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DOI: 10.35765/pk.2019.2502.08

## Internet – the First Source of (dis)Information

### ABSTRACT

The Internet is the first medium in which controlling the content has become difficult or even impossible. One of its reasons is the fact that the Internet users – who so far were only passive recipients of media messages – have gained the possibility to create and distribute their own messages. Thus, they have become active participants of the participatory culture, in which it is difficult to distinguish between professional and amateur content. The boundaries between private and public domains have become blurred. The distribution of forces shaping public opinion has changed, because the content comes from large media corporations and non-professional creators alike.

The Internet message is characterized by instantaneous distribution, the ease of editing and modifying its content, and vagueness of authorship. These features make the Internet particularly susceptible to disinformation purposefully aimed at manipulating its users. The fact that every activity undertaken by the Internet users is recorded and analysed is also conducive to manipulation attempts, as the data obtained this way are used to shape their opinions and influence their decisions.

The aim of the article is to undertake a discourse on information and disinformation on the Internet in the context of the development of new digital communication tools. The article provides the examples of information manipulation, which could happen only in such an interactive and multimedia medium as the Internet.

**KEY WORDS:** Internet, media, manipulation

## STRESZCZENIE

*Internet – pierwsze źródło (dez)informacji*

Internet jest pierwszym medium, w którym kontrola treści stała się trudna lub wręcz niemożliwa. Wynika to m.in. z faktu, że dotychczasowy odbiorca zyskał możliwość tworzenia własnych przekazów i ich natychmiastowego rozpowszechniania. Tym samym stał się aktywnym uczestnikiem kultury partycypacji, w której obecnie trudno jest odróżnić treści profesjonalne od amatorskich. Zatarły się granice pomiędzy przenikającymi się domenami prywatnymi i publicznymi. Zmienił się rozkład sił kształtujących opinię publiczną, bo rozpowszechniane treści pochodzą zarówno od dużych korporacji medialnych, jak i od twórców nieprofesjonalnych.

Przekaz internetowy charakteryzuje natychmiastowość dystrybucji, łatwa edycja i modyfikacja treści oraz niedookreśloność autorstwa. Cechy te decydują o tym, że internet w szczególny sposób podatny jest na działania dezinformacyjne i mające na celu manipulację odbiorcą. Działaniom manipulacyjnym sprzyja dodatkowo fakt, że każda aktywność podejmowana przez użytkowników internetu jest rejestrowana i analizowana. W ten sposób uzyskane dane wykorzystywane są do kształtowania ich opinii i decyzji.

Celem artykułu jest podjęcie dyskursu na temat informacji i dezinformacji w sieci internetowej w kontekście rozwoju ciągle nowych cyfrowych narzędzi komunikacji. W artykule zostaną wskazane przykłady manipulacji informacją, które mogły zaistnieć dopiero w interaktywnym i multimedialnym internecie.

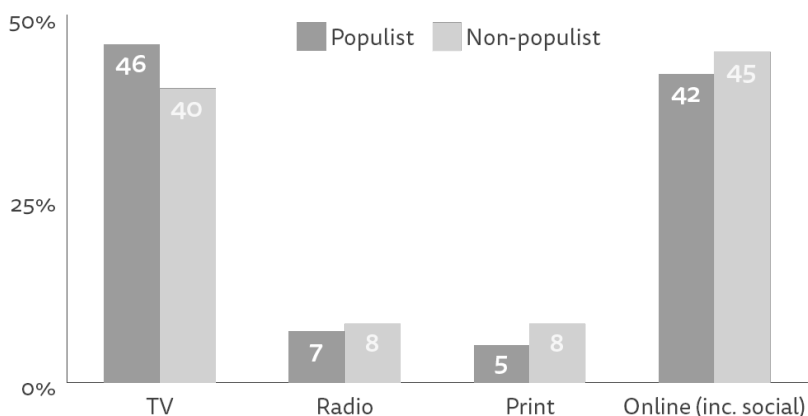
SŁOWA KLUCZE: internet, media, manipulacja

*Information society – surveillance society*

It has been known for some time now that the media have enormous power at their disposal. Called the fourth power, they both create the reality and shape the identity of recipients. According to a popular opinion, news media do not so much report on events as create them by masking, distorting or over-interpreting their sense and meaning. The media are a battlefield in which the winners are the ones which can effectively acquire a trusting community of their recipients.

Until a few years ago, television was the most popular news medium. Nowadays the Internet, which has become an indispensable part of the life of a contemporary man, indispensable in his everyday activity, is gaining an advantage. The Internet is a medium of immediate access, and – being an interactive medium – it enables its users to instantaneously react to its content.

**Figure 1.** Main source of news by attitudes – Europe and the USA



Source: N. Newman et al., *Reuters Institute Digital News Report 2019*, p. 43, [https://reuters-institute.politics.ox.ac.uk/sites/default/files/2019-06/DNR\\_2019\\_FINAL\\_1.pdf](https://reuters-institute.politics.ox.ac.uk/sites/default/files/2019-06/DNR_2019_FINAL_1.pdf)

The Internet is the first medium in history that has given the users the right to create their own content and distribute it. However, the consequence of this new role is the loss of privacy. Every Internet user, regardless of the extent of his online activity, leaves a digital footprint. Every website visited, every online purchase made or the number of logins to the bank’s website are recorded. Further data about users are provided by the IP address from which they gain access to the Internet, the type of software used and, in case of mobile applications, the location of the device through which they log on to the network. This way a lot of information about their preferences, interests and income is obtained. In addition, their detailed profile is built, which contains information regarding their personality traits, habits and lifestyle.<sup>1</sup> The value of information collected this way is

1 K. Szymielewicz, K. Iwańska, *Śledzenie i profilowanie w sieci. Jak z klienta stajesz się towarem*, 2019, p. 6, [https://panoptykon.org/sites/default/files/publikacje/panoptykon\\_raport\\_o\\_sledzeniu\\_final.pdf](https://panoptykon.org/sites/default/files/publikacje/panoptykon_raport_o_sledzeniu_final.pdf) (access: 29.07.2019). See also: D. Susser, B. Roessler, H.F. Nissenbaum, *Online Manipulation: Hidden Influences in a Digital World*, 2018, p. 1, <http://dx.doi.org/10.2139/ssrn.3306006> (access: 28.07.2019).

enormous and difficult to overestimate, because it becomes a tool for influencing the Internet users. In 2016 a scandalous practice was revealed in which *Cambridge Analytica*, a company dealing with political consulting, was a disgraceful hero. Using advanced algorithms, the company obtained data from eighty-seven million Facebook accounts and then used them to predict their owners' voting decisions with a view to influencing their choices in the US presidential election.<sup>2</sup>

Collecting information about users is often explained by a common tendency to personalize products and services. The concept of personalization is most easily translated as "giving products and services a personal character."<sup>3</sup> In recent years, the Internet has become such an individual and personal phenomenon. Artificial intelligence algorithms adjust the content displayed to particular users to their preferences, and a list of responses returned by search engines is created on the basis of their previous activity in the virtual space.<sup>4</sup> The results of the search influence users' subsequent activity. This way a personalized path of activity on the web is continued, providing more and more information about each user, which facilitates manipulative practices.

Undoubtedly, the once popular opinion about anonymity on the Internet is an old wives tale. And the lack of anonymity is conducive to influencing and manipulating the Internet users. The Internet dictates not only what they should think about a given topic, but also what they should think about and what should arouse their interest. It is commonly known that "the Internet does not forget:" it is a space where nothing disappears, and every information that is published in it remains there forever. It is also a reservoir of the content the distribution of which through the traditional media is over. It is a place where shocking and controversial advertisements withdrawn from circulation gain their second life. It is where the photographs that people captured in them would like to forget about remain forever. Even those entries that were deleted almost immediately after their publication remain in the eternal memory of the Internet space: one day, sooner or later, their duplicated copies will be available to all interested parties.

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2 L. Koczanowicz, *Lęk intymności, czyli mówienie prawdy w dobie internetu*, "Kultura Współczesna," 2(101), 2018, p. 45.

3 M. Jabłońska, *Personalizacja internetu – zagrożenie czy naturalny proces rozwoju sieci?*, "Com. press," 2(1), 2019, p. 58.

4 Ibidem, p. 59.

## Characteristics of online content

In most cases the speed with which online content is transmitted does not go hand in hand with its credibility. It is very easy to post and modify messages on the net, and it takes no time at all. The quality and credibility of online news is questionable and unstable, as it can be changed at any time and with any frequency. Large portals update their websites several times a day or even several dozen times a day. The hurry to publish the most up-to-date news is revealed by the number of grammatical and stylistic errors found in texts published online.

Information about such embarrassing mistakes posted on social networks by institutions, politicians and other well-known persons appears on the Internet regularly. Most of these incidents happen on Twitter, and although administrators and profile owners quickly delete unfortunate entries and correct their errors, the screens containing them circulate on the web, compromising their authors or at least putting them in an awkward position.

The non-linear layout of news, characteristic of electronic media, offers limitless opportunities to manipulate information. The layout of the elements on the website, the font, the colour scheme, and the shapes on the website influence the perception of its content. One of the most important parameters defining success of the portal is clickability, therefore, it is important to manage its content aiming at generating as many clicks within the website as possible. The fight for clicks begins with teasers of articles on homepages. A controversial, shocking title carries a large emotional load and increases the chances that users will click on it to read the whole article. However, very suggestive titles can be very misleading, although it is hard to accuse them of lying. For example, the article “Priests behind bars” discusses the work of prison chaplains, although its title leads readers to expect completely different content.<sup>5</sup>

When it comes to using misleading and perverse headlines and titles, the Internet is in the lead among all mass media. People who prepare news for publication use the method of placing intriguing and ambiguous fragments of titles in the teasers of articles, which in their full version have a completely different meaning. It is easy to manipulate the place, time and seriousness of information in the title. The headline which reads “Aircraft crash. Nobody survived” is undoubtedly a powerful impulse to click and read the full article. Here, however, the user learns that the disaster occurred 30 years ago in the other hemisphere, and the accident involved a light aircraft with two people on board.

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5 S. Sobkowiak, *Prawda w Internecie. Czy katolickie portale internetowe manipulują informacjami?*, “Teologia i Moralność,” Vol. 13, No. 2(24), 2018, p. 215.

News websites are filled with photographs. The functioning of the most popular social networks is based on the publication of photographs. There is no doubt that the image rules on the Internet. It is a form of message of almost instantaneous perception which affects emotions. It is worth recalling that in the past, in societies with a high illiteracy rate, images were the main means of communication. Nowadays, when media consumption takes place via small-screen smartphones, there is no room for long narrations. This way history has come full circle. Priority is given to images, which offers enormous opportunities for manipulation. With just a few clicks you can make changes in the appearance of the photographed person. On 19th July 2019 the homepage of wp.pl included a photo showing a wrinkled face of a well-known Polish politician signed "They have aged beyond recognition! You may have a problem already on the 2nd question." The photo was a far cry from the actual appearance of the politician, because it was processed by the now extremely popular *FaceApp* application. One of its functions allows you to age the face of the person in the photo with a single click. The article explained it, but most probably a large number of readers did not read it, and an old, unattractive face of this person remained in their memory.

Following Piotr Zawojcki, we should ask ourselves a fundamental question whether contemporary images published in electronic media can still be treated as the ones reflecting reality, or whether they are the results of algorithmic processes that created them.<sup>6</sup> The possibilities of new technologies allow for far-reaching modifications, both in static and moving images. However, in times when photographs are available in such great abundance there is no need to resort to manipulation of the image. Having hundreds of photographs taken to report on a particular event at our disposal, it is easy to choose the one that shows a completely different picture of reality. On the basis of photographs of the same object taken from different perspectives, one can build diametrically different stories.

The enormous potential of image manipulation has been known for a long time. It is worth recalling a story which happened over a century ago. In 1897, the American press magnate William Hearst sent his reporter Frederic Remington to Cuba to report on the revolution that was about to begin. Remington, however, informed him of relative calm there, writing: "Everything quiet. There is no trouble here. There will be no war. Wish to return." Hearst's answer is still quoted today: "Please remain. You furnish the pictures and I'll furnish the war."<sup>7</sup>

6 P. Zawojcki, *Sztuka obrazu i obrazowania w epoce nowych mediów*, Warszawa 2012, p. 11.

7 The truth of this story has not been confirmed and therefore it is most often referred to as an anecdote. W. J. Campbell, *Not Likely Sent: The Remington – Hearst Telegrams*, "Journalism

## The informational function of the Internet

Millions of people around the world start their day by checking out new social media entries. Social media have become an integral part of human life today; they are not only a medium of interpersonal communication, but also an increasingly important source of the latest news about what is happening in the world, the main provider of news from one's country and abroad. A lot of content is created by network users who are direct witnesses of events, which they then report in social media, where they also publish their own photos and videos. A survey conducted by McKinsey & Company revealed that for 72% of Polish Internet users, social media were an everyday source of information, and 65% considered them to be the most important source of information.<sup>8</sup> According to the results of Eurobarometer surveys, more than half of Poles consider the content published on Facebook and Twitter to be true, and this number is growing steadily.<sup>9</sup> On the one hand, easy access, timeliness of news, and the speed of information dissemination encourage people to use social media as a source of information. On the other hand, however, due to the same reasons, they enable dissemination of false information on a massive scale.<sup>10</sup>

In June 2008, the American journalist Tim Russert died of a heart attack during the preparation of a program in the NBC's studio. In accordance with the standard procedure, all TV stations abstained from reporting his death until his family was informed of this tragic event. However, it was only 11 minutes after Russert's death that this information appeared in the journalist's biography on Wikipedia. The NBC employee who placed it there was fired, but there is still the question of ethics and whether the time when people will learn about the deaths of their loved ones through the media is approaching.<sup>11</sup>

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& Mass Communication Quarterly," 77, 2, 2000, pp. 405-422, <https://journals.sagepub.com/doi/abs/10.1177/107769900007700212> (access: 27.07.2019). See more: WJ. Campbell, *The Year That Defined American Journalism: 1897 and the Clash of Paradigm*, New York 2006.

- 8 W. Bogdan et al., *Cyfrowi Polacy – przyspieszenie e-rewolucji*, p. 39, <https://mckinsey.pl/publikacje/raport-cyfrowi-polacy-przyspieszenie-e-rewolucji/> (access: 30.07.2019).
- 9 See more: <https://www.wirtualnemedi.pl/arttykul/polacy-traca-zaufanie-do-mediow-liderami-tvn-i-onet-pl> (access: 30.07.2019).
- 10 Read more: K. Shu et al., *Fake News Detection on Social Media. A Data Mining Perspective*, <https://arxiv.org/pdf/1708.01967.pdf> (access: 04.08.2019).
- 11 S. Greenstein, *Soccer Mom Messaging Is the Poetry of our Age*, "IEEE Computer Society", 29(4), 2009, [https://www.researchgate.net/profile/Shane\\_Greenstein/publication/228495581\\_Soccer\\_Mom\\_Messaging\\_Is\\_the\\_Poetry\\_of\\_Our\\_Age/links/0c9605383505f9ba70000000.pdf](https://www.researchgate.net/profile/Shane_Greenstein/publication/228495581_Soccer_Mom_Messaging_Is_the_Poetry_of_Our_Age/links/0c9605383505f9ba70000000.pdf) (access: 27.07.2019).

Figure 2. Wikipedia screenshot of Ted Kennedy's biography



Source: [https://en.wikipedia.org/w/index.php?title=Ted\\_Kennedy&oldid=265340417](https://en.wikipedia.org/w/index.php?title=Ted_Kennedy&oldid=265340417).

Only six months later, on 20th January 2009 Wikipedia 'killed' a well-known American politician, Senator Ted Kennedy. His biography on Wikipedia reported his death after he left President Obama's inaugural lunch due to his indisposition. Senator Robert Byrd, who was concerned about Kennedy's health and left the lunch with him, was also 'killed.'<sup>12</sup> The horrible mistake was quickly corrected: the media 'death' of Kennedy and Byrd lasted only a minute, after which both politicians came back to life.<sup>13</sup> This case, however, makes us realize how fast news spreads on the Internet, even if it is placed there even for a very short period of time.

Fake news is very often posted on Wikipedia deliberately. Events that have never happened and people that have never existed are described there. A well-known Polish example is a case of fictional Henryk Batuta, whose biography was prepared by several anonymous authors, most likely with the aim of demonstrating the credulity of the Internet users and the lack of credibility of Wikipedia. According to his fake biography, Henryk Batuta, born in 1898, was a Polish communist, prisoner of the Bereza Kartuska camp, and one of the founders of the Communist Party of Poland. He participated in the civil war in Spain, after which he left for the Soviet Union, and died in 1947 in Ustrzyki Górne in a clash with the Ukrainian Insurgent Army (UPA). To make the mystification credible, the authors wrote that, to commemorate Henryk Batuta, one of the streets in Warsaw received his name. In fact, the name of the street referred to the baton

12 R. Hatcher-Gallop, Z. Fazal, M. Oluseyi, *Quest for Excellence in a Wiki-based World*, 2009 IEEE International Professional Communication Conference, Waikiki, 2009, [https://www.academia.edu/10021988/Quest\\_for\\_excellence\\_in\\_a\\_wiki-based\\_world](https://www.academia.edu/10021988/Quest_for_excellence_in_a_wiki-based_world) (access: 23.07.2019).

13 The website from Wikipedia with fake information about Ted Kennedy's death [https://en.wikipedia.org/w/index.php?title=Ted\\_Kennedy&oldid=265340417](https://en.wikipedia.org/w/index.php?title=Ted_Kennedy&oldid=265340417) (access: 04.08.2019).



(*batuta* in Polish) used by conductors and not to the name of the person. As a result, Henryk Batuta, although never born, survived 15 months on Wikipedia.<sup>14</sup>

## Actors, trolls and bots

Internet 2.0 technology has transformed a one-way medium into a platform shared by both creators and recipients of its content. Those who previously were mere recipients of content have now started to create their own texts and publish them on the Internet, which has given rise to prosumer culture.<sup>15</sup>

Social media are a phenomenon born on the basis of participatory culture. The Oxford dictionary explains the term *social media* as “websites and applications that enable users to create and share content or to participate in social networking.”<sup>16</sup> However, this definition does not cover the whole phenomenon. The original idea behind social networking was to facilitate establishing contact between people and to enable their communication within groups of friends. Nowadays, however, social .media have gone far beyond the socialisation function. They are used for marketing purposes to shape the image of companies and other institutions. Political groups, representatives of the state and church authorities also use social media. Additionally, they are the space in which people can become famous as a result of their activity in social media; such persons, capitalizing on their online fame, can effectively influence the opinions of other network users. Influencers aim at gaining a group of loyal followers who trust their opinions. The list of the most influential people on the Internet in 2019 compiled by *Time* magazine included politicians, social activists, musicians, celebrities, and people who, in principle, are not exceptional as such, but in their online activity deal with issues that earn them a huge number of observers.<sup>17</sup>

In 2005 the YouTube platform was created on which the Internet users can post, watch, evaluate and comment on films. Making and posting online short amateur films in which the creators share stories about their lives

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14 J. Hofmokl, A. Tarkowski, *Wikipedia – pospolite ruszenie encykłopedystów. Największa encyklopedia na świecie*, [http://www.ebib.pl/2006/73/hofmokl\\_tarkowski.php](http://www.ebib.pl/2006/73/hofmokl_tarkowski.php) (access: 04.08.2019).

15 *Prosumer* – a word that originated from the combination of *producer* and *consumer* words.

16 Term explanation from Oxford Dictionary, [https://www.lexico.com/en/definition/social\\_media](https://www.lexico.com/en/definition/social_media) (access: 23.07.2019).

17 *The 25 Most Influential People on the Internet*, <https://time.com/5626827/the-25-most-influential-people-on-the-internet/> (access: 30.07.2019).

and interests became all the rage. The most popular channels attracted the attention of hundreds of thousands of the Internet users. This was the case with Bree, a 15-year-old American girl, who started publishing her video blog on *lonelygirl15* shortly after the creation of the platform. The girl quickly acquired a large group of observers. However, each new film she published aroused doubts as to the authenticity of the stories presented by her, including the place where the films were made, which did not resemble a teenage girl's room, and the suspiciously professional way in which they were produced. After a few months, the story turned out to be great mystification, and the video blog turned out to be a well-organized enterprise. The role of the protagonist, 15-year-old Bree, was played by the little-known actress Jessica Rose.<sup>18</sup> The case of *lonelygirl15* and similar ones demonstrate how important the problem of authenticity on the Internet is in the context of manipulating the emotions of its users.

There are many techniques through which recipients of the message can be influenced. One of the most popular classifications was presented by the American psychologist Robert Cialdini. One of them, the social proof principle, seems to be of great importance on the interactive level of the Internet. It says the credibility of information is conditioned by its acceptance by a large group of people. In other words, Cialdini's principle is based on the conviction that if other people consider particular information to be true, reliable and valuable, it is most likely just such information.<sup>19</sup>

The social proof principle is frequently applied in advertising. Numerous advertisements support the promotion of a given product with information about a large number of people who have already verified its value, and the advertised product has met their expectations. In 2013 Santander Bank prepared an advertisement with the slogan "10 million Poles have already trusted us."<sup>20</sup> The number of customers was supposed to be a proof of the bank's credibility, but some people questioned the accuracy of the data: if it were to be true, every third Pole would have to be a customer of this bank, which leads to the conclusion that the advertisement gave a strongly exaggerated number of satisfied customers.<sup>21</sup>

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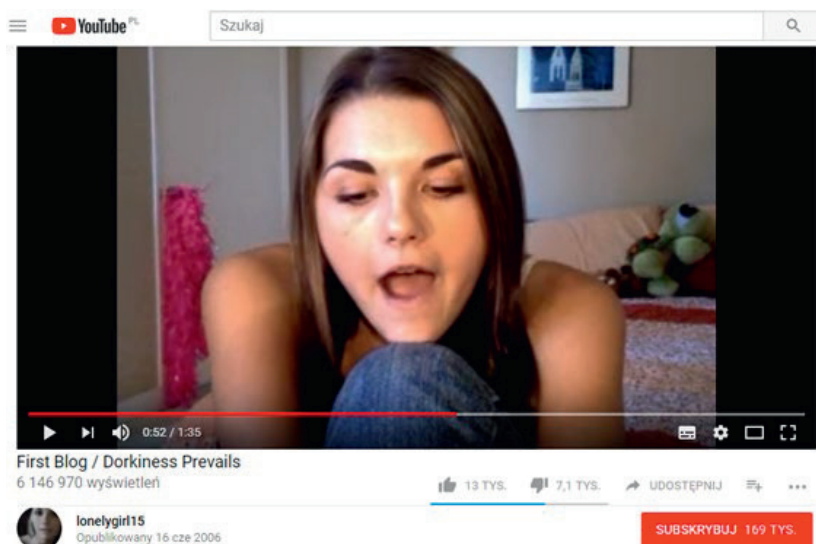
18 See more: K.A. Hall, *The authenticity of social-media performance: lonelygirl15 and the amateur brand of Young-Girlhood*, "Women & Performance: a journal of feminist theory," Vol. 25, No. 2, 2015.

19 M. Antosik, *Człowiek współczesny w obliczu manipulacji*, "Warmińsko-Mazurski Kwartalnik Naukowy," 1, 2014, p. 42.

20 <https://www.santanderconsumer.pl/serwis-prasowy/aktualnosci/10-milionow-polakow-w-nowej-reklamie,89,1.html> (access: 23.07.2019).

21 <https://www.facebook.com/samcik.blox/posts/10151824918385642/> (access: 23.07.2019).

Figure 3. A frame from the first video posted on the *lonelygirl15* channel on YouTube



Source: <https://www.youtube.com/watch?v=-goXKtd6cPo>.

Advertising is not the only area that supports its credibility by applying the unanimity rule. Convincing a large number of people to an idea or concept is easier when they believe that a lot of people are convinced that it is a good one. On the Internet this is the area of trolls' activity, that is people who intentionally use aggressive, offensive posts to antagonize the Internet community, spread disinformation by publishing fake news, and undertake other forms of harmful online activity.<sup>22</sup>

Trolling is not a new phenomenon. The first cases of trolling were described in the subject literature already in 1999.<sup>23</sup> Initially this concept referred to intentional actions aimed at triggering the recipient's emotional reaction. Early trolls acted in the area of Usenet groups, in a destructive way influencing the discussions there and aiming at provoking conflicts.<sup>24</sup>

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22 D. Jachyra, *Trollowanie – antyspołeczne zachowania w internecie, sposoby wykrywania i obrony*, "Zeszyty Naukowe Uniwersytetu Szczecińskiego," 655, 2011, p. 253.

23 Ibidem, p. 254.

24 J. Donath, *Identity and Deception in the Virtual Community in Communities in Cyberspace*, in: *Communities in Cyberspace*, eds. P. Kollock, M. Smith, London 1999, from A. Marwick, R. Lewis, *Media Manipulation and Disinformation Online*, 2017, p. 4, <https://datasociety.net/output/media-manipulation-and-disinfo-online/> (access: 23.07.2019).

Currently, trolling is not limited to malicious and destructive actions aimed at evoking negative emotions within groups of Internet users, but it is also a thriving business, which brings trolls measurable financial benefits. Paid trolls write several dozen comments commissioned by their clients a day and place them on news websites, discussion forums and social networking sites. These statements are the result of professionally organized marketing strategies. Trolls' various activities include building a positive image of companies on the Internet, advertising products and discrediting competitors. Another area of their activity is politics, where their task is to shape political beliefs and opinions, which is done by writing opinions favourable to a given political option or their particular representatives.<sup>25</sup> Political parties use paid trolls to ridicule their opponents, while in crisis situations trolls save the reputation of their own politicians. A large number of social media accounts have been set up for the sole purpose of political trolling. It should be mentioned here that Poland has not introduced any legal regulations addressing trolling on the Internet yet.

However, dissemination of a huge amount of content is not always man-made. In many cases trolls' activity was taken over by artificial intelligence in the form of social robots, in short bots, defined in the following way: "Social bots are automated accounts impersonating humans,"<sup>26</sup> that is they are computer algorithms that create and distribute content in social media. Bots try to imitate human behaviour and change people's behaviour and opinions. Some bots have been programmed to replace people in their marketing and informational activities by providing online services to customers of companies and online shops.

The area of bots' activity which triggers particularly emotional reactions is politics. Bots are able to influence political discourse, create public opinion and spread propaganda content. Through such activity, based on a large number of generated messages, they control the level of support of the Internet community to a chosen political option or a specific politician.<sup>27</sup> Bots' activity can be restricted to generating likes of posts or profiles only, but it can also be expanded to disseminating specific content on a massive scale. Bots play a key role in spreading false messages. But people also contribute to forwarding such messages in a viral way, because the

25 P. Pawlak, *Charakter dyskusji politycznej na portalach informacyjnych. Studium przypadku*, "Studia Europaea Gnesnensia," 13/2016, pp. 204-205. See also: E. Musiał, *Trolling jako przykład zagrożeń informacyjnych w cyberprzestrzeni*, in: *Bezpieczeństwo informacyjne w dyskursie naukowym*, eds. H. Batorowska, E. Musiał, Kraków 2017, p. 232.

26 K. Yang, O. Varol et al., *Arming the public with artificial intelligence to counter social bots*, "Human Behavior and Emerging Technologies," 1, 1, 2019, p. 48.

27 A. Marwick, R. Lewis, *Media Manipulation and Disinformation Online*, 2017, p. 38, <https://data-society.net/output/media-manipulation-and-disinfo-online/> (access: 23.07.2019).

network users who are susceptible to manipulation pass them on to other recipients.<sup>28</sup>

The issue of bots' activity on the Internet hits the headlines at a time of important political events, such as elections or politically important referendums. It is estimated that at the time of the presidential election in the USA in 2016 the reception of the first presidential debate between Hilary Clinton and Donald Trump was heavily influenced by the posts generated by the army of Internet bots; they generated 20% of the posts on Twitter at that period, representing only 0.5% of users.<sup>29</sup> According to the estimates, up to 15% of active Twitter accounts are operated by bots, and Facebook is attacked by 60 million bots. They were behind a significant amount of political content disseminated during the presidential campaign in the USA in 2016, and some of the same bots were used in the following year to try to influence the election in France.<sup>30</sup>

The Internet is the first medium which makes the question of who manipulates its users an acute one. The first versions of social bots were easy to identify through the analysis of the content of their posts. A bot could be unmasked by observing its activity and behaviour, such as the continuous publication of tweets 24 hours a day, without any break for sleep, which would be a natural human behaviour. Currently, these errors have been eliminated and the activity of bots has been adjusted to the daily rhythm of human activity. As a result of introducing more and more advanced improvements, it is no longer possible to be 100% sure whether a profile is operated by a human or a bot.<sup>31</sup>

## A subliminal message – mind programming

A subliminal (subconscious) message is information that reaches recipients without the participation of their consciousness. This happens when the stimuli are too short or too weak to be consciously recorded by

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28 D.M.J. Lazer et al., *The science of fake news. Addressing fake news requires a multidisciplinary effort*, "Science," 359, 6380, 2018, p. 1095. More: C. Shao et al., *The spread of fake news by social bots*, 2017, <https://www.andy.blackassociates.co.uk/wp-content/uploads/2015/06/fakenewsbots.pdf> (access: 23.07.2019).

29 A. Marwick, R. Lewis, *Media Manipulation and Disinformation Online*, op. cit.

30 D.M.J. Lazer et al., *The science of fake news. Addressing fake news requires a multidisciplinary effort*, op. cit.

31 K. Kupferschmidt, *Social media 'bots' tried to influence the U.S. election. Germany may be next*, <https://www.sciencemag.org/news/2017/09/social-media-bots-tried-influence-us-election-germany-may-be-next> (access: 01.08.2019).

the human mind. The brain does not receive them consciously, but the messages contained in them influence recipients' decisions and choices, because images, words or sounds are recorded by their subconscious. Subliminal messages are sent as texts, images or sounds. They can be placed in films, in single frames mounted in films, in music, and in images in which the arrangement of elements represents the content intended by the sender of the message. Subliminal messages can influence the way the reality is perceived, bring negative results, and even introduce their recipient into extremely negative, depressive mental states.<sup>32</sup> However, stimuli introduced into a person's subconscious may also help him to change bad habits and create new, beneficial ones.

Subliminal manipulation of the mind has been used since the middle of the 20th century, causing emotional and cognitive changes in unaware recipients.<sup>33</sup> Subliminal messages are most frequently used in advertising, in films and in static images; it has been argued that subliminal messages were even placed in Disney's animated fairy tales.<sup>34</sup>

The beginnings of the phenomenon are connected with an experiment conducted in 1957 by the American market researcher James Vicary in the cinema in Fort Lee, New Jersey. He added single frames which read: "Hungry? Eat Popcorn" and "Drink CocaCola" to the film being shown. The exposure time for the frames that had nothing to do with the film was too short to be noticed by the audience, but their subconscious recorded them. According to the author of the experiment, after the screening the sales of Coca Cola increased by 18.1% and the sales of popcorn by 57.5%. Since the experiment was not carried out under controlled conditions, which made it impossible to confirm the results, its results are sometimes questioned.<sup>35</sup>

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32 L.R. Salpeter, J.I. Swirsky, *Historical and Legal Implications of Subliminal Messaging in the Multimedia: Unconscious Subjects*, "Nova Law Review," 36, 3, 2012, pp. 504-505.

33 M. Sulej, *Reklama podprogowa jako forma manipulacji*, "Warszawskie Studia Pastoralne," 12, 2010, p. 50.

34 More: M. Singh, R. Nayyar, *Psychology of Brand Creation and Management: Subliminal Advertising*, "International Journal of Science and Research," 6, 11, 2017, pp. 852-853.

35 *Ibidem*, s. 51.

Figure 4. Bush Campaign ‘Rats’ Subliminal Message



Source: <https://youtu.be/2NPKxhfQMs?t=24>.

One of the best known examples of the use of subliminal messages is the infamous episode of the presidential campaign in the United States, where in a TV spot issued by the Republicans, for a moment Al Gore was linked with the word “rats” coming from the sentence appearing in the spot: “The Gore Prescription Plan: Bureaucrats decide.” This word appeared at the time when they were talking about Bush’s rival.<sup>36</sup> It is difficult to assess how much influence this message had on the audience, as the opinions on its impact were strongly divided. This incident caused an avalanche of indignation among Bush’s opponents. On the other hand, his supporters argued that the appearance of huge letters that formed the word RATS on the screen which lasted for a fraction of a second was totally accidental. Advertising specialists approached the matter sceptically, comparing subliminal effects to a “belief in astrology and alien abduction.”<sup>37</sup>

This example is by no means the only event in the world of big politics in which subliminal messages were mentioned. Similar attempts, supposed to stimulate recipients’ subconscious, have been frequently made in political games. In the following years the effectiveness of subliminal messages was repeatedly studied, however, no conclusive results were found. Some studies revealed that subliminal stimuli influence the assessment of politicians, both known and unknown to recipients, as well as the results

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36 S. Dehaene, L. Naccache, *Can One Suppress Subliminal Words?*, “Neuron,” 52(3), 2006, p. 397.

37 J. Weinberger, D. Westen, *RATS, We Should Have Used Clinton: Subliminal Priming in Political Campaigns*, “Political Psychology,” Vol. 29, No. 5, 2008, p. 635.

of polls and the distribution of votes in political elections, if their transmission took place in real time during voting.<sup>38</sup>

In the 1970s, great popularity and interest in issues related to the use and effectiveness of subliminal messages was reflected in popular culture. For example, in 1973, in an episode of the then popular crime series *Columbo*, the killer lured his victim to the crime scene by means of a subliminal message.<sup>39</sup> Although in subsequent years the researchers' opinions on the effectiveness of this technique of influencing people were strongly divided, in 1999 a subliminal transmission generator was patented in the United States, enabling the creation and placement of such messages in television programmes.<sup>40</sup>

Already in 1970s, the United States banned subconscious broadcasts from television programs. These practices were later declared to be illegal in other countries, including Poland. However, no such regulations exist when it comes to the Internet. In addition, this technique of influencing users on the net has a much greater potential due to its interactive nature. Subconscious messages can be programmed at the level of computer applications as options embedded in their functioning.<sup>41</sup> Currently, a large number of free applications for generating and placing subliminal messages in audio and video files as well as in static images is available, which is possible thanks to their modularity and automation of editing.

Although the effectiveness of subliminal communication has not been proven so far, it is still used today as one of the methods of manipulation. It is difficult to determine how many subliminal messages have been placed in cyberspace, because no data on this subject exist, and most studies conducted so far have focused on messages aimed at changing the perception of a brand or a product. In the context of cyber violence, one of the greatest threats of the Internet, it is important to consider whether subliminal messages can become a tool for cyber attacks able to encourage people to take specific actions.<sup>42</sup> Similarly, the issue of political and ideological choices made using web-based propaganda content and materials remains open.

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38 Ibidem, p. 631.

39 *Double Exposure*, 1973 r.

40 Patent of Subliminal Message Generator, <https://patentimages.storage.googleapis.com/cf/6b/aa/00b2a938571414/US5270800.pdf> (access: 23.07.2019).

41 E. Olszewska, *Przekaz podprogowy w reklamie jako manipulacja i zagrożenie dla poczucia bezpieczeństwa konsumenta*, "Zeszyty Naukowe WSOWL," 2 (168), 2013, p. 50.

42 D.I. Sriendra, K.Y. Abeywardena, *The Use of Subliminal and Supraliminal Messages in Phishing and Spear Phishing based Social Engineering Attacks; Feasibility Study*, The 13th International Conference on Computer Science & Education (ICCSE 2018), p. 56, <https://ieeexplore.ieee.org/document/8468681> (access: 07.08.2019).



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