

# Analysis of Individual Susceptibility of Social Media Users to Fake News: Polish Perspective

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## ABSTRACT

**Scientific objective:** The subject of research presented in the paper is the issue of fake news and the impact of the user's analytical thinking on his / her ability to detect fake news. The hypothesis underlying the research is that a high level of analytical thinking has a positive effect on the ability to distinguish fake from real news. **Research methods:** The method of diagnostic survey, containing the scale of fake news and psychological measurement of the level of analytical thinking. **Results and conclusions:** The analysis proves that there is a fundamental relationship between the level of analytical thinking and the accuracy in fake news detection. In addition, some groups that were particularly susceptible to fake news have been identified. **Cognitive value:** The paper presents a media-psychological analysis of the phenomenon of fake news in Poland, focusing on the susceptibility of social media users to fake news. This is the first interdisciplinary study of this kind conducted in Polish media studies academia.

## KEYWORDS

media education, fake news, media studies, analytical thinking, psychology



Fabricated information, called fake news, has become particularly popular thanks to social networking websites where information spreads extremely quickly. For this reason, the phenomena of disinformation and misinformation using fake news are an issue analyzed by scientists of various disciplines. A large part of such analyzes concerns the detection of elements or types of the news and the pattern of their distribution (Aldawairi, 2018; Shu et al., 2017; Horne & Adali, 2016). It is worth noting that many researchers of various disciplines of science emphasize the negative impact of fake news on current reality both in the world (Allcott & Gentzkow, 2017; Curtis, 2017; Flynn, Nyhan, & Reifler, 2017; Lazer et al., 2018; Lewandowsky, Ecker, & Cook, 2017; Mayer, 2018; Nyilasy, 2019; Public dialogue, 2017) and in Poland (Bąkiewicz, 2019; Gorwa, 2017; Łódzki, 2017; On Board Think Kong, 2017; Palczewski, 2019).

Therefore, the aim of this paper is to examine and present the state of individual susceptibility to fake news in Poland in the context of socio-demographic and psychological variables. The study was conducted using a diagnostic survey method that included the fake news scale and psychological measurement of the levels of analytical thinking. This is a preliminary study, recognizing certain trends, but requiring verification with a larger sample. However, the results of this study already allow some conclusions to be drawn, especially in the field of media education.

## Definitions of Fake News

Although the term “fake news” has gained interest and quickly became common in colloquial language, there is no clear definition of what fake news is. There is a division into narrow and broad definitions in the literature that draw attention to various aspects of this phenomenon. For the purposes of this paper, some definitions based on media studies and a psychological perspective have been provided.

American researchers Hunt Allcott and Matthew Gentzkow (2017) define the phenomenon in a narrower aspect and believe that “fake news” is news in media presented as facts, although not based on them. They understand news media as information that circulates both in the traditional news media and on social media. However, they exclude statements by politicians that may be deliberately false by classifying them as political manipulations. Canadian scientists Naill Conroy, Victoria Rubin, and Yimin Chen (2015) define “fake news” as deliberate and deceptive messages that are spread to unsuspecting recipients. Like Allcott and Gentzkow, Canadian researchers, point out the motivations of providing fake news, but focus much more on spreading it to recipients. The team have developed verification methods based on textual analysis. In their research, they analyze social media in particular, but also refer to traditional press articles. In turn, the German team of researchers, Martin Potthast, Johannes Kiesel, Kevin Reinartz, Janek Bevendorff, and Benno Stein (2017), draws attention to the impact of fake news. They note that social media is spreading some sort of news that is quickly gaining popularity and is usually extremely biased, controversial, emotional, and often full of untruths. German researchers have also categorized three approaches of fake news detection—knowledge-based and style-based.

American researchers, Chris Vargo, Lei Guo, and Michelle Amazeen (2018), define “fake news” in a broader context, as media reports and stories they contain, which are not based on facts, but are presented as news or reports completely fake ones that resemble real news and are distributed to attract attention and prepared for financial gain. This definition refers to the pecuniary motivation for providing fake news, but at the same time leaves room for satire news. The broader definitions of “fake news” focus not so much on intentions as on the falsity of the content itself. These types of definitions fall under the types of fake news, also satirical / mocking messages, as well as all kinds of fabrications and journalistic errors. In a broader context, “fake

news” is defined by Robert Gorwa, a researcher at the University of Oxford (Gorwa, 2017) who believes that fake news are entries, messages or even entire channels where the transmitted data (to varying degrees) turn out to be false or distorted. Rubin, Conroy, Chen, and Cornwell point out the satirical fake news as a broader context. They note that fake news can arise without the intention of the creator. According to them, some fake news was created as a joke or satire, but people copying such news treated it as serious information. An interesting observation about the division into narrow and broad definitions of “fake news” was shared by Sandra Baron and Rebecca Crootof (2017) in the report “Fighting Fake News.” They noticed that regardless of the perspective of defining this phenomenon, the common is the fact that it devalues and delegitimizes the voices of experts, authoritative media institutions, and the concept of objective data. The authors of the report emphasize that regardless of whether the message was written intentionally falsely or satirically without the intention of manipulation, it consequently becomes a message that undermines the facts and contributes to social degradation and departure from the perception of reality. A similar problem is affected by the concept repeated by many authors that fake news is the result of internet and technological conditions. The definitions presented so far are diverse and multi-faceted. Although this phenomenon is evolving and requires a broad view, for the purposes of this research it was decided to adopt a narrow definition of Allcott and Gentzkow. Researchers refer to so-called hard fake news, which somewhat narrows down the research area and allows examining the susceptibility to these specific fake news.

The content division is parallel to the definition of fake news. Based on literature on media studies, a typology has been proposed, distinguishing several types of fake news: 1. satirical (humorous messages, e.g. posts from the *AszDziennik* website, and any satirical content that may seem serious but misleading); 2. misleading (any erroneous information about persons or events that gains large ranges in the distribution process); 3. deceptive (content that deceives the recipients, e.g. by title, i.e. clickbait); 4. gossip / celeb news (information about celebrities, athletes, etc., not based on facts); 5. pseudoscientific (messages referring to alleged scientific research or institutions with high scientific authority, without specific sources or manipulating scientific sources in order to create a false theory); 6. conspiracy (all conspiracy theories, not having any sources based on facts, but also those that are written in a conspiracy convention and detached from this convention create a separate fabricated information); 7. extreme (content about extreme events, e.g. terrorist attacks, war, the tragic death of public figures, mutilation and all topics aimed at intimidating the recipient or drawing his / her attention to drastic events); 8. social (this is content related to current social life presenting a false version of events or manipulating facts on a given topic); 9. historical (news about past events or people that misrepresent them); 10. political-economic (news on political and economic affairs, politicians or businessmen, giving a false picture of political and economic activities); 11. commercial (any fake reviews and advertising campaigns and clickbait); 12. ideological (content on religion and all kinds of ideologies). The division allows the authors to select fake news in line with the definition of this concept proposed by Allcott and Gentzkow. That is why the media studies part of the research was based on this definition and classification, the results of which will be presented in this paper. Before this happens, however, it is worth understanding the psychological perspective, which is important to know for the purposes of the study conducted.

### **Psychological Perspective on Fake News Detection**

A recipient, a media user, is directly affected by fake news. This perspective centers on the question of why some people tend to believe in fake news, while others almost immediately reject it. And also, what cognitive factors influence such results of information processing?

The literature on this topic distinguishes two key aspects. First, people prefer information consistent with their beliefs and political views, regardless of their authenticity and intent. The key is that the information is consistent with the views of the individual or comes from a source that presents similar views (Kahan, 2017; Van Bavel & Pereira, 2018; Redławski, Civettini, & Emmerson, 2010; Strickland, Taber, & Lodge, 2011; Berinsky, 2017; Nyhan & Reifler, 2010; Ecker, Hogan, & Lewandowsky, 2017; Swire, Ecker, & Lewandowsky, 2017; Harper & Baguley, 2019; Li & Sakamoto, 2014). The second aspect of individual susceptibility to fake news is the role of cognitive abilities. Key works addressing the subject of individual susceptibility to fake news point to the fact that an important variable in the perception of fake news is the level of analytical thinking (Pennycook & Rand, 2018; Pennycook & Rand, 2019). Research suggests that its low level increases individual susceptibility to fake news. Therefore, it is worth verifying these assumptions in Polish media reality.

## Methodology

The aim of this study is to examine the individual susceptibility of social media users to fake news in Poland. To achieve this aim, a research tool was prepared consisting of a questionnaire and two psychological tests.

The research was conducted on Facebook using the snowball method. The final sample of respondents consisted of 303 people. The measurement paradigm and the procedure for its acquisition were taken from numerous American papers in which it was used in the psychological context to test individual susceptibility to fake news (Bago, Rand, & Pennycook, 2020; Pennycook, Bear, Collins, & Rand, in press; Pennycook, Cannon, & Rand, 2018; Pennycook & Rand, 2018; Pennycook & Rand, 2019).

In order to obtain a broad spectrum of compliance with the definition, the research material was collected independently by two people, according to the authors' thematic categorization. Both fake and real news were presented in the same format, resembling a post from Facebook. Firstly, 25 real news were prepared from popular news sources, such as: *Newsweek.pl*, *Fakt.pl*, *Polsatnews.pl*, *TVPinfo.pl*, *Wp.pl*, *Onet.pl*, *Gazeta.pl*, and *Wyborcza.pl*. This part of the material will be referred to as real news, i.e. factual and reliable news. In addition, there were 25 fake news from Polish fact-checking websites: *Demagog.org*, *Fakenews.pl*, *Demaskator* and *Kontakt24*. Secondly, three experts assessed the quality of the prepared research material and its compliance with the adopted definition of fake news. Then a short pilot study ( $N = 30$ ) was conducted, in which respondents assessed the accuracy of 50 news. This study showed the weakness of 4 real news and low reliability of the fake news measurement. Therefore, the authors decided to collect the second part of research material. An additional 11 fake news (23 in total) and 4 real news (16 in total) were collected. Again, the material was assessed by three experts other than in the first phase of the research. Twenty-eight items, 14 in each of the two categories, received a satisfactory quality rating. Then the material was arranged in a random order, creating a questionnaire of fake news susceptibility, consisting of 14 fake news and 14 real news on various topics.

The scale of answers consisted of 6 levels: 1—definitely not accurate; 2—not accurate; 3—partly not accurate; 4—partly accurate; 5—accurate; 6—definitely accurate. Respondents' answers were coded in three indicators: (1) perceived accuracy of fake news (average of responses to all fake news). The higher the indicator, the more accurate the respondent considered the fake news included on the scale; (2) perceived accuracy of real news (average of responses to all real news). The higher this indicator was, the more accurate the respondent considered the real news included on the scale; (3) detection of fake news (the difference between the perceived accuracy of fake news and the perceived accuracy of real news). The higher this indicator was, the better

the respondent recognized fake news, i.e. considered real news to be more accurate than fake ones.

In the next phase of the research, the level of analytical thinking was measured using two tools. The first tool was the cognitive reflection test (Frederick, 2005). It consisted of three mathematical puzzles. For example: “A baseball bat and a ball cost PLN 1.10 together. The bat costs PLN 1.00 more than the ball. How much does the ball cost?” The intuitive answer is 10 *groszy*, but a careful person will notice that the correct answer is 5 *groszy*. To answer correctly, one must analyze the content of the task. The second tool used was the verbal cognitive reflection test arranged because of the criticism of the CRT created by Frederick (Sirota, Kostovičová, Juanchich, Dewberry, & Marshall, in press). It consists of eight puzzles with a similar structure, but not based on numbers. For example: “Mary’s father has 5 daughters and no sons. Their names are Nana, Nene, Nini, Nono. What is the fifth daughter’s name probably?” The correct answer is of course, Mary. Both tests have been successfully adapted and validated in Poland (Olszewska & Sobków, 2019). The results were coded into the Analytical Thinking indicator in such a way that 25% of people who responded best were assigned to a group with high analytical thinking, and 25% of people whose most erroneous answers were assigned to the low analytical thinking group. At the end, the respondents filled socio-demographic classification questions about age, gender, education, and using Facebook as a source of news.

Based on the theory quoted in this work, a hypothesis was put forward about the positive relationship between the level of analytical thinking and fake news detection. In order to confirm the hypotheses, the following research questions were posed: (1) How do social media users perceived accuracy of fake news and real news? (2) What fake news are perceived as the least accurate and which as the most accurate? (3) How is the detection of fake news differentiated due to factors such as age, gender, education or using Facebook as a source of news? (4) What is the impact of analytical thinking on fake news detection depending on age, gender, education or using Facebook as a source of news?

## Results

It is worth starting by analyzing the scale of fake and real news in the first phase of the study. The scale contained 14 fake news and 14 real news (examples on the scale will be attached to the supplement). The users had to determine the accuracy level of news. Figure 1 presents the distribution of all fake news, in order from those perceived as the least accurate to those perceived as the most accurate. For comparison, Figure 2 illustrates the perception of real news, i.e. factual information. These two charts show that fake news was perceived by users as less accurate and real news as more accurate. Figure 3 illustrates this even better.

Figure 3 shows that only one fake news (No. 10) was rated by the respondents as more accurate than three real ones (No. 3, 4 and 13). This should be assessed as a positive phenomenon because it means that most users can distinguish between factual and fake news.

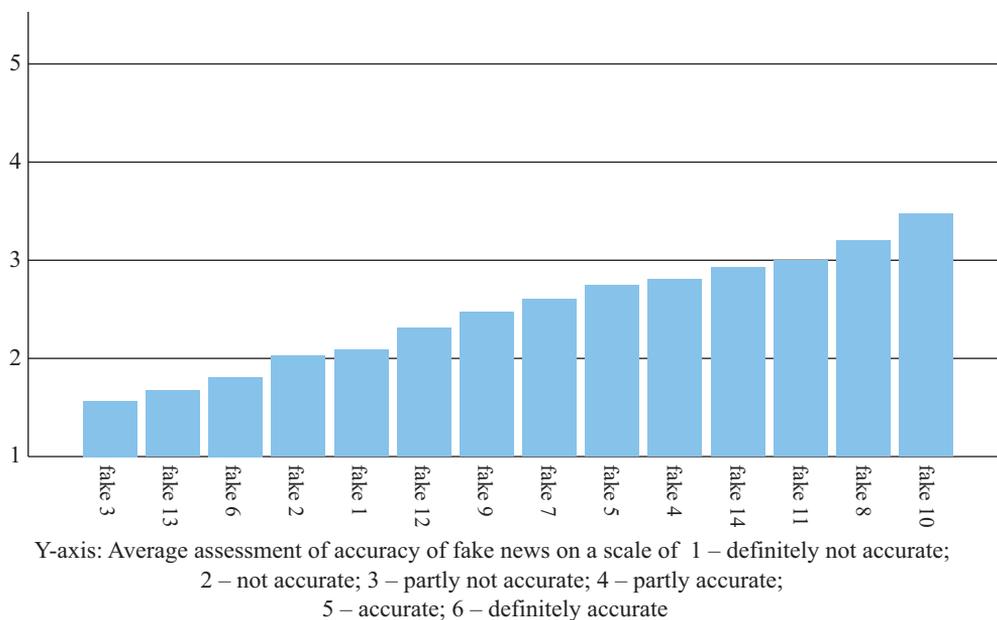


Fig. 1. Perceived accuracy of Fake News

Source: Own study

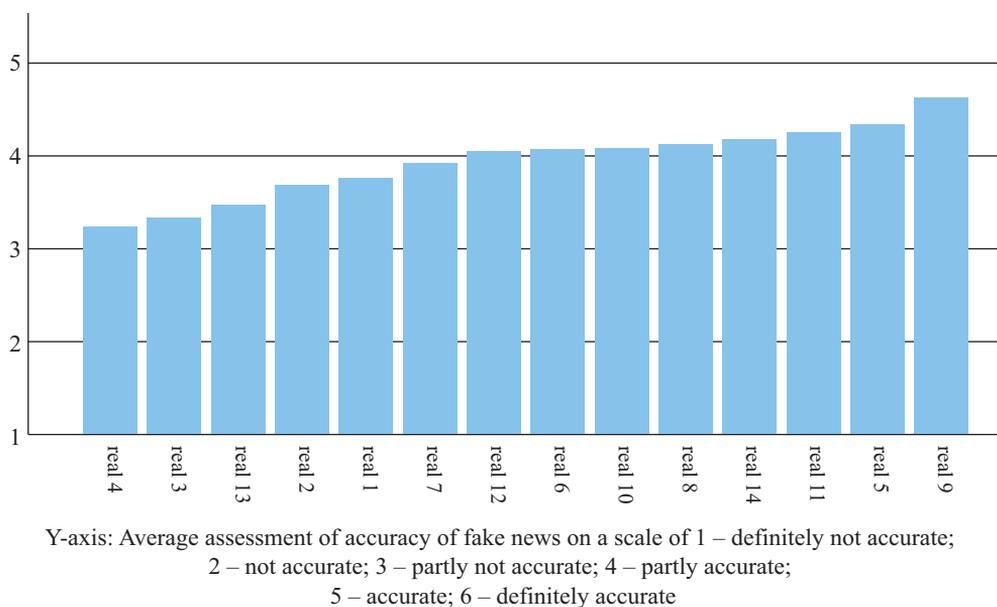


Fig. 2. Perceived accuracy of Real News

Source: Own study

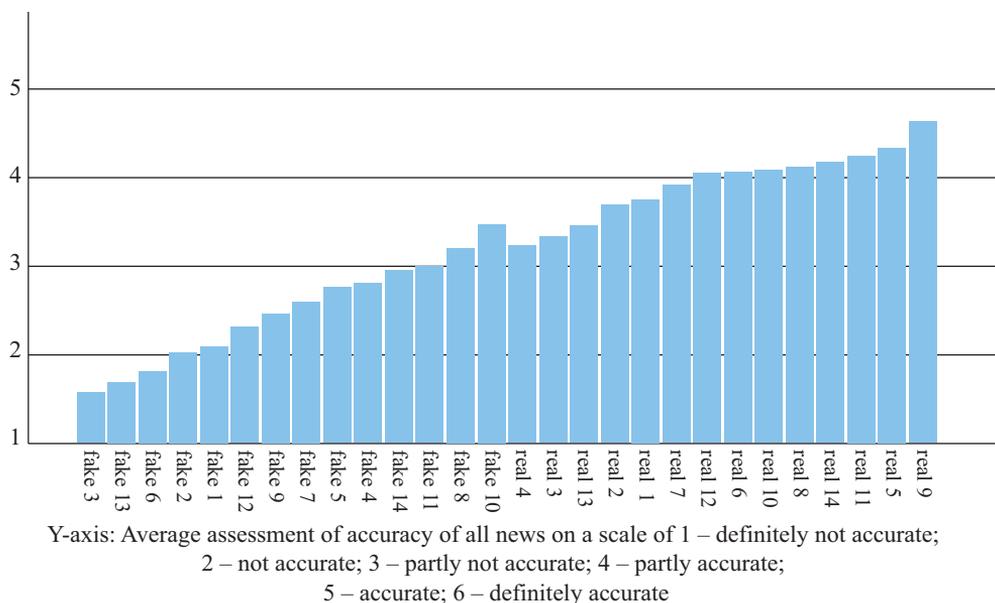


Fig. 3. Perceived accuracy of All News

Source: Own study

In response to the second research question, two outstanding fake news are posted. Figure 4 presents the most shocking and false news, which received an average rating of 1.57, i.e. between 1 (definitely not accurate) and 2 (not accurate). However, Figure 5 shows the most “credible” fake news, which received an average rating of 3.48, i.e. between 3 (partly not accurate) and 4 (partly accurate).



Fig. 4. The Most Shocking and False News

[Shocking Fact! Energy Drinks Contain Bull Semen and Urine!]

Source: Own study



Fig. 5. The Most Credible Fake News  
[Germany is Cutting Down a Nature's Reserve for a Profitable Investment]

Source: Own study

Both examples seem interesting, especially from the media studies perspective. The first of them (Fig. 4), considered unreliable, concerns the product of a popular brand producing energy drinks and the supposed ingredient in the form of bull's semen. The assumption that this information is unreliable may relate to the brand's credibility and its strong market position, but also to the fact that bull's semen appears to be an unusual ingredient in any drink. The second example (Fig. 5) is fake news rated as more accurate than some real news. Refers to the situation in Germany related to deforestation. It seems interesting that fake news about Western neighbors seemed credible to respondents. However, it is difficult to explain why this happened.

The authors were particularly interested in the way social media users reasoned and their predispositions in terms of identifying fake from real news. The accuracy in fake news detection means, by how many points, on the 6-point scale presented (1—definitely not accurate, 6—definitely accurate), the examined person rated real news higher than the fake ones. The higher the indicator, the better a person detects fake news. Based on this data, attempts were made to find out how the fake news detection is differentiated due to socio-demographic factors such as age, gender, education, and Facebook use as news source. The data indicate that men were slightly better at detecting fake news (Fig. 6). However, this is a small difference.

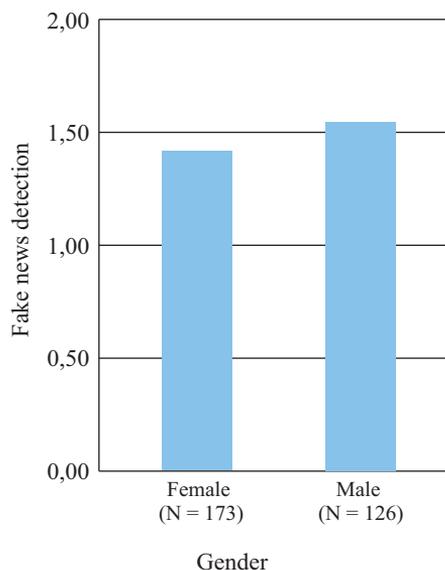


Fig. 6. Fake News Detection and Gender

Source: Own study

The age factor is interesting as well. The highest accuracy in fake news detection was found in the group of people between 25 and 34 years old. However, after 35 years old, this accuracy decreased with age, which is presented in Figure 7. This may be due to a decrease in concentration or a lack of ability to critically analyze media coverage in these age groups. This is a very valuable tip for media educators who should direct their activities primarily to these age groups.

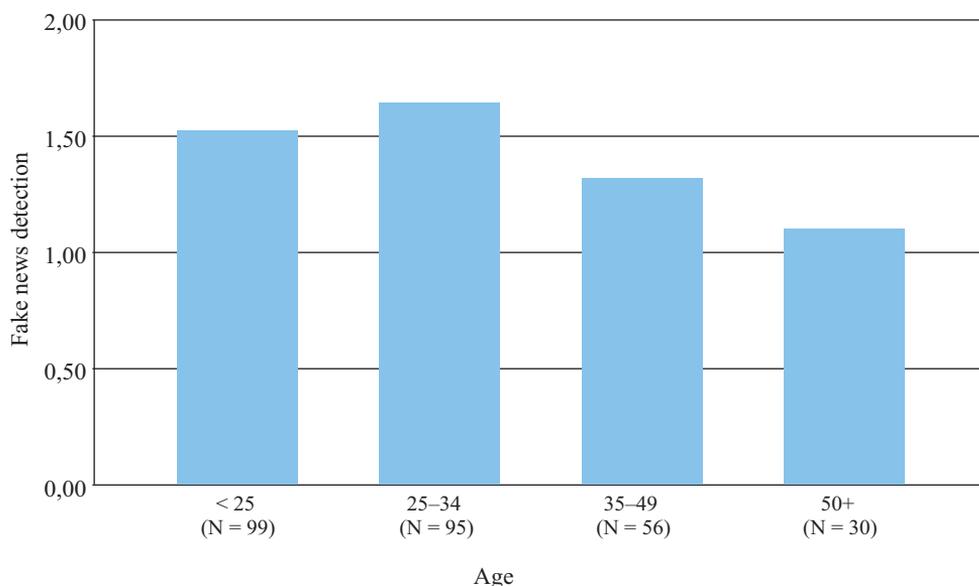


Fig. 7. Fake News Detection and Age

Source: Own study

The factor related to the level of education also seemed important in the context of the study conducted (Fig. 8). The highest accuracy in fake news detection was demonstrated by people during their studies. This may be due to increased intellectual activity during this period of life, which is constantly verified during studies. People with technical and vocational education had the lowest accuracy in fake news detection. The key conclusion is that better educated people better detect fake news. However, the relatively low accuracy in fake news detection by people with technical and vocational education may be an indication for further considerations. The numbers in these groups, however, does not allow drawing strong conclusions at this stage.

Another factor worth noting was the use of Facebook as an important source of news. The studies conducted in the US have shown that the more often people use this platform for news, the more the user is exposed to believing fake news (Silverman & Singer-Vine, 2016). On the other hand, it seems that thanks to frequent use one can develop the ability to detect fake news. It can be seen in Figure 9 that people using the platform at various times maintain a similar percentage of identifying false news. A big difference is visible in the case of people who mainly use Facebook, as well as those who do not use this platform at all. These people were far less able to identify fake news. It can therefore be assumed that the activity on the platform somehow strengthens users' ability to identify fake news, perhaps by merely interacting with them.

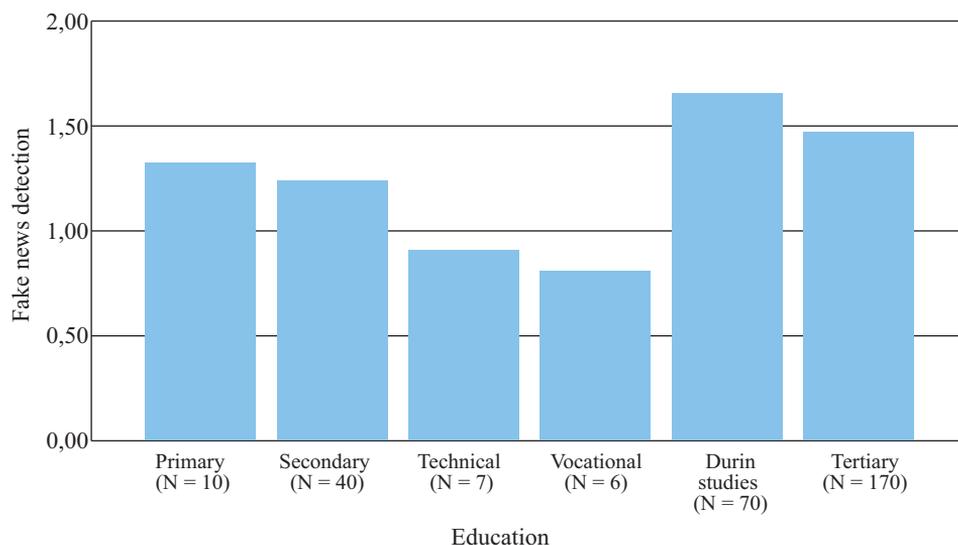


Fig. 8. Fake News Detection and Education

Source: Own study

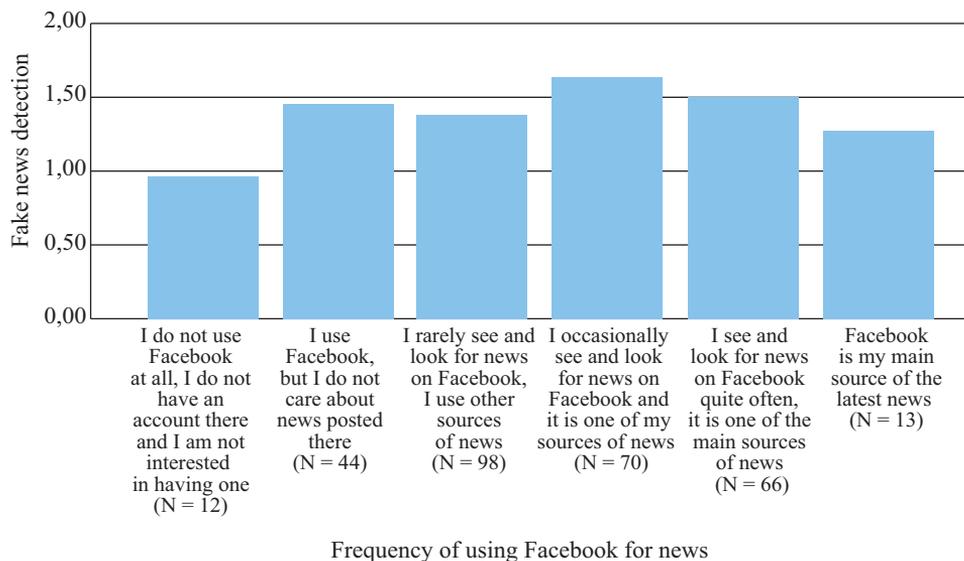


Fig. 9. Fake News Detection and the Frequency of Facebook Use

Source: Own study

The key question for the study was how a high level of analytical thinking affects the fake news detection. Figure 10 shows that people who think more analytically did better with detecting fake news. This phenomenon is in line with the observations of individual susceptibility to fake news

in the United States, including only political ones. The collected data confirm that a high level of analytical thinking increases the ability to identify fake news also in Poland. On this basis, the conclusions of American researchers can be extended.

Further analysis indicates that a higher level of analytical thinking increased the accuracy in fake news detection, regardless of the demographic variables we have examined. In the case of gender (Fig. 11), it can be observed that people with a high level of analytical thinking had similar accuracy in fake news detection. The situation is different in the case of low analytical level. Men with low level of analytical thinking were significantly better at identifying fake news than women with low analytical thinking. Conducting a survey with an even wider range of news on a representative sample, together with measuring values, is necessary to clearly identify the reason for this difference.

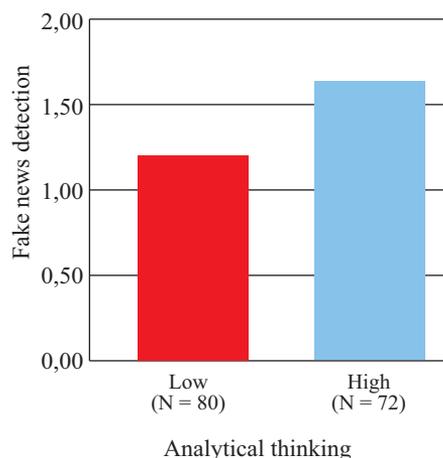


Fig. 10. Fake News Detection and the Level of Analytical Thinking

Source: Own study

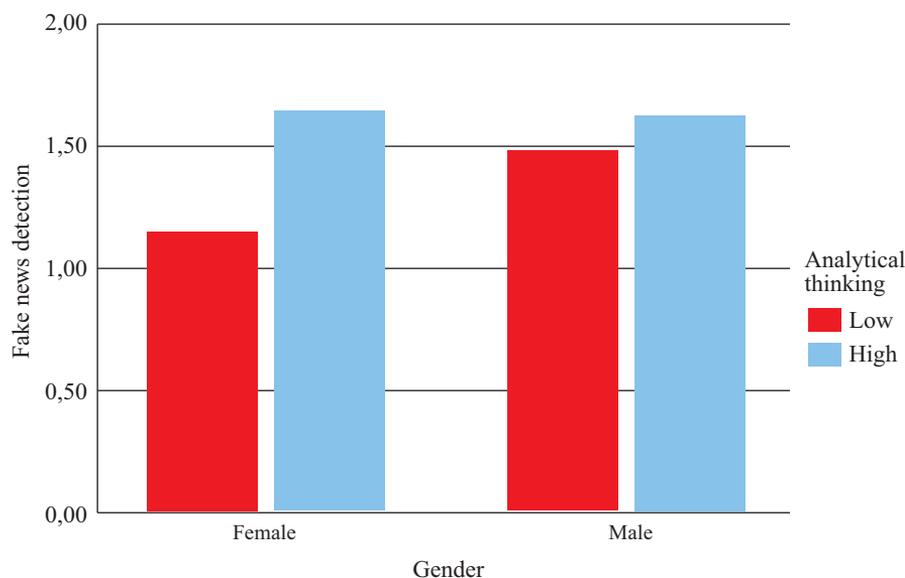


Fig. 11. Fake News Detection and the Level of Analytical Thinking [Gender]

Source: Own study

In the case of age factor (Fig. 12), it has been observed that among people over 50 years of age, the difference due to the level of analytical thinking is small. This may be due to the relatively low size of the sample analyzed in this age range ( $N = 30$ ), but even though the results suggest that it is worth to study this group in more depth and focus educational activities on it. As for the variable related to education (Fig. 13), two inaccuracies appeared. First, there was not a single person with a high analytical level of thinking in the group of people with vocational education. Moreover, surprisingly, more analytical thinking was even harmful for people with technical education. The analysis significantly shows that the results for these levels of education (technical and vocational) are inconclusive. Re-gathering a large representative sample would more accurately determine the impact of analytical thinking among people with such an education. It is worth noting, however, that a high level of analytical thinking helps a lot in detecting fake news by people during their studies.

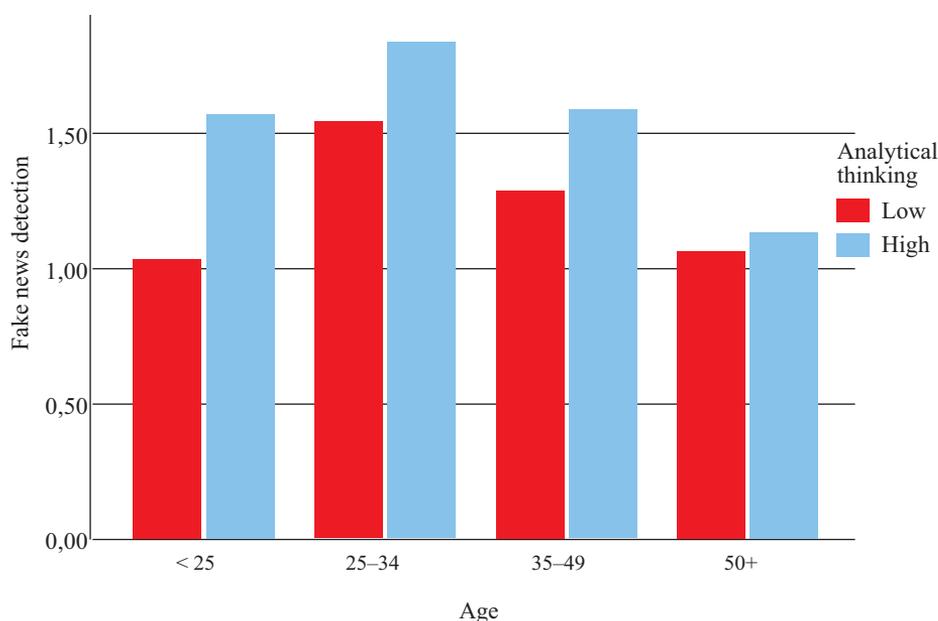


Fig. 12. Fake News Detection and the Level of Analytical Thinking [Age]

Source: Own study

In case of the factor of using Facebook (Fig. 14) there were also two results worth explaining. First, there was not a single person with a high level of analytical thinking among people who did not use Facebook. This is due to the small number of people who have declared lack of Facebook. Secondly, the difference in detection of fake news generated by the level of analytical thinking among people for whom Facebook is the main source of news is undoubtedly overestimated. However, the direction of the relationship is in line with expectations and is probably the same in reality. This indicates that the group, theoretically most vulnerable to fake news (Silverman & Singer-Vine, 2016), may gain the most as analytical thinking increases. In this group, analytical thinking can be a key factor. Of course, in order to legitimately make such a conclusion, a study should be carried out on a representative sample, including people not using Facebook or the Internet.

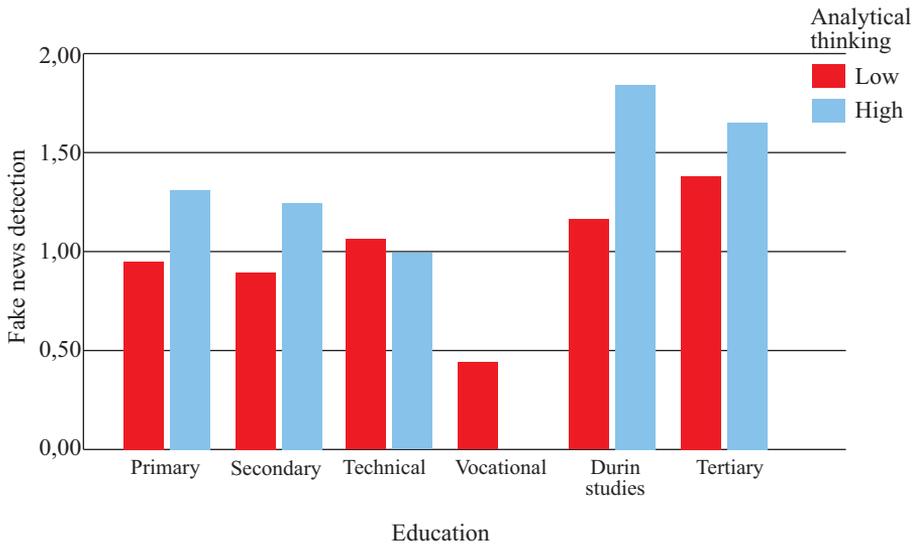


Fig. 13. Fake News Detection and the Level of Analytical Thinking [Education]  
Source: Own study

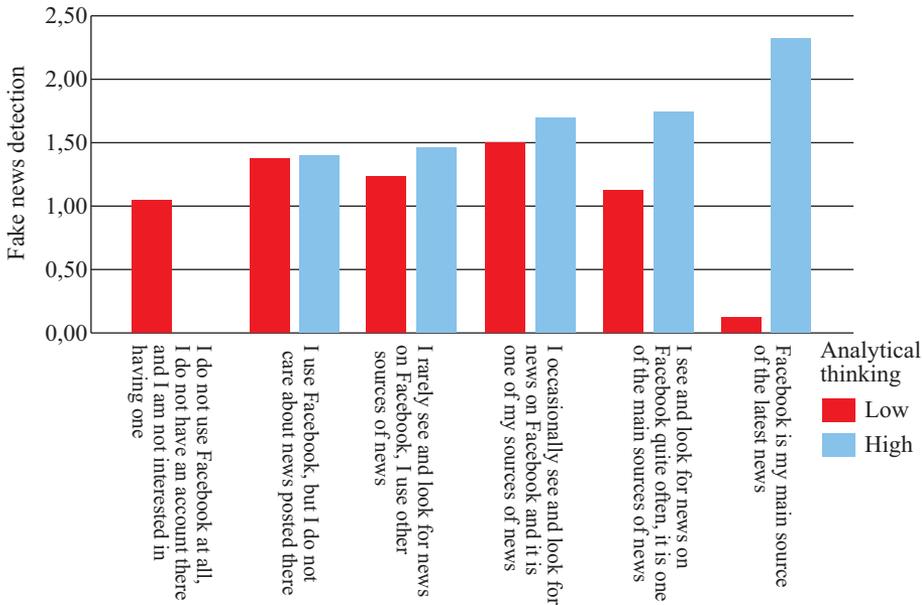


Fig. 14. Fake News Detection and the Level of Analytical Thinking [Frequency of Facebook Use]  
Source: Own study

The analyses carried out indicate the accuracy of the measurement, but also possible gaps and critical points that should be subjected to further considerations.

## Summary and Conclusions

The most important conclusion is that a high level of analytical thinking contributes to accuracy in fake news detection. What is more, compared to the original study of American scholars, it is known that this applies to many thematic areas, not just political fake news. The most unbelievable fake news turned out to be information about the product of a popular brand, producing energy drinks, containing an unusual ingredient in the form of bull's semen. The unbelievability of this news may be due to its abstractness, but also to the strong market position of the RedBull brand, presented in the photo attached to the fake news. It seems that this is an interesting tip for public relations specialists and Internet marketing specialists in the field of crisis management related to fake news (Grzesiak, 2017). Strong brand credibility can reduce the negative impact of fake news. That is why it seems important to build credibility as a form of counteracting such fake news. In turn, the most credible fake news turned out to be news about deforestation in Germany. It seems that this was because the news was not very specific and gave relatively few controversial facts. Perhaps that is why it seemed credible to the recipients. On this basis, an important conclusion can be drawn regarding the impact of fake news. Paradoxically, it turns out that the more vague and uncontroversial the news is, the more likely it may be to be considered credible (Gilbert, 1991). This is certainly an interesting introduction to further analysis, especially in the field of psychology and linguistics.

In addition, important conclusions for media education come from the analysis of the results. The highest level of fake news detection was legitimized by people between 25 and 34 years old. This means that it is worth supporting this intuitive ability through courses related to critical analysis of media coverage in order to further develop those people intellectually. An exceptionally poor accuracy in fake news detection was seen within the group of older people. It is worth targeting specific educational programs that will be adapted to their cognitive abilities. It is especially worth taking care of people over 50 whose are just opening up to new technologies and need support in this field. An interesting way to reach this group could be to use the public library network they use and propose a series of trainings there to develop skills in analyzing news online.

Equally important in the context of media education seems to be the factor related to the level of education. The key conclusion is that better educated people better detect fake news. This is not a surprising conclusion, but it seems interesting that the highest accuracy in fake news detection was presented by persons during their studies. It may be appropriate to assume that this is due to the intensification of intellectual processes at this time and the increase in cognitive criticism. It would be interesting to examine how differentiation of fake news detection is different depending on the discipline studied. If there were significant differences, it could be an incentive to introduce universal courses related to critical thinking and analyzing media coverage, regardless of the type of study. It seems a bit surprising, however, that the lowest accuracy in fake news detection had people with technical and vocational education, not primary. This is certainly a tip for those responsible for the curriculum at this stage of education. The presented analysis shows that there is an urgent need to supplement them with items related to the detection of false information.

Contrary to the assumptions of some researchers (Silverman & Singer-Vine, 2016), the results of the study indicate that the frequency of using Facebook does not adversely affect the

identification of fake news. Although it should be noted that relatively lower accuracy in fake news detection was noticed in the case of people who treated Facebook as the main source of news. For these people, infographics on fake news and algorithms on social media can be helpful in detecting fake news. An important role can also be played by organizations dealing with fact-checking, which quickly straighten fake news. However, a significant difference can be observed in the case of people who do not have an account on Facebook. Although assuming that these people use rather traditional news media and thus are less exposed to contact with fake news, the analysis shows that they have very limited ability to identify them. Therefore, it is worth preparing educational programs in the field of critical analysis of media coverage, which will be presented in traditional news media. According to the Public Dialog (2017) report, journalists do not necessarily notice their important role in this area, and in Polish traditional media such programs practically do not exist. Therefore, it is worth considering the new function of journalism, which is education about sources of news on the Internet. In a nutshell, additional detailed analyzes must be carried out in all indicated areas, however, the presented preliminary study indicates some important directions that can be taken, especially in the field of media education and psychology.

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## Annex

### News Evaluation Form

#### Expert's Assessment

An expert is a person whom the researchers consider to have high knowledge and / or skills enabling them to correctly and impartially assess problems related to a certain field of knowledge. We would like to ask you to provide an expert opinion in the following study. In the context of this work, an expert should have proficiency in the understanding of a simple media message (in this case headlines), especially in the ecosystem of fake news, which is information fabricated or manipulated in such a way as to convey false (and often sensational) content that is to pretend to be real news. It is necessary for our work to assess whether the following statements can be logically considered true / real or false / fake, and not e.g. as half-truths, unclear information or information that does not carry content that can be assessed as true or false.

Your role as an expert will be to evaluate the headlines in terms of the possibility of determining their veracity.

The first category is confused, unclear, non-falsifiable information. Those that cannot be rated as true or false. Assign **0 (zero)** to such headlines:

Example:

News: **It Is Amazing How Many Legs Horses Have! Read More Here.**

It cannot be evaluated and rated in terms of truth, because we know that this is not true.

The second category is understandable headlines, accuracy of which can be objectively checked, are clear and falsifiable. Such headlines can be subjected to an assessment of truthfulness and after careful analysis can be considered as true or certainly false. Assign **2 (two)** to such headlines.

Example:

News: **Horses Have 6 Legs!**

It can be assessed and rated in terms of truth, because we know that this is not true.

There are also headlines that contain unclear or not-clearly-defined elements, or those that can be interpreted differently so that they cannot be assigned to any of the two groups given or containing their own opinions, such as “in our opinion” or suppositions, such as “maybe” and “probably,” which reduce the zero-singularity of the content. Asses such headlines as **1 (one)**.

Example:

News: **Probably, At Least Some Horses Have About 6 Legs.**

This news is not untrue, it is also not completely devoid of truth / real or false / fake values. Due to the use of vague wording (“probably,” “about”) it occupies an intermediate position between news 0 and 2.

### Examples of Fake News, included in the Scale:

1.



[Influenza Vaccine Causes 5.5 Times More Cases]

2.



[Chemotherapy Spreads Cancer Cells—New Research Results]

3.



MEGANIUSY.COM

**Uwaga! Napoje energetyczne zawierają spermę oraz moc z byka!**

[Shocking Fact! Energy Drinks Contain Bull Semen and Urine!]

4.



WIADOMOSCI.ONET.PL

**Jewish Insider: polski prezydent twierdzi, że Izrael jest odpowiedzialny za ostatnie ataki antysemitki w Polsce**

[Jewish Insider: Polish President Claims Israel is Responsible for Recent Anti-Semitic Attacks in Poland]

5.



ALEXJONES.PL

**Prof. Marczak: Polska dwukrotnie więcej wpłaca do unijnej kasy niż zyskuje w formie dotacji**

[Professor Marczak: Poland Pays Twice as Much to the EU Coffers than It Receives in the Form of Subsidies]

6.



[Unfortunately It Is the Truth. There Are New Regulations—WOŚP Will Not Be Able to Collect Money]

7.



[Fr. Ziejewski Attacked by Thieves. They Wanted a “Homosexual Marriage Ceremony”]

8.



[Israeli Army Shot 2273 Palestinians In a Month]

9.



NEWSBOOK.PL

**USA: Lekarka z Polski walcząca z przemysłem farmaceutycznym została zastrzelona przez policjanta...**

[USA: A Doctor from Poland Fighting with the Pharmaceutical Industry Was Shot by a Police Officer...]

10.



RADIOMARYJA.PL

**Niemcy wycinają rezerwat przyrody pod dochodową inwestycję. ...**  
Unia Europejska po raz kolejny stosuje podwójne standardy. Podczas gdy Puszc...

[Germany is Cutting Down a Nature's Reserve for a Profitable Investment...]

11.



TOMASZURBAS.PL

**Trzech senatorów PO, przechodzi do klubu PiS - Wolne Demokrat...**  
To już niemal pewne, jak donosi tvn24, trzech senatorów, do tej pory należących...

[Three PO Senators Join PiS—Free Democratic...]

12.



[Italian Court: Mercury and Aluminum in Vaccines Cause Autism—OnaLubi.pl]

13.



[WOŚP Grand Finale Canceled! Residents in Shock and Kaczyński Triumphs]

14.



[Swedes Apply for Asylum in Poland]

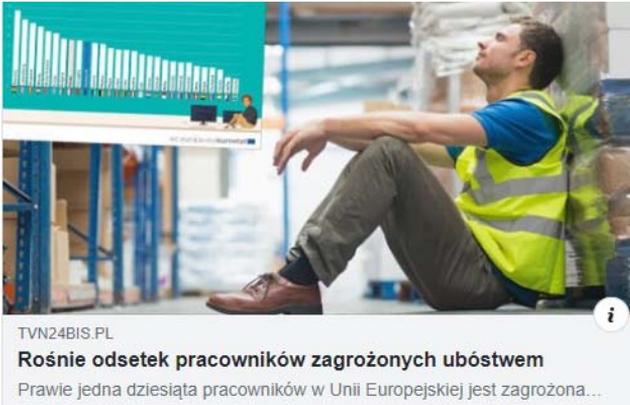
**Examples of Real News, included in the Scale:**

1.



[Palestine Cut Ties with the US and Israel. "A New Apartheid"—Polsat News]

2.



[The Percentage of Employees at Risk of Poverty is Increasing]

3.



[The Tragic Death of Kobe Bryant. The Helicopter Was Not Allowed to Fly in Fog]

4.



[Wild Boars Destroyed Cocaine Buried in the Forest. Dealers Lost Thousands of Euros]

5.



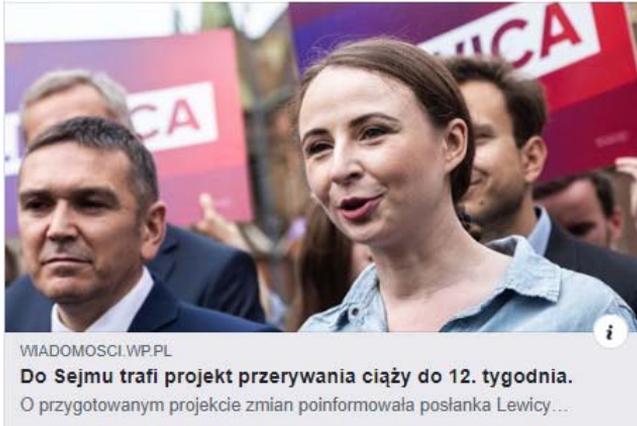
[Landslide Destroyed the Viaduct. Cars Stopped Just Before the Breach VIDEO]

6.



[The Homeless Man Had No Winter Shoes. The Policeman Gave Him His Pair of Shoes—Polsat News]

7.



[A Relevant Bill About the Termination of Pregnancy Up 12 Weeks is Going To Be Presented to the Sejm]

8.



[The Ministry of National Defense Planned Increases in the Amount of PLN 500 for Civilian Army Employees]

9.



[Murder of a Child in Lublin. Policemen Arrested the Mother of a 1-Year-Old—Dziennik Wschodni]

10.



[The Doctor Sent the Woman Home. A Few Days Later She Had Her Leg Amputated—Polsat News]

11.



[Olga Tokarczuk Sets Up a Foundation in Wrocław to Support the Work of Writers and Translators]

12.



[“Frankowicze” Are Winning with Banks]

13.



[18-Year-Old Gave Birth to a Child in the Bathroom. The Newborn Baby Dies After Being Strangled]

14.



[Poznan. Boars Invaded the Kindergarten]

