

DOI: 10.11649/a.1513

Article No.: 1513

Adeptus
nr 10/2017 r. pismo humanistów

Iwona Zielińska is a sociologist; she completed her doctoral studies at the Graduate School for Social Research at the Polish Academy of Sciences in Warsaw. An active member of the Polish Sociological Association, and an Assistant Professor at the Maria Grzegorzewska University in Warsaw (since 2012), teaching courses in sociology of communication and other subjects. Her research focuses on moral panic, media discourses and, more recently, technological controversies and science communication. e-mail: izielinska@aps.edu.pl

Iwona Zielińska

The Influence of Social Media on Science Communication: Strategies of GMO Opponents on Facebook

Introduction

The emergence of new communication tools of the Web 2.0 era has led to the “demassification” of the media, as information is increasingly more often selected to fit individual receivers’ tastes, needs and worldviews (Chaffee & Metzger, 2001). Unlike in the classical models of mass communication, where the addressee is usually a passive receiver, the model of Internet communication as it is today enables Web users not only to receive but also comment, edit, disseminate (e.g. by sharing with others) and even co-create the message. It is becoming a norm that the main TV or radio news programmes cover events which originally started on social media, such as Facebook and Twitter. Thus the users’ reactions to controversial issues expressed online, or their action in physical space, for example spontaneous street protests (e.g. the “black protest” (*czarny protest*) in Poland against the proposed legislation to restrict abortion, held in autumn 2016) can turn into news stories. Before proceeding to the main topic of this article, it is worth explaining how the term “social media” is used in this article. Without adding too much complexity – which, incidentally, is a frequent occurrence (cf. Toczyski, 2014) – I rely on an often-quoted definition of social media as a group of Internet-based Web

The study was conducted at author's own expense.

No competing interests have been declared.

Publisher: Institute of Slavic Studies, Polish Academy of Sciences & The Slavic Foundation.

This is an Open Access article distributed under the terms of the Creative Commons Attribution 3.0 PL License (creativecommons.org/licenses/by/3.0/pl/), which permits redistribution, commercial and non-commercial, provided that the article is properly cited. © The Author(s) 2017.

2.0 applications “that allow the creation and exchange of User Generated Content” (Kaplan & Haenlein, 2010, p. 61, as cited in Toczyski, 2014, p. 61).

The above mentioned changes both in the world of media and in communication as such are also apparent in science communication, understood as a social practice consisting in the public promotion and explanation of science, technology and scientific principles not only by scientists, but also by journalists and non-experts, using tools they have at their disposal (cf. Kulczycki, 2012). As can be seen, this concept is much broader than the popularisation of science, which is essentially an educational activity. Such a definition of science communication includes also discussing and questioning the results of scientific research. This kind of activity gives rise to conflicts over technology and science (cf. Stankiewicz, 2011), as is the case of genetically modified organisms (GMOs) considered here, vaccination or nuclear energy. Traditional mass media (radio, television and the press) clearly favour the dominant scientific¹ discourse and its exponents, mainly scientists and experts (Bucchi, 2004; Bucchi & Mazzolini, 2003). Alternative opinions on particular topics are presented only in controversial situations, such as disputes or affairs, mostly in order to further stir conflict and thus generate profit (e.g. by boosting circulation figures) for the media that report it (Bucchi, 2004).

This article stresses a change in the dynamics of science communication stemming from the use of social media. It mainly focuses on new actors who used to be excluded from mainstream media, particularly those who are not professionally involved in the field of science, but for certain reasons (such as their concern about the results of the implementation of new technologies) become engaged in the shaping of scientific discourse. Their communication strategies are discussed on the example of a Facebook group (or, using Facebook terminology, a “community”) called “GMO To Nie To” (GMO, that’s not it at all), whose aim is to oppose GMO seeds and food products.

Web 2.0 communication

The term Web 2.0 refers to a new type of online communication where content can be generated, modified or removed by Internet users. In this open space the distinction between the sender and the receiver is blurred, as opposed to traditional mass communication, in which these roles are firmly fixed. The products of such communication include Wikipedia,

¹ As used in this article, the term “science” refers to a broad spectrum of phenomena, including technology (e.g. genetic engineering), as well as medical and environmental issues.

YouTube, discussion forums and social networking platforms – Twitter, Instagram, Facebook, Pinterest and many others. Consequently, Web 2.0 services have introduced wider representation of opinions on different topics, including those concerning science and technology. A far more accessible medium (although not as democratic as initially expected), the Internet provides a space where alternative scientific and technological discourses emerge, develop and spread on social media, including blogs and forums. They reach a large audience, since the Internet is increasingly more often a natural first choice for those seeking information, particularly (as established by researchers) about health-related issues (Choudchury, Morris, & White, 2014). This can be the case of, for example, parents considering the risk of vaccination of their babies, patients waiting for transplants, or teenagers looking up information about embarrassing symptoms they noticed in their bodies.

According to a survey conducted in early 2016, although most Poles (71%) identify TV news as their main source of information, in the case of people up to 40 years of age it is the Internet that is taking over this function (TNS Global, 2016). In the same survey, as many as 56% of the respondents declared an interest in science and technology. American surveys indicate that the main source of information about the world of science and technology is social media: YouTube, Twitter and Facebook (National Science Board, 2014). Under the circumstances, it is apparent that science communication scholars should shift their attention from traditional media to the Internet. The current situation in social sciences is paradoxical: although Web 2.0 users use and generate a vast quantity of data, the number of sociological studies analysing this readily available information, also in the case of dynamic science and technology communication, is far from sufficient. Overlooking online behaviour means neglecting an important aspect of many current social phenomena.

Before proceeding to a detailed discussion of communication strategies of grassroots organisations engaged in science communication concerning GMOs, it is worth noting the basic differences between the use of such strategies by the supporters of GMO technology, mainly scientists and experts (e.g. researchers), as well as some journalists² on the one hand, and by its opponents, mainly environmentalists, farmers and other people interested in the impact of GMOs on health and natural environment on the other. Information presented in Table 1 is based on my observation of their online activity.

² For example, the blog of the *Polityka* magazine journalist Wojciech Zalewski, entitled *GMObiektywnie* (Objectively about GMOs), which includes information based on research, studies and reports indicating the positive aspects of GM plants in agriculture.

Table 1: Strategies of science communication of GMO supporters and opponents. Source: a study conducted by the author between February and April 2015

	Pro-GMO	Anti-GMO
Organisation of activity	Weak: scattered messages from different sources rarely making reference to one another	Strong: individual organisations and initiatives form coalitions, pursue joint activity, quote one another and thus strengthen their message
Frequency of message	Low: message usually appears in reaction to particular events, e.g. legislative changes in 2015	Regular, consistent message which intensifies in the context of particular events
Area of activity	mainstream media, the Internet	The Internet, street protests, collecting signatures for petitions
Use of social media	Low (the largest pro-GMO Facebook group has over 100 members)	Very high (the largest anti-GMO Facebook group has over 7,000 members)
Support from	Scientific and research institutions, experts, scientists, the media	Celebrities, some individual scientists, NGOs, some politicians
Type of narrative	"Rational": making reference to facts and scientific research, using positive scenarios of GMO implementation	"Emotional": using black scenarios of GMO implementation, making reference to less popular or concealed research

Algorithms used in social media, such as Facebook, constantly "learn" about our choices, interests and our use of online multimedia in order to offer us content that is similar to what has previously drawn our attention and is consistent with our opinions and attitudes, which further reinforces them as a result. In this way, clicking the "Like" button on an article posted on, for example, Crazy Science means that information from this website will appear on our Facebook wall more often; likewise, posting a comment on US presidential elections will most likely increase the number of news items about the campaign that we receive (from various sources), and so on. This pattern of personalised information leads to a situation whereby social media users do not follow a variety of news but become immersed in information on selected topics which, in addition, confirms the opinions they already hold. Social psychology describes such a tendency to search for information that will confirm one's own prejudices or opinions as the type of cognitive error known as "confirmation bias" (Plous, 1993). In fact, however, it is another phenomenon, called "information bias" that refers to the tendency to search for a large amount of data which is supposed to help in making a decision (or resolving a dilemma). Meanwhile, research demonstrates that the amount of information does not have a significant impact on the decision reached

(Vaughan, 2013). Algorithms used by social media (tracking our Web activity) enable and reinforce both information and confirmation bias.

The following section presents strategies employed by one of the largest Facebook communities in Poland (as measured by the number of “likes”)³ conducting campaigns against GMO crops and food products, the group called “GMO To Nie To” (GMO, that’s not it at all; hereafter GMO TNT). The anonymous authors of its “Information” section write that GMO TNT is an entirely apolitical grass-roots initiative involving people from a range of different groups across Polish society, not only environmentalists. Their principal aim is “to build the broadest possible civic awareness of GMO issues”.⁴ GMO TNT activists also stress that they protest against the use of genetic engineering in seed and food production, and not in medicine or pharmacology (e.g. insulin production). This standpoint reflects the opinion of most Poles about GMOs (see Centrum Badania Opinii Społecznej, 2013).

(Anti-)GMO communication strategies on Facebook

Studying the communication activity of GMO TNT, I made use of the SUCCESS framework (Heath & Heath, 2007; cf. Yeo, 2015), one of available models that can help scientists and experts to publicise and popularise scientific knowledge by employing online tools more effectively. Incorporating general guidelines for science communication in the mass media (cf. e.g. Christensen, 2007), the model also addresses the specific nature of Internet communication tools. Its name, SUCCESS, is an acronym formed from the six fundamental principles of effectively designed messages, which should be Simple, Unexpected, Concrete, Credible, Emotional and should make use of Stories. Investigating the activity of the administrators of the GMO TNT page, I aimed to establish whether (and if so, how) these principles operate in science communication on Facebook.

The principle of simplicity does not mean trivialisation of the topic. It requires the skill of conveying abstract theories or a large amount of empirical data without resorting to excessively technical or specialist jargon in order to make the message clear, comprehensible and understandable to the audience. Some difficulties here stem from the fact that many

³ 7292 “likes”, as on 15 June 2017.

⁴ See “GMO To Nie To” (n.d.).

words have an entirely different meaning in specialised language as opposed to everyday speech. The word “institution” is a good example: while in general usage it means some kind of an organisation, in sociology it is a term used with reference to an established practice or form of social life, such as the family. The task of simplifying the topic is one of the most challenging for people professionally involved in science, as they often feel that nuances and details are particularly important for the comprehensive presentation of their ideas (Yeo, 2015). An excessive focus on details, however, does not help non-specialists to understand the essence of the message.

As observed, the administrators of the GMO TNT page do not have a problem with applying the principle of simplicity. Nevertheless, this does not mean that their message is addressed to uneducated audience, as confirmed by the fact that although brief posts concerning the results of particular studies are written in simple language, they often include links to sources in English, which suggests that the sender assumes a certain level of competence among group members when it comes to their language skills or ability to use tools that will enable them to understand the content (e.g. Google Translate). For example, the results of a study conducted in Germany are presented as follows:

Shocking data!

The Heinrich Böll Foundation carried out an extensive study testing the level of glyphosate – a substance classified as “probably carcinogenic” – in urine samples of the German population. 2009 people were tested. 3/4 of them showed levels of glyphosate that were five times higher than the legal limit of drinking water. As many as 1/3 of them displayed levels that were between ten and 42 times higher than what is considered the safe level in water. Glyphosate was recorded in 99.6% of the samples.⁵

This information was shared fifteen times, which is a relatively high number in comparison with other posts on the page, although not the highest. For example, the post on the Canadian report entitled *Food Safety, Agriculture and Regulatory Cooperation in the Canada–EU Comprehensive Economic and Trade Agreement (CETA)* was shared 41 times. Whether a particular post will be shared with other Internet users depends on arousing such emotions as awe, anger, anxiety and surprise (Berger & Milkman, 2012).

The techniques of simplifying the message include the activation of cognitive schemas, abstract knowledge structures stored in memory that people use to classify and interpret new

⁵ This post on the GMO TNT page is a summary translation of an article that appeared in English on www.euractiv.com: Nicole Sagener, “Overwhelming majority of Germans contaminated by glyphosate” (Sagener, 2016) (translator’s note).

information. In phenomenological sociology they are also known as “stock of knowledge”. In other words, people try to find a relationship between new information and the frameworks they have in their minds. One example of the use of cognitive schemas is a Greenpeace campaign against GMO food which featured references to Frankenstein’s monster. This simple but powerful association was intended as a memento and a warning about what can happen when scientists (here: geneticists) fiddle with nature.

The second principle of successful science communication is unexpectedness, involving an element of surprise intended to draw and hold the audience’s attention. GMO TNT most often employs this principle by publishing posts that suggest disclosure of some kind of a secret or information which powerful institutions (e.g. corporations, the European Commission, national governments) try to conceal from the public. For example, one of the posts is entitled “Harvard professor failed to disclose Monsanto connection in paper touting GMOs: The dodgy face of science” (4 October 2015). Another one reads: “The process of GMO assessment in the EU is faulty, vast sums of money are pumped into supporting technology whose safety is not dully verified”; and it provides a link to an article published on the website called zielonewiadomosci.pl (“Green News”), criticising the inefficiency of the process of GMO risk assessment while billions are spent on the development of this technology. The article seems to suggest that the EU might be under considerable pressure from GMO industry.⁶

The principle of concreteness rests on the conviction that the audience will find it easier to form an image of a particular topic on the basis of concrete rather than abstract data. As in the case of simplifying the message, people who are not professionally involved in science have an advantage over scientists and experts. GMO TNT applies this principle by quoting particular figures or pointing out particular side effects of using GMO technology in agriculture, such as its negative impact on biodiversity and contamination of GMO-free crops in the area.

The fourth principle is credibility of information and reliability of the person who communicates the message. In science communication performed by experts, this principle is automatically applied by, for example, clarifying affiliations with trusted institutions (Yeo, 2015), e.g. the Polish Academy of Sciences or the University of Warsaw. Such institutional proof of credibility is usually unavailable to non-experts, particularly if they strongly stress their independence from any political or economic organisations and research centres, as

⁶ See “Europejscy Zieloni: Proces oceny GMO w UE jest wadliwy” (2016).

does the GMO TNT initiative. Under the circumstances, they need to find other ways to make their message credible. In the case of science communication under discussion it is possible to identify four strategies aiming to achieve this end:

- (1) Relying on the support of scientists questioning the safety of GMOs. The main authority figure among GMO opponents is Professor Gilles-Eric Séralini, who conducted a controversial study on rats that were fed genetically modified corn and developed side effects, such as large tumours, attributed to their GMO diet. The study report was published in 2012 in a recognised scientific journal but was removed and published elsewhere following a severe criticism of its methodology.
- (2) Quoting results of studies confirming GMO TNT's standpoint that GMOs can be harmful, e.g. Séralini's study or the German study testing the level of glyphosate in urine mentioned above.
- (3) Stressing the role of scientific knowledge in GMO TNT's standpoint; for example, the information section states: "On the GMO TNT page we exchange knowledge about GM crops and food"; the discussion section claims: "We rely on factual arguments and not on emotions". Since in the case of expert communication the use scientific knowledge is taken for granted, scientists convincing their audience that they rely on it are an infrequent occurrence. What is more likely to be stressed is the quality of expert knowledge, as evidenced by such phrases as "reliable studies" or "conclusive evidence".
- (4) Gaining the support of celebrities and artists: the information section features a list of events and initiatives organised by GMO TNT, such as an appeal signed by different artists active on the Polish music scene, including Urszula Dudziak, the Waglewski brothers (Fisz and Emade), and members of the band Sistars. The fact that there is no information about the appeal itself suggests that the names of those involved are more important than the actual message of the document. The GMO TNT page also features a video in which the renowned chef Kurt Scheller explains why he does not use GM ingredients. In this case, well-known personalities play the function of authority figures, which amounts to the use of a mechanism of influence on others (Cialdini, 1993). In general terms, the principle of reliability illustrates a tendency whereby individuals who lack knowledge or competence in a certain field automatically look for an authority figure to follow. This particular example demonstrates that legitimising GMO TNT's activity by well-known personalities provides a guarantee that

it is credible. These observations, however, are based on my researcher's intuition and would require further investigation in order to be confirmed.

Another principle of successful science communication is the emotional element of the message. According to the authors proposing the SUCCESS framework, the ideas and messages that appeal to emotions tend to "stick" stronger, which means they are understood better and remembered by the audience for longer (Heath & Heath, 2007). There are two ways of enhancing the impact of emotions on the message. The first of them involves appealing to self-interest of the individual, for example by demonstrating the impact of GMOs on personal health. Presenting the health risks of GMO food and the herbicide Roundup is GMO TNT's most frequently applied strategy. The second tactic relies on appealing to cultural and national identity, e.g. the need to protect Polish land and agriculture against foreign influence, particularly that of Monsanto Company, a leading producer of GMO seeds. GMO TNT activists also make use of less refined tactics of appealing to the emotions of their audience, for example by means of affective slogans which are not much different from those that can be seen in tabloids (e.g. "Roundup out of Europe!", *Wyrzucimy Roundup z Europy!*).

Finally, the last principle-stories-stresses the role of suitable narratives in engaging the audience's interest in science and technology. Julie Downs (2014) observes that the use of stories in science communication makes it possible to illustrate a direct connection between science and the lives of the so-called ordinary people. Narratives featuring on the GMO TNT page tell stories of particular people who in some way suffered from contact with GMOs or are victims of great industrial corporations involved in GMO business. One example here is the story of a French farmer who maintained that he suffered lasting neurological problems as a result of contact with a Monsanto herbicide he had used on his farm. His victory in a three-year lawsuit against the industrial giant has all the elements of "a good news story" from a journalist point of view: it is unusual, sensational, personal and presented as an example of a classic battle of good against evil.

Conclusion

The study presented above only serves as an illustration and does not exhaust all the opportunities offered by a broad-ranging analysis of communication. It aimed to examine whether the principles recommended in the popularisation of scientific knowledge on social media are also used by people who question this knowledge. As can be seen from the example of GMO

TNT Facebook page, anti-GMO activity pursued by this social initiative displays the use of all the principles of effective science communication as characterised in the SUCCESS framework. This, however, does not imply that its activists have mastered them basing on the literature of the subject (such a conclusion would have to be verified by interviews with those involved). Rather, as I believe, the explanation lies in their considerable skills at using new communication tools offered by the Internet in this day and age, and an intuitive understanding of the needs of their audience (a concise, simple, message appealing to emotions).

Another factor that plays a role in the shaping of attitudes to new technology using Internet communication is the so-called nasty effect. American scientists (Anderson, Brossard, Scheufele, Xenos, & Ladwig, 2014) conducted an experiment in order to investigate whether and how negative comments make an impact on the perception of risk involved in the use of nanotechnology. To this end, they first added a neutral post on a blog devoted to the subject and asked the readers for their opinions on safety issues. Interestingly, when the researchers added some arrogant comments in vulgar language it turned out that nanotechnology came to be perceived as more risky.

On the one hand, thanks to social media, science communication can include a variety of opinions on science and technology that are rarely presented in traditional media. On the other, as mentioned above, owing to the nature of algorithms used by Facebook, Twitter or YouTube, Internet users often receive only such content that is consistent with their views on a particular subject. In other words, in the case of GMOs social media platforms are not a space of discussion but a space where people confirm their pro- or anti-GMO standpoints. For example, research shows that Twitter is used to share information among like-minded people rather than to initiate a debate on certain topics (Smith, Zhu, Lerman, & Kozareva, 2013). Likewise, the Facebook page observed in this study displays a very low diversity of opinions on GMOs; the one person who questions the data presented on the page is most often ignored.

It seems rather certain that new technological tools will induce a change in the dynamics of science communication and a greater inclusion of voices of those actors (both people and institutions) that are not professionally involved in science. So far, scientists, experts and science communication journalists have tended to ignore such alternative opinions. This, however, does not necessarily imply ill will on their part, but can be attributed to the domination of the Enlightenment paradigm of science with a prominent role of the expert. Even if there are social consultations organised to consider some issues, such as new regulations concerning GMOs, it is always the dominant scientific discourse

that is their main point of reference. Piotr Stankiewicz (2011) aptly observes that this leads to a situation in which any discussion is reduced to talking about (scientific) facts, while such questions as values, political interest, fear and apprehension of the development of a particular technology are ignored and excluded from the debate. The study of science communication in the online environment not only makes it possible to notice new actors and their opinions, which are rarely present in traditional media, but also draws attention to a large number of nuances and factors that have an impact on this type of communication.

Translated by Piotr Styk

Bibliography

- Anderson, A. A., Brossard, D., Scheufele, D. A., Xenos, M. A., & Ladwig, P. (2014). The “nasty effect”: Online incivility and risk perceptions of emerging technologies. *Journal of Computer-Mediated Communication*, 19(3), 373–387. <https://doi.org/10.1111/jcc4.12009>
- Berger, J., & Milkman, K. L. (2012). What makes online content viral? *Journal of Marketing Research*, 49(2), 192–205. <https://doi.org/10.1509/jmr.10.0353>
- Bucchi, M. (2004). Can genetics help us rethink communication?: Public communication of science as a ‘double helix’. *New Genetics and Society*, 23(3), 269–283. <https://doi.org/10.1080/1463677042000305048>
- Bucchi, M., & Mazzolini, R. G. (2003). Big science, little news: Science coverage in the Italian daily press, 1946–1997. *Public Understanding of Science*, 12(1), 7–24. <https://doi.org/10.1177/0963662503012001413>
- Centrum Badania Opinii Społecznej. (2013). *Polacy o bezpieczeństwie żywności i GMO*. Komunikat nr 4760. Centrum Badania Opinii Społecznej.
- Chaffee, S. H., & Metzger, M. J. (2001). The end of mass communication? *Mass Communication & Society*, 4(4), 365–379. https://doi.org/10.1207/S15327825MCS0404_3
- Choudchury, M., Morris, M., & White, R. (2014). Seeking and sharing health information online: Comparing search engines and social media. *Microsoft Research, One Microsoft Way*. Retrieved May 15, 2016, from http://research.microsoft.com/pubs/208026/health_search_chi2014.pdf
- Christensen, L. L. (2007). *The hands-on guide for science communicators: A step-by-step approach to public outreach*. New York, NY: Springer.
- Cialdini, R. B. (1993). *Influence: Science and practice* (3rd ed.). New York, NY: HarperCollinsCollegePublishers

- Downs, J. S. (2014). Prescriptive scientific narratives for communicating usable science. *Proceedings of the National Academy of Sciences*, 111(Suppl. 4), 13627–13633. <https://doi.org/10.1073/pnas.1317502111>
- Europejscy Zieloni: Proces oceny GMO w UE jest wadliwy. (2016, April 1). *Zielone Wiadomości*. Retrieved May 15, 2016, from <http://zielonewiadomosci.pl/tematy/ekologia/europejscy-zieloni-proces-oceny-gmo-w-ue-jest-wadliwy/>
- GMO To Nie To. (n.d.). Informacje [Facebook page]. Retrieved May 15, 2016, from <https://www.facebook.com/pg/GMOtoNieTo/about/>
- Heath, C., & Heath, D. (2007). *Made to stick: Why some ideas take hold and others come unstuck*. New York, NY: Random House.
- Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. *Business Horizons*, 53(1), 59–68. <https://doi.org/10.1016/j.bushor.2009.09.003>
- Kulczycki, E. (2012, December, 9). Komunikacja naukowa, czyli co? [Blog post]. Retrieved May 15, 2016, from http://ekulczycki.pl/teoria_komunikacji/komunikacja-naukowa-czyli-co/
- National Science Board. (2014). *Science and engineering indicators 2014*. Arlington, VA: National Science Foundation.
- Plous, S. (1993). *The psychology of judgment and decision making*. New York, NY: McGraw-Hill.
- Sagener, N. (2016, March 7). Overwhelming majority of Germans contaminated by glyphosate (S. Morgan, Trans.). Retrieved November 25, 2017, from <https://www.euractiv.com/section/agriculture-food/news/overwhelming-majority-of-germans-contaminated-by-glyphosate/>
- Smith, L. M., Zhu, L., Lerman, K., & Kozareva, Z. (2013). The role of social media in the discussion of controversial topics. In *Proceedings of the 2013 International Conference on Social Computing (SocialCom)* (pp. 236–243). Washington, DC: IEEE Computer Society. <https://doi.org/10.1109/SocialCom.2013.41>
- Stankiewicz, P. (2011). Od przekonywania do współdecydowania: Zarządzanie konfliktami wokół ryzyka i technologii. *Studia Socjologiczne*, 203(4), 95–119.
- TNS Global. (2016). *Wiarygodne informacje?: Czy są dziś w cenie?* Survey Report. Retrieved May 15, 2016, from <http://www.tnsglobal.pl/archiwumraportow/2016/05/05/wiarygodne-informacje-czy-sa-dzis-w-cenie-2/#more-6492>
- Toczyski, P. (2014). O sednie terminu social media: Web 2.0 a sprawność użytkowników w "generowaniu treści". *Kultura Popularna*, 3(41), 56–67.
- Vaughan, M. (2013). *The thinking effect: Rethinking thinking to create great leaders and the new value worker*. Boston, MA: Nicholas Brealey Publishing.
- Yeo, S. K. (2015). *Public engagement with and communication of science in a Web-2.0 media environment*. Washington, DC: The American Association for the Advancement of Science (AAAS).

The Influence of Social Media on Science Communication: Strategies of GMO Opponents on Facebook

The aim of this article is to discuss a growing role of social media in science communication. Unlike traditional mass media – television, radio, the press – Web 2.0 tools allow for a much wider representation of opinions on science and technology, including those opposing or questioning mainstream research. The article presents communication strategies used by one of the biggest Polish anti-GMO groups on Facebook (“GMO To Nie To”; GMO, that’s not it at all) to put forward their arguments and gain public support. In conclusion, it is argued that the use of new communication tools such as social media introduces inevitable changes in the dynamics of science communication, which opens new research opportunities.

Keywords:

GMO, science communication, social media, Facebook

Wpływ mediów społecznościowych na komunikację naukową: strategie przeciwników GMO na Facebooku

Celem artykułu jest wskazanie na rosnącą rolę mediów społecznościowych w komunikacji naukowej. W przeciwieństwie do mediów tradycyjnych – telewizji, radia i prasy – narzędzia, jakie oferuje Web 2.0, pozwalają na reprezentację daleko bardziej różnorodnych opinii na temat nauki i technologii, również tych, które przeciwstawiają się powszechnie uznawanym wynikom badań lub je kwestionują. W dalszej części artykułu wskazane zostały strategie komunikacyjne największej na polskim Facebooku grupy skupiającej przeciwników GMO („GMO To Nie To”), stosowane, by zyskać wsparcie dla swoich racji i argumentów. Artykuł kończy się konkluzją, że wykorzystanie nowych narzędzi komunikacyjnych, np. mediów społecznościowych, wprowadza nieuchronne zmiany w dynamice komunikacji naukowej, co otwiera jednocześnie nowe możliwości badawcze.

Słowa kluczowe:

GMO, komunikacja naukowa, media społecznościowe, Facebook

Note:

This is the translation of the original article entitled “Wpływ mediów społecznościowych na komunikację naukową: strategie przeciwników GMO na Facebooku”, which was published in *Adeptus*, issue 10, 2017.

Citation:

Zielińska, I. (2017). The influence of social media on science communication: Strategies of GMO opponents on Facebook. *Adeptus*, 2017(10). <https://doi.org/10.11649/a.1513>