

The influence of mass media in creating identification models in adolescents

Popovska Nalevska, Gorica

International Slavic University, Republic of Macedonia (popovska.g@gmail.com)

Popovski, Filip ✉

St. Kliment Ohridski University - Bitola, Republic of Macedonia (Filip.popovski@tfb.uklo.edu.mk)

Dimova Popovska, Hristina

High School SABA - Bitola, Republic of Macedonia (Hristinadimova95@gmail.com)



ISSN: 2243-7703

Online ISSN: 2243-7711

OPEN ACCESS

Received: 5 March 2022

Revised: 10 March 2022

Accepted: 14 March 2022

Available Online: 14 March 2022

DOI: 10.5861/ijrse.2022.175

Abstract

It is known that a large part of our personality is formed under the influence of our environment - parents, educators, educational institutions, peer groups - but in the era of digitalization, mass media have a great contribution in creating identification models that aim to create feelings of belonging and to encourage certain types of thinking and behavior in adolescents. The main goal of this research is to examine the content that adolescents prefer to watch through the mass media and how it affects them. The research was carried out by using a questionnaire for adolescents. The sample was chosen randomly and consisted 181 adolescents aged 15 to 18 years. According to the results adolescents most often use social networks and the Internet to search for entertaining content. Identification usually does not appear in the form of idealization or imitation of specific characters from the mass media, on the contrary, adolescents indicate that they relate to the characters and are found in them, but take an open approach to study and determine the meaning of different ideological settings and examples that are present before deciding to apply something. Many adolescents are encouraged to expand their worldview through the mass media, learning about things that are not available to them in their environment, rethinking the set standards of society, and being encouraged to express their views, while retaining their identity by not being as inclined to identify directly with a character as being inclined to express their identity in many aspects.

Keywords: inclusive education, adolescents, identification models, mass media, education

The influence of mass media in creating identification models in adolescents

1. Introduction

Throughout our lives, we constantly encounter different patterns of behavior that if we accept and adopt they can become part of our understanding of the world and our character, as well as determine the choices we make later in life. It is known that a large part of our personality is formed under the influence of our environment - parents, educators, educational institutions, peer groups - but in the era of digitalization, where the recent emergence of the Internet, content is created and distributed with topics of various nature that are easily accessible to anyone interested in exploring them and thus easily becomes part of the daily surrounding of the individual. The novelty in this digitalization is the fact that the choice of content that is perceived depends on the interests of the subject and thus the mass media have a great contribution to the formation of patterns of behavior by creating identification models that aim to create feelings of belonging, and encourage certain types of thinking, behavior and creativity. By examining the process of identification through the prism of hitherto known social cognitive theories, as well as the process of development of mass media and their gradual decentralization that allows the inclusion of more and more types of identification models that are intended to gain their target audience, to analyze how much and how the presence of these media affects and how significant that impact is compared to the impact of the physical environment.

The social-cognitive theory was created by Albert Bandura and appears as a theory of social learning in the 60s of the 20th century when it is based on the statement that learning takes place in a certain social context where the learning process has dynamic properties full of reciprocal interaction between personality, environment, and behavior. The unique feature of the theory of social learning is that for the first time a focus is placed on social influence in the formation of certain patterns of behavior, with an emphasis on external and internal social stimuli of behavior. This branch of cognitive theory examines the unique way in which individuals adopt and maintain certain behaviors, taking into account the environment in which they perceive and later demonstrate learned behaviors. In this context, the past experiences of the individuals are considered as an important factor in the formation of assumptions, expectations, and motivators that affect their further functioning, what behaviors they decide to adopt, to what extent they adopt them, and how they practice them.

Apart from the fact that social-cognitive theory has a great influence on the work of psychologists, it also has important contributions in the field of education and the media industry. Media impact research often refers to Bandura's research and theories, and today, teachers and parents recognize the importance of the modeling process and use the knowledge from this theory to consciously contribute to modeling children, as well as to encourage self-efficacy and self-regulation. Observing others is a process that plays a significant role. As Bandura himself said, "Life would be extremely difficult, even dangerous if we learned everything from personal experience" (Bandura, 2001). Understanding this theory allows us to consider the process of observation and how important it is in shaping the things we know and the things we do.

Adolescents often want to see relevant examples to explain their position in society, and in the more critical stages of identity formation, media messages are an important source of such examples (Arnett, 1995). Theories of group identity development that come from previous theories of ego development suggest that most individuals go through several stages of re-examining their identity until they find a relatively stable status of achieved identity (Hilbert & López, 2012). Identification is also used as a persuasion strategy because it often transcends a person's natural tendency to hold their thoughts and actions within a perspective. Introducing people to other perspectives through the media, encouraging them to identify with them, offers them new opportunities for understanding that can result in changing attitudes.

It is obvious that the mass media provoke different reactions from different groups of people, and the danger

of inaccurate information or deliberate incitement to certain ideologies is quite real in an environment where there is a possibility to be anonymous, and even to present yourself as another person. For the mass media to be used rationally and to get the maximum benefit from them, we need to talk about the importance of digital and media literacy, which is very important at this time.

2. How are the mass media creating identification models today

The media today have several important roles in our society. One of the obvious roles is that the media offers fun materials that are perceived in their free time, and they are also platforms where imagination and creativity can be developed by offering different types of content that can inspire us. The media is also an important source of information and often brings us into contact with educational materials that teach us about various aspects of nature and science, as well as cultures around the world. Another important aspect of the media is their provision of a public forum where important issues are discussed and a wide range of opinions and interpretations are offered. The media, above all, offer easy communication.

The Internet is often said to be the technology that started the information revolution by being thought to have caused as much change in social structures as the industrial revolution itself. This global computing network, based on wireless communication platforms, provides a huge capacity for multimedia interactive communication at a select time, spanning space. At the core of these communication networks is the creation, distribution, and use of digitized information in all formats. According to the Hilbert and López research (1995, p. 959), 95% of all information on the planet is digitized and available on the Internet - this includes all original preserved media (sometimes in modified form): scanned old newspapers, scientific papers, old films, modified movie clips, renaissance paintings, 3D paintings of ancient sculptures, etc.

We are witnessing major changes in social structure and social behavior - online communication is emerging as the main form of organization, individualism is becoming the main orientation of social behavior, and the culture of autonomy reflects the culture of the network society. The primary dimension of these changes is marked by the rise of the "I" centered society, ie the decline in the understanding of the social group as a structure that depends on space, family, workplace, and cultural habits of the physical environment - there is a reconstruction of social groups with the emergence of strong cultural or personal ties created based on individual interests, values, and projects. Belonging to a social group comes down to "searching" for like-minded people and engaging in interaction with them online, and later in physical reality (Moshman, 1999).

Academic research has shown that the Internet does not isolate people, but rather increases sociality. Also, an important study by Michael Wilmot from the British Computer Society, conducted in 2010, collects global data for over 35,000 people and after the analysis, it is concluded that there are psychological indicators for a higher level of personal satisfaction. Research has shown that the Internet encourages people by increasing their sense of security, personal freedom, and influence, all of which affect their general mood. In researching the relationship of the mass media with the multitude of social structures such as economics, politics, and culture, it is found that they often represent individuals, social groups, organizations, and themes through structured stereotypes and ideological frameworks and it is considered that their symbolic power (Fourie, 2008).

Bandura himself, in his work "Social Cognitive Theory of Mass Communication" (2001) talks about the social construction of reality, pointing out that the television representation of social relations, norms, and the structure of society represent a symbolic world that through its skill can simulate the authentic state of interpersonal relationships and thus creates a basis for vicarious cultivation of beliefs. This assumption has led to more research based on the fact that more important than what is seen on television is how often it is seen, including the research of Signorelli (1987). However, the impact is best illustrated by what kind of programs are most often "followed", and the frequency of viewing only contributes to the extent to which the views and beliefs of the observer are influenced. Controlled laboratory studies, confirm these assumptions. Television viewers are a heterogeneous group - they belong to different cultures and follow different traditions based on

different norms and values. Similarly, their interests and choice of programs are different, and thus unique effects of media influence occur in each person. It is well known that advertisements in magazines and on television use modeling to represent happy, successful people who use the advertised product and thus advertising companies hope to encourage people to use the product.

A well-known situation that illustrates the success of such advertisements is how women's cigarette smoking was successfully advertised at a time when such an act was stigmatized. The father of public relations, as well as Sigmund Freud's grandson, Edward Bernays, faced many challenges when he wanted to advertise cigarettes as a product that women can use because at that time there was a negative attitude towards women who smoke cigarettes. . With this, he designed the first public campaign "Torches of Freedom" in which he selected respectable and modern women (who were respectable enough, but still "ordinary" enough for the average woman to identify with them), who hired them to go out at the Easter parade and symbolically light a cigarette in support of the then feminist movement, with the view that cigarettes are a symbol of their freedom in the fight against gender stereotypes. The campaign was also followed by ads indicating that cigarettes are glamorous and beneficial for weight loss. This campaign proved successful in that cigarette sales doubled between 1923 and 1929.

The development of identity usually involves processes such as determining what it means to be part of a group where the attempt to understand and reconsider the expectations that society has of us and the group to which we belong is involved. Given that identification is primarily a subconscious process, it is difficult to analyze the subconscious impact of such content on viewers, which significantly limits research in that field, but given that people often seek to represent characters similar to them in the media to be able to identify with them, the relationships of these phenomena can be well described through the social and cultural consequences they have. Part of the problem of determining the relationship between identification and media content is that there are two types of identification prevalent in media consumption that are different from each other - identification with a specific social group or identification with a specific character (Bandura, 2001).

Identification becomes important when it is articulated because it still comes down to the ability of a person to express the connection he feels with a certain category of people he meets through the media. Given that there is a strong emphasis on individualism and decentralized society today, it is important to note that identification does not occur only when we observe a new activity with which we are unfamiliar - often the actions of others can serve as social motivators for previously learned behavior, which the observer can perform, but did not do so because it was not properly encouraged, not because it was prohibited. In this respect, social incentive differs from observational teaching because no new behavior is learned, and also incited behavior, in this case, would not be forbidden or undesirable in society. Identification is one of the many ways an observer can react to people in the media, whether real or fictitious. The observer can react to the characters by deciding whether he likes them or not, whether he feels close to them, whether he finds similarities or differences between the characters and himself, whether he likes them in a romantic way, whether he develops parasocial interaction with them or whether he wants to imitate them (Cohen, 2001, p. 251)

Media character identification is often based on psychological attachment between the viewer and the character, but not in terms of direct interaction with the character, but the process of the observer imagining that he or she is the character on some level. In this process, the observer retains his identity. This means that the observer should develop a deep emotional connection with the content. To judge a media character while comparing himself or being close to him, the observer needs to activate his psychological patterns and be self-aware, while when he identifies he uses his psyche to imagine that he is someone else. The mixing of the cognitive and emotional aspects of identification in these situations indicates that on the one hand, liking and affinity are formed based on the judgment of reality, while on the other hand, the identification itself is on an emotional basis, and in this case, the character often loses the need to be considered as something outside of itself.

Adolescence is a period when individuals start to form a sense of personal identity and social comparison

can be a part of creating that identity (Weinstein, 2017). Teens use one of two types of comparisons on social media: upward comparisons, seeing themselves as inferior to others or downward comparisons, seeing oneself as better off or superior to others. Social media can have both a positive and negative impact on an individual's self-esteem. Presentation of self on social media is linked to the perception of peer acceptance and level of belonging, as can be directly indicated by the number of likes or comments one social media post might receive (Wright et al., 2018).

Burrow and Rainone (2017) found that the reward system of the brain was stimulated when looking at a post with a perceived high number of likes, perhaps prompting feelings that the user also likes that post, or should, regardless of the user's true feelings. False liking behavior is positively correlated to false presentation of self on social media, meaning that users are more likely to relay a sense of self that they believe to be acceptable to specific situations or groups rather than present a true self-presentation (Wright et al., 2018). Shapiro and Margolin (2014) noted that creating several versions of true selves is a common behavior when matching self-presentation to an intended audience. Self-presentation was found most often to be a true representation but modified to fit different expectations or intended audiences. High levels of self-esteem and high satisfaction of life and purpose of life scores were mediating factors in presenting false liking behaviors, demonstrating that if a young adult had a positive self-esteem and high purpose in life score they were less likely to use false presentation behaviors (Burrow & Rainone, 2017; Wright et al., 2018). Utz et al. (2016) found that personality characteristics, like the need for popularity, could predict social media use and behavior. The need for popularity predicted behaviors like grooming, strategic self-presentation, profile enhancement and disclosure of feelings while also positively relating to feelings of entitlement, vanity and narcissism. Vanity, narcissism and entitlement, predicted by a high need for popularity also correlated with a negative self-esteem. The need for popularity predicted social media behavior better than the need to belong did, verifying that an individual only needs a few intimate relationships to feel like they belong, a positive effect on self-esteem (Utz et al., 2016).

3. Methodology of the research

Research objectives and tasks - The general aim of the research is to examine the content that adolescents prefer to watch through the mass media and how it affects them, i.e. whether by perceiving this content adolescent are encouraged to empathize with the people in them (real or fictitious) or to change some of their behaviors, adapting to current trends. The realization of this goal is done through the realization of the following tasks:

- Examining how often and for what purpose adolescents use the mass media.
- Examining the impact of content that adolescents perceive from the mass media in creating identification models.
- Examining the opinion of adolescents about the importance of personal data protection on the Internet and media literacy.

Methods, techniques, and sample of research - The research was conducted with a descriptive-analytical method that is adequate and by the nature and character of the set goals of the research. The analytical method analyzed the views and opinions of the respondents covered in the sample of the research. The research was carried out using a questionnaire for adolescents. Questionnaires contained a combination of closed-type questions and Likert Scales. The sample was chosen randomly and consists of 181 adolescents aged 15 to 18 years.

Data processing - The data were processed quantitatively using the EXCEL and STATISTICS computer programs. They were grouped according to the number of matching in certain categories and then placed into tables. The data were calculated with frequencies for which a percentage was calculated.

4. Results and discussion

4.1 How often and for what purpose do adolescents use the mass media

Table 1

How often do adolescents use the mass media

	Very often %	Often %	Rarely %	Never %	Total %
How often do adolescents use the mass media	41.4	42.5	14.9	1.1	100
How often adolescents follow current media trends	12.2	42.9	35	9.9	100

From the data presented in table 1, we can conclude that most adolescents (42.5%) often review the content of the mass media, while 41.4% said they do very often. Most of the respondents (42.9%) often follow the current media trends, while a significantly large percentage (37%) rarely see them, which we assume indicates that with the availability of a wide range of trends and "genres" present today in the media, the very term "current trend" means only part of what media users can decide to follow actively.

Table 2

Purpose of using the mass media and Internet

For what purpose do adolescents most often use the Internet?	%
for social networks	40.3
for research and education	9.9
to inform what is happening in the world	7.7
for entertaining content (movies, music, videos)	42

The results show that adolescents most often use the mass media (mostly the Internet) for fun/entertainment, with 42% saying they use the Internet to find entertainment materials, while 40.3% use it for social networks (which are also a tool for communication, are a known source of entertainment materials). Only 9.9% said that their main use of the Internet is research and education, while only 7.7% use the Internet to keep abreast of world events. These results show that although the Internet can be a good source of educational materials and current events, it is very rarely its primary role among young people.

Table 3

Influence of the content that adolescents perceive from the mass media in the creation of identification models

	Very often %	Often %	Rarely %	Never %	Total %
How often do media characters influence the appearance of adolescents	7.7	21.1	52.2	17.7	100
How much adolescents empathize with media characters	18.8	35.4	34.8	11	100
How often adolescents identify with fictional characters	13.3	39.8	38.1	8.8	100
Frequency of using phrases heard/read through the mass media	29.8	39.4	32.4	5.4	100
How often adolescents are inspired by the mass media to do something creative	30.4	44.2	21.5	3.9	100

In table 3 we can see that most of the respondents (52.2%) think that their appearance or style of dress is rarely influenced by the characters in the mass media, a small part thinks that they are often influenced (22.1%), 17.7% think that it never happens, and 7.7% think it happens very often. The results show that 35.4% of the respondents often empathize with the characters they see on the mass media, with 18.8% it happens often, i.e. a total of 54.2% empathize with the characters from the mass media. 34.8% of adolescents rarely empathize with the mass of the median, and in 11% this never happens.

Most of the respondents (39.8%) answered that they often identify with fictional characters, very often happens to 13.3%, i.e. a total of 53.1% identify with fictional characters, a smaller percentage answered that it rarely happens to them (38.1 %), and never happens to 8.8%. The largest percentage answered that often (44.2%) and very often (30.4%) are inspired to do something creative by perceiving the content of the mass media, while

it rarely happens to 21.5%, and does not happen at all to 3.9% of the respondents. The results indicate one of the most important roles of mass media today, namely social support and encouragement, creative impetus, and the contribution of exposure to new information and perspectives in the evolution of hobbies, interests, standards, and values of new generations for which the use of mass media is a big part of their everyday life.

Table 4

The importance of personal data protection on the Internet and media literacy

	Very often %	Often %	Rarely %	Never %	Total %
How important it is for adolescents to protect their personal information on the Internet	58	31.1	8.3	0.6	100
How often do adolescents have a critical attitude towards what they perceive on the Internet	22	45.9	31.5	0.6	100
How many respondents attended or participated in a lecture or training on the use of mass media and media literacy	/	19.4	20	60.6	100

Respondents' answers show that most of them 60.6 % have never participated in a lecture or training on the use of mass media, personal data protection on the Internet, and media literacy and consider it very important to protect their personal information on the Internet. Many respondents are critical of what they perceive through the mass media.

As questionnaire results, we concluded that the Internet needs a better regulation for filtering the listed information on value criteria and that an increased number of cultural messages would help to educate the youth positively. Much of the respondents consider mass media as being an information source, it is quite obvious that the strategy has to be focused on the positive aspects the Internet has. It is true that used without limits, the Internet has several negative effects as tiredness, social isolation, etc but, at present, it indisputably is the main information source, grants rapid and cheap access to information, has numerous sources.

Today, the importance of digital and media literacy is widely understood as warnings for coping well with the influx of information offered by mass media light and the impact of that information on social life. Different educators implement different approaches to educating media literacy and its significance. Sometimes more emphasis is placed on analysis and critical thinking when reviewing and creating media content, while others are committed to evaluating the content itself and developing a proper evaluation strategy when it comes to judging content. These strategies are implemented not only in the perception of media content but also at the level of creation, given that today's technology allows everyone to create all kinds of content, regardless of whether they are an expert or a professional. Media literacy is universal, in that all age groups today use the media to some degree, but a different approach is implemented depending on which group it is and in what context the media influence is explored - whether in terms of education, science, at the institutional level or in leisure activities.

5. Conclusions and recommendations

There is no doubt that mass media have a great impact on the daily lives of young people, as confirmed by the results of a research according to which adolescents most often use social networks and the Internet to search for entertaining content. Identification usually does not appear in the form of idealization or imitation of specific characters from the mass media, on the contrary, adolescents indicate that they relate to the characters and are found in them, but take an open approach to study and determining the meaning of different ideological settings. and examples that are present before deciding to apply something.

Research has shown that adolescents can compare and evaluate different content that they perceive through the media. This is confirmed by the results of the survey, which showed that adolescents are largely exposed to the content of the mass media, and their impact is perceived as both positive and negative. According to the responses, many adolescents are encouraged to expand their worldview through the mass media, learning about things that are not available to them in their environment, rethinking the set standards of society, and being

encouraged to express their views, while retaining their identity. by not being as inclined to identify directly with a character as being inclined to express their identity in many respects.

The results show that adolescents, although not significantly involved in media or digital literacy training, are critical of most of the content they perceive, they need to protect their privacy, and their inclination to deepen their knowledge and develop their Creativity through the mass media inspires many ideas on how to extract the positive aspects of these phenomena, especially today when there is a growing need for online learning and the physical presence of classes is increasingly being replaced by teaching through media systems. The obtained results can be used to improve the education of adolescents regarding the use of mass media and their application for educational purposes.

Application of personalized systems in education - In the context of learning and developing creative expression, it is important to consider the individual needs and characteristics, i.e. cognitive abilities, learning styles, motivation, and competence of each student. Modern education strives for an individualized approach, and this approach has got a great potential to develop when considering the success of personalized systems that appear as part of the organization of mass media content.

Creating a "tailored to you" model as an example of creating a database of scientific and educational systems enables education to draw from these sources, informing students about the content they consume. Such systems would enable the educational process to be more flexible and adaptable, by proposing materials and activities based on the student's interests, his / her learning style, and level of knowledge. Using the "keywords" that the student is searching for and contained in the materials he/she prefers to read, it is possible to algorithmically create a database of materials that would be suggested to him/her, that would be related to the curriculum, to deepen their knowledge and expand their perspective. The student could have their account, something similar to today's social media profiles like Facebook or YouTube. Here, it could be related to the various contents that are part of the curriculum, as well as materials, discussions, debates, and analyzes that correspond to these topics. The opportunity for students to appear in the form of anonymous accounts would also be desirable since there could be a forum where they discuss the topics they study, ask questions and connect based on their common interests - this would improve socialization. which would be reduced if students were not physically present in the same room, while anonymity would allow them to ask questions without feeling uncomfortable if they are not familiar enough with a topic or if they make a wrong assessment.

Creating an electronic library that aims to inform, inspire and educate - Investing in an active electronic library as part of education (especially in the field of non-formal and informal education) would provide access to a variety of materials that would be submitted by several educators and professionals with different backgrounds, access, and information base. This library would include databases with content from formal and non-formal education and in addition to explanations of curriculum materials, could also include materials related to mental hygiene, motivation, learning how to learn, mnemonic techniques, similar questionnaires to those whose goal is to help in professional orientation and similar materials that would be helpful to students. The very fact that there would be materials from several areas and with different characters makes the student more likely to positively identify with some aspect of the areas that interest him, encouraging him to create his content. There are good implications that the student could relate well to the material he/she studies by realizing his / her educational activity through direct participation in the media, i.e. to be able to engage as a creator of media content (within the previously mentioned idea to have your educational account). This practice, similar to the design assignments and presentations used today, can serve as a tool that gives the students space to express themselves creatively, think critically, and develop their skills in debating or evaluating the content they present. considers. Allowing students to produce media materials related to what they study can be a creative self-research and an opportunity for them to better master the research process, to develop responsibility in making the research they publish and share, and also to strengthen their individuality by having control over the way they want to present certain topics.

6. References

- Arnett, J. (1995). The young and the reckless: adolescent reckless behavior. *Sage Journal*, 4(3), 67-70.
<https://doi.org/10.1111/1467-8721.ep10772304>
- Bandura, A. (2001). Social cognitive theory of mass communication. *Media psychology* 3(3), 265-299.
https://doi.org/10.1207/S1532785XMEP0303_03
- Burrow, A. L., & Rainone, N. (2017). How many likes did I get? Purpose moderates links between positive social media feedback and self-esteem. *Journal of Experimental Social Psychology*, 69, 232–236.
<https://doi.org/10.1016/j.jesp.2016.09.005>
- Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass communication & society*, 4(3), 245-264.
https://doi.org/10.1207/S15327825MCS0403_01
- Erikson, E. H. (1968). *Identity: Youth and Crisis*. New York: Norton.
- Fourie, P. J. (2008). *Media studies: Media history, media and society* (2nd ed). Cape Town: Juta and Company Ltd.
- Hilbert, M., & López, P. (2012). The world's technological capacity to store, communicate, and compute information part I: Results and scope. *International Journal of Communication*, 6, 956–979.
- Moshman, D. (1999) *Adolescent psychological development: Rationality, morality and identity*. Mahwah, NJ: Lawrence Erlbaum.
- Papacharissi, Z. (2010). *A networked self: Identity, community, and culture on social network sites*. New York: Routledge.
- Rainie, H., & Wellman, B. (2012). *Networked: The new social operating system*. Cambridge, MA: Mit Press.
- Shapiro, L. A. S., & Margolin, G. (2014). Growing up wired: Social networking sites and adolescent psychosocial development. *Clinical Child and Family Psychology Review*, 17(1), 1–18.
<https://doi.org/10.1007/s10567-013-0135-1>
- Signorielli, N. (1987). Children and adolescents on television: A consistent pattern of devaluation. *The Journal of Early Adolescence*, 7(3). <https://doi.org/10.1177%2F0272431687073003>
- Utz, S., Tanis, M., & Vermeulen, I. (2016). It is all about being popular: the effects of need for popularity on social networksite use. *Cyberpsychology, Behavior and Social Networking*, 15(1), 37-42.
<https://doi.org/10.1089/cyber.2010.0651>
- Wright, E. J., White, K. M., and Obst, P. L. (2018). Facebook false self-presentation behaviors and negative mental health. *Cyberpsychology, Behavior and Social Networking*, 21(1), 40–49.
<https://doi.org/10.1089/cyber.2016.0647>

