practice, none of these domains is standardized (Kajimoto & Fleming, 2019). While news literacy is a subset of media literacy, media literacy is a subset of information literacy. Critical literacy and digital literacy are prerequisites for all three of them.

News literacy is, in fact, at the intersection of both the information and media literacies (or recently known as media and information literacy), as news is a type of information which can be delivered through the media. However, its connection to civic engagement is what conceptually distinguishes it from other information or media (Malik, Cortesi & Gasser, 2013, p.7).

The description of news literacy as an application of critical-thinking skills is similar to definitions of media literacy found in its extensive research literature. There are dozens of competing definitions of media literacy and information literacy (as well as competing related literacies, such as digital literacy and 21st century literacy, among others). Every advocacy group and research organization has its own definition that emphasizes the skills which it feels to be most important (Malik, Cortesi & Gasser, 2013, p. 7). Media literacy generally focuses on the idea of mass media, its purposeful means and production ends (Farmer, 2019, p. 4). It commonly is defined in terms of the ability to analyze and evaluate messages across the range of media platforms. Ability to create messages is also included by many researchers as a component of media literacy. Others describe media literacy as a skill essential to citizenship (Craft, Ashley & Maksl, 2016, p. 144). But beyond critical-thinking skills and the relevant aspects of media platforms what news literacy specifically comprises is the things to know in order to effectively analyze and evaluate news messages (Craft, Ashley & Maksl, 2016, p. 145).

Media literacy fits well under the umbrella of information literacy which is defined as the set of skills needed to find, retrieve, analyze, and use information (American Library Association, 2021). News literacy involves accessing, understanding, evaluating, and interpreting news messages (Farmer, 2019, p. 4) while on the other hand, it fits under the media literacy umbrella. One dominant feature, which distinguishes news literacy from its longer-recognized counterpart, media literacy is the focus which is put exclusively on the deconstruction of news content and methods specific to the process of news production, which are not applicable to other types of media content (Kajimoto & Fleming, 2019).

News Literacy Curriculum

The core mission of the news literacy curriculum is broadly recognized as “citizen empowerment” in that the critical thinking skills necessary for the evaluation of news reports and the ability to identify fact-based, quality information and encourage active participation and engagement among well-informed citizens. News literacy training has been traditionally conducted under the umbrella of media literacy, however especially after the increased global concerns over “post-truth” media consumption and the “fake news” phenomena news literacy curriculum, on its own, has become part of academic discourse in different disciplines (Kajimoto & Fleming, 2019).

News literacy is sometimes narrowly framed as the transfer of verification skills so consumers can check facts and sources and identify misinformation. While these are valuable outcomes of news literacy education, knowledge and skills that make someone news literate compose a broader framework (Tully, Maksl, Ashley, Vraga & Craft, 2021, p. 3). For instance, news literacy education helps people identify partisan misinformation and be skeptical of news they encounter, and encourage skepticism toward political conspiracy beliefs. Developing skepticism toward news and information is paramount to distinguishing high-quality content from low-quality or false information (Vraga & Tully, 2021, p. 154)

Issues which should be focused in a news literacy curriculum are indicated by Farmer (2019, p. 5) as follows: the power of reliable information and the free flow of information, the mission of the press and its relation to government, how journalists work and make decisions, the impact of digital revolution and news media structural changes on news consumptions, news and reader responsibilities and why news and its literacy matters (Farmer, 2019, p. 5).

The detailed investigation and the understanding of the news landscape which is presented in this report help us to compose a list of subjects to address within a comprehensive news literacy curriculum: distinguishing between journalism and other information providers, distinguishing

between news and opinion, distinguishing news versus sponsored content, identifying ads, distinguishing between assertion versus verification, distinguishing between evidence and inference, deconstructing news based on evidence and source reliability, distinguishing between news media bias and audience bias, identifying reliable sources of information, determining suitable and reliable search strategies, determining the trustworthiness of social media postings, explaining why sponsored content might not be reliable, determining the trustworthiness of a photograph, determining the reliability and accuracy of sources, reading and thinking critically, identifying the author/creator of a source, identifying bias (Farmer, 2019, p. 5-7), sifting fact from falsehood, managing algorithms, bursting filter bubbles and reaching beyond echo chambers, recognizing traps in arguments, understanding search-engine rankings and of how algorithms filter the content, developing fact-checking abilities, and getting familiar with fact-checking platforms/services and recognizing their limitations.

CONCLUSIONS

We live in an increasingly complex information landscape and the line between producers and consumers of news is blurred. While ambiguous information proliferates, social media facilitates its speedy dissemination. Additionally, the number of people who use social media to get access to the news is increasing. As a result, news consumers today: need to be competent, knowledgeable, active and intelligent users; should be able to critique the news; should be able to verify the news; should be able to seek and find the news that is *not* being prioritized; should be able to understand the difference between the various providers and provocateurs of news. Which means they need to be news literate. In a post truth era, where ambiguous information proliferates and manipulation through misinformation becomes widespread, it is crucial that every and each member of the society is equipped with news literacy skills.

The following parts of this report will present the existing situation in project partner countries, namely Latvia, Serbia, Slovenia and Turkey, as well as the findings of a survey which is carried on news consumption, production and sharing behaviour of adults in these countries. Findings will be used to develop a news literacy online training course (MOOC) which will be designed to teach the skills necessary to become smart consumers of news.

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PART 2

MEDIA AND NEWS LITERACY IN PARTNER COUNTRIES

INTRODUCTION

In the second part of the *Study report*, the current state regarding media and news literacy in partner countries will be presented, as well as the habits, needs, and expectations of target groups on this subject. This part consists of three chapters. The first one is entitled *Brief overview of the current state* and covers four country reports on media and news literacy. By reviewing existing strategic documents, research, texts, and online resources, the authors gave a brief overview of the state of media/news literacy in their countries. The second chapter is devoted to the analysis of an extensive news use survey conducted in the partner countries. And the third, final chapter summarizes all the results and findings from the first two and gives conclusions and guidelines for further development.

BRIEF OVERVIEW OF THE CURRENT STATE

Serbia

Unlike the term media literacy (in Serbian: medijska pismenost), the term news literacy is brand-new and less unknown in Serbia. Moreover, an adequate translation has not been adopted yet. In one of the few narratives related to this topic, it was stated: “There has been lack of consensus about the term that should be used in the Serbian language. There are some recommendations for it: “njuz pismenost”, “pismenost vesti”, “novinska pismenost”, “novinarska pismenost” or descriptively “the understanding of informative media content”, “the news reading skills”, etc.” (Sigeti, 2020).

In Serbia, the concept of news literacy has not been applied independently. It has been considered as one of the segments within the concept of media literacy. Therefore, in Serbia, it is necessary to talk about news literacy through a review of the situation in the field of media literacy.

National Strategies and Policies

Media literacy started to emerge into Serbian public discourse more frequently approximately ten years ago. For the first time, in particular, it was recognized as the concept in the National document “Strategy for the Development of the Public Information System in the Republic of Serbia until 2016” (adopted in 2011). The generally low level of media literacy was stated as well as the necessity of the State to contribute more in that sphere (Government of the Republic of Serbia, 2011).

Although media literacy has been recognized in this document as one of the seven priority areas, no specific measures were listed for its improvement. Therefore, it is impossible to give a relevant assessment of the realization of this priority.

While independent researches show lack of progress and unsatisfactory condition in this area, the Government research emphasizes some favourable changes (the introduction of the elective subject “Language, media, culture” in the curriculum, the formation of an interdepartmental working group that includes several competent state authorities, and co-financing media literacy projects).

The importance of media literacy has been pointed up as well in the new, up-to-date “Strategy for the Development of the Public Information System in the Republic of Serbia for the period 2020-2025”. Concrete measures are envisaged for its improvement: making an analysis of the level of media literacy in the Republic of Serbia; development of an action plan aimed at raising the level of media literacy; organizing campaigns for raising the awareness among professionals and the general public related to acquiring media literacy skills; creation of a cross-sectoral program for the development of media and information literacy in a media environment; supporting networking and providing a multisectoral approach to the development of media literacy, the involvement of all stakeholders (government institutions, education sector, library sector, media, civil society organizations, researchers); continuing the process of introducing media literacy into the formal education system, as well as supporting teacher competence development (Government of the Republic of Serbia, 2020, p.76-77). The results of the implementation of listed activities have not been released to the public so far.

The second most important strategic document in the context of media literacy was “The Strategy for Development of Education in Serbia by 2020” (adopted in 2012). The importance of media and information literacy was emphasized together with the role of libraries recognized as the space for

learning and resource centre for implementation of media and information literacy (Government of the Republic of Serbia, 2012, p.62). There is no education strategy for the upcoming period, thus nor the future position of media literacy in the education system has been strategically defined.

In Serbia, media and information literacy has been the part of the education plan and program since 2005, but only as a component of the elective subject Citizen's Education (a total of three lessons, in 8th grade of the elementary school and 4th grade of the secondary school) and of the elective subject "Language, media and culture", implemented in secondary education in 2018.

Catalogue of continuing professional development programs for teachers, preschool teachers, and professional associates for the period 2018-2021, among 1022 training programs, has only 4 explicitly related to media literacy.

As for higher education, media literacy is covered in detail at specialized vocational schools and faculties of media and communication.

Media literacy was not mentioned in the *Strategy for the development of adult education* in the Republic of Serbia in 2007.

Researches and reports

According to the *2021 World Press Freedom Index*, Serbia ranks 93rd out of 180 countries in terms of media freedom (Reporters Without Borders, 2021). In "Freedom in the World", Freedom House's annual study of political rights and civil liberties worldwide, Serbia is rated Partly Free (Freedom House, 2020).

The European Commission's Serbia 2020 Report states the following: "Regarding freedom of expression, Serbia has adopted a new media strategy, which was drafted transparently and inclusively and identifies the main challenges related to media freedom in Serbia. However, implementation of the new strategy has not yet started and no progress was made yet on the ground to improve the overall environment for freedom of expression" (European Commission, 2020, p.5).

No research thoroughly deals with the level of media literacy and the development of critical thinking of the citizens of the Republic of Serbia, but there are a few types of research that can give us quite a clear picture of the situation in this area.

One of the most relevant international surveys related to media/newspaper literacy is the survey called "the Media Literacy Index for 2019" by the European Policy Initiative (EuPI) of the Open Society Institute – Sofia. The index assesses the resilience potential to fake news in 35 European countries, using indicators for media freedom, education, and trust in people. According to this research, Serbia ranks 30th place, with a low score of media literacy – 31 of 100 points, 2 less than in 2017. Serbia, together with Bosnia and Herzegovina, Montenegro, Hungary and several southeast European countries, has a low media literacy score and very high distrust in journalists.

The report "Monitoring Media Pluralism in Europe: Application of the Media Pluralism Monitor 2017 in the European Union, FYROM, Serbia & Turkey" shows that in Serbia, media literacy is underdeveloped (with underdeveloped media literacy policies) and most citizens show no interest in the sources behind the news they consume (Surculija Milojevic, 2018).

A survey of BIRODI conducted in 2013 on a representative sample of 3,200 respondents on media literacy in Serbia (high school students, civic education professors, students of journalism, journalists)

showed that there is a false impression of the level of media literacy among respondents. That is why education on the general media literacy of all actors is necessary, and education on new media and social networks is especially important (Stamenković, 2013).

The research “Media Literacy in Niš High Schools” was carried out in 2016 by the Faculty of Philosophy in Niš in cooperation with Media and Reform Center Niš. Results showed that more than 90% of respondents think that all population categories need media education. Nearly half of the respondents (students, professors, and parents) said that they have never heard of any media literacy programs or training (Media i reform centar Niš, 2016).

The research “Citizens and media: consumption, habits and media literacy” conducted in November 2019 by CeSID and Propulsion, on a sample of 1,147 citizens of Serbia aged between 12 and 60, showed the following findings:

- People in Serbia are exposed to a multitude of media and digital content the quality of which is questionable and the ability of people to navigate this complex maze of information is limited.
- When it comes to the quality of media content broadcast on television, radio, website, social networks, and in the press, more than half of respondents believe that content broadcast on television and print is low quality or bad.
- 37% of citizens believe that there are no media in Serbia that report on different topics in an adequate way.
- Based on the self-assessment of the participants, the average level of media literacy in Serbia, on a scale up to 10, is 6.8.
- 87% of citizens do not believe that there are at all reliable sources. One-third of the examinees are not able to assess or do not know whether there is negative content in the media (propaganda 32%, fake news 31%, misinformation 32%, spinning 33%).
- Facebook is perceived as a social network that is the most effective for the promotion of content, with two-thirds of the respondents agreeing with this, while the number of those who choose Twitter or YouTube is practically negligible.
- The research showed that in developing further activities related to media literacy regarding the younger population (primarily members of Generation Z), one should rely on influencers and social networks. The older population is looking for a different approach because television is still a very vital medium for them. The Internet and social networks are not a generator of mistrust for the younger population, while the older ones trust them less.
- Only half of the respondents check whether the text supports the title statement. 26% of the citizens only read the headlines while reading the news. Only one-third of the examinees read the whole news. The younger the respondents, the smaller the percentage reading the news completely (43% of the oldest vs 24% of the youngest). 46% of Generation Z members do not read informative content at all or read the title only (vs. 14% of baby boomers).
- The field that should be thoroughly considered is privacy and security on the Internet, including passwords, account verification, and the attitude towards "cookies". Even the most passionate users of social networks are not familiar enough with this area.
- When it comes to the future, there is a significant willingness of two-thirds of the survey participants to support initiatives related to media literacy.

According to the research of the Propulsion organization, the index of media literacy in Serbia in 2020 was 3.91 out of 6 points. The index was not evaluated externally, by objective criteria, but was the result of self-evaluation of citizens up to 60 years of age.

According to The World Bank's "Critical Thinking in Teaching" research dated 2019, Serbia was ranked 63 out of 141 countries. Critical thinking index in teaching in Serbia was 3.55 (1-7)¹, which is slightly above the global average but below the European average. Compared to the 2017 data, Serbia went up by 24 positions (The World Bank, 2019).

The findings of all the above reports indicate an unenviable situation in the field of media literacy in Serbia and the importance of its improvement, as well as the further development of critical thinking.

Stakeholders

Key stakeholders in the field of media literacy in Serbia are the Ministry of Education, Science and Technological Development, the Ministry of Culture and Information, the Ministry of Trade, Tourism and Telecommunications, Regulatory Authority of Electronic Media (REM), Institute for the Improvement of Education, educational institutions, libraries, civil society organizations, journalists associations, media, and publishers.

Projects

In the past decade, several international and national projects in the field of media literacy have been launched. We would like to point out the significant ones:

"Support to media reforms in the Republic of Serbia" is a project implemented by the Ministry of Culture and Information, with EU funding. One of the goals of the project was to provide technical support to the working group of the Ministry of Culture and Information in the development of a teacher's handbook for media literacy for the entire pre-university education.

The three-year project "Digital Drive"² was launched with the intent of including media and IT literacy in the already existing systems of elementary and high school education in Serbia, to develop critical awareness among students and enhance the level of creativity and interactivity in schools.

"The New Literacy" program has been realized within the New Media and Digital Literacy Initiative implemented by Propulsion in partnership with USAID. Among the program partners are the Ministry of Culture and Information, the National Academy of Public Administration, and the Institute for Education Quality and Evaluation. Within the program, media and digital literacy have been promoted and disseminated through a series of activities aimed at citizens, media, companies, the education system, influencers, and public administration.

Novi Sad School of Journalism, a member of the International Association for Media Literacy – Media and Learning (MEDEA), has been implementing several projects in the field of media/news literacy: "Strengthening the learning of media and information literacy in the Serbian school system" – the project deals with the ways of expanding opportunities for the implementation of media and

¹ 1 = frontal, teacher based, and focused on memorizing; 7 = encourages creative and critical individual thinking. Source: <https://bit.ly/38wdluc>

² <https://medijskapismenost.org.rs/>

information literacy in the formal education system; “Debunking Disinformation” – the project aims to improve the quality of media reporting; “Fake News Tracker Fighting Against Online Frauds” – the idea of the project is to build local capacities in Serbia in the fight against media propaganda and misinformation in the public sphere; “Fake Spotting” – implementing brand new tools for the innovation of the higher education and adult education field ...

The Media Coalition (a coalition of several journalists and media associations) has implemented several projects to improve media literacy, mostly aimed at high school students, teachers, and journalists. As part of the implemented activities, an educational website was created,³ as well as educational materials, including a handbook for high schools “The Basics of Media Literacy”.

The documentary series "Information Media – Informed Public", produced by Media and Reform Center Niš, through three episodes talks about the situation in media, fake news and impact on the audience, the way they spread, how the state fights fake news, recommendations on how to understand media messages accurately ...

“Balkans Voices” project through the workshops, conferences and the special online platform⁴ improves young people's and teachers' knowledge and skills in media literacy in schools.

It can be noted that a significant number of projects brings into focus formal education and high school students and teachers. The lack of projects aimed at adults indicates the need to launch projects and activities intended for strengthening the capacity of all citizens, not just those who are part of the formal education system.

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³ <http://www.medijskapismenost.net>

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Turkey

News literacy emerges as one of the effective ways to prevent the spread of misinformation in the digital world. The resilience of individuals and therefore societies on this issue can have many positive effects, such as preventing social polarization and being able to make rational judgments on any issue. In recent years, various researchers and institutions have taken different pictures of the world's performance related to this matter. This document is intended to show the place of Turkey in this picture.

Various studies about the spread and resistance to disinformation reveal that Turkey does not exhibit a positive statement. "Digital News Reports" of various years prepared by Reuters provide remarkable clues about this situation in the country. For example, according to the results of research carried out over 37 countries in 2018, it is understood that almost one out of every two survey participants in Turkey, was exposed to totally fabricated news in the previous week. Turkey (49%), Greece (44%) and Malaysia (44%) shared the first three places on this issue (Fletcher, Kalogeropoulos & Newman, 2018, p.40).

Societies need to be aware of disinformation, which almost became an integral part of the digital world and its effects. A curriculum was developed on this issue by Stony Brook University Center for News Literacy and it was emphasized that critical thinking lies at the basis of the necessary skills. The reason for this is the current polluted information climate, where people have difficulties deciding on the truthfulness of what they read, and their need to overcome this problem ("Center for News Literacy", 2016a). Despite the great importance of critical thinking skills in the existing information environment, Turkey is located at the end of the world rankings in this regard. According to The World Bank's "Critical Thinking in Teaching" research dated 2019, Turkey was ranked 134 out of 141 countries where Finland ranked first and Angola the last. Moreover, compared to the 2017 data, it can be seen that Turkey's rank dropped down 2 rows in 2019 (The World Bank, 2019).

Similar to the rest of the world, digital media are used as a source of news by the citizens of Turkey. According to Reuters data in 2020, preferred mediums as news sources in Turkey have exhibited a change from 2015 to 2020 as shown in Table 1 (Newman, Fletcher, Schulz, Andi & Nielsen, 2020, p.84).

Table 1. Most preferred sources of news in Turkey

Sources of News	2015 (%)	2020 (%)
Online platforms (including social media)	88	85
TV	75	68
Social media	67	58
Printed resources	50	42

From Table 1 it is observed that there has not been a significant change in the preference of online sources in general over the years, but there is a remarkable decrease in the preference of TV and print sources which are among traditional media channels. On the other hand, it is understood that the participants have a different tendency to use social media as a news source than five years ago. They preferred these platforms as a news source in 2020 less than in the past. Accordingly, it can be considered that some online news sources other than social media (such as online news portals or newspapers) might have become more preferable in 2020 in Turkey (Newman, Fletcher, Schulz, Andi

& Nielsen, 2020, p.84). On the other hand, in the 2019 version of the report, the decreasing trust in news in a rising global uncertainty environment was underlined. The research also revealed that almost one third (32%) of people from all over the world who participated in the study, intentionally avoid the news. Turkey (55%) was among the top three countries having this concern, with Croatia (56%) and Greece (54%) (Newman, 2019, p.26). Despite this, Turkey was ranked third with 55% in 2020, among the countries whose citizens often stated they can trust most of the news they encounter (Newman, 2020, p.15). However, looking at all the countries covered by the research, it is possible to say that people (average 38%) are timider about trusting the news they consume in 2020 (Newman, 2020, p.15). Despite all of these, it is also seen that the majority of respondents from Turkey (62%) were worried about what was real and what was fake when it came to the news on the Internet (Newman, 2020, p.19). It is also noteworthy that this concern is higher than the world average (56%) (Newman, 2020, p.19).

In analogy to the usage habits of the world, smartphones became the most widely (72%) used mobile devices for accessing online news in Turkey. In addition to this, approximately one out of every two respondents from Turkey (57%) stated that they shared the news via social media, e-mail or online messaging tools (Newman, Fletcher, Schulz, Andi & Nielsen, 2020, p.85). On the other hand, in Turkey, the most widely used (49%) social media tool for news was Facebook, followed by YouTube (45%), Instagram (41%), WhatsApp (31%) and Twitter (30%) (Newman, Fletcher, Schulz, Andi & Nielsen, 2020, p.85). The study also emphasized in its 2019 version (Newman, 2019, p.10) the tendency of people in Turkey (29%) and Brazil (22%) share or discuss news on open or closed Facebook groups which were more than some countries such as Canada (7%) and Australia (7%). In the same study, it was stated that closed messaging groups such as Whatsapp or private Facebook groups facilitate the sharing of information, which reveals a new trend that potentially accelerates the spread of misinformation (Newman, 2019, p.10). From 2017 to 2020, an increase was observed in Turkey in the rate of people (25% and 31% respectively) who preferred closed messaging platforms such as Whatsapp to discuss or share the news (Newman, 2017; Newman, Fletcher, Schulz, Andi & Nielsen, 2020, p.85). The increasing interest in some countries in such platforms, which are different from other social media tools, was attributed to the fact that these platforms provide greater privacy and their contents tend not to be filtered by algorithms (Newman, 2017).

The rise of the closed messaging platforms for news sharing purposes in some countries including Turkey, Malaysia, Brasil, Spain, Hong Kong, etc. was also associated with the opportunity of sharing content without fear of embarrassment. Moreover, these platforms also offer an end-to-end encrypted sharing environment which could positively affect people's preferences in some countries, where sharing politically sensitive content can be dangerous (Newman, 2017). In that context, it is noteworthy to investigate the place of Turkey among other countries in which the interest in closed messaging media is increasing. Thus, in terms of Internet freedom, Turkey ranked 35 among 100 countries and was defined as "not free" (Freedom House, 2020) and in the World Press Freedom Index ranked 154 in 180 countries (Reporters without Borders, 2020) according to the 2020 data of these reports.

On the other hand, the spread of fake news or false information shared in closed messaging groups such as Whatsapp has been more uncontrolled and it has become more difficult to detect and verify these contents by various fact-checking organizations (de Freitas Melo, Vieira, Garimella, de Melo & Benevenuto, 2020). This also proves the importance of stopping the spread of false information and taking individual precautions, long before fact-checking platforms take their place on the stage for verification. Detecting false information in closed messaging applications and dealing with it requires individual level awareness and a certain level of media literacy skills (Tanca, 2020). Unfortunately,

Turkey does not exhibit good performance in this matter, either. According to the Media Literacy Index released by the Open Society Institute, Turkey was ranked 34 among 35 countries in 2019, where Finland, Denmark, Netherlands, Sweden and Estonia shared the top five places (Lessenski, 2019).

In the digital world, the ability of news consumers to distinguish between fake and real news is associated with their critical thinking skills (Potter, 2013). Solutions such as raising awareness in individuals, building disinformation resilience and enabling them to acquire different literacy skills such as media and news literacy have recently been expressed through different channels (Lessenski, 2019; Tanca, 2019; RDMedu, 2020; Mackintosh, 2019; Aggrawal, 2020). Despite the various attempts being made in Turkey in this regard, it can be said that they are limited to academic discussions rather than taking action to solve the problem practically.

Although a formal news literacy programme has not been carried out recently in Turkey, there are some examples of training programmes under different names with different objectives as part of formal and/or distance education (e.g. Galatasaray University⁵, Gazi University⁶, İstanbul University⁷, etc.) (Şencan, 2020, p.6). These programmes generally target university students and show a close relationship with the content of news literacy training programmes, in terms of some topics such as the understanding the difference between news and interpretation, disinformation and misinformation concepts, the importance of critical thinking, and information sources in journalism. It is seen that some of these training programmes are defined under the media literacy approach (such as the programmes of Gazi and İstanbul Universities). In addition, news verification training has been provided from time to time through some workshops organized by various fact-checking platforms⁸ ("Doğruluk Payı Ankara atölyesi", 2019; "Doğruluk Payı İzmir Atölyesi", 2020; "TGS", 2020).

Although it does not directly aim to provide news literacy skills, one of the recent training programmes on the subject was conducted within the scope of a NATO-supported project, titled "Building Disinformation Resilience in Turkey: An Educational Approach" (RDMedu, 2020). A handbook and report were published within the scope of the project, which aimed to inform young people who are less resistant to disinformation and are mostly exposed to social media, by using different learning materials and methods together. The project also intended to raise awareness in society on how to become more "responsible" media readers and social media users (RDMedu, 2021a; RDMedu, 2021b).

The number of Turkey-addressed academic studies directly about news literacy seems to be quite limited. When the studies conducted on the topic were investigated, it was seen that the concept of news literacy was generally mentioned briefly under the scope of media literacy. On the other hand, the studies based on media literacy mostly focused on individuals' attitudes and behaviours and they were mostly related to education. These studies addressed the following issues:

- Teachers' perceptions of media (Bozkurt & Coşkun, 2018),
- Parents' attitudes towards preschool children's use of technology (Saltuk & Erciyes, 2020)

⁵ <https://ects.gsu.edu.tr/tr/program/coursereport/2445>

⁶ http://gbp.gazi.edu.tr/htmlProgramHakkinda.php?baslik=1&dr=0&lang=0&ac=16&FK=08&BK=10&ders_kodu=30800143

⁷ <http://ebs.istanbul.edu.tr/home/dersprogram/?id=8732&yil=2019>

⁸ As in most countries there are some fact-checking platforms such as Doğruluk Payı, Teyit.org, Malumatfuruş, Yalansavar, Evrim Ağacı, working for news verification in Turkey, as well. Doğruluk Payı and teyit.org are among the 74 active signatories of the International Fact-Checking Network from all over the world ("Verified Signatories of the IFCN", 2021).

- Parents' level of awareness of media literacy (Özsevinç & Yengin, 2021)
- The effect of media literacy in preventing cyberbullying in schools (Akca, Sayımer, Salı & Başak, 2014)
- Investigation of new skills to be acquired within the framework of new media literacy (Karaduman, 2019)
- Opinions of the University students who study communication on the necessity of media literacy education (Geçer & Bağcı, 2018)
- Evaluation of media literacy in the context of digital citizenship (Orhon, 2019) and participatory culture (Sezen, 2011)
- New media literacy training for adults (Buluş, 2017)
- Examining the fake and unidentified Facebook messages within the framework of media literacy (Dikbaş Torun, 2019)

On the other hand, there were a limited number of studies that focused more directly on news literacy. These studies were conducted for the following purposes:

- Determining the decision processes of individuals exposed to fake news along with their attitudes and behaviours against it (Onursoy, Turan, Yeşilyurt & Astam, 2020)
- Revealing the changing news consumption and news verification behaviours (Yağmur, 2019)
- Examination of the news literacy levels of the university freshmen who study communication (Ünal, 2018)
- Assessment of trust in media and reactions to fake news (Gurbanova, 2018)

In the most comprehensive study on news literacy in Turkey, the impact of a newly designed Turkish news literacy training programme applied to university students with a quasi-experimental method were evaluated (Şencan, 2020). Given the rate of spread and exposure of fake news, the increasing need for news literacy was pointed out in the study, and this situation had likened to the importance of information literacy which had increased significantly for people who dealt with information overload (Şencan, 2020, p.34). A news literacy training curriculum in Turkish was among the important outputs of the study, and it was adapted from the content developed by Stony Brook University ("Center for News Literacy", 2016b). It was concluded in the study that the news verification module was found more instructive by students. Moreover, the students who completed and were continuing to receive information literacy training along with news literacy, have performed better, especially when it came to news verification.

It is being emphasized in some studies that the battle given by the fact-checking organizations against fake news was not something that can create widespread impact, especially on society in the short term. In addition to the efforts of these platforms, it is extremely important to train information users to gain awareness of the accuracy of the news they encounter and to gain critical thinking skills (Foça 2016; Şencan, 2020).

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Slovenia

Research

In Slovene literature, there is no distinguished difference between the definition of media, news, and information literacy. Therefore, these terms are often mistaken for each other and used interchangeably. The closest to being defined in Slovene legislature is media literacy, which is mentioned in Art. 11 of Audiovisual Media Service Act of 2011 as follows: »media literacy relating to skills, knowledge and understanding that enable users to use media and audiovisual media services effectively and safely«.

The government-run Communications Networks and Services Agency of the Republic of Slovenia (AKOS - their main job is to manage and monitor Slovenian radio-frequency spectrum) has set up a web page www.mipi.si (MIPI) about media and information literacy. AKOS set up MIPI to help general population »understand media and information technology. Recognize adverts even when cleverly hidden. Know why we think there are more adverts on TV than are allowed. Counsel our children what content is safe. Distinguish between paid and ordinary hits while browsing the internet. Recognize the news that may not be true and know how to check it out. Understand how Facebook offers content that is supposed to interest us in our news feed. «

There have only been a few studies in this area and only done by a few groups. Leaders in this area are from the Faculty of Media, University of Ljubljana (Fakulteta za medije). As expected, they study this area frequently and their main goal is to incorporate media literacy into every school's curriculum at all levels of education process. In 2014 they performed the first comprehensive study about media literacy in Slovenia. Before that, research had been focused on information literacy (Kovačič, A., Kovačič, T., 2020). In 2008 a research was carried out by RIS (English: Internet use in Slovenia) within the Faculty of Social Sciences, University of Ljubljana. The focus of the research was on access and ability/skills to use digital technologies and only tackled media literacy minimally (Kovačič, A., Kovačič, T., 2020).

Again, the Faculty of Media performed a research about media literacy in 2020 by conducting a qualitative survey that was answered by 428 adult respondents. The aim of the survey was to examine general level of media literacy among Slovenian population. The survey questionnaire was based on media literacy research questionnaire from 2014. The survey focused on the following aspects of media literacy:

- access to media content
- understanding media content
- critical consumption of media content
- citizen's ability to create media content

The survey results show that the respondents have the most trust in radio and newspapers, less in television and the least in the information gathered on the Internet. When asked about the action taken when respondents come across differences in the news content presented by different sources, every 1 in 5 respondent takes no action while three in four ask others when they notice differences in same reported media content (Kovačič, A., Kovačič, T., 2020).

The research is part of the efforts undertaken within the "Infrastructural Program of the Faculty for Media" – collecting, managing, and archiving data on media literacy. The program is funded by Javna agencija za raziskovalno dejavnost RS – ARRS (Slovenian Research Agency). The program's aim is the collect data, analyse trends and indicators about media literacy in Slovenia throughout a longer period. The following research projects have been conducted in the programme:

- Media Literacy 2014 (Rek, Kovačič, Milanovski Brumat, 2014)
- Media and Preschool Children (Rek, Milanovski Brumat, 2016)
- Media and Secondary School Students (Rek, Milanovski Brumat, 2016)
- Media and Primary School Children (classes 1-6) (Rek, Milanovski Brumat, 2016)
- Media Habits of the Deaf, Hard of Hearing Individuals, the Blind and Partially Sighted People (Rek, Kovačič, Milanovski Brumat, 2017)
- Media Habits of the Elderly (65+) (Rek, Kovačič, Milanovski Brumat, 2018)
- Media Habits of People with Mental Disorders (Rek et. al., 2019).
- Media Literacy 2020 (Kovačič, Kovačič, 2020)

Media Literacy in Formal Education System

Since the early 2000's the Slovene Ministry of Education, Science and Sport has been incorporating media literacy at all levels of education in Slovenia, starting in preschool as part of Arts Education, and continuing in elementary school as three one-year compulsory elective classes Media Education – Print, Media Education – Radio, and Media Education – TV. There are several programs at the secondary school level that include media literacy (Media technician, Graphics technician, Electronic communication technician, Computer technician) as well as programs at the university level (Photography, Media production, Telecommunication).

Regarding further training of professionals, in KATIS (the Catalogue of Further Education Programmes and Training, managed by the Ministry of Education, Science and Sport) there are currently seven programmes and workshops listed under the key word media literacy. Their focus is different and reaches from fake news, creating media and journalistic content, encouraging reading to critical use of sources and general focus on media literacy and critical thinking. Providers of these workshops are equally diverse: Faculty of Arts, two non-profit organisations, Reading Association of Slovenia, Association of Slovenian Writers and Faculty of Theology. While providers are diverse, the main target groups are teachers at all levels and librarians,

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Latvia

News is information consumed by the majority of members of the public. There are different types of media that provide the public with the news. News consumption varies from one part of society to another. Nowadays, there are wide opportunities to get not only local news but also foreign news. News literacy is important for today's information consumer. This report provides an insight into the news literacy situation in Latvia.

The concept of literacies, especially media literacy (the umbrella term including news literacy) in all level education discourse in the Republic of Latvia emerged comparatively recently: The decision of the Terminology Commission of Latvian Academy of Sciences from March 15 2016 shows that the concept has been given the Latvian term “medijpratība” and since this turning point the interest in different literacies (including news literacy) and their correlation with the quality of life has increased. Before this point (and also - after) there was a conceptual confusion regarding different literacies (Spurava).

In November 2016 after political disputes and debates with the media representatives, the Mass Media Policy Guidelines of Latvia 2016-2020 were adopted. Amongst Policy Results and Performance-based Indicators increase in media literacy in society was mentioned. Since 2017 the National Library of Latvia is involved in the organization of media literacy training for mentors – librarians and educators.

However, the lack of published studies on the topic created by Latvian researchers is visible. The topic is more used in media articles explaining the topic, its relevance and most important skills.

In 2020 the Latvian National Electronic Media Council commissioned a study on the media usage habits and needs of the Latvian population. 1.547 Latvian residents were included in the survey according to the principle of stratified randomness among the population aged 16 and over. A similar study was conducted in 2017, allowing us to compare the obtained data and draw conclusions about trends in public perceptions of media literacy. The most popular media consumed in Latvia are television, online platforms, social media, radio and printed resources (Latvian Facts, 2020).

Table 1. The most popular media use in Latvia

Sources of News	2018 (%)	2019 (%)	2020 (%)
TV	89	90	88
Online platforms	80	82	79
Social media	75	76	72
Radio	80	82	83
Printed resources	73	77	71

The table above shows that there have been no significant changes in media consumption in recent years. The results of the study reveal that radio as a media is regaining its popularity every year. Although radio was previously projected to lose popularity, surprisingly it is rapidly regaining its place among popular media and news sources. Possibly the pandemic was the reason why printed resources were used less in 2020. In terms of topics of interest to the public regarding the use of the media the most common are local news (88%), international news (82%), entertainment (74%), society health and medicine (73%) and culture (66%). The study reveals that respondents are most interested in local

and international news. Analyzing data by age, younger respondents (16-30 years old) are more interested in entertainment, educational content, professional sports, but less in policy, analytics, Latvian life, message and religion. Elderly respondents are more interested in public health, policy, national defence, Latvian life, message and religion. The distribution of interests between age groups is logical and provides the expected results from which it can be assumed that all age groups consume news, but the topics of interest are different. Analyzing news literacy, 62% of participants believe that they can distinguish between true and false news, but 28% say it can be a problem. Therefore, it is important to think about how to educate the public about news literacy. During the pandemic, Latvians were more likely to face false news and were more sceptical about their ability to recognize misinformation. At the same time, people have become more critical of the information found on the Internet and more demanding of traditional media (Latvian Facts, 2020).

The study “Perception of Media and Information Literacy among Representatives of Mid-Age and Older Generations: the Case of Latvia” reveals that the importance of media literacy in older adults is related to the demographic trends in Latvia. News literacy is part of media and information literacy and it is also very important among older adults. The population structure in the country is characterised by population decline due to emigration and negative birth rate, and population ageing. In 2020, 1.9 million people live in Latvia. MIL is: “knowledge and skills needed to work with information sources – to find and analyse information, understand functions of the providers of information, critical evaluation of information, differing between critical and biased information, comparing the news from different sources in order to make one’s own opinion. Media literacy includes also the skills of practical use of media.” (Cabinet of Ministers, 2016). Today, the news is available in many different media and consumption of news includes MIL skills. Data show that media usage or belonging to a particular age group does not determine the skills, but knowledge of events and processes of public interest, understanding the criteria for determining the quality of information, and the habit of following important information in the media are more relevant (Rožukalne, A., 2020). All age groups in society need to be educated about news literacy for all age groups. When providing training, it is important to take into account that a large part of Latvian society is mid-age and older generations.

The results of the study “Media education in the common interest: Public perceptions of media literacy policy in Latvia” indicate that interest and knowledge regarding MIL are mainly influenced by the level of respondents’ education and income. The educated and interested respondents noticed significantly more MIL activities. Respondents with a higher education level, females and people with higher income tended to take MIL-related threats more seriously. Opportunities must also be provided for educating the lower-income and lower-educated groups of society. People in Latvia have noticed and would like to receive MIL education via the media. The main action in the field of MIL is expected from educational and research institutions. Educational institutions and libraries tend to offer information on their websites or social networking accounts about MIL. Often it is textual information or infographic. Information literacy and media literacy training is organized in educational institutions and libraries mostly for students, educators or librarians. In the view of the biggest part of respondents, media literacy like every literacy is considered as an outcome of education content and process, and the responsibility for those outcomes is put on the shoulders of a small number of professional educators and librarians (Rožukalne, A., Skulte, I., & Stakle, A., 2020).

The article “Media Use Among Social Networking Site Users in Latvia” explores the relationship between social networking site use and mass media consumption. According to the findings, most of the surveyed social networking site users regularly consume other media, although they are more likely to consume online news media than print or broadcast media. Online news sites are the dominant journalism-based type of media in which the participants are interested. More serious

activities such as work and information seeking are associated with the consumption of diverse media regardless of whether they are online or offline-based, but using them for entertainment and communication purposes is only associated with visiting blogs and other social media (Bucholtz, I., 2015). Online media is easier to access, as it can be done at any time with the necessary equipment and internet connection. Print media are more used to search for information on specific topics. But in all types of media, news literacy is important to choose reliable and truthful information.

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TARGET GROUPS SURVEY

Methodological Framework

The target groups survey was created and conducted between February and April 2021 in all four partner countries. The main aim of the survey was to find out about the news consumption, production, and sharing behaviour of adults along with their training needs for news literacy.

The survey was conducted through Google Forms online platform, which made the distribution of the same survey in different languages fast and simple also making the later mutual data processing a lot easier. The questionnaire was first made in English and then translated into the four languages of the partner countries – Latvian, Serbian, Slovenian and Turkish. The translations were directly imported into Google Forms thus making four identical questionnaires in four different languages. The next step for each partner was to conduct the piloting of the questionnaire after which some corrections were made and the final version of the questionnaire was created.

Each partner conducted the survey in their local community, focusing on their target groups. It had been decided beforehand that the number of respondents should be between 100 and 130 so the comparable results would be as relevant as possible. In this way, the survey included 436 respondents in total in all four countries: 101 in Latvia, 129 in Serbia, 105 in Slovenia and 101 in Turkey.

After the survey had been conducted, the data from all four questionnaires were imported as an Excel Form and processed in SPSS software. In this way we got comprehensible results for each country separately as well as the mutual comparative ones.

The survey was prepared based on the literature available and previous empirical studies on the subject. It consisted of 24 questions 23 of which were close-ended ones with a limited number of options offered as answers. Some questions could be answered by choosing only one option while the other set of questions could be answered by choosing multiple answers. Almost all the questions included option *other* for the respondents to be able to specify their answers themselves. One question (#15) was an open-ended question so that the respondents answered it in their own words. Question 6 was a real turning point in the course of the survey. With this question the respondents who do not follow the news at all were eliminated from further questioning as irrelevant to the survey. It was mandatory to answer all the questions so the respondents had to give their answers to all of them in order to finish the questionnaire successfully.

With regard to the subject, the questionnaire consisted of the following parts: 1) Demographics and General Information; 2) Reasons for Not Following the News; 3) Getting and Following the News; 4) Trust and Verification; 5) News Behaviour; 6) Opinions About the News Media.

In the following text the results of the answers to each question have been analysed in detail using the descriptive method and in two different ways: for each partner country separately and, whenever it was necessary, for all the countries together. In the end we came to some conclusions that show some of the basic problems and needs of the target groups in the area of news literacy and give us certain directions on the improvement of news literacy in the partner countries.

Note 1: The complete questionnaire in English is in Annex 1 at the end of this document.

Note 2: In the survey the term "news" was defined as newly received or noteworthy information, especially about recent events. It includes all possible formats which are generated on various

platforms from print newspapers to Twitter.

Analysis and findings

The first four questions were supposed to define the structure of respondents, their gender, age, working status and level of education.

Out of 436 respondents in total, 296 were female (64% of all the respondents), while 167 were male (36% of all the respondents). Two respondents did not want to disclose this piece of information.

Table 1: Respondents' Gender Structure

Country	Gender						Total	
	Female		Male		Not disclosed			
	n	%	n	%	n	%	n	%
Latvia	83	82	17	17	1	1	101	100
Serbia	69	53	59	46	1	1	129	100
Slovenia	69	66	36	34	0	0	105	100
Turkey	75	74	26	26	0	0	101	100
Total	296		167		2			

With regard to their age, out of 436 respondents of legal age, 116 were between 18 and 24 years of age (27%), 93 were between 25 and 36 (21%), 79 were between 35 and 44 (18%), 91 were between 45 and 54 (21%), 35 of them were between 55 and 64 (8%), 20 were between 65 and 74 years of age (5%), and 2 respondents were 75 and older.

When it comes to age categories, younger population (18-34) make up 48%, adults 47% and the elderly (65+) make up 5% of the total number of respondents. The largest number of young respondents were surveyed in Turkey since the focus there was on university students. The largest number of elderly people were surveyed in Serbia.

Table 2: Respondents' Age Structure

Country	Age														Total	
	18-24		25-34		35-44		45-54		55-64		65-74		75 +			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Latvia	1	1	40	40	16	16	22	22	14	14	7	7	1	1	101	101
Serbia	11	9	35	27	24	19	33	26	15	12	10	8	1	1	129	102
Slovenia	6	6	15	14	39	37	36	34	6	6	3	3	0	0	105	100
Turkey	98	97	3	3	0	0	0	0	0	0	0	0	0	0	101	100
Total	116		93		79		91		35		20		2		436	

Considering their working status, most of the respondents belong to the employed in public sector category – 43%. Then there are students – 28%, while 16% of all the respondents belong to the employed in private sector category. Retired people make up 4% and the unemployed 12% out of all the respondents.

Regarding the countries they come from, all the respondents in Turkey were students, while in Latvia there were no students at all. The majority of respondents in Latvia and Slovenia were employed in

public sector (68% and 63% respectively), and a large percentage of people from this category were surveyed in Serbia as well.

Table 3: Respondents' Working Status

Country	Work Status																Total	
	Student		Employed- Private sector		Employed- Public sector		Retired		Self- employed or Freelance		Unemployed		Homemaker		Other			
n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Latvia	0	0	21	21	69	68	0	0	8	8	1	1	0	0	2	2	101	100
Serbia	12	9	37	29	52	40	13	10	8	6	7	5	0	0	0	0	129	99
Slovenia	10	10	12	11	66	63	3	3	7	7	4	4	1	1	2	2	105	101
Turkey	101	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101	100

Regarding the level of education, almost half of the respondents have an undergraduate degree. One in three respondents (31%) have a postgraduate degree (MA) followed by the ones with a secondary school degree (13%). There are fewest respondents who have a PhD making up 5% of the respondents' structure. On the whole, we came to the conclusion that the respondents have a high level of education. In Latvia and Turkey, for example, all the respondents' education is above secondary school level.

Table 4: Respondents' Level Of Education

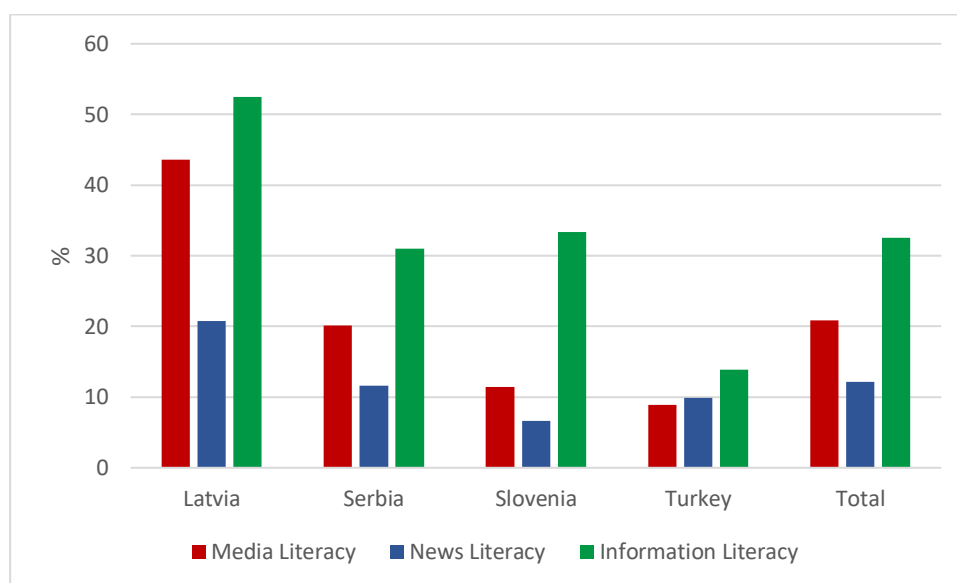
Country	Level of Education										Total	
	Secondary school		Undergraduate degree		Postgraduate (master)		Postgraduate (PhD)		Other			
	n	%	n	%	n	%	n	%	n	%	n	%
Latvia	0	0	46	46	48	48	5	5	2	2	101	101
Serbia	36	28	54	42	36	28	3	2	0	0	129	100
Slovenia	21	20	14	13	53	50	13	12	4	4	105	99
Turkey	0	0	101	100	0	0	0	0	0	0	101	100

Question 5 was to survey the education of the respondents in the field of media, news and information literacy. Most respondents had formal training in information literacy – 142 of them (33%), then there were the ones that had some education in media literacy (21%), while the lowest number of them had some training in news literacy – only 12%.

With regard to the countries, Latvia had the largest percentage of trained respondents in all three categories, followed by Serbia, then Slovenia and Turkey. There were 44% of media literacy educated respondents in Latvia, 20% in Serbia, 11% in Slovenia and only 9% in Turkey. When it comes to news literacy, there was the largest number of respondents with formal training in Latvia – 21%, then in Serbia – 12%, in Turkey – 10%, and the smallest number in Slovenia – 7%.

This data tells us about a strong need for civil education in all three fields surveyed, especially in the news literacy one. Only one in three citizens had a training course in information literacy, one in four in media literacy, and one in nine in news literacy.

Graph 1: Respondents based on the fact if they have ever gotten any formal training on information, media and/or news literacy



Question 6 was a real turning point in the course of the survey. The question was *Do you follow (find, read, listen or watch) the news?*, and was supposed to define the percentage of the respondents who follow the news and to survey only the ones who do follow the news in the further questioning.

Out of all the respondents, 94% follow the news, while 6% of them do not. The largest percentage of respondents who follow the news were from Slovenia – 95%, while in other three countries there were 93% of those who do so.

Table 5: Percentage of respondents who follow/do not follow the news

Country	Follow the News				Total	
	Yes		No			
	n	%	n	%	n	%
Latvia	94	93	7	7	101	100
Serbia	120	93	9	7	129	100
Slovenia	100	95	5	5	105	100
Turkey	94	93	7	7	101	100
Total	408	94	28	6	436	100

Question 7 was answered only by the respondents who do not follow the news, which was 28 of them. The aim of the question was to define the reasons for their not following the news. The respondents could check multiple options offered as answers. Half of those respondents do not follow the news because they do not trust the accuracy of the news, while 43% of them are not interested in the news; 39% claim to not be following the news for it has a negative effect on them, while 11% of the respondents think they cannot distinguish real news from fake news.

Table 6: The reasons for respondents' not following the news

Reasons For Not Following the News	n	%
News have a negative effect on me	11	39
I do not trust the accuracy of news	14	50

I cannot distinguish real news from the fake news	3	11
I do not have time for it	8	29
I am not interested in news	12	43

From question 8 to the end of the questionnaire the questions were answered only by the respondents who follow the news, i.e. the ones who gave the positive answer to question 6, which is 408 of them in total.

Question 8 referred to the frequency of following the news. The largest number of respondents, 55% of them follow (find, read, listen or watch) the news several times a day. 30% of respondents do that once a day, while 11% of them do that several times a week. Respondents who follow the news rarely: once a week or several times a month make up 2% of the participants each.

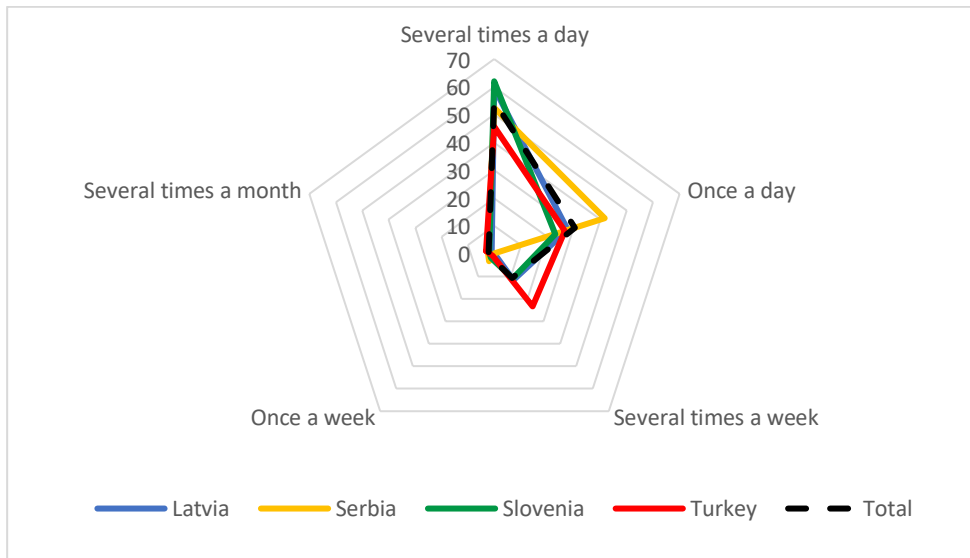
In all the countries except Turkey more than half of the respondents follow the news several times a day. Slovenia is ahead of others with 62% of people who do so, and is followed by Latvia with 60%. In Serbia the highest percentage of respondents follow the news once a day (42%). In Turkey most respondents follow the news several times a week (23%).

The data shows that, on the whole, a high percentage of respondents follow the news frequently, 85% of them on a daily basis (once or several times a day). This shows the importance of the news in the lives of modern people and, indirectly, the influence it has.

Table 7: The frequency of respondents' following the news

Country	Frequency of Following News										Total	
	Several times a day		Once a day		Several times a week		Once a week		Several times a month			
	n	%	n	%	n	%	n	%	n	%	n	%
Latvia	56	60	26	28	11	12	0	0	1	1	94	101
Serbia	63	53	50	42	0	0	4	3	3	3	120	101
Slovenia	62	62	23	23	11	11	2	2	2	2	100	100
Turkey	43	46	25	27	22	23	1	1	3	3	94	100
Total	224	55	124	30	44	11	7	2	9	2	408	100

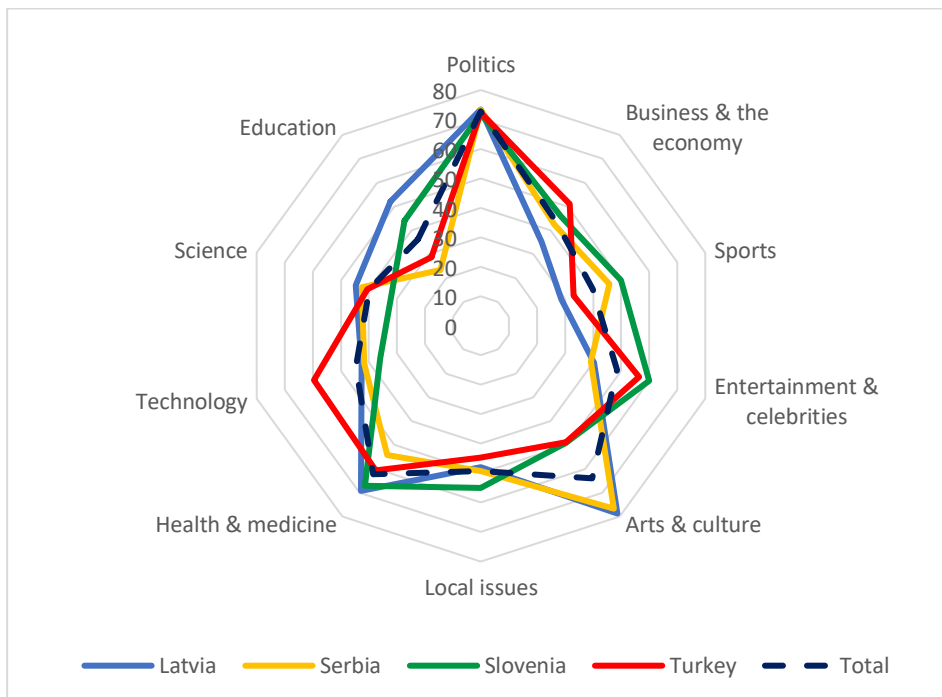
Graph 2: The respondents based on the frequency of following the news



Regarding the type (topic) of news, the largest number of respondents follow politics – 73%. Arts and culture are followed by 64%, and health and medicine by 62% of respondents. Entertainment and local issues are followed by 49% each. The topics followed by fewest people are the ones of education (36%) and science and sports (40% each).

In Turkey, the most followed topics are politics, health and medicine, technology and business and economy. In Slovenia it is politics, health and medicine, entertainment and local issues; In Serbia arts and culture, politics and health and medicine; In Latvia arts and culture, politics, health and medicine and education.

Graph 3: Type of news respondents follow



When it comes to the main source of news, the vast majority of respondents, 44% of them said it was news sites and / or websites / apps of newspapers (Latvia is ahead of others with 61%). For 17% of the respondents the main source of news is other channels or accounts on social media (Turkey is ahead of others with 46%). These are followed by television news bulletins or programmes (13%), channels or accounts of newspapers / journals on social media (10%), social circle (7%), radio news bulletins or programmes (5%) and printed newspapers (3%). Almost none of the respondents use closed messaging apps and blogs.

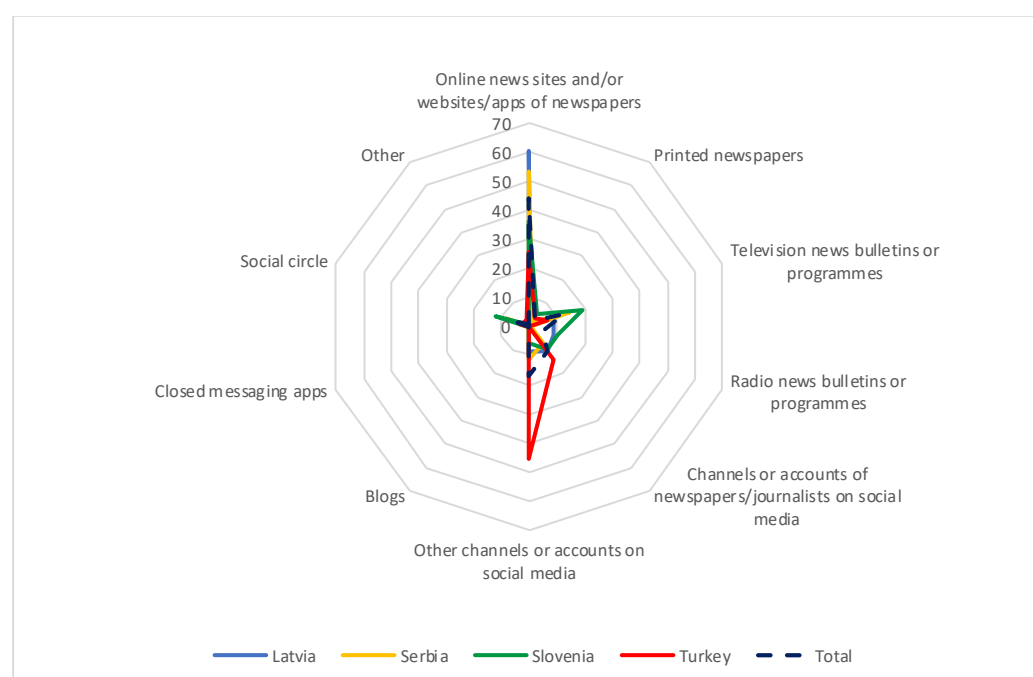
It is interesting that, unlike Slovenia, in Serbia and Latvia online news sites and / or websites / apps of newspapers are far ahead of other sources (36%, 53%, 61%), in Turkey it is other channels or accounts on social media (46%). Radio as the main source of information is used by no respondents in Turkey and only 1 respondent in Serbia.

The results show that online channels are by far the most dominant source of information. Once dominant, television is now in the third place, while printed newspapers, which had an extremely important role in providing information before the expansion of the Internet, are now among the least used sources of information.

Table 8: Respondents' main source of news

Main Source of News	Turkey (94)	%	Slovenia (100)	%	Serbia (120)	%	Latvia (94)	%	Total (408)	%
Online news sites and/or websites/apps of newspapers	24	26	36	36	64	53	57	61	181	44
Printed newspapers	3	3	5	5	2	2	1	1	11	3
Television news bulletins or programmes	6	6	19	19	18	15	8	9	51	13
Radio news bulletins or programmes	0	0	10	10	1	1	8	9	19	5
Channels or accounts of newspapers/journals on social media	13	14	10	10	9	8	10	11	42	10
Other channels or accounts on social media	43	46	6	6	14	12	8	9	71	17
Blogs	0	0	0	0	1	1	0	0	1	0
Closed messaging apps	0	0	1	1	1	1	0	0	2	0
Social circle	3	3	12	12	10	8	2	2	27	7
Other	2	2	1	1	0	0	0	0	3	1

Graph 4: Respondents' main source of news



Question 11 was to check how familiar respondents were with some concepts, i.e. terms connected to the news. On the whole, almost all the respondents have heard of fake news (99%), while a high percentage of respondents know what fact-checking (87%), malinformation (84%), disinformation (83%), misinformation (75%) and algorithms (75%) are. Less than half of the respondents know what black propaganda (47%), gray propaganda (35%) and filter bubble (33%) are. Only 16% of the respondents have heard of echo chamber.

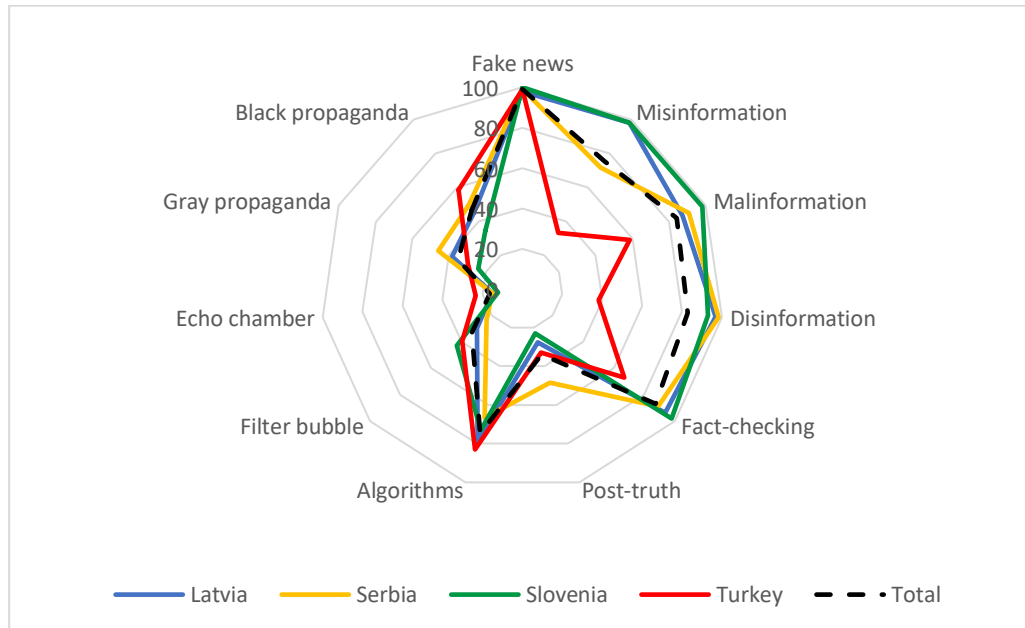
Turkish respondents are most familiar with the terms fake news (99%) and algorithms (83%), and least familiar with the terms gray propaganda (30%) and echo chamber (23%).

Almost all Slovenian respondents are familiar with the terms fake news (100%), misinformation (98%), malinformation (98%) and fact-checking (98%), while the terms gray propaganda (24%), post-truth (23%) and echo chamber (12%) are not so familiar to them.

Serbian respondents know very well what fake news (99%) and disinformation (98%) are, and are not very familiar with the concepts of filter bubble (23%) and echo chamber (15%).

Fake news is the most familiar term in Latvia as well, followed by fact-checking (87%), malinformation (84%) and disinformation (83%). Latvians are least familiar with the terms filter bubble (33%) and echo chamber (16%).

Graph 5: Familiarity with the main concepts/terms in the field of news literacy

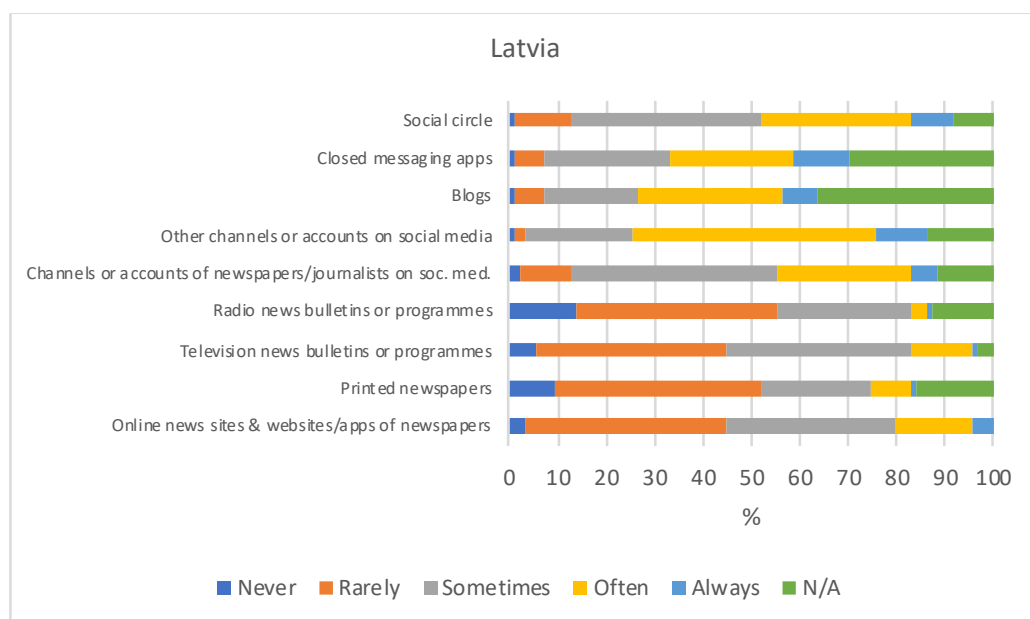


Question 12 was to determine how suspicious the citizens were of the accuracy of the news based on the sources it comes from. The results show that most of the respondents suspect the accuracy of the news no matter which source it comes from.

In Latvia respondents suspect the accuracy of the news coming from radio news bulletins or programmes least (14% of the respondents never suspect, while 41% rarely do), printed newspapers (13% of the respondents do not suspect, while 30% rarely do), television news bulletins or programmes (5% of the respondents never suspect, while 39% rarely do) and online news sites and web sites/apps of newspapers (3% of the respondents never suspect, while 41% rarely do). The respondents are most

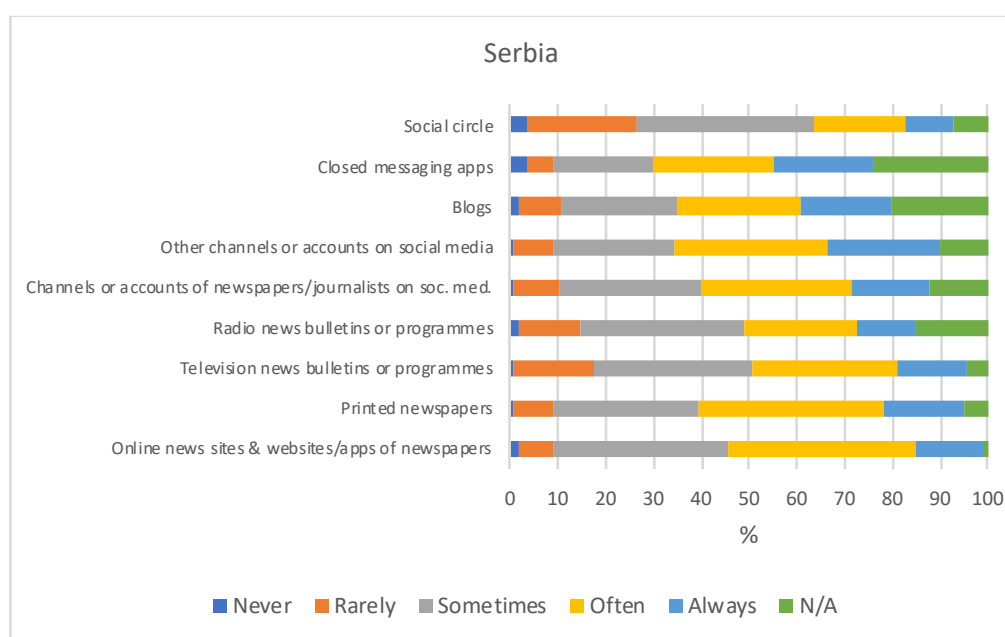
suspicious of other channels or accounts on the social media (50% often suspect and 11% always do) and the social circle (31% often suspect and 9% always do).

Graph 6: Respondents' opinion on the accuracy of the news based on the source it comes from, Latvia



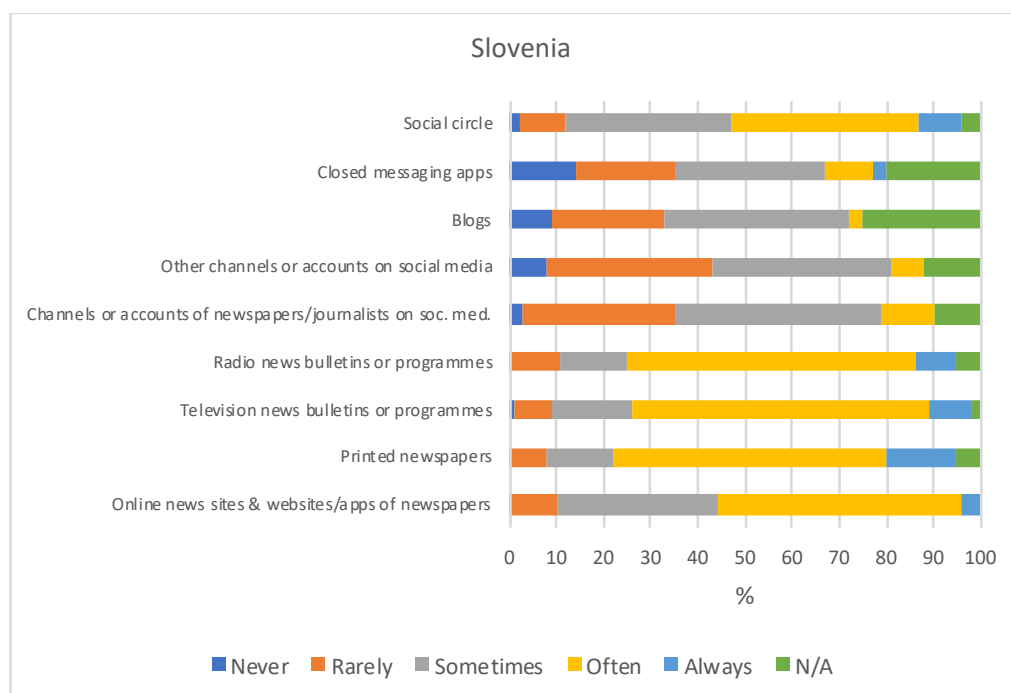
In Serbia a vast majority of respondents do not suspect the accuracy of the news that comes from the social circle (3% never suspect 23% rarely suspect), then television news bulletins or programmes (1% of the respondents never suspect, while 17% rarely do) and radio news bulletins or programmes (2% of the respondents never suspect, while 13% rarely do). The respondents in Serbia are most suspicious of the accuracy of the news coming from other channels or accounts on the social media (33% often suspect and 23% always do), printed newspapers (39% often suspect and 17% always do) and online news sites and websites/apps of newspapers (39% often suspect and 14% always do).

Graph 7: Respondents' opinion on the accuracy of the news based on the source it comes from, Serbia



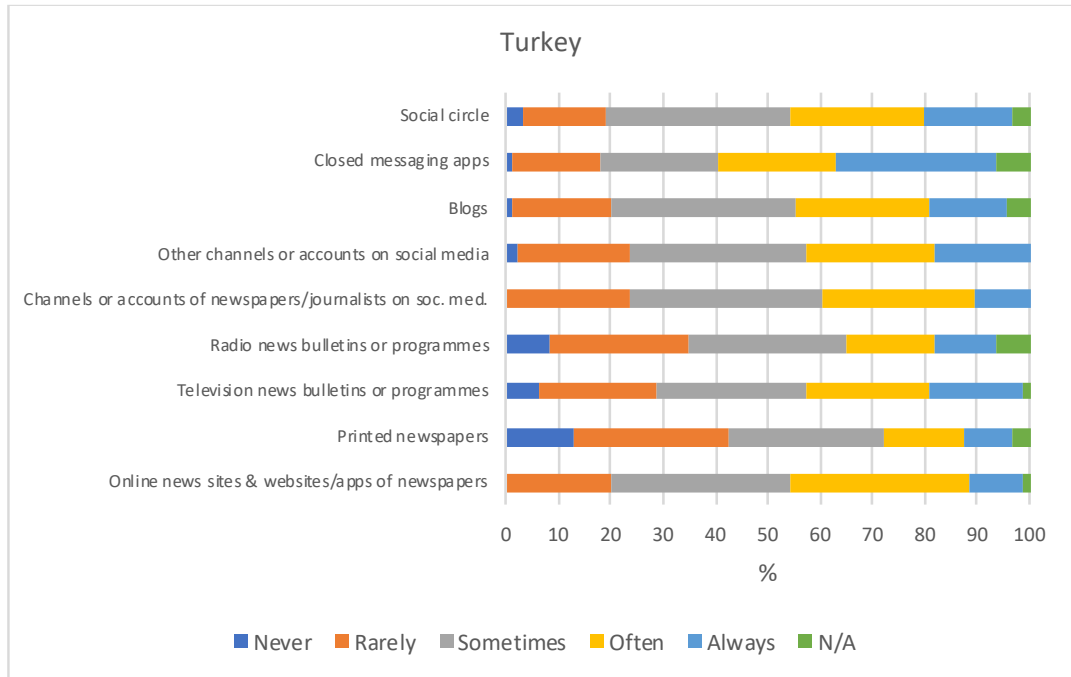
In Slovenia the respondents suspect the accuracy of the news coming from other channels or accounts on social media least (8% of the respondents never suspect, while 35% rarely do), closed messaging apps (14% of the respondents never suspect, while 21% rarely do) and channels or accounts of newspapers/journalists on the social media (3% of the respondents never suspect, while 32% rarely do). The largest number of Slovenians suspect the accuracy of the news coming from printed newspapers (58% often suspect and 15% always do), television news bulletins and programmes (63% often suspect and 9% always do) and radio news bulletins and programmes (61% often suspect and 9% always do).

Graph 8: Respondents' opinion on the accuracy of the news based on the source it comes from, Slovenia



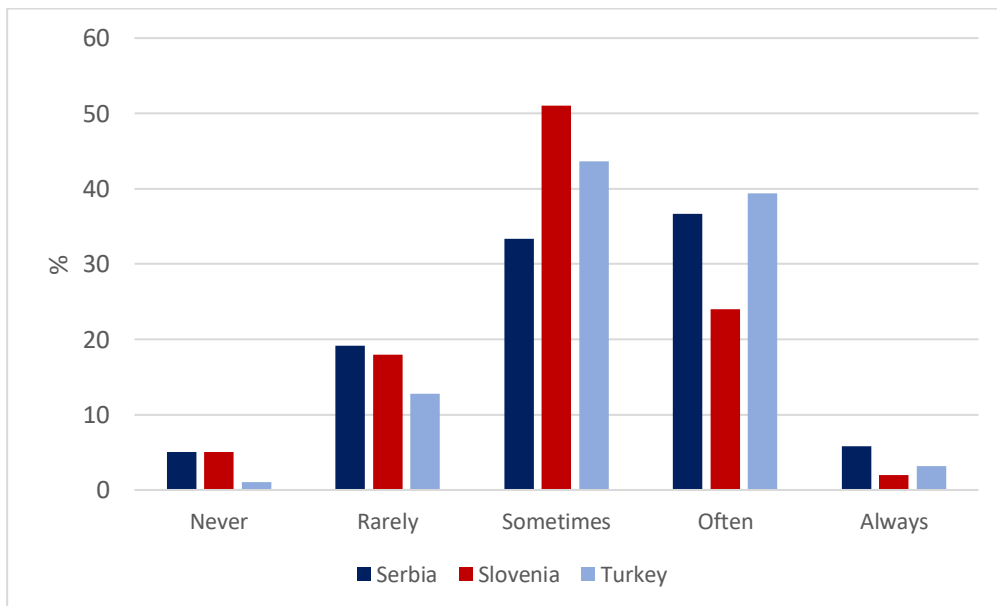
In Turkey a vast majority of respondents do not suspect the accuracy of the news coming from printed newspapers (13% of the respondents never suspect, 30% rarely do), then radio news bulletins and programmes (9% of the respondents never suspect, 27% rarely do) and television news bulletins and programmes (6% of the respondents never suspect, while 22% rarely do). The largest number of Turks suspect the accuracy of the news coming from closed messaging apps (22% often suspect and 31% always do). Suspecting the accuracy of the news coming from online news sites and websites/apps of newspapers is also on a very high level in Turkey (34% often suspect and 11% always do), the social circle (26% often suspect and 17% always do) and other channels or accounts on the social media (24% often suspect and 18% always do). It is interesting that the respondents have an ambivalent attitude to television, a rather large number of them never or rarely suspect the accuracy of the news coming from this source, but there is a large number of those who often or always suspect it.

Graph 9: Respondents' opinion on the accuracy of the news based on the source it comes from, Turkey



Question 13 examined how often the respondents verify the news they come across. The results show that a very small percentage of people always verify the news, from 6% in Serbia to 3% in Turkey. However, the percentage of those who never verify the news is also small. There is a higher percentage of those who do that rarely (Serbia 19%, Slovenia 18% and Turkey 13%). The largest number of respondents verify the news sometimes, one in three respondents in Serbia, one in two in Slovenia and almost one in two in Turkey. On average, one in three respondents often verifies the news they come across.

Graph 10: Verification of the news' frequency

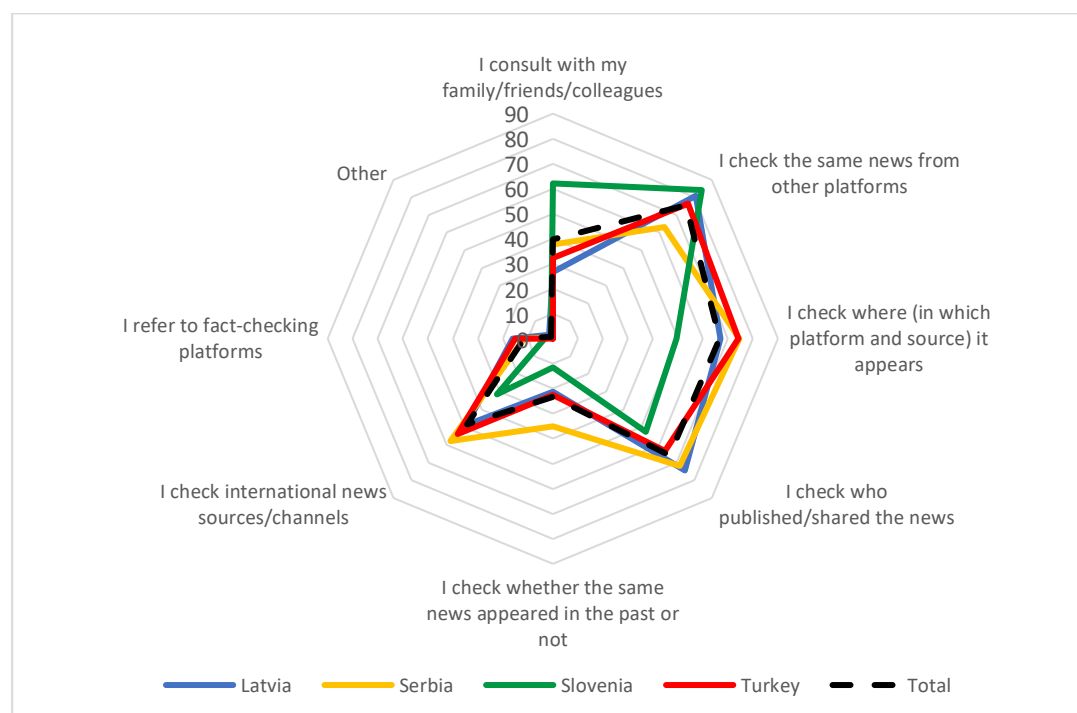


The next question was to determine in what ways the respondents verified a piece of news which looks suspicious. Out of 8 options offered as answers the highest percentage of them verify the news by checking the same news on other platforms – 76% of them. 67% of the respondents check where (in which platform and sources) it appears, while 66% of the respondents said that they check who published/shared the news. Around half of the respondents as one of the ways to verify the news use international news sources/channels, while 40% of them consult their family/friends/colleagues. The very least number of the respondents, 11% of them, use fact-checking platforms to check suspicious news. Only 3% of Slovenians use fact-checking platforms.

Table 9: The ways the respondents verify a piece of news which looks suspicious to them

	Latvia		Serbia		Slovenia		Turkey		Total	
	n	%	n	%	n	%	n	%	n	%
I consult with my family/friends/colleagues	25	27	43	38	59	62	30	32	157	40
I check the same news from other platforms	76	81	72	63	80	84	71	76	299	76
I check where (in which platform and source) it appears	63	67	85	75	47	49	69	74	264	67
I check who published/shared the news	70	74	82	72	50	53	59	63	261	66
I check whether the same news appeared in the past or not	20	21	40	35	11	12	21	23	92	23
I check international news sources/channels	46	49	66	58	30	32	50	54	192	48
I refer to fact-checking platforms	15	16	13	11	3	3	14	15	45	11
Other	2	2	1	1	1	1	0	0	4	1

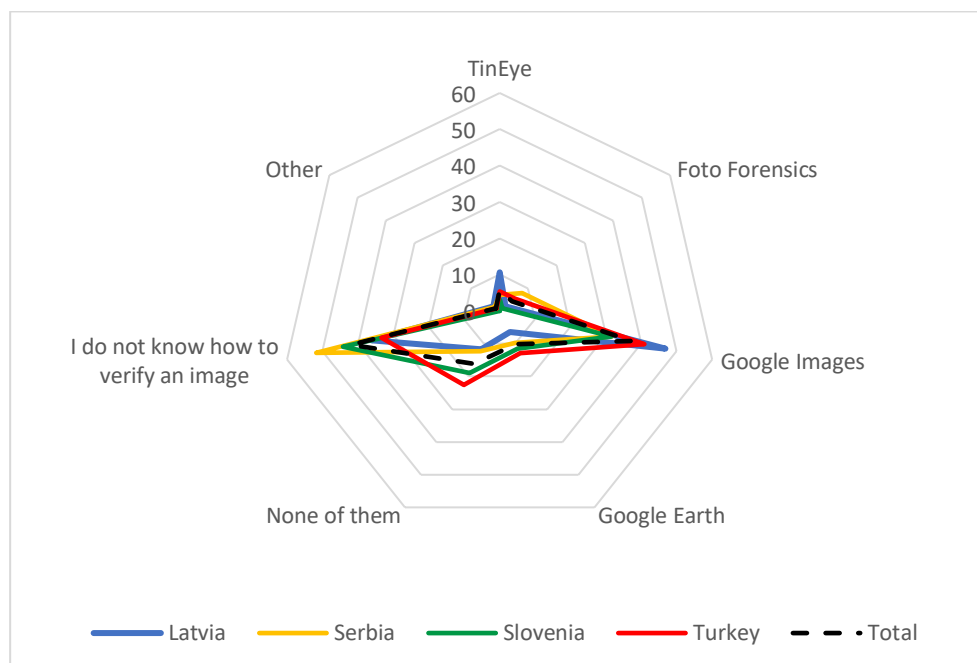
Graph 11: The ways the respondents verify a piece of news which looks suspicious to them



The respondents using fact-checking platforms for verifying news use different platforms, mostly the national ones, but also international ones such as <https://eufactcheck.eu> and <https://www.politifact.com>. A part of the respondents also recognised sources like Google, Wikipedia and BBC.

When it comes to verifying suspicious images, as many as 42% of the respondents said they did not know how to verify an image (Latvia 36%, Serbia 52%, Slovenia 44% and Turkey 33%). The highest percentage of those who know how to do it and do it (37%) use Google Images (Latvia 47%, Serbia 32%, Slovenia 32%, Turkey 41%), 10% of them use Google Earth, 6% use TinEye and 4% Foto Forensics.

Graph 12: Tools/platforms used for verifying news images



Question 17 was comprised of 13 statements referring to news literacy where the respondents were supposed to indicate their level of agreement. The respondents were offered 6 options as answers: strongly disagree, somewhat disagree, neither agree nor disagree, strongly agree and N/A (not applicable).

The question which required the respondents to indicate how strongly they agreed with the statement that they could determine whether a piece of news was fake or not, the respondents answered as follows:

- Latvian respondents: strongly disagree 3%, somewhat disagree 9%, neither agree nor disagree 35%, somewhat agree 39%, strongly agree 12%.
- Serbian respondents: strongly disagree 11%, somewhat disagree 11%, neither agree nor disagree 16%, somewhat agree 19%, strongly agree 28%.
- Slovenian respondents: strongly disagree 2%, somewhat disagree 11%, neither agree nor disagree 43%, somewhat agree 32%, strongly agree 9%.
- Turkish respondents: strongly disagree 7%, somewhat disagree 9%, neither agree nor disagree 31%, somewhat agree 33%, strongly agree 18%.

The results show that, on the whole, around half of the respondents in all the countries strongly or somewhat agree that they can determine if a piece of news is fake or not.

The question which required the respondents to indicate how strongly they agreed with the statement that they could judge the accuracy of news relying on their instincts, the respondents answered as follows:

- Latvian respondents: strongly disagree 16%, somewhat disagree 20%, neither agree nor disagree 30%, somewhat agree 17%, strongly agree 9%.
- Serbian respondents: strongly disagree 18%, somewhat disagree 13%, neither agree nor disagree 21%, somewhat agree 18%, strongly agree 15%.
- Slovenian respondents: strongly disagree 5%, somewhat disagree 12%, neither agree nor disagree 37%, somewhat agree 32%, strongly agree 12%.
- Turkish respondents: strongly disagree 21%, somewhat disagree 26%, neither agree nor disagree 24%, somewhat agree 17%, strongly agree 7%.

Comparative analysis shows that Slovenians are most prone to judge the accuracy of the news relying on their instincts, while Turks trust their instincts least of all the respondents.

On the other hand, the question which required the respondents to indicate how strongly they agreed with the statement that they could judge the accuracy of the news based on factual evidence the respondents answered as follows:

- Latvian respondents: strongly disagree 4%, somewhat disagree 1%, neither agree nor disagree 13%, somewhat agree 46%, strongly agree 33%.
- Serbian respondents: strongly disagree 5%, somewhat disagree 3%, neither agree nor disagree 16%, somewhat agree 30%, strongly agree 33%.
- Slovenian respondents: strongly disagree 0%, somewhat disagree 9%, neither agree nor disagree 14%, somewhat agree 27%, strongly agree 37%.
- Turkish respondents: strongly disagree 6%, somewhat disagree 10%, neither agree nor disagree 18%, somewhat agree 29%, strongly agree 34%.

From the abovementioned results, it is obvious that Latvians are ahead of others when it comes to judging the accuracy of the news based on factual evidence. Taking all four countries into consideration, on average 30-40% of the respondents do not use factual evidence to judge the accuracy of the news.

The respondents' attitude to the statement *I cannot trust the news if I do not know its source (origin)* is as follows:

- Latvian respondents: strongly disagree 7%, somewhat disagree 4%, neither agree nor disagree 13%, somewhat agree 33%, strongly agree 38%.
- Serbian respondents: strongly disagree 7%, somewhat disagree 2%, neither agree nor disagree 13%, somewhat agree 16%, strongly agree 48%.
- Slovenian respondents: strongly disagree 4%, somewhat disagree 4%, neither agree nor disagree 21%, somewhat agree 23%, strongly agree 42%.
- Turkish respondents: strongly disagree 10%, somewhat disagree 5%, neither agree nor disagree 11%, somewhat agree 28%, strongly agree 38%.

As we can see, considering all the countries, between 60 and 70% of the respondents agree that knowing the source is important for trusting the news (they checked somewhat agree and strongly agree). This indirectly shows us that a significant number of respondents trust certain news sources.

The respondents' attitude to the statement *Fake news has made me distrust the credibility of any news* is as follows:

- Latvian respondents: strongly disagree 16%, somewhat disagree 26%, neither agree nor disagree 33%, somewhat agree 15%, strongly agree 2%.

- Serbian respondents: strongly disagree 10%, somewhat disagree 17%, neither agree nor disagree 13%, somewhat agree 32%, strongly agree 16%.
- Slovenian respondents: strongly disagree 6%, somewhat disagree 14%, neither agree nor disagree 31%, somewhat agree 22%, strongly agree 23%.
- Turkish respondents: strongly disagree 6%, somewhat disagree 7%, neither agree nor disagree 11%, somewhat agree 20%, strongly agree 48%.

The results show that a large number of respondents in Turkey and a significant number of respondents in Slovenia and Serbia have lost trust in news credibility in general due to fake news. This is not the case in Latvia, where only 17% of the respondents indicated that they strongly or somewhat agreed with the abovementioned statement.

The question which required the respondents to indicate how strongly they agreed with the statement *I post/share interesting news on the social media* the respondents answered as follows:

- Latvian respondents: strongly disagree 22%, somewhat disagree 28%, neither agree nor disagree 10%, somewhat agree 26%, strongly agree 6%.
- Serbian respondents: strongly disagree 19%, somewhat disagree 12%, neither agree nor disagree 9%, somewhat agree 21%, strongly agree 5%.
- Slovenian respondents: strongly disagree 24%, somewhat disagree 14%, neither agree nor disagree 15%, somewhat agree 22%, strongly agree 3%.
- Turkish respondents: strongly disagree 23%, somewhat disagree 41%, neither agree nor disagree 13%, somewhat agree 14%, strongly agree 15%.

On the whole 25-30% of the respondents from all the countries somewhat or strongly agree with the given statement. Significant percentage of the respondents strongly or somewhat disagree with this statement as well, e.g. in Turkey it is as much as 64% and in Latvia 50%.

On the other hand, when it comes to posting/sharing interesting news on closed messaging apps, the situation is as follows:

- Latvian respondents: strongly disagree 22%, somewhat disagree 15%, neither agree nor disagree 10%, somewhat agree 29%, strongly agree 10%.
- Serbian respondents: strongly disagree 20%, somewhat disagree 8%, neither agree nor disagree 8%, somewhat agree 22%, strongly agree 11%.
- Slovenian respondents: strongly disagree 17%, somewhat disagree 22%, neither agree nor disagree 14%, somewhat agree 25%, strongly agree 6%.
- Turkish respondents: strongly disagree 10%, somewhat disagree 19%, neither agree nor disagree 17%, somewhat agree 38%, strongly agree 13%.

On the whole, in Latvia, Serbia and Slovenia around a third of the respondents post/share interesting news on closed messaging apps, while in Turkey as many as half of the respondents do that.

The results show that there is a higher percentage of respondents who use closed messaging apps to share the news than the ones who use the social media for the same purpose.

In the next part, potential trustworthiness of the news shared on the social networks and closed messaging apps was examined. The question including the statement *on the social media, I only share the news which come from trustworthy sources*, was answered as follows:

- Latvian respondents: strongly disagree 12%, somewhat disagree 2%, neither agree nor disagree 9%, somewhat agree 29%, strongly agree 35%.

- Serbian respondents: strongly disagree 16%, somewhat disagree 6%, neither agree nor disagree 8%, somewhat agree 15%, strongly agree 18%.
- Slovenian respondents: strongly disagree 11%, somewhat disagree 8%, neither agree nor disagree 11%, somewhat agree 15%, strongly agree 27%.
- Turkish respondents: strongly disagree 11%, somewhat disagree 13%, neither agree nor disagree 14%, somewhat agree 36%, strongly agree 23%.

The results show that Latvian respondents are most confident that the news they share come from trustworthy sources (64% somewhat or strongly agree with this statement). They are followed by Turks with 59%, Slovenians with 42% and Serbs with 33%.

The next question examined the same statement, but in the context of sharing news on closed messaging apps. The respondents answered as follows:

- Latvian respondents: strongly disagree 13%, somewhat disagree 3%, neither agree nor disagree 14%, somewhat agree 28%, strongly agree 21%.
- Serbian respondents: strongly disagree 13%, somewhat disagree 8%, neither agree nor disagree 13%, somewhat agree 18%, strongly agree 11%.
- Slovenian respondents: strongly disagree 11%, somewhat disagree 12%, neither agree nor disagree 14%, somewhat agree 29%, strongly agree 18%.
- Turkish respondents: strongly disagree 9%, somewhat disagree 16%, neither agree nor disagree 18%, somewhat agree 40%, strongly agree 15%.

It can be seen that Turkish respondents are most confident that the news they share come from trustworthy sources (55% somewhat or strongly agree with this statement). They are followed by Latvians with 49%, Slovenians with 47% and Serbs with 29%.

Regarding the countries, we can conclude that Latvians and Turks trust the news sources they share on the social networks and closed messaging apps most, unlike Serbs who trust these sources least. This indirectly tells us about the confidence in the media in general.

The answers to the statement *I do not share any news without verifying its accuracy* were to examine if the respondents checked the accuracy of the news before sharing it with others. The results are as follows:

- Latvian respondents: strongly disagree 9%, somewhat disagree 5%, neither agree nor disagree 14%, somewhat agree 39%, strongly agree 22%.
- Serbian respondents: strongly disagree 13%, somewhat disagree 6%, neither agree nor disagree 8%, somewhat agree 18%, strongly agree 33%.
- Slovenian respondents: strongly disagree 11%, somewhat disagree 19%, neither agree nor disagree 22%, somewhat agree 17%, strongly agree 18%.
- Turkish respondents: strongly disagree 5%, somewhat disagree 11%, neither agree nor disagree 19%, somewhat agree 30%, strongly agree 30%.

The data shows that the smallest number of Slovenian respondents regularly check the accuracy of the news they share with others – somewhat more than a third of them (35%). They are followed by Serbian respondents, half of which do this, while in Turkey and Latvia this is a regular practice with 60% of the respondents.

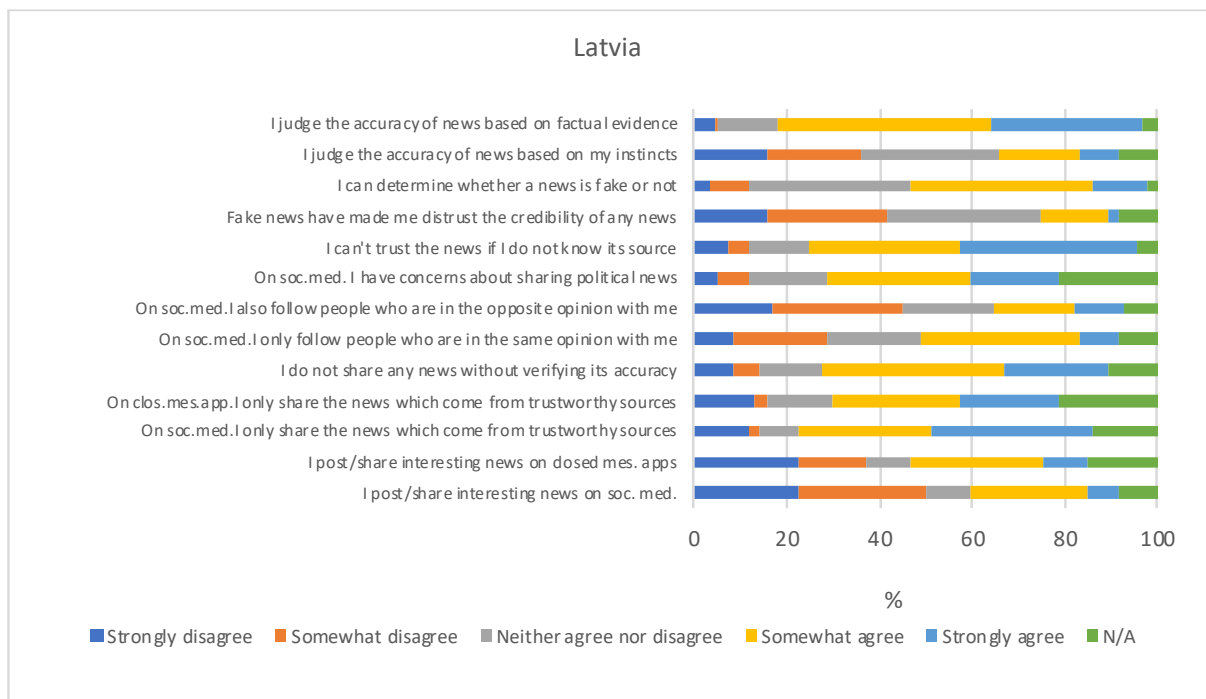
In sum, regarding all the countries, around half of the respondents check the accuracy of the news they share with others, while the other half of them do not do that.

A significant number of the respondents in all the countries, over half of them on average, have concerns about sharing political news on the social media. Most of them in Turkey – 65%, then Slovenia – 56%, Latvia – 50% and Serbia – 40%.

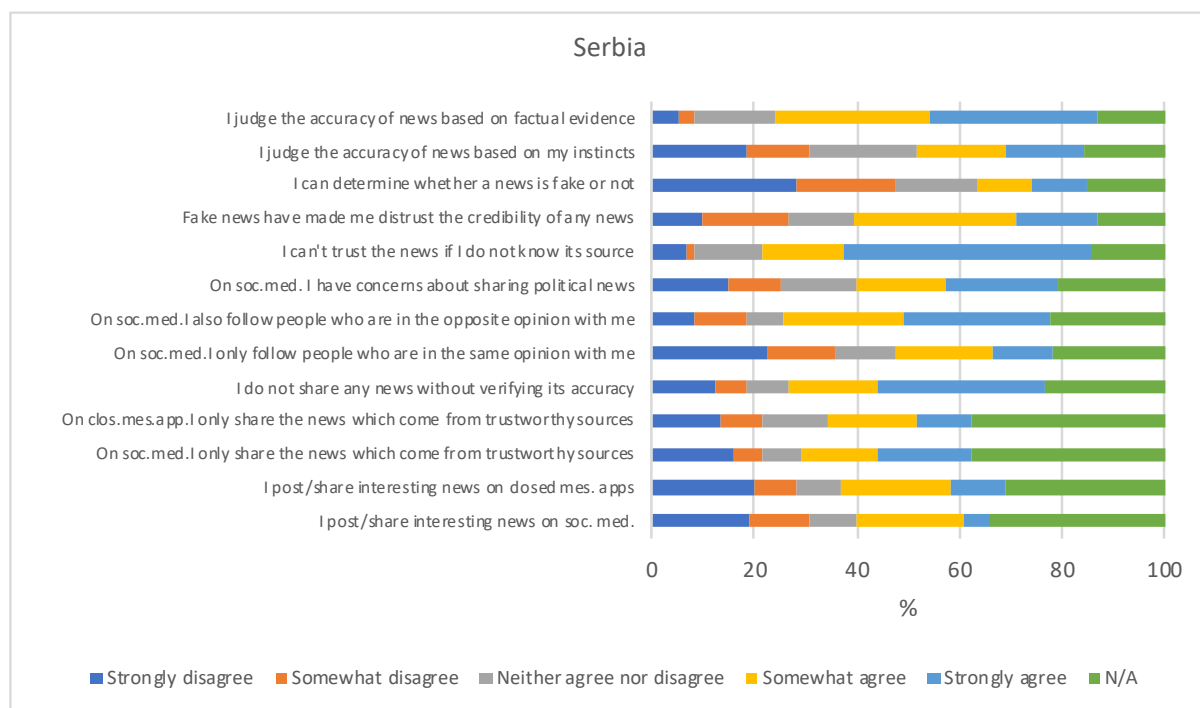
Two consecutive questions examined if the respondents using the social media followed only the people of the same opinion or the ones of the opposite opinion as well. The data shows as follows: 43% of Latvian respondents follow the ones of the same opinion, while 28% of them follow the ones of the opposite opinion as well. Almost a third of Serbian respondents follow the ones who they share the same opinions with (31%), while half of them follow the ones of the opposite opinion as well (51%). 18% of Slovenian respondents follow the ones of the same opinion, while somewhat less than a third also follow the ones of the opposite opinion (30%). 22% of Turkish respondents follow the ones of the same opinion, while half of them follow the ones of the opposite opinion as well (49%).

The data shows that in Latvia the highest percentage of respondents follow the ones of the same opinion, while in Serbia, Slovenia and Turkey between one third and half of the respondents follow the ones of the opposite opinion as well.

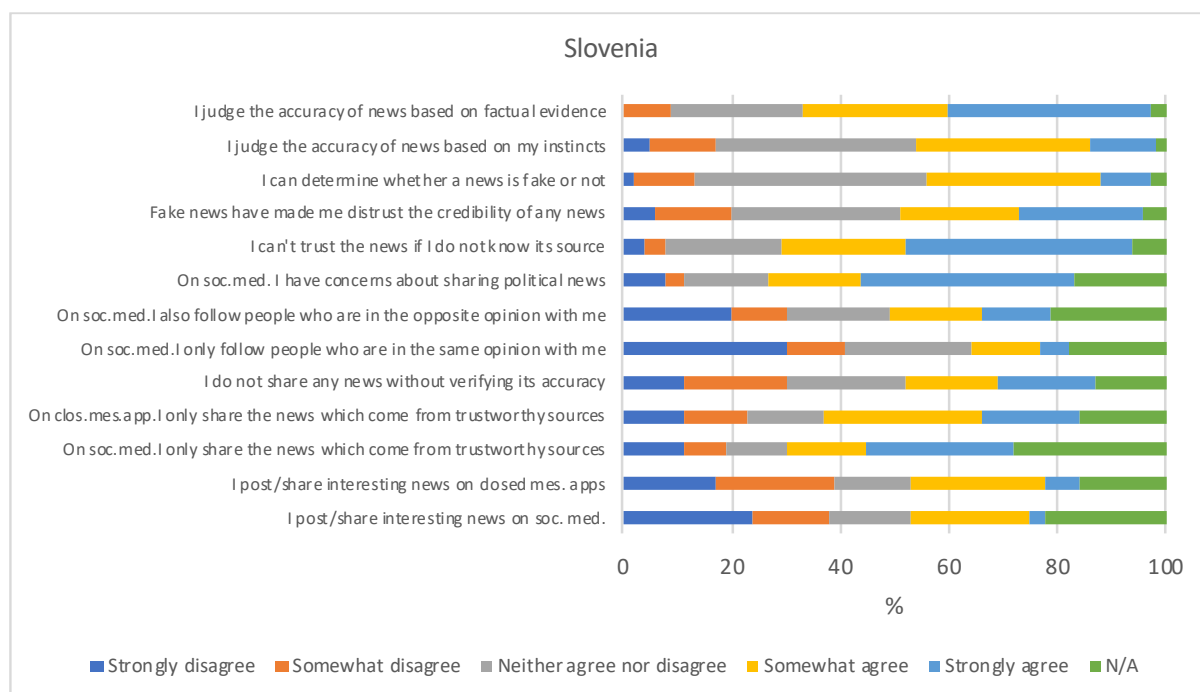
Graph 13: Latvian respondents' level of agreement with different statements in the field of news literacy

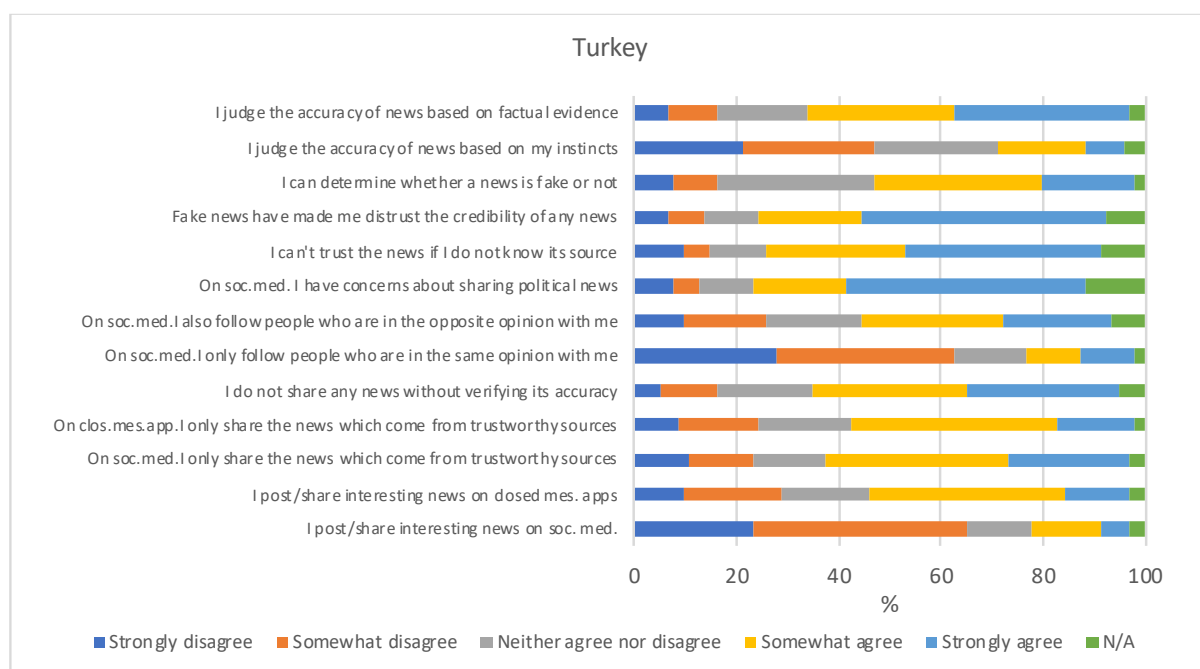


Graph 14: Serbian respondents' level of agreement with different statements in the field of news literacy



Graph 15: Slovenian respondents' level of agreement with different statements in the field of news literacy



Graph 16: Turkish respondents' level of agreement with different statements in the field of news literacy

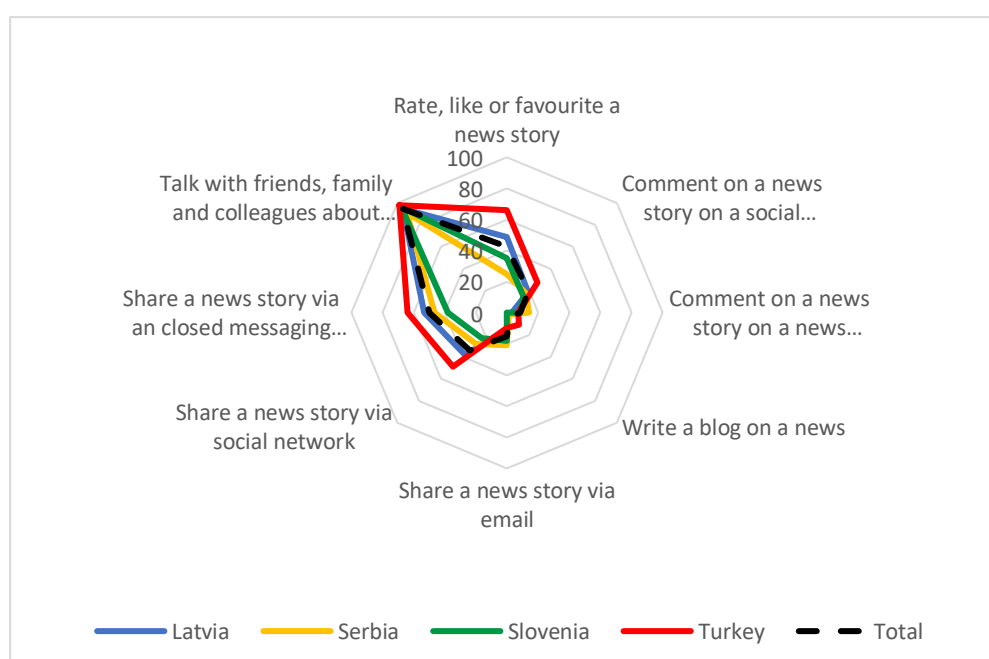
Question 18 was to determine how actively the respondents reacted to a news story, how much they liked, commented, shared them. The results show that Turkish respondents rate and like news stories (66%) a lot more than the respondents in Serbia, where one in four respondents does that. Also, on average, the respondents comment news stories on the social networks more (20%), where Turkish respondents are ahead of others with 28%, while the news on news websites is commented by 9% of the respondents, which is done most often by the respondents in Serbia with 14%. Except Turkey, the respondents in other three countries either do not write blogs on a piece of news (Slovenia) or do it in a very small number, Serbia (2%) and Latvia (1%)

Sharing a news story via email is the most common in Serbia (21%) and Slovenia (18%) compared to respondents in Latvia with 11% or Turkey where one in ten respondents does that. The participants of the survey in Turkey are the ones who share the news using social networks most often (49%), Latvia follows with (38%), then Serbia (28%) and Slovenia (23%). One in two respondents shares a news story via a closed messaging app (e.g. WhatsApp, Telegram, Signal, etc.), where the number varies between 64% in Turkey and 38% in Slovenia.

On the whole, the largest number of all the respondents talk about news stories with their friends, family and colleagues, which is done by 95% of the respondents on average. It is followed by sharing news stories via closed messaging apps, which is done by half of all the respondents, while 42% of them rate, like or favour news stories. The smallest number of them write a blog on a piece of news (3%) and comment a news story on a news website (9%).

Table 10: The level and way of respondents' reacting to a news story

	%				
	Latvia	Serbia	Slovenia	Turkey	Total
Rate, like or favourite a news story	49	25	35	66	42
Comment on a news story on a social network	19	18	15	28	20
Comment on a news story on a news website	3	14	8	7	9
Write a blog on a news	1	2	0	11	3
Share a news story via email	11	21	18	10	15
Share a news story via social network	38	28	23	49	34
Share a news story via an closed messaging app	53	47	38	64	50
Talk with friends, family and colleagues about a news story	95	91	96	98	95

Graph 17: The level and way of respondents' reacting to a news story

Within question 19 we analysed the ways of sharing news, checking the sources and accuracy of the news by the respondents in the course of the previous year.

A significant percentage of respondents (68%) decided not to share a piece news if they were not confident of its accuracy, the respondents in Turkey did it in 78% of the cases, in Latvia in 74%, in Slovenia in 66% and in Serbia in 58% of the cases. The largest number of respondents in Turkey checked a number of different sources to see whether a news story was reported in the same way (86%), then in Serbia (74%), Latvia (73%) and Slovenia (52%). What is common for the respondents in all four countries is that they stopped following or paying attention to the news sources whose accuracy they were not confident of (69% on average) as well as the people who shared the news whose accuracy they did not trust (77% on average).

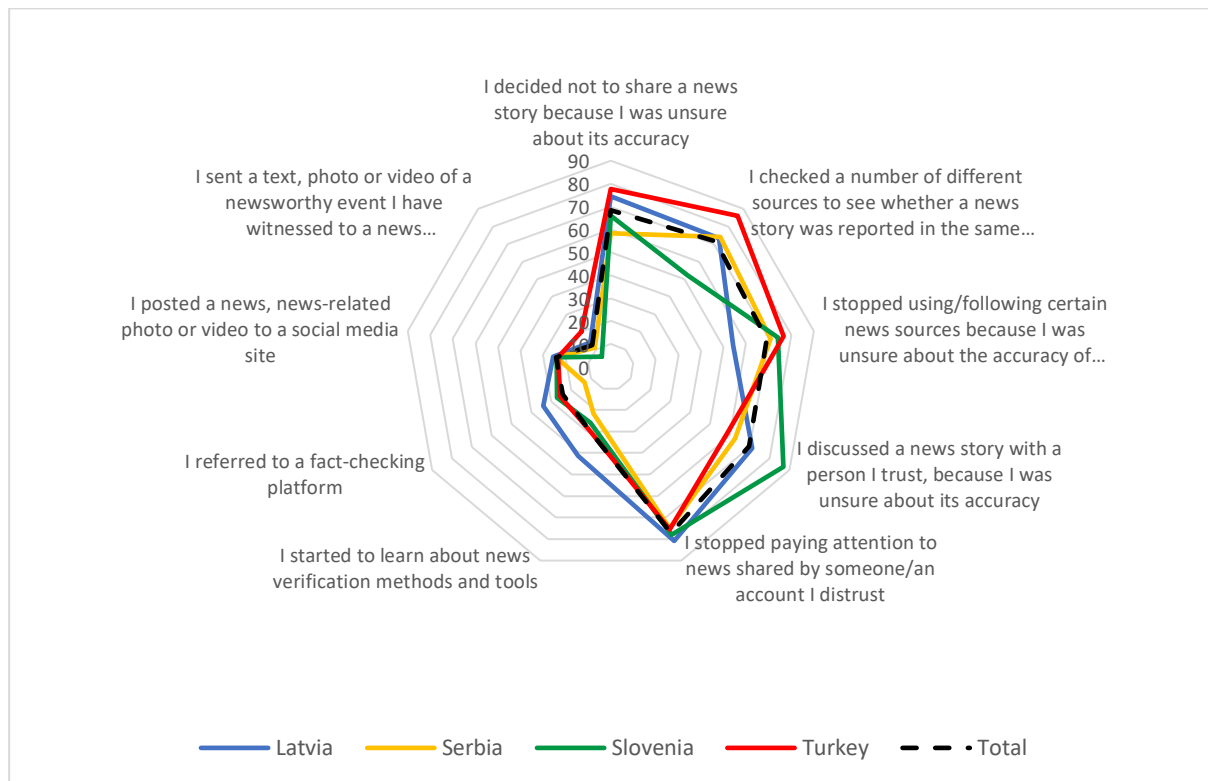
When they were not confident of the accuracy of the news, a significant percentage of respondents (70%) discussed it with a person they trusted. It was done by the largest number of people in Slovenia (87%), and by the smallest number of people in Turkey (59%).

During the previous year the respondents in Latvia started learning about news verification methods and tools more than others (41%), the respondents in Turkey follow them with 29%, in Slovenia with 26% and Serbia with 22%. Using fact-checking platforms shows a similar trend with Latvians using them most (34%) and Serbs using them least (13%).

Almost one in four respondents in the countries where the survey was conducted (24%) posted a piece of news, news-related photo or video on a social media site. Fewer of them were ready to send a text, photo or video of a newsworthy event they had witnessed to a news website/news organisation, which was done by 13% of the respondents.

A relatively small number of respondents started learning about news verification methods and tools during the last year, on average 29% of them. The situation is similar when it comes to using fact-checking platforms, on average 24% of the respondents did that. The statistics indirectly confirm the necessity for education in the field of news literacy.

Graph 18: The ways of sharing news, verification methods, etc.

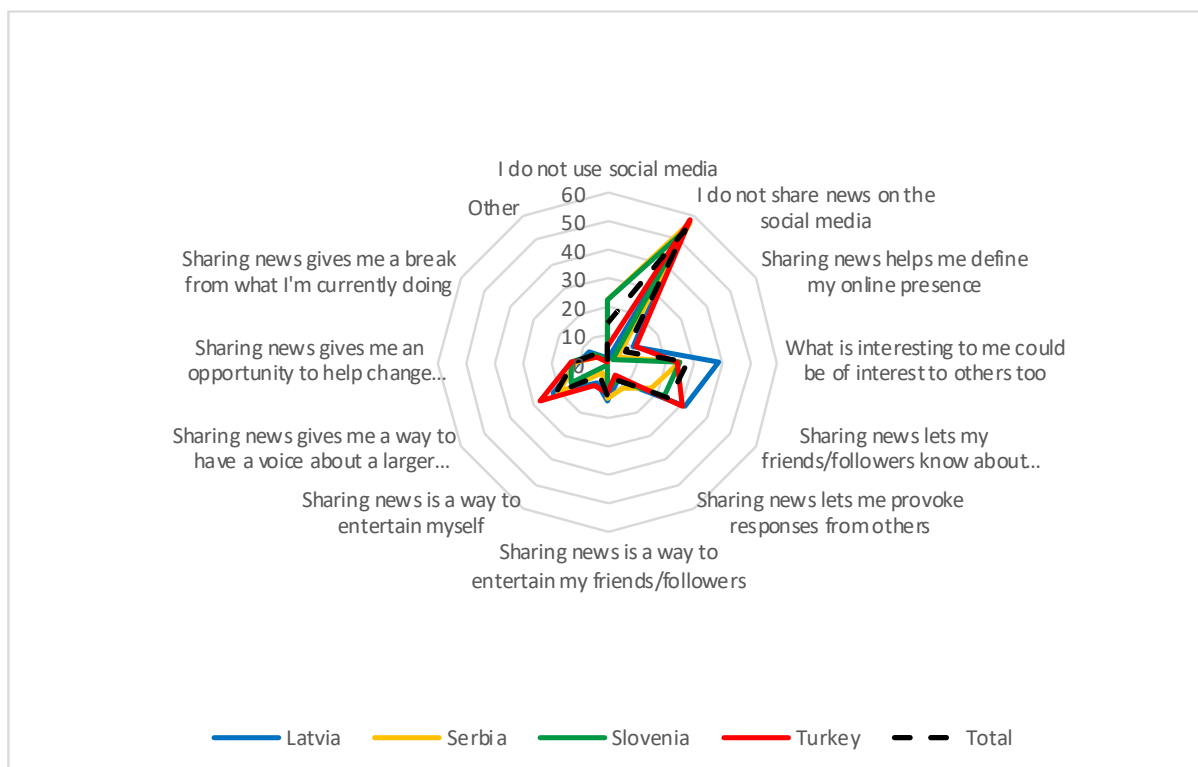


Question 20 determines why, if at all, the respondents share news on the social media sites they use. 13% of respondents said that they did not use the social media at all. Here a difference was spotted between the countries: while, on the one hand, a significant percentage of the respondents in Serbia (23%) and Slovenia (22%) claimed not to be using social networks at all, in Turkey and Latvia there was a very low percentage of the respondents with the same answer (5% and 1%). Still, generally speaking, a very high percentage of the respondents use social networks – 87%, slightly over half of whom do not share news on the social media (54%), while slightly under half of these respondents do that. Regarding the countries, in Turkey they do not share news on social networks in 59% of the cases; In Serbia they do not do it in 58% of the cases, in Slovenia 53% and in Latvia 47% of them do not do that.

One in four respondents shares news on social networks because they think it's the news their friends and followers should know about. Almost one in five respondents (21%) does that because sharing news give them a way to have a voice about a larger cause in the world.

A smaller percentage of respondents in all the countries do that to provoke other people's reactions (8%), to entertain friends (12%) and to entertain themselves (6% in all the countries).

Graph 19: Respondents' attitude to sharing news on the social media



Asking question 21 we wanted to find out how the respondents evaluated the quality of the information they shared, if they did at all, when they decided to share 'breaking news' (a currently developing special news event) on the social media. The number of those who do not use the social media and do not share news on the social media is identical to or insignificantly different from the one in question 20.

Only 7% of the respondents do not evaluate the quality of breaking news before sharing it with others. This percentage is higher in Slovenia – 16% compared to other countries: 6% in Serbia, 4% in Turkey and 2% in Latvia. In all four countries one in five respondents checks how current the information is, but the respondents in Turkey do it most frequently (30%), in Latvia (24%), in Serbia (15%) and in Slovenia (13%).

We spot a big difference between the respondents when it comes to checking the hashtag following certain breaking news. While the respondents in Turkey do that in 29% of the cases, in Serbia it is done by only 5% of the respondents, in Latvia 2% and in Slovenia 1% of the respondents. The respondents in Latvia and Turkey check more often to see who posted or tweeted a news item, with 31% and 30% respectively, while in Serbia and Slovenia the respondents do it in 18% of the cases each.

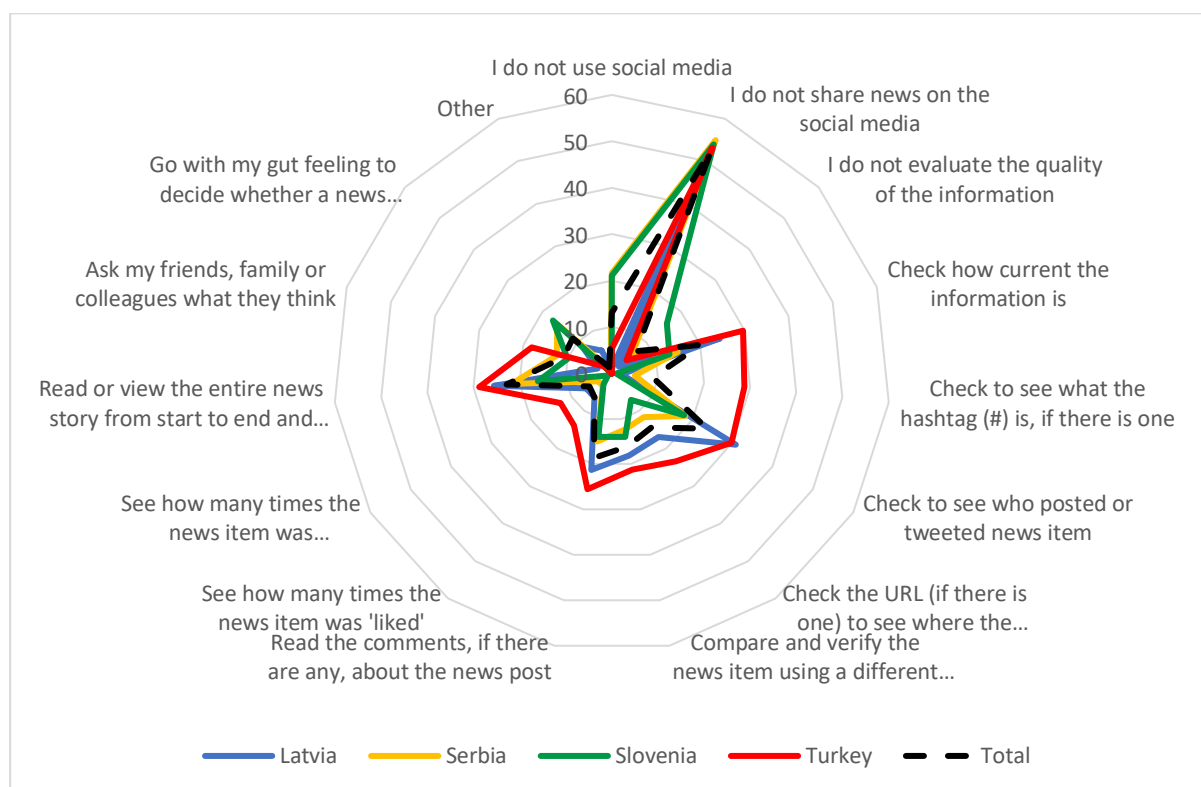
On average 14% of the respondents check the URL (if there is one) to see where the source originated from, Turkey being the one that diverges from the average most with 23% as well as Slovenia with 7%.

On average 16% of the respondents in all the countries where the survey was conducted compare and check a piece of news using other sources relating to that news. The respondents in Turkey (26%) and Latvia (21%) most often read the comments about a certain piece of news (if there are any), in Serbia 15% and in Slovenia 14% of the respondents do that.

In the following two questions there has been a more significant divergence between the respondents' answers. The first question refers to the respondents' checking the number of 'likes' before they share a news item with other users, which is done by 14% of them in Turkey unlike Latvia where it is done by 6% of the respondents and Serbia and Slovenia 3% each. The other question refers to the respondents' checking the number of times a news item was shared/retweeted, and there is the same trend as in the previous question, in Turkey 13% of the respondents do that, in Latvia 6%, Serbia 3% and Slovenia 1%.

One in five respondents in all four countries checks how current a piece of information is. In Turkey it is done in 29% of the cases, in Latvia 26%, in Serbia 22% and in Slovenia in 16% of the cases. On average 11% of the respondents ask their friends, family or colleagues what they think before sharing breaking news, Turkey being the country where it is done most frequently (18%) unlike Latvia where it is done least frequently (3%). The respondents in Slovenia (17%) and Serbia (16%) go with their gut feeling when deciding whether a news item is trustworthy or not, in Latvia (9%), while the respondents in Turkey do that least often (2%).

Graph 20: The ways respondents evaluate the quality of breaking news shared on the social media



Question 22 required the respondents in all the countries to indicate their level of agreement with certain statements about news media (newspapers – including printed newspapers, online news sites and/or websites/apps of newspapers, as well as channels or accounts of newspapers or journalists on social media, television and radio news bulletins or programmes) in their countries. The levels of

agreement were as follows: strongly disagree, somewhat disagree, neither agree nor disagree, somewhat agree and strongly agree.

Almost half of the respondents (48%) in Latvia somewhat agree with the statement that the media in Latvia are impartial. Only 1% of the respondents in this country strongly agree with this statement, 28% of them neither agree with it, one in five respondents somewhat disagrees that the media are impartial and 3% of them strongly disagree with this statement.

More than two thirds (68%) of the respondents somewhat agree that the media keep the important event on the agenda, while 13% of them strongly agree with this statement. A high percentage of the respondents in Latvia also think that the media often focus on negative events and 59% of the respondents somewhat agree with that statement, while 22% strongly agree with it. The respondents that somewhat disagree or strongly disagree with it make up 3% each.

The largest number of respondents somewhat agree with the statement that the media focus more on entertainment and celebrities (54%), while 26% of them neither agree nor disagree, 14% somewhat disagree, 4% strongly agree and 2% strongly disagree with this statement.

Six in ten respondents somewhat agree that the media keep important events on the agenda, the respondents who strongly agree or neither agree nor disagree with this make up 16% each, while 6% of them strongly agree or neither agree nor disagree that the media don't keep important events on the agenda, which 2% of the respondents strongly agree with.

49% of the respondents somewhat agree that the media help them understand the news of the day, 14% of them strongly agree with this, 22% neither agree nor disagree, 9% somewhat disagree and 6% strongly agree with this statement.

Regarding the statements that the media follow up on injustice and inequity and that the media try to uncover the truth, the participants of the survey in Latvia gave almost identical answers: 40% i.e. 41% of them neither agree nor disagree, 32% i.e. 34% of them somewhat agree, 18% i.e. 19% of them somewhat disagree with the statements mentioned above, 7% i.e. 3% of them strongly disagree and 2% of the respondents strongly agree that the media in Latvia follow up on injustice and inequity and try to uncover the truth.

Like in other countries, the respondents in Latvia somewhat agree (43%) that the main concern of the media is to get more followers i clicks, 19% strongly agree with this, 27% of the respondents neither agree nor disagree, 9% of the respondents somewhat disagree and 3% of them strongly disagree with this statement.

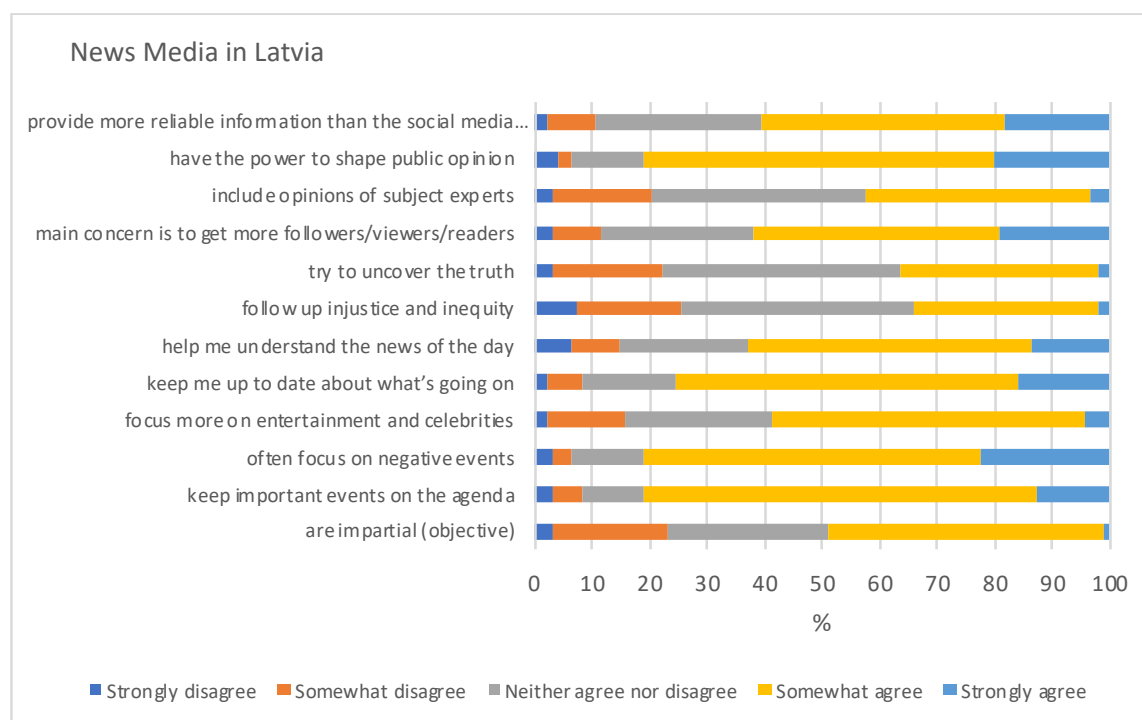
39% of the respondents somewhat agree that the media include opinions of subject experts, 17% somewhat disagree with this, 37% neither agree nor disagree and 3% of the respondents are on each side of the spectrum either strongly agreeing or strongly disagreeing with the statement.

Latvia is not an exception compared to the respondents from other three countries because there too 61% of the respondents somewhat agree that the media have the power to shape public opinion, which one in five respondents strongly agrees with, 13% neither agree nor disagree, while far fewer respondents somewhat disagree with this statement (2%) and strongly disagree with it (4%).

In Latvia, like in Serbia and Slovenia, the respondents are more prone to agree with the statement that traditional media provide more reliable information than the social media. 43% of the respondents somewhat agree with it, 18% strongly agree, 29% neither agree nor disagree, 9% of them somewhat

disagree and 2% of the respondents strongly disagree with the statement that traditional media provide more reliable information than the social media.

Graph 21: Respondents' opinion on news media in their country, Latvia



Almost one in two respondents in Serbia (48%), like in Turkey (50%), strongly disagree with the statement that the media are impartial. On the other hand, only 5% of the respondents strongly agree with the statement that the media are impartial, 13% somewhat agree, 14% neither agree nor disagree and 19% somewhat disagree with the statement that the media in Serbia are impartial.

34% of the participants of the survey somewhat agree with the statement that the media keep important events on the agenda, 26% somewhat disagree, 16% strongly disagree with the statement, the same percentage of respondents neither agree nor disagree, while 8% of the respondents strongly agree that the media keep important events on the agenda.

Like in other countries where the survey was conducted, the majority of the respondents here think that the media often focus on negative events. In Serbia a similar trend is evident. 43% of the respondents strongly agree with the statement that the media often focus on negative events and one in four respondents somewhat agrees with it.

30% of the respondents strongly agree with the statement that the media focus more on entertainment and celebrities, 30% of them somewhat agree, 24% neither agree nor disagree, 10% strongly disagree with it, and the rest 6% of the respondents strongly disagree with this statement.

The largest number of the survey participants somewhat agree that the media keep them up to date about what's going on (43%). 9% of them strongly agree, as opposed to 10% who strongly disagree with this statement.

Regarding the respondents' opinion on the statement that the media help them understand the news of the day, except for the 5% of those who strongly agree with it and 20% of the respondents who strongly disagree, other three options were chosen by almost the equal number of respondents.

Like the survey participants in Turkey, the largest and identical number of the respondents in Serbia (28%) either strongly disagree or somewhat disagree that the media in Serbia try to follow up on injustice and inequity. 23% of them neither agree nor disagree with it, 17% somewhat agree and 5% strongly agree with that statement. The same trend and figures are evident in Serbian respondents' opinions on the statement that the media try to uncover the truth. When the data about these two statements is compared, a clear division of opinions is obvious - on the one hand, the respondents from Turkey and Serbia largely disagree with these two statements, and, on the other hand, the respondents from Slovenia and Latvia tend to agree with the statement that the media follow up on injustice and inequity and try to uncover the truth.

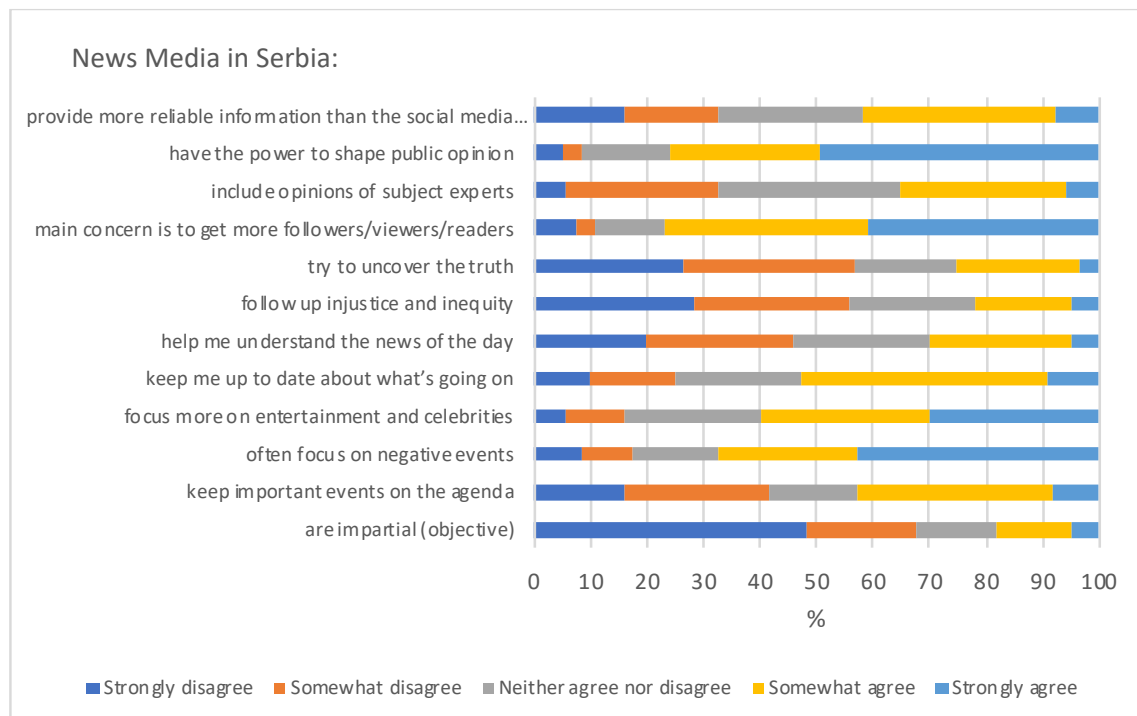
The statement that all the respondents in all the countries agree about is that the main concern of the media is to get more followers/viewers/readers/hits/clicks so the respondents in Serbia strongly agree with this statement in 41% of the cases and somewhat agree in 36% of the cases, while only 8% of the respondents in Serbia strongly disagree with it.

One in three respondents (33%) neither agrees nor disagrees that the media include opinions of subject experts, 29% of them somewhat agree with it, 27% somewhat disagree and the respondents who either strongly agree or strongly disagree make up 6% each.

Like in Slovenia, almost one in two respondents in Serbia (49%) strongly agrees that the media have the power to shape public opinion. 27% of the respondents somewhat agree with it, 16% neither agree nor disagree with that statement, 3% somewhat disagree and 5% strongly disagree with it.

Regarding the statement that traditional media provide more reliable information than the social media platforms where the content is produced by users, 8% of the respondents strongly agree with it, but 34% of them somewhat agree, 26% neither agree nor disagree with it, while 17% somewhat disagree and 16% strongly disagree with it. The results in Serbia regarding this question are most like the same results in Slovenia, which, again, are both closer to the results in Latvia than the ones in Turkey, which, when it comes to this particular question, are an exception.

Graph 22: Respondents' opinion on news media in their country, Serbia



Unlike the situation in Turkey, but similar to the one we have seen in Serbia, the respondents in Slovenia neither agree nor disagree that the media are impartial in 41% of the cases. One in four respondents somewhat disagrees with this statement, 19% of them somewhat agree with it, 13% strongly disagree and only 2% strongly agree.

In Slovenia, 10% of the respondents strongly agree that the media keep important events on the agenda, 38% somewhat agree, 26% neither agree nor disagree, 24% of the respondents somewhat disagree with it and 2% of them strongly disagree with this statement.

The largest percentage of respondents, 43% of them strongly agree with the statement that the media in Slovenia often focus on negative events. Also, 38% of them somewhat agree with that statement. In all four countries, the respondents assessed the media in a similar way, with Turkey having somewhat lower percentages than other three countries.

Almost one in two respondents in Slovenia (46%) neither agree nor disagree with the statement that the media focus more on entertainment and celebrities. Again, there are more of those who somewhat agree with this statement (28%) than the ones who somewhat disagree with it (19%).

18% of the respondents strongly agree with the statement that the media keep them up to date about what is going on, 44% of them somewhat agree with it, 26% neither agree nor disagree with this statement, and 8% somewhat disagree, while 4% of the respondents strongly disagree that the media keep them up to date about what is going on.

The largest number of respondents (44%) somewhat agree that the media help them understand the news of the day, those who neither agree nor disagree make up 33% of the respondents, 12% somewhat disagree with this statement, 8% strongly agree that the media help them understand the news of the day, while 3% strongly disagree with this statement.

The respondents in Slovenia assessed the role of the media more positively when it comes to their following up on injustice and inequity and trying to uncover the truth. In both cases there is 36% of the respondents who somewhat agree that the media follow up on injustice and inequity and try to uncover the truth. 39% of the respondents neither agree nor disagree with the statement that the media follow up on injustice and inequity, and 37% of them think the same regarding the media uncovering the truth. The results of the answers to this question in Slovenia are very much like the ones in Latvia, but very different from the results within this question in Turkey and Serbia.

27% of the respondents strongly agree with the statement that the main concern of the media is to get more followers/viewers/readers/hits/clicks, 37% somewhat agree with it, the percentage of the ones who neither agree nor disagree with it is 28%, while 7% of them somewhat disagree, and 1% of the respondents strongly disagree with this statement.

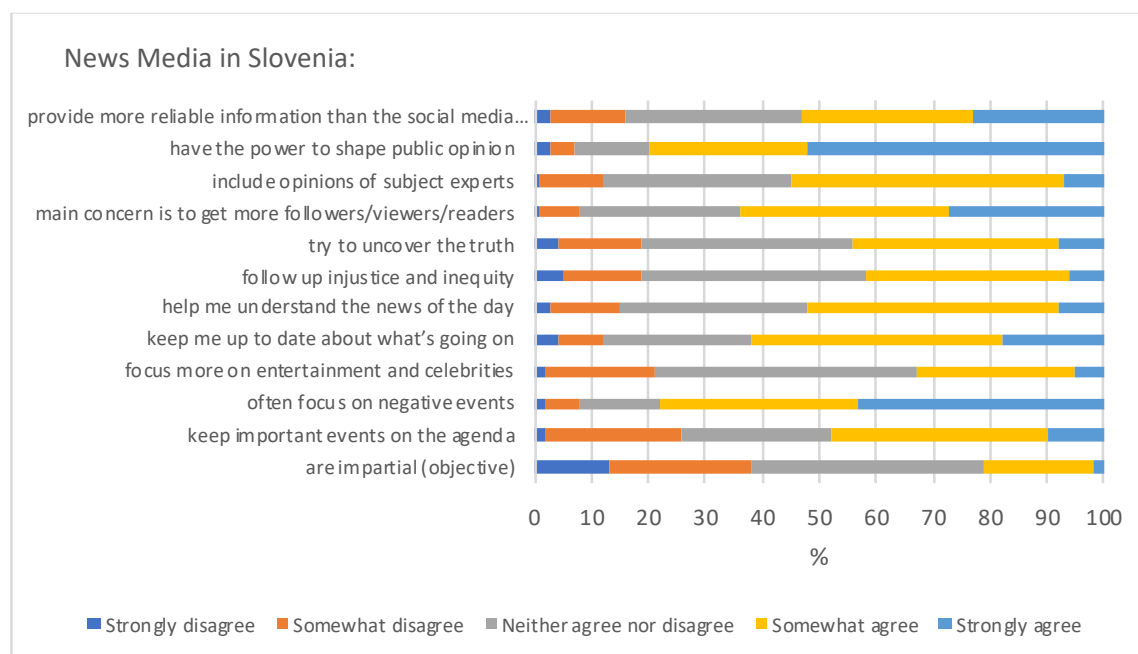
48% of the survey participants in Slovenia somewhat agree that the media include opinions of subject experts, while 33% of the respondents neither agree nor disagree with this statement.

More than half of the respondents (52%) strongly agree with the statement that the media have the power to shape public opinion, 28% of them somewhat agree with it, 13% neither agree nor disagree, while the respondents who somewhat disagree and strongly disagree make up only 4% and 3% of the participants respectively.

With Turkey again being an exception here, 23% of the respondents in Slovenia strongly agree with the statement that traditional media provide more reliable information than the social media

platforms where the content is produced by users, 30% of them somewhat agree with this, 31% of them neither agree nor disagree, and 13% somewhat disagree with it, while only 3% of the respondents strongly disagree with this statement.

Graph 23: Respondents' opinion on news media in their country, Slovenia



Only 6% of the respondents in Turkey strongly agree with the statement that the media are impartial, while 50% of them strongly disagree with it. The difference is even bigger if we add the respondents who somewhat agree with the statement that the media in Turkey are impartial (2%) as opposed to those who somewhat disagree with the statement that the media are impartial (31%). 11% of the respondents do not have a strictly defined opinion on this subject.

11% of the respondents strongly agree that the media keep important events on the agenda unlike the 21% of those who think the opposite. Those who somewhat agree that the media keep important events on the agenda make up 17% of the respondents, while there is 30% of those who somewhat disagree with it.

The largest number of respondents neither agree nor disagree with the statement that the media often focus on negative events (31%), but when we look at the answers at different ends of the spectrum, there are more respondents who strongly agree (14%) or somewhat agree with it (28%) than the ones who strongly disagree (16%) or somewhat disagree with it (12%).

The majority of the respondents in Turkey agreed with the statement that the media focus more on entertainment and celebrities (17% strongly agree, 31% somewhat agree).

35% of the respondents neither agree nor disagree that the media keep them up to date about what is going on, and exactly the same percentage of the respondents neither agree nor disagree with the statement that the media help them understand the news of the day. 31% of the respondents say that the media help them understand the news of the day, 6% strongly agree with it, and 13% of them strongly disagree that the media help them understand the news of the day, while 15% of them somewhat disagree with it.

The majority of the respondents disagree with the statement that the media follow up on injustice and inequity (30% strongly disagree and 36% somewhat disagree), while 3% of the respondents strongly agree that the media follow up on injustice and inequity. The results are similar when it comes to the answers to the question if the media try to uncover the truth. 30% of the respondents strongly disagree with it, 29% somewhat disagree, 31% neither agree nor disagree with this statement, and only 3% strongly agree with the statement that the media try to uncover the truth.

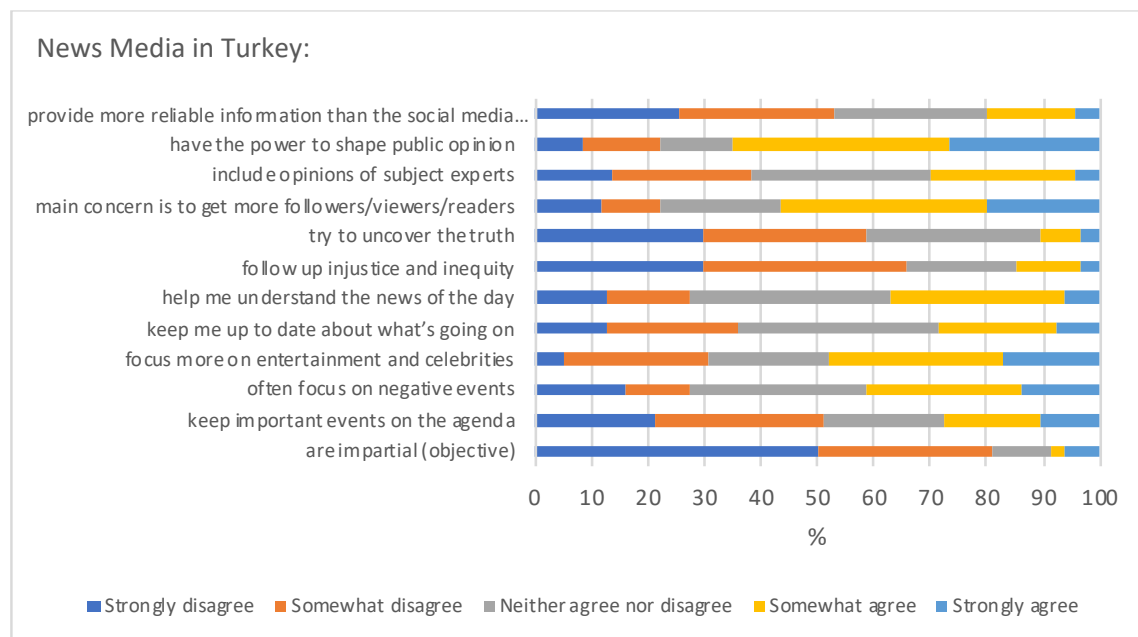
The majority of the respondents think that the main concern of the media is to get more followers of a certain piece of news, 20% of whom strongly agree with it, 36% somewhat agree, and 21% neither agree nor disagree with this statement.

32% of the respondents neither agree nor disagree that the media include opinions of subject experts, 26% somewhat agree with it, and 24% somewhat disagree with that statement.

27% of the respondents in Turkey strongly agree that the media have the power to shape public opinion, 38% of them somewhat agree with it, 13% of the respondents neither agree nor disagree, 14% of the respondents somewhat disagree with this statement unlike 9% of those who strongly disagree that the media have the power to shape public opinion.

There's a significant difference in the assessment and percentages around the statement that traditional media provide more reliable information than the social media platforms, where 26% of the respondents strongly disagree with it, 28% somewhat disagree, 27% neither agree nor disagree with this statement, while 16% of them somewhat agree and only 4% of them strongly agree with this statement.

Graph 24: Respondents' opinion on news media in their country, Turkey



The importance of the media and their power in today's society is supported by the fact that around two thirds of all the respondents strongly or somewhat agree with the statement that news media have the power to shape public opinion.

A high percentage of respondents in Turkey and Serbia do not think that news media are impartial/objective (81%, i.e. 67% of them strongly or somewhat disagree), while in Slovenia and

Latvia, the percentage of those who share that opinion is lower (38%, i.e. 23% of them strongly or somewhat disagree).

The majority of the respondents share the opinion that news media often focus on negative events.

In question 23, the respondents were supposed to indicate their level of agreement with certain statements.

In Latvia 32% of the respondents neither agree nor disagree that it is safer to share politics-related news via closed messaging app, 21% of the respondents somewhat agree, while 19% of them somewhat disagree with this, 16% of the respondents did not assess this statement, and 11% of them strongly disagree 11% as opposed to 1% of those who strongly agree with this.

Unlike the respondents in other three countries, where the largest percentage of respondents strongly agree that the proliferation of fake news is worrying, in Latvia the percentage is slightly lower and is 37%, but the percentage of the respondents who somewhat agree with this statement is significantly higher – 41% of them. 5% of the respondents neither agree nor disagree, while one in ten respondents somewhat disagrees and 5% strongly disagree with this.

30% of the respondents think that fact-checking platforms are totally impartial, and this statement is the one with the fewest number of answers in Latvia (28%). 22% of the respondents somewhat agree with this, 14% somewhat disagree, and on the opposite ends of the spectrum there are 2% of those who strongly agree and 4% of those who strongly disagree with this statement.

The largest percentage of respondents (64%) strongly agree with the statement that the news is necessary in a democracy, and 24% of them somewhat agree with it.

The majority of the respondents in Latvia tend to believe that following the news is a civic responsibility, 46% somewhat agree with this statement, 22% strongly agree, 18% neither agree nor disagree with it, while the ones who strongly disagree or somewhat agree that following the news is a civic responsibility make up 6% and 5% respectively.

Almost one in three respondents in Latvia (32%) neither agrees nor disagrees and somewhat disagrees (31%) with the statement that real news and fake news are hard to distinguish. 22% of them somewhat agree that real news and fake news are hard to distinguish, 9% of them strongly agree and 4% strongly disagree with this.

Most Latvian respondents somewhat agree with the statement that the news is objective reporting of facts (33%) and 13% of them strongly agree with this statement. A similar trend is evident among the respondents in Turkey and Slovenia unlike Serbia where the trend is quite opposite. 30% of them neither agree nor disagree, almost one in five respondents (21%) somewhat disagrees and just 2% of the respondents strongly disagree, which can be compared to Slovenia (7%), Turkey (11%) and Serbia where as much as 33% of them strongly disagreed with this statement.

Based on the results from Latvia, we can see that their respondents, compared to other countries, chose the strongly agree option less often in case of the statement that the sheer amount of news any given day is overwhelming (24%). 34% of them were ready to somewhat agree with it, 17% of them somewhat disagreed, 16% neither agreed nor disagreed, while 6% strongly disagreed with this statement.

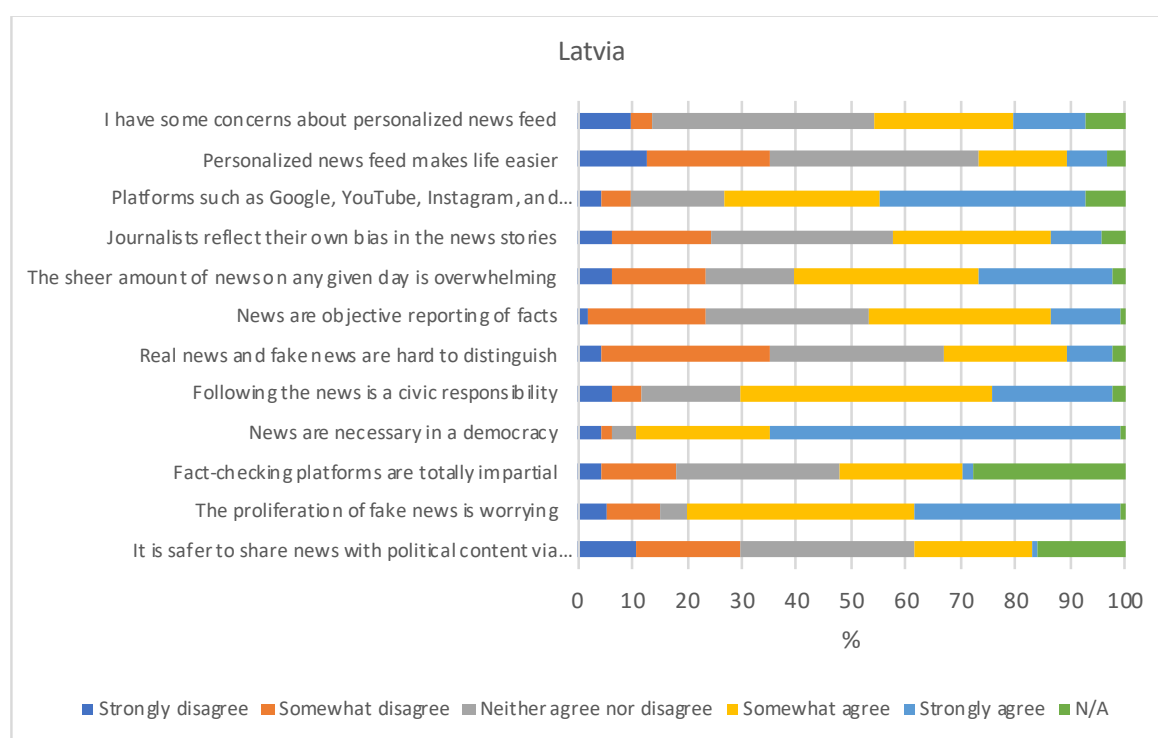
One in three respondents neither agrees nor disagrees with the statement that journalists reflect their own bias in the news stories, 29% of them somewhat agree and 18% somewhat disagree with this, while one in ten respondents strongly agrees with the statement and 6% strongly disagree with it.

37% of the respondents strongly agree that Platforms such as Google, YouTube, Instagram, Facebook personalize the news we get, 29% of them somewhat agree with this, while 17% of the respondents neither agree nor disagree with this statement.

The largest number of respondents in Latvia chose the neither agree nor disagree option (38%) in case of the statement that personalised news feed makes life easier. 22% of the respondents somewhat disagree and 13% strongly disagree with this, while, on the other hand, 16% of them somewhat agree and 7% of them strongly agree with the statement that personalised news feed makes life easier.

The last statement in question 23 the respondents expressed their opinion on was: I have some concerns about personalized (filtered) news feed. 40% of the survey participants in Latvia neither agree nor disagree, 26% of them somewhat agree, 13% strongly agree with it, 4% somewhat disagree and one in ten participants in the survey strongly disagrees with this statement.

Graph 25: Respondents' opinions on news media in their country, Latvia



In Serbia 26% of the respondents neither agree nor disagree with the statement that it is safer to share politics-related news via closed messaging apps. Almost one in five respondents (21%) did not express their opinion on this statement, and compared to other countries, the respondents in Serbia left the offered statements unassessed more often, like in this case. 18% of the respondents strongly agree, 11% of them strongly disagree with this statement and there is the same percentage of the respondents who somewhat disagree, while 13% of them somewhat agree that it is safer to share politics-related news via closed messaging apps.

Like Slovenia, in Serbia there is a very high percentage (72%) of the respondents who strongly agree that the proliferation of fake news is worrying unlike the 4% of those who strongly disagree with this statement.

As we will see in case of Slovenia, assessing the statement that fact-checking platforms are totally impartial, the most frequent option Serbian respondents chose was neither agree nor disagree (32%).

Besides a large number of those who did not assess this statement (28%), 21% of the respondents somewhat agree with this statement, 8% somewhat disagree with it, 5% strongly agree, while 6% strongly disagree with this statement.

Two thirds of the respondents in Serbia strongly agree with the statement that the news is necessary in a democracy, while 13 % of them somewhat agree with this. The ones who strongly or somewhat disagree with this statements make up 3% of the respondents each.

The ones who either strongly agree or somewhat agree that following the news is a civic responsibility make up 29% of the participants each, 19% neither agree nor disagree with this statement, 4% somewhat disagree with it and 2% strongly disagree with this statement.

The largest number of respondents (45%) somewhat agree with the statement that real news and fake news are hard to distinguish, 19% strongly agree with this as opposed to the 4% of those who strongly disagree with it. 13% of the respondents somewhat disagree and 12% neither agree nor disagree with this statement.

One in three respondents in Serbia strongly disagrees and the same number of them somewhat disagree with the statement that the news is objective reporting of facts. Only 3% of the respondents strongly agree with this, 13% somewhat agree, 12% neither agree nor disagree with this statement, while 6% of them did not express their opinions on this.

Like in other countries, slightly over half of the respondents in Serbia (54%) strongly agree with the the statement that the sheer amount of news any given day is overwhelming, 18% of them somewhat agree with it. Only 6% of the respondents strongly disagree, while one in ten respondents did not express their opinions on this.

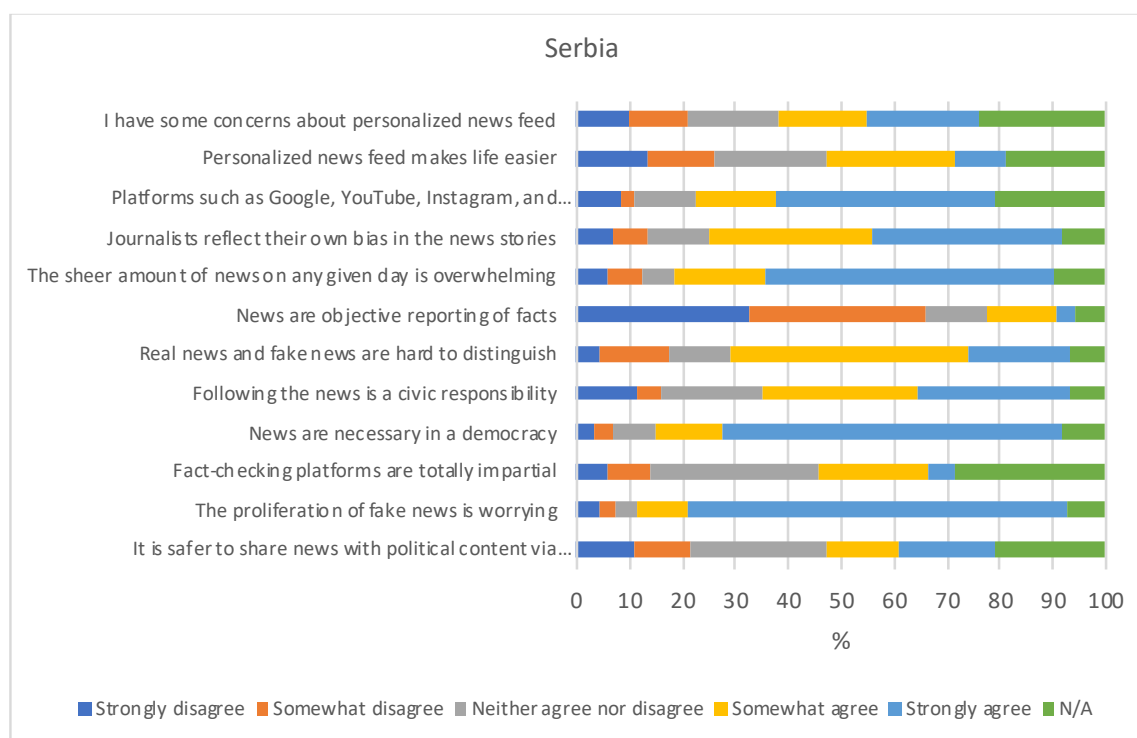
36% of the respondents strongly agree that journalists reflect their own bias in the news stories, 31% of them somewhat agree, 12% neither agree nor disagree with this statement, and the ones who strongly disagree or somewhat disagree make up 7% of the respondents each.

42% of the survey participants in Serbia strongly agree that platforms such as Google, YouTube, Instagram, Facebook personalize the news we get. There is a high percentage of those who did not express their opinions on this (21%). 15% of the respondents somewhat agree with this statement, 12% neither agree nor disagree, 3% somewhat disagree with it and 8% strongly disagree with this statement.

The largest number of respondents in Serbia somewhat agree with the statement that personalised news feed makes life easier (24% of the cases), 22% of them neither agree nor disagree, and almost one in five respondents (19%) didn't express their opinion on this. Those who somewhat or strongly disagree with this statement make up 13% of the respondents each.

In case of the statement: I have some concerns about personalized (filtered) news, the largest number of respondents decided not to express their opinions (24%). Out of those who did, 21% strongly agree, 17% somewhat agree, 18% neither agree nor disagree, 11% somewhat disagree and one in ten respondents strongly disagrees with this statement.

Graph 26: Respondents' opinion on news media in their country, Serbia



Almost one in three respondents in Slovenia (34%) neither agrees nor disagrees with the statement that it is safer to share politics-related news via closed messaging apps. 18% of the respondents strongly disagree with this statement unlike 5% of them who strongly agree. 9% of the respondents somewhat disagree and 15% somewhat agree with it.

In Slovenia, more participants (75%) than in any other country, strongly agree with the statement that the proliferation of fake news is worrying. 13% of Slovenian respondents somewhat agree with it, while only 1% of them strongly disagree.

In all four countries, most respondents, when assessing the statement that fact-checking platforms are totally impartial, chose the neither agree nor disagree option, with Slovenia following the trend (38%). It is also interesting that in the case of this statement most respondents in all four countries decided not to express their opinions - in Slovenia 35% of the respondents, in Serbia and Latvia 28% each, and in Turkey 14% of them.

Two thirds of the respondents in Slovenia (64%) strongly agree with the statement that the news is necessary in a democracy, which is exactly the same percentage of the respondents with the same answer in Serbia and Latvia. 17% of the respondents somewhat agree with this statement. None of the respondents strongly disagreed with this statement.

32% of the respondents strongly agree that following the news is a civic responsibility, while 26% of them somewhat agree with this, and 28% of the respondents neither agree nor disagree.

39% of the respondents in Slovenia somewhat agree with the statement that real news and fake news are hard to distinguish, 23% of them strongly agree with it, and 27% neither agree nor disagree. Only 2% of the respondents strongly disagree with this statement or didn't express their opinions, while 7% somewhat disagree with it.

Except for the 7% of those who strongly disagree that the news is objective reporting of facts, all other answers are equally distributed between 22% and 44%.

After the respondents in Serbia (54%), the largest number of respondents who strongly agree that the sheer amount of news any given day is overwhelming is in Slovenia (45%). One in three respondents in Slovenia somewhat agrees with this statement (34%), 14% of them neither agree nor disagree, 5% somewhat disagree with this, while none of the respondents strongly disagreed with this statement.

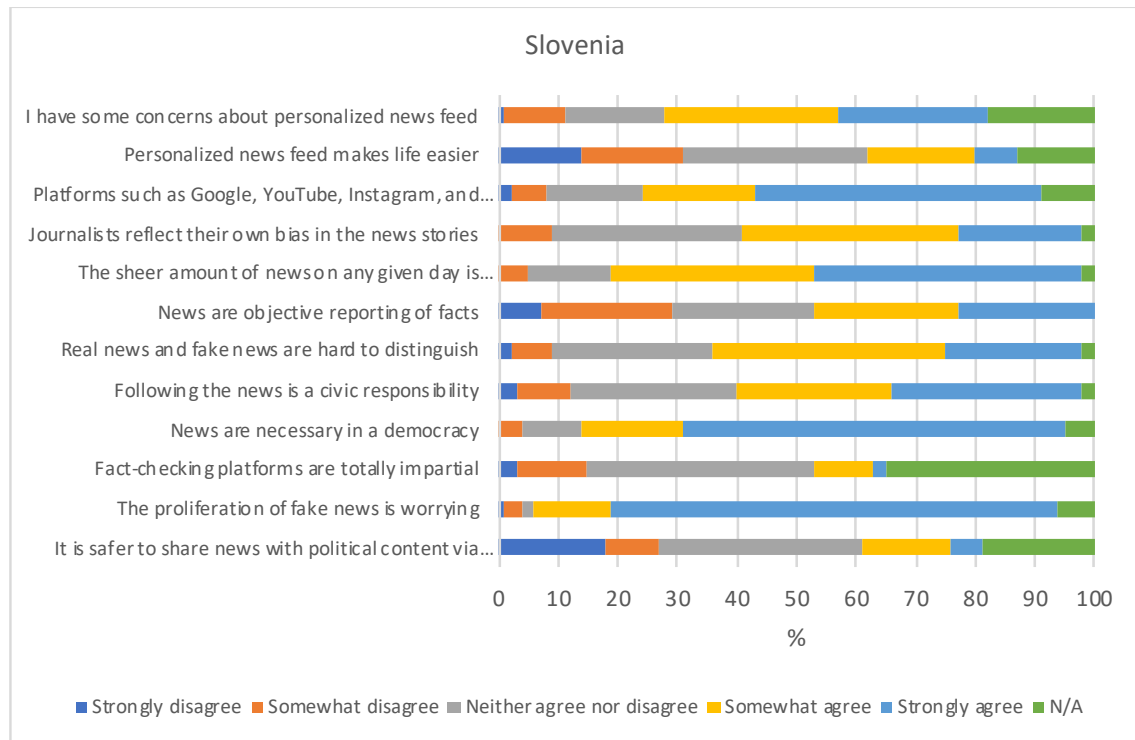
36% of the respondent somewhat agree with the statement that journalists reflect their own bias in the news stories, 32% of them neither agree nor disagree, 21% of the respondents strongly agree with it, while, again, no respondents strongly disagreed with this statement.

Almost half of the respondents (48%) strongly agree that platforms such as Google, YouTube, Instagram, Facebook personalize the news we get. 19% of the respondents somewhat agree with this, 16% of them neither agree nor disagree, 9% of the participants didn't express their opinions on this statement, 6% somewhat disagree, and 2% strongly disagree with it.

When it comes to the statement that personalised news feed makes life easier, most respondents chose to neither agree nor disagree with it (31%), 18% of the respondents somewhat agree with this statement unlike 17% of those who somewhat disagree. 7% of the respondents strongly agree with this, while 14% of them strongly disagree with the statement that personalised news feed makes life easier. A high percentage of respondents (13%) did not express their opinions on this statement.

One in four respondents in Slovenia have some concerns about personalized (filtered) news, 29% of the respondents somewhat agree with this, 18% did not express their opinions on this, 17% neither agree nor disagree, one in ten respondents somewhat disagrees with it, while only 1% of them don't have any concerns about personalized (filtered) news.

Graph 27: Respondents' opinion on news media in their country, Slovenia



In Turkey 21% of the respondents strongly disagree with the statement that it is safer to share politics-related news via closed messaging apps, 23% of them somewhat agree with this, 22% neither agree nor disagree, 14% somewhat agree with this statement, and those who strongly agree with it make up 16% of the respondents.

All the respondents in all four countries agree that the proliferation of fake news is worrying. In Turkey 59% of the respondents strongly agree with this statement, 22% of them somewhat agree with it, and only 3% of the respondents strongly disagree with it.

Almost one in two respondents (46%) neither agree nor disagree that fact-checking platforms are totally impartial, 17% of them somewhat disagree with it, 11% strongly disagree with the statement, 9% of the respondents strongly agree and 4% of them somewhat agree with it.

The largest number of respondents either strongly or somewhat agree with the statement that the news is necessary in a democracy with 34% of them choosing each of the two options, 16% of the respondents neither agree nor disagree with it, while the ones who somewhat or strongly disagree with it make up 5% and 4% respectively.

Also, the largest number of respondents in Turkey (31%) strongly agree that following the news is a civic responsibility. 30% of the respondents somewhat agree with this, 19% of them neither agree nor disagree, while 16% of the respondents somewhat disagree and only 2% of them strongly disagree with this statement.

The largest number of the survey participants in Turkey (29%) neither agree nor disagree with the statement that it is hard to distinguish between real news and fake news, 26% of the respondents somewhat agree with this statement, 21% of them somewhat disagree with it, 13% strongly agree, while 9% strongly that real news and fake news is hard to distinguish.

As much as 39% of the respondents agree that the news is objective reporting of facts, and 26% of them somewhat agree with this statement. 11% of the respondents in Turkey strongly disagree with this statement, and 10% of them somewhat disagree with it.

Most respondents strongly or somewhat agree with the statement that the sheer amount of news any given day is overwhelming, 39% and 28% of them respectively. 16% of the respondents neither agree nor disagree with this, 14% of them somewhat disagree, and only 1% of the respondents strongly disagree with it.

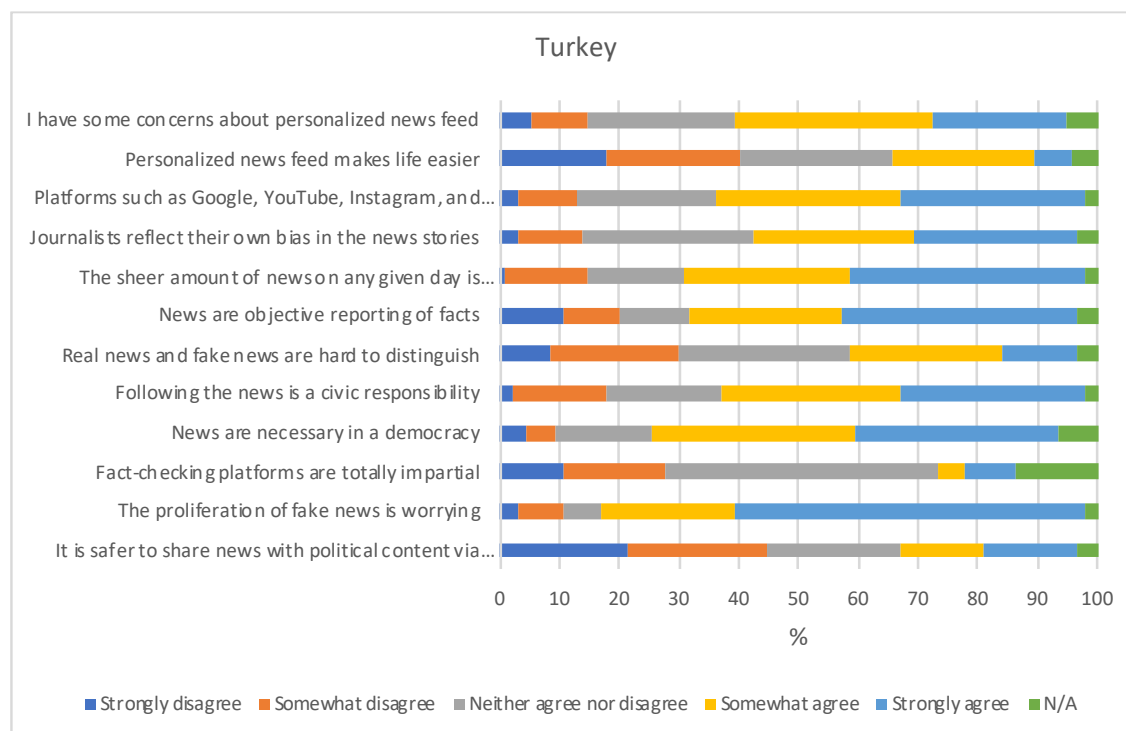
When it comes to the statement that journalists reflect their own bias in the news stories, most respondents (29%) neither agree nor disagree with it. Those who strongly or somewhat agree with this statement make up a very similar percentage, 28% and 27% respectively. 11% of the respondents somewhat disagree and 3% of them strongly disagree with this statement.

The identical percentage of respondents strongly agree or somewhat agree (31%) with the statement that platforms such as Google, YouTube, Instagram, and Facebook personalize (filter) the information and news we get, 23% of them neither agree nor disagree, one in ten respondents somewhat disagrees, and 3% of them strongly disagree with this statement.

Turkish respondents also expressed their opinions on the last two statements on personalized news within question 23. Most respondents (26%) neither agree nor disagree with the statement that personalised news feed makes life easier, 23% of them somewhat agree with it, but 22% of the respondents somewhat disagree and 18% strongly disagree that personalised news feed makes life easier, unlike the 6% of those who strongly agree that personalised news feed makes life easier. As a

logical continuation to this statement, the next one referred to the question whether the respondents have some concerns about personalized (filtered) news. Most respondents have some concerns about personalized (filtered) news, out of whom 22% strongly agree, 33% somewhat agree with it, and only 5% of the respondents do not have concerns about personalized (filtered) news.

Graph 28: Respondents' opinions on various issues regarding news and fake news, Turkey



Overall, on average around two thirds of all the respondents in all four countries think that the news is necessary in a democracy. Also, most respondents think that following the news is a civic responsibility. Still, a significant number of respondents think that the sheer amount of news on any given day is overwhelming. A vast majority of respondents in all four countries think that the proliferation of fake news is worrying.

The last question, question 24 consisted of a set of 14 questions which the respondents answered expressing different levels of the need for different types of training in the field of news literacy. The first question was to determine if the respondents wanted any kind of training in this field in general, while the rest of the questions determined the level of the respondents' interest in different types of actual training.

Overall, as much as 81% of the respondents want some kind of training. 36% of the respondents in Serbia do not want any training. The percentage of those who do not want any training in Slovenia is 15%, in Turkey 14% and in Latvia 9%.

In Slovenia, respondents showed most interest in getting trained in verifying news (60%), followed by Turkey (44%), Serbia (34%) and Latvia (23%). To get trained in verifying images most interest was shown by Latvian and Slovenian respondents (43% and 42% respectively), somewhat fewer respondents in Turkey (37%) and fewest respondents in Serbia (28%).

Almost half of the respondents in Slovenia and Turkey (52% and 47% respectively) expressed the need to learn how to distinguish facts from falsehood, while the respondents in Latvia and Serbia (23% and

19% respectively) showed significantly less interest in this kind of training. The same trend is evident when it comes to the training in distinguishing facts from opinions.

The training in how fake news is spread raised most interest by Turkish respondents (41%) and least interest by Serbian respondents (18%), while almost one in four respondents in both Latvia and Slovenia (26% each) is interested in this topic.

Latvian and Turkish respondents (46% and 45% of them respectively) were interested in understanding how algorithms work and learning how information is personalized.

Also, the respondents in Latvia expressed most interest in getting to know how fact-checking platforms worked with 47% of the respondents, while the respondents in other three countries expressed interest in this kind of training in 30% of the cases.

On average 31% of the respondents were interested in getting trained in and learning about reliable, trustworthy sources. There were 41% of the respondents in Turkey and 39% of them in Slovenia unlike the respondents in Latvia and Serbia where there were 24% and 22% of them respectively who expressed interest in this kind of training.

The participants in the survey showed less interest in learning about news media (their nature and mission), 17% of them on average, Turkey being an exception with 34% of the respondents expressing interest in this kind of training.

All the participants in the survey showed even less interest when it comes to citizen and Internet journalism, 15% of them on average.

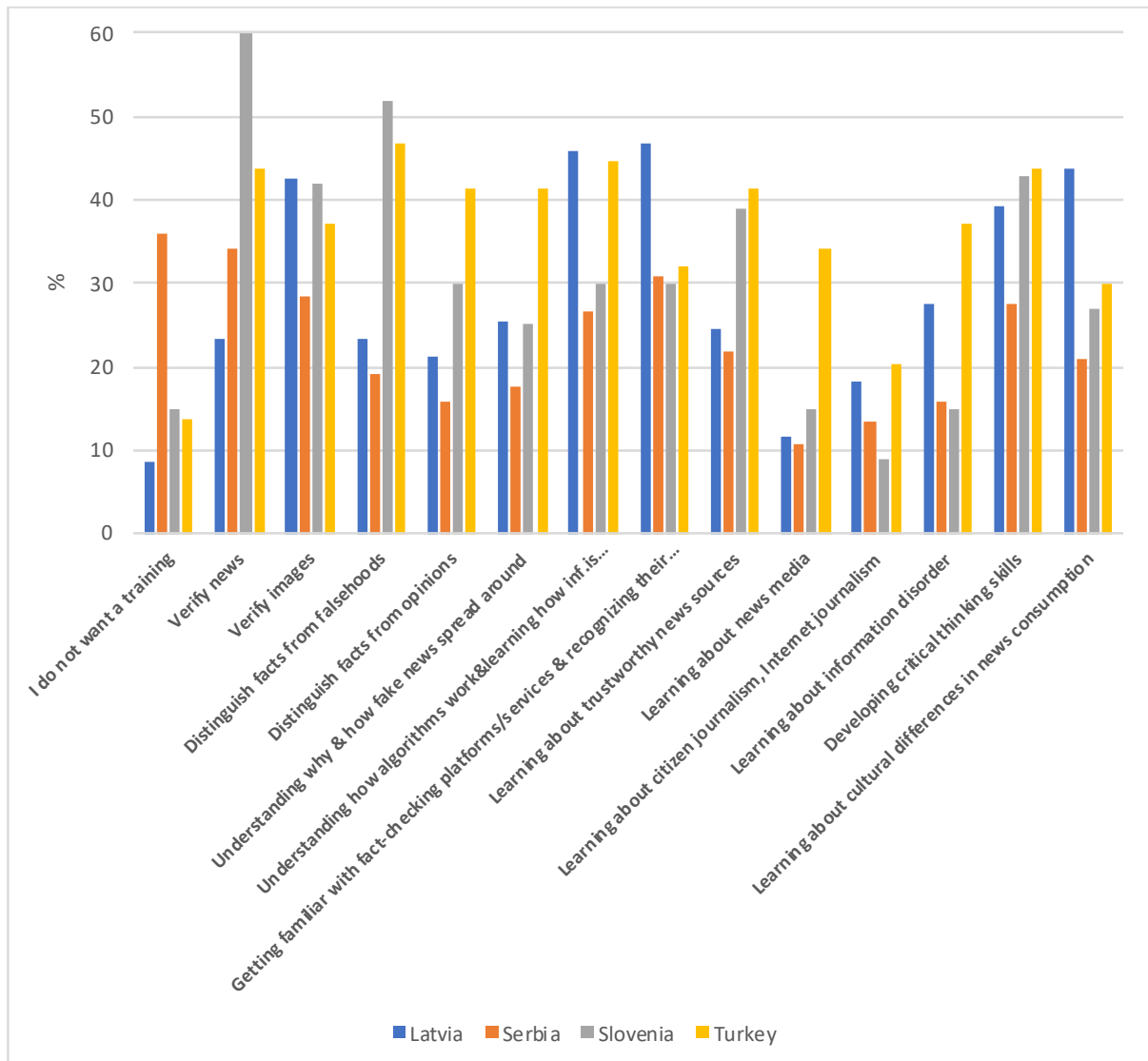
37% of the respondents in Turkey, 28% of them in Latvia, 16% and 15% respectively in Serbia and Slovenia said they wanted to get trained in and learn more about information disorder.

A high percentage of respondents is interested in developing critical thinking skills. When it comes to this topic, Turkish respondents are slightly ahead of others (44%), followed by respondents in Slovenia (43%), Latvia (39%) and the smallest number of them in Serbia (28%).

The respondents in Latvia were most interested in learning about cultural differences (44%) unlike the respondents in Serbia who showed least interest in this topic (21%).

On average, the respondents expressed most interest in getting trained in news verification (40%), developing critical thinking (38%) and verifying images (37%). They are least interested in the training dealing with learning about citizen and Internet journalism (15%), news media (their nature and mission) (17%) and learning about information disorder (23%).

Graph 29: Respondents' need for training in different areas of news literacy



CONCLUSIONS

Based on review and analysis of the situation in the field of news literacy we came to the following conclusions:

- Country reports indicate that in all partner countries the very term *news literacy* still has not been established, so that there is no specific term for this type of literacy. Also, in all partner countries, during the first two decades of 21st century, different activities, projects and research regarding media/news literacy have begun. Yet, in all partner countries there is still a significant need for improving citizens' education in this field. The Annual Media Literacy Index led by Open Society Institute from Sofia, shows that no partner country belongs to a group of countries with the highest level of media literacy (cluster 1). In Slovenia, media literacy is the highest (cluster 2), Latvia follows (cluster 3), then Serbia and Turkey (cluster 4). In general, both media freedom and media literacy are more developed in Slovenia and Latvia than in Serbia and Turkey.
- The news plays an important part in modern society – as much as 94% of the respondents follow the news, 85% of whom do it on a daily basis (once or several times a day). Around two thirds of all the respondents think the news is necessary in a democracy. Also, the majority of the respondents think that following the news is a civic responsibility. Around two thirds of all the respondents strongly or somewhat agree with the statement that news media have the power to shape public opinion. All this supports the importance and necessity of the news in the lives of modern people as well as the strong impact it has on them. Still, the abundance of information has a negative impact on the population – a significant percentage of respondents in all four countries think that the sheer amount of news on any given day is overwhelming.
- Online channels/sources are by far the most dominant sources of information. Once dominant television now takes the third place, while printed newspapers, which used to play a very important role in providing information, are now among the least used main sources.
- With regard to the type (topic) of news, the largest number of respondents follow politics – as much as 73% of them. Arts and culture are followed by 64%, and health and medicine by 62% of the respondents.
- Most respondents are suspicious about the accuracy of the news and the impartiality of news media. One of the most important reasons why the respondents do not want to follow the news is suspecting its accuracy. The results show that most respondents suspect the accuracy of the news regardless of its source. A large percentage of respondents in Turkey and Serbia strongly and somewhat disagree that news media are impartial/objective (81% and 67% respectively), while in Slovenia and Latvia there is a lower percentage of respondents who think so (38% and 23% respectively). Still, besides all this, the highest percentage of respondents are still not used to approaching the news critically. A very small percentage of respondents always verify the news, from 6% in Serbia to 3% in Turkey. (To be honest, the percentage of those who never verify the news is also very low). The largest number of respondents verify the news sometimes. On average, one in three respondents verifies the news often. Also, around half of the respondents check the accuracy of the news they share with others, while the other half of them do not do that. Only 23% of all the respondents read the whole piece of news, from the beginning to the end, before

they share it with others. Only one in five respondents checks how current the information is before they share it via social networks.

- Fake news is a negative phenomenon with a strong impact. A large number of respondents in Turkey and a significant number of them in Slovenia and Serbia have lost trust in news credibility in general. A vast majority of respondents in all four countries think that the proliferation of fake news is worrying.
- Around half of the respondents in all the countries strongly or somewhat agree that they can distinguish fake news from real news. On average, 30%-40% of the respondents do not use factual evidence to confirm the news accuracy.
- The largest number of respondents (76%) verify suspicious news by checking the same news on other platforms. The very least number of respondents, 11% of them, use fact-checking platforms to verify the accuracy of suspicious news.
- With regard to the countries, between 60% and 70% of the respondents agree that knowing the exact news source is important for trusting its accuracy. This indirectly tells us that a significant number of respondents trust certain news sources.
- There is a higher percentage of respondents who use closed messaging apps to share news than the ones who use the social media for the same purpose. 25-30% of the respondents from all four countries share news via social media, while in Latvia, Serbia and Slovenia around one in three respondents posts/shares interesting news on closed messaging apps, and in Turkey it is done by as many as half of the respondents.
- By far the largest number of all the respondents discuss news stories with their friends, family and colleagues, which is done by 95% of the respondents on average. It is followed by those who share news stories via closed messaging apps, which is done by half of all the respondents and, the ones who rate, like and favor news stories (done by 42%). Fewest respondents write a blog on a piece of news (3%) and a comment on a news story on a news website (9%).
- The respondents' familiarity with news terms and concepts varies. Almost all the respondents have heard of fake news (99%), 87% of them know what fact-checking is, while less than half the respondents are familiar with the term black propaganda (47%), and only one in three of them knows what gray propaganda is.
- There is a strong need for the education of citizens in the field of information, media and news, especially in the area of news literacy. Only one in three citizens had a training in information literacy, one in four citizens had a training in media literacy, and one in nine citizens had a training in news literacy. A relatively small number of respondents started to learn about news verification methods and tools in the course of last year, on average 29% of them. The situation is similar with referring to fact-checking platforms, on average 24% of respondents do that. Overall, as much as 81% of the respondents want some kind of training in the field of news literacy. The respondents show most interest in training in news verification methods (40%), developing critical thinking skills (38%) and image verification methods (37%).

ANNEX 1 SURVEY

NEWS USE SURVEY

The main aim of this survey is to find out about the news consumption, production, and sharing behaviour of adults along with their training needs for news literacy. Findings will be used to develop a Massive Open Online Course (MOOC) on news literacy which will be designed to teach the skills necessary to become smart consumers of news. The free MOOC will be the main output of the ESSENTIAL Project (Erasmus+ KA2 Project).

News is defined as newly received or noteworthy information, especially about recent events. In this survey, it includes all possible formats which are generated on various platforms from print newspapers to Twitter.

It will take about 10-15 minutes to complete the survey. Your participation with sincere and complete answers will affect the success of the MOOC and is highly appreciated.

This survey has the ethical clearance from the Hacettepe University Ethical Commission. If you need more information about the survey or the project, please contact

Please tick the box below to give your informed consent before starting the survey.

Yes, I'd like to continue

No, I will not participate

DEMOGRAPHICS and GENERAL INFORMATION

1. Gender

Female

Male

Do not want to disclose

2. Age

Younger than 18 (end the survey)

18-24 years old

25-34 years old

35-44 years old

45-54 years old

55-64 years old

65-74 years old

75 years or older

3. What is your work status?

Employed-Public sector

Employed-Private sector

Self-employed or Freelance

Unemployed

Homemaker

Student

Retired

Other:.....

4. What is your highest level of education?

No formal education
 Primary education (from 1-8 grades)
 Secondary education (from 9-12 grades)
 Undergraduate degree (first degree academic studies)
 Postgraduate degree (master's/magister level)
 Postgraduate degree (doctoral/PhD level)
 Other:.....

5. Have you ever gotten any formal training on the below listed subjects? Please tick Yes or No.

	Yes	No
Media literacy		
News literacy		
Information literacy		

6. Do you follow (find, read, listen or watch) the news? (This could be from any source from newspapers to Twitter).

Yes (continue from question 8)

No (answer question 7 and finish the survey)

REASONS FOR NOT FOLLOWING THE NEWS

7. Please indicate the reasons for not following the news? Please select/tick all that apply.

News have a negative effect on me

I do not trust the accuracy of news

I cannot distinguish real news from the fake news

I do not have time for it

I am not interested in news

Other:.....

GETTING and FOLLOWING NEWS

8. Typically, how often do you follow (find, read, listen or watch) news?

Several times a day

Once a day

Several times a week

Once a week

Several times a month

Several times a year

9. What type of news (on what topics) do you follow (find, read, listen or watch)? Please select/tick all that apply.

Politics

Business and the economy

Sports

Entertainment and celebrities

Arts and culture

Local issues

Health and medicine

Technology

Science

Education

Other:

10. Which of the following is your main source of news?

Online news sites and/or websites/apps of newspapers

Printed newspapers

Television news bulletins or programmes

Radio news bulletins or programmes

Channels or accounts of newspapers/journalists on social media (YouTube, Instagram, Facebook, Twitter, etc.)

Other channels or accounts on social media (YouTube, Instagram, Facebook, Twitter, etc.).

Blogs

Closed messaging apps (e.g. WhatsApp, Telegram, Signal, etc.)

Social circle (family, friends, colleagues, etc.)

Other:.....

11. Are you familiar with the following concepts? Please tick Yes or No.

	Yes	No
Fake news		
Misinformation		
Malinformation		
Disinformation		
Fact-checking		
Post-truth		
Algorithms		
Filter bubble		
Echo chamber		
Gray propoganda		
Black propoganda		

TRUST and VERIFICATION

12. Do you suspect the accuracy of news you come across through the following news sources? Please select Not Applicable (N/A) for those sources you do not know or you do not use. If you cannot see all 6 options on the screen please hold your mobile phone horizontally.

	Never	Rarely	Sometimes	Often	Always	N/A
Online news sites and websites/apps of newspapers						
Printed newspapers						
Television news bulletins or programmes						
Radio news bulletins or programmes						
Channels or accounts of newspapers/journalists on social media						

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(YouTube, Instagram, Facebook, Twitter, etc.)						
Other channels or accounts on social media (YouTube, Instagram, Facebook, Twitter, etc.)						
Blogs						
Closed messaging apps (e.g. WhatsApp, Telegram, Signal, etc.)						
Social circle (family, friends, colleagues, etc.)						

13. How often do you verify the news you come across?
Never (go to question 17)

Rarely

Sometimes

Often

Always

14. If you need to verify a news which looks suspicious to you, which of the followings would you do?

Please select/tick all that apply.

I consult with my family/friends/colleagues

I check the same news from other platforms

I check where (in which platform and source) it appears

I check who published/shared the news

I check whether the same news appeared in the past or not

I check international news sources/channels

I refer to fact-checking platforms

Other:.....

15. Please name the fact-checking platforms you use for verifying the news. Please leave it empty if you do not use any.

.....

16. If you need to verify a news image which looks suspicious to you, which of the following tools/platforms would you use? Please select/tick all that apply.

TinEye

Foto Forensics
Google Images
Google Earth
None of them
I do not know how to verify an image
Other

NEWS BEHAVIOUR

17. Please indicate your level of agreement with the following statements. Please select **Not Applicable (N/A)** for those platforms you do not use. If you cannot see all 6 options on the screen please hold your mobile phone horizontally.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	N/A
I post/share interesting news on social media						
I post/share interesting news on closed messaging apps						
On social media, I only share the news which come from trustworthy sources						
On closed messaging apps, I only share the news which come from trustworthy sources						
I do not share any news without verifying its accuracy						
On social media, I only follow people who are in the same opinion with me						
On social media, I also follow people who are in the opposite opinion with me						
On social media, I have concerns about sharing political news						
I can't trust the news if I do not know its source (origin)						
Fake news have made me distrust the credibility of any news						
I can determine whether a news is fake or not						

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I judge the accuracy of news based on my instincts						
I judge the accuracy of news based on factual evidence						

18. Do you consider any of the following among your activities during an average week? Please select/tick Yes or No.

	Yes	No
Rate, like or favourite a news story		
Comment on a news story on a social network (such as Facebook, Twitter, LinkedIn, Instagram, YouTube, TikTok)		
Comment on a news story on a news website		
Write a blog on a news		
Share a news story via email		
Share a news story via social network (e.g. Facebook, Twitter, LinkedIn, Instagram, YouTube, TikTok)		
Share a news story via a closed messaging apps (e.g. WhatsApp, Telegram, Signal, etc.)		
Talk with family, friends and colleagues about a news story		

19. Have you done any of the following in the last year? Please select/tick Yes or No.

	Yes	No
I decided not to share a news story because I was unsure about its accuracy		
I checked a number of different sources to see whether a news story was reported in the same way		
I stopped using/following certain news sources because I was unsure about the accuracy of their reporting		
I discussed a news story with a person I trust, because I was unsure about its accuracy		
I stopped paying attention to news shared by someone/an account I distrust		
I started to learn about news verification methods and tools		
I referred to a fact-checking platform		
I posted a news, news-related photo or video to a social media site		
I sent a text, photo or video of a newsworthy event I have witnessed to a news website/news organisation		

20. Why do you share news, if at all, on the social media sites that you use? Please select/tick all that apply.

I do not use social media
 I do not share news on the social media
 Sharing news helps me define my online presence
 What is interesting to me could be of interest to others too
 Sharing news lets my friends/followers know about something I think they should know
 Sharing news lets me provoke responses from others
 Sharing news is a way to entertain my friends/followers
 Sharing news is a way to entertain myself
 Sharing news gives me a way to have a voice about a larger cause in the world
 Sharing news gives me an opportunity to help change the views of my friends/followers
 Sharing news gives me a break from what I'm currently doing
 Other:.....

21. When you're deciding to share 'breaking news' (a special news event that is currently developing) on social media, how do you evaluate the quality of the information that you share, if you do at all?

Please select/tick all that apply.

I do not use social media
 I do not share news on the social media
 I do not evaluate the quality of the information
 Check how current the information is
 Check to see what the hashtag (#) is, if there is one
 Check to see who posted or tweeted news item
 Check the URL (if there is one) to see where the source originated
 Compare and verify the news item using a different source
 Read the comments, if there are any, about the news post
 See how many times the news item was 'liked'
 See how many times the news item was shared/retweeted
 Read or view the entire news story from start to end and then decide
 Ask my friends, family or colleagues what they think
 Go with my gut feeling to decide whether a news item is trustworthy or not
 Other:.....

OPINIONS ABOUT THE NEWS MEDIA

22. Please indicate your level of agreement with the following statements about news media

(newspapers –including print newspapers, online news sites and/or websites/apps of newspapers, as well as channels or accounts of newspapers or journalists on social media -, television and radio news bulletins or programmes) in your country. If you cannot see all 5 options on the screen please hold your mobile phone horizontally.

News media...	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
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are impartial (objective)					
keep important events on the agenda					
often focus on negative events					
focus more on entertainment and celebrities					
keep me up to date about what's going on					
help me understand the news of the day					
follow up injustice and inequity					
try to uncover the truth					
main concern is to get more followers/viewers/readers					
include opinions of subject experts					
have the power to shape public opinion					
provide more reliable information than the social media platforms where the content is produced by users					

23. Please indicate your level of agreement with the following statements about news. Please select **Not Applicable (N/A)**, if you do not know the concepts mentioned. If you cannot see all 6 options on the screen please hold your mobile phone horizontally.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree	N/A
It is safer to share news with political content via closed messaging apps (e.g. WhatsApp, Telegram, Signal, etc.)						
The proliferation of fake news is worrying						
Fact-checking platforms are totally impartial (objective)						
News are necessary in a democracy						
Following the news is a civic responsibility						

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Real news and fake news are hard to distinguish						
News are objective reporting of facts						
The sheer amount of news on any given day is overwhelming						
Journalists reflect their own bias in the news stories						
Platforms such as Google, YouTube, Instagram, and Facebook personalize (filter) the information and news we get						
Personalized (filtered) news feed makes life easier						
I have some concerns about personalized (filtered) news feed						

24. On which of the following topics, if at all, would you like to get trained? Please select/tick all that apply.

I do not want a training

How to verify news

How to verify images

How to distinguish facts from falsehoods

How to distinguish facts from opinions

Understanding why and how fake news spread around

Understanding how algorithms work and learning how information is personalized/filtered

Getting familiar with fact-checking platforms/services and recognizing their limitations

Learning about trustworthy news sources

Learning about news media (its nature and mission)

Learning about citizen journalism, Internet journalism

Learning about information disorder

Developing critical thinking skills

Learning about cultural differences in news consumption

Other: