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Editorial Office
University of Information Technology and Management in Rzeszow
ul. Sucharskiego 2
35-225 Rzeszów
mail: sc@wsiz.rzeszow.pl
www.socialcommunication.edu.pl
(0048) 17-866-14-63 ; (0048) 17-866-12-97

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"DADIFICIAL" INTELLIGENCE. FATHERHOOD FROM THE MIDJOURNEY PERSPECTIVE

Radosław Wierzbiński[1]

Abstract

As artificial intelligence takes an increasingly important place in professional and private life, its rapid development makes the study of the field a constant exploration. One of the most recent popular AI-driven platforms—Midjourney—offers millions of users a creative text-to-image perspective on any topic. It is used by artists, creative directors in advertising agencies and architects, among others. What about researchers and scientists? The aim of the article is to analyze the role of Midjourney as a social research tool. The paper uses an analysis of the AI's image definition of the evolving social and communication topic of fatherhood to discuss the role of AI-generated images in digital ethnography and social science, especially when we consider AI not only as a research tool but as a content creator and a researched "individual."

Keywords: artificial intelligence (AI), Midjourney, fatherhood, exploratory research

Introduction

The distinguished French soccer club Toulouse FC was relegated from Ligue 1 to Ligue 2 in 2019. Shortly afterwards, it was bought by an investment fund, which forced a new look at day-to-day operations, including the club's severely limited budget. The club started to rely heavily on data and artificial intelligence when planning transfers, lineups or tactics for each game, and even the staffing of the coaching position (Britto, 2022). This was so successful that Toulouse FC is back in the top division in the 2022/2023 season.

This is just one of many examples of the power and real impact of data and artificial intelligence on business. And although the use of computer systems to conduct activities that previously required human involvement is decades old, recognizing speech, understanding natural language and making decisions are revolutionizing many other areas of our lives. One of them is science and related research (Falk, 2019). Early detection of skin cancer (Jones et al., 2022), the location of asteroids or finding of supernovas (Center for Astrophysics, N/A) and molecular property identification (Choudhary, Bharti & Sharma, 2022)—in these examples from the exact and natural sciences, AI is used primarily as a support research tool whose analytical and computational capabilities significantly accelerate the research process.

1 PhD candidate, University of Information Technology and Management in Rzeszow, Poland, email: radoslaw.wierzbinski@gmail.com, ORCID: 0000-0001-7718-9284

But its possibilities do not end there. Alexey A. Melnikov (Melnikov et al., 2018, p. 1226) draws attention to another dimension of AI's role, indicating that AI methodologies will not only "contribute to research" but can also "contribute to the discovery of new physics", for example in automated laboratories. Therefore they have the ability to create reality. At the same time, this progressive approach may have some negative consequences, which can be seen better at the intersection of the exact sciences and the social sciences. As cultural anthropologist Giles Crouch says, "cultural aspects of a society are incredibly hard to program" (Crouch, 2022). This quote can be confirmed by the history of algorithms used in the U.S. healthcare system, which stereotypically reduced "the number of Black patients identified for extra care by more than half" (Obermayer et al., 2019, p. 447). This issue is also highlighted by Dashun Wang, who believes that artificial intelligence may even intensify prejudice (Crouch, 2022). One of the reasons for this emerges from his recent studies (Wang et al., 2019, p. 79) analyzing the "bibliometric evolution of AI research and its related fields from 1950 to today." A professor of management and organizations at Kellogg, he showed that social studies "do not reference AI research in proportion to its growing paper production" (Frank et al. 2019).

The full realization of the benefits of AI therefore requires greater involvement of social scientists[2] and greater awareness of AI ethics (Rességuier & Rodrigues, 2020), especially where understanding human development, effectiveness of diagnosis, and data management are concerned (Robila & Robila, 2019, p. 2957). Meeting these expectations, and at the same time taking into account the extraordinary popularity of text-to-text (chatGPT) or text-to-image AI generators (e.g. Fotor, Night Cafe, DALL-E, Midjourney, Deep AI) in 2022 and at the beginning of 2023,[3] the analysis of one of them seems cognitively attractive for examining AI's role in the social sciences.

From images to Midjourney

"The image itself … seems to be, or to have become, the prevalent sign of late-modern culture" (Hall, 1997). It conveys different concepts, reinforces textual information, and builds engagement and attention (Abu Bakar, Desa & Mustafa, 2015, p. 313). This is largely thanks to the Internet, where the TLDR culture is spreading. A quarter of all Google searches are for Google Images, images on Instagram influence many decisions about products or travel destinations (Yun, 2022, p. 1), memes have become a powerful form of meaning-making (Milosavljević, 2020; Wiggins, 2019), and tokenized art in recent years has resulted in spectacular events such as the sale of *Everydays: The First 5000 Days* by Christie's for USD 69 million (Christie's, N/A). Moreover, the growing popularity of visual narratives and the role of images in persuasion and advertising messages is observed in media and advertising (Waligorska, 2011). Considering the above facts and bearing in mind the partly questionable credibility of online images (Shen et al., 2019), Midjourney was chosen for the present analysis, as one of the most popular text-to-image generators.

Midjourney is an AI research lab that offers a platform run on Discord servers that uses artificial intelligence to generate images from text. Any user can ask the AI to imagine and present any topic. The more specific the keywords or description, the better the AI will be able to generate good results. As 1 million users use Midjourney to generate 2 million images per day, and, unlike ChatGPT, the platform does not have problems with server overload, it has gained huge popularity among creatives, graphic designers and architects (Jaruga-Rozdolska, 2022). At the same time, AI's ability to produce cre-

2 Wang says that "AI has to pay more attention to social science" whereas "social scientists have to pay more attention to AI." (See: Kwok 2023).

3 A co-founder of OpenAI even stated that "It's not like a human theory of mind. It's like an alien artifact that came out of this massive optimization." More: Thompson 2022.

ative and surreal images on the one hand (Borji, 2022) and copyright issues on the other (Cammer, 2023) have sparked a debate about whether such works can be called art. Especially since, as Mikalonyte and Kneer (2022, p. 1) say, "Art has traditionally been considered to be one of those domains exclusive to humans, as creativity—sometimes called 'the final frontier' of AI research—is highly valued by society, and is not that easily attributed to non-human entities." So if AI is not only a research tool but also a "collective" content creator, it can add a new dimension to thinking about content analysis and digital ethnography.

To explore this topic, the image of fatherhood created by AI has been chosen. Fatherhood—the focus of the author's doctoral dissertation—is a very current topic in science, media and advertising. The crisis of masculinity (Kohlhaas, 2022), the development of feminist movements, COVID-19 causing changes in labor law and family dynamics (Sheppard & Brough, 2022, p. 6), and stereotypes in media messages (Edwards & Marine, 2021)—all this forms the basis for modern fatherhood that is opposed to the traditional model (Bierca, 2019). As this is only partially visible in the media and marketing communication, it is worth checking whether/how AI relates to this.

Methodological analyses of images refer primarily to paintings, photographs and video materials, and are focused on the interpretation of the image rather than the discovery of its truth (Ferenc, 2007, p. 6). This is because "the image has a whole range of potential meanings" and "there is no escape from the fact that meaning is, in the end, interpretation" (Hall, pp. 16-18), especially when the author or the title of the image is known. Furthermore, content analysis is not "a simple conclusion of the researcher about the researched material" (Szczepaniak, 2012, p. 86), as the knowledge or intentions of the researcher or the social context are taken into account. In the case of AI-generated images, the observation that "visual research, due to the ambiguity of the social context, can be used for exploratory rather than verification purposes" (Penkowska, 2017), may be very true, the more so because although the technologies used in creating an image determine its form, meaning and effect (ROSE, 2011, p. 20), it is difficult nowadays to clearly define and determine the impact of AI on these elements.

Therefore AI's perception of modern fatherhood, its differentiation by country, the relations between a father and his child/children, as well as the look and feel of images and the way fatherhood is presented in advertising, became the basis for the analysis. Moreover, as the evolution of fatherhood is closely related to the evolution of motherhood and the contemporary role of women, questions about the image of modern motherhood and differences in presenting modern fatherhood and modern motherhood in one given advertising format (on posters) were also analyzed.

Analysis

Five sets of images were generated on January 22, 2023. Midjourney was first asked to imagine what fatherhood looks like, and this was then contrasted with the image of modern fatherhood. In response, two sets of four images were generated (Fig. 1).

Figure 1. "Fatherhood" and "modern fatherhood" according to Midjourney.

"Fatherhood" according to Midjourney is all about a close, physical relationship between a father and his young child. The images are slightly blurred, the light entering the room even has a mystical dimension, father and child have eyes closed. "Modern fatherhood," on the other hand, is a relationship based on joint activity, on doing things together (reading, playing). There is a focus on an object (phone, newspaper, touchpad), but there is no eye contact between father and child. The main differences are shown in the Table 1.

Table 1. The differences between the images of fatherhood and motherhood according to Midjourney.

	Fatherhood	Modern fatherhood
Look and feel	blurred, mystical	sharp, pragmatic
Father-child relation	physical proximity	joint activity

Source: own work.

When we compare "modern fatherhood" with "modern motherhood" (Fig. 2), a mother's care of a child is combined with other responsibilities, there is more than one child with her, and her face emphasizes greater suffering than the images of fathers.

Figure 2. Modern motherhood according to Midjourney

The aim of the third analysis was to show potential differences between the image of "modern fatherhood" in different countries (Fig. 3).

Figure 3. Modern fatherhood in Poland and in the United States according to Midjourney

The images generated for Poland and the United States reflect stereotypical differences between the two nations. The Polish fathers are a bit old-fashioned compared to the U.S. dads. Their clothes are a mix of military uniforms and communist-era outfits, whereas the U.S. fathers wear more stylish T-shirts or dress shirts, have modern glasses or tattoos. The Polish fathers are concentrated on something (TV, window, meal), as if they were watching or looking for something. Their kids are next to them but not with them. The U.S. fathers are a bit more focused on the children, one image even shows a shopping experience while others are at home.

Table 2. The differences between the images of fatherhood in Poland and US according to Midjourney.

	Modern fatherhood in Poland	Modern fatherhood in the U.S.
Look and feel	old-fashioned	modern
Father-child relation	fathers focused on the situation	fathers focused on the child

Source: own work.

As more brands position their marketing communication so as to target fathers (Tas 2023; Qian 2023) and more researchers investigate the topic of fatherhood in the communication sphere (Humphreys, 2016), another layer has been added to the analysis: an advertisement and a poster about fatherhood (Figs. 4, 5).

Figure 4. The best advertisement presenting modern fatherhood in Poland and in the United States according to Midjourney

A different approach toward intimacy can be seen. Once again, the Polish fathers do not have eye contact with their child, wear more formal clothes as if they were about

to go to work or had just come home. Conversely, the U.S. fathers wear T-shirts, have eye contact with the child and play an active role in its life (feeding it, cleaning something together, talking). Interestingly, most of the images show FMCG products (cans, fast food, beer). What is more, most of the pictures show fatherhood in a domestic or even kitchen context (one shows a father and son sitting in an empty fridge).

Table 3. The differences between the images of fatherhood in Poland and US in advertisement according to Midjourney.

	Modern fatherhood in Poland	Modern fatherhood in the U.S.
Look and feel	official	informal
Father-child relation	fathers focused on the situation	fathers focused on the child

Source: own work.

Another perspective is offered when we ask Midjourney for posters presenting "modern fatherhood" and "modern motherhood" (Fig. 5).

Figure 5. Modern fatherhood vs. modern motherhood on posters according to Midjourney

What unites the perspectives of motherhood and fatherhood are different shades of green—a symbol of life, openness and fertility. What distinguishes these posters, however, is that motherhood has a specific face (pretty, well-groomed). Fatherhood has no face, as if it were in the making. Moreover, motherhood is about indoor apparel and interiors whereas fatherhood is about being outside, active, in uniform.

Table 4. The differences between the images of modern fatherhood and modern motherhood according to Midjourney.

	Modern fatherhood	Modern motherhood
Look and feel	artistic	realistic
Parent-child relation	active	discreet

Source: own work.

Discussion

In 2017 *Wired* magazine covered the story of James Vlahos, who created a chatbot enabling him to be "in contact" with his deceased dad (Wired 2017). Artificial immortality was ensured by a "text-based Siri that replied to queries with his father's familiar cadence" (CBC Radio 2023). In 2020 Avatarminds released iPal, a "robot that they claimed could take over about 50% of parenting roles." There are many more examples of AI tools that help fathers. However, Midjourney can do one more thing: help others understand

fathers better.

Platforms like Midjourney are still in their beta versions, so it is difficult to say whether we can already talk about in-depth insights and "dadificial" intelligence at the visual level. The analysis reveals insights that require deepening in further qualitative and quantitative research, e.g. "modern fatherhood" is more task-oriented and child-oriented than "fatherhood"; "modern fatherhood" is more about the home environment but still not as much as "motherhood"; Polish fathers are old-fashioned compared to U.S. fathers; if motherhood has a face, fatherhood does not yet have one. Moreover, the content layer emphasizes the stereotypical elements associated with fatherhood (uniforms, lack of focus on the child, outdoor context, beer), while the visual layer is often eclectic (the posters combine the colors of Bauhaus, the discipline of art deco, and some street art elements).

The analysis of the AI tool in terms of its usefulness in social science and digital ethnography also provides valuable information:

1. **State of AI**: Midjourney is a constantly learning solution based on *machine learning*. It uses not only millions of images from the Internet but also queries from the users of the platform itself. And this knowledge is enormous, since at least 2 million images are generated every day. For an identical query ("fatherhood") a month earlier (December 25, 2022), the author received slightly different images. This shows that this is not a closed set of images but an open platform. Therefore it offers new perspectives for researchers on the "state of AI" over a longer period of time.

2. **Creativity**: The platform offers a lot of space for the creativity of the users themselves, who can use any set of keywords to ask Midjourney to imagine any image. The whole creative process can be done in less than a minute. This can take creativity to a whole new level[4] and raise the bar not only for graphic designers or advertising agencies but also media (e.g. personalized images corresponding to the content of articles) or sociologists and psychologists (A-B tests or qualitative questionnaires with AI images), especially when "you do not always get exactly what you had in mind … but you often get a really cool image that you were not expecting!"[5] On the other hand, legal and ethical issues need to be considered, as there are already lawsuits being filed against Midjourney and other AI tools (Vincent 2023) and questions about "what is art," "what is an artist" are being asked (Newton & Dhole, 2023; Mikalonyte & Kneer, 2022).

3. **Ethnography 2.0**.: Carol Grbich (2013, p. 201) notes that "ethnographic content analysis seeks to identify the signifiers/signs within visual images and to understand their accepted meanings within the culture in which they are located." But how does one identify the culture of artificial intelligence, especially when the "author" is "the Internet"? Moreover, analyzing the queries that users of platforms such as Midjourney send to AI provides insights not into what their reality looks like, but what reality they are looking for, especially if a lot of users use "variations" and remix the images in their search for the best one.

4. **Mathodology:** Many questions arise, for example:

a. Can theories concerning the analysis of traditional images—such as Roman Ingarden's theory concerning the reception of art—be useful when analyzing images

4 Jonas Oppenlaender states that "The human creativity of text-to-image art lies in the interaction with text-to-image generation systems and in online communities. Increasingly, online communities act as a catalyst for learning the craft of 'prompt engineering'." More: Oppenlaender, 2022.

5 *Midjourney* [online: 2023-01-23], https://expertphotography.com/midjourney/ Mohesh Radhakrishnan notes that it is "essential to consider emerging technologies' challenges and ensure that creativity is protected. It remains to be seen if this democratization of creativity supports humanity." More: M. Radhakrishnan. (2022). Is Midjourney-AI a new anti-hero of architectural imagery and creativity? An atypical era of AI-based representation & its effect on creativity in the architectural design process. GSJ: Volume 11, Issue 1. Online: ISSN 2320-9186.

generated by artificial intelligence?

b. Given the technological sophistication of AI and the nature of the algorithms analyzing millions of data, can an image generated by Midjourney still be regarded as qualitative content, or is it already quantitative?

The above project paves the way for further analysis of content created by the AI (e.g. how different text-to-image platforms visualize the same question), as well as a study of the people who use the tool (their motivations, how they search, their reaction to the results).

Conclusions

From autonomous cars to detection of fraudulent transactions, AI's passive role is to allow people to focus on complex and more rewarding tasks. However, more and more examples also show the "smart" (Melnikov et al., p. 1226) and active role of AI, which refers to the creation of reality. Therefore "just as AI needs to pay more attention to social science, social scientists need to pay more attention to AI technology" (Sadiku, Fagbohungbe & Musa, 2021, p. 50). AI-driven platforms like Midjourney offer a fresh and insightful perspective on any visual topic. On the other hand, their limitations (content without context, perpetuation of stereotypes, AI as a tool or as an "author") need to be taken into account. Therefore it is still worth thinking about AI-driven solutions more as "a blurry JPEG of all the text on the Web," where you receive "an approximation" rather than "an exact sequence of bits" (Chiang 2023).

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TECHNOLOGY AS A MEDIUM OF ARTISTIC CREATION: THE CASE OF BIOTECHNOLOGY

Bogumiła Suwara[1]

Abstract

In recent decades, artists have lost interest in the search for new solutions. In the celebration of traditional techné, and in pursuit of means of expression, they have turned to extreme areas of human activity or to the field of science and new technologies. The latest gene-editing technologies open up new challenges for art and force a rethinking of the interpretation of projects, artefacts, performances, and installations by artists focused on biotechnology. This is especially due to the fact that, for the time being, art criticism is in thrall to a posthuman discourse (grounded in theories of postmodernism) that at various levels focuses on the nature– culture opposition, primarily delimiting the biological aspects of humans to the interspecies social relationships of human and non-human beings. Because of this, artists and critics lack appropriate philosophical concepts to develop interpretive frameworks for art that reach into the realm of empirical investigations of human nature. Transhumanist discourse seems to offer a solution of sorts. Although still evolving and facing ethical critiques, it provides a more appropriate (emulative) framework for some contemporary artistic activities than the existing posthuman discourse.

Key words: transhumanism, posthumanism, transhuman art, gene editing, co-evolution, Maja Smrekar, Patricia Piccinini

Artistic Experimentation with Technology

Since the establishment of pop art, championed by the philosopher and art critic Arthur Danto, there has been a proliferation of projects that reach out to means of expression outside the space of traditional art such as painting or sculpture. Danto (1997) believed that for the history of Western European art, addressing the philosophical aspect of "what is art" had lost its relevance, as had the insistence of art critics and art historians on emphasizing the linear progression of means of expression. He perceived contemporary art in the category of "after the end of art" (1997). Instead of tracing artistic values in the context of developmental transformations and changes, he proposed a vascular channel into which various philosophically justified artistic objects, solutions, and activities would fit.

Thanks to this paradigmatic change in the art world, there was a proliferation of art types in the media; various artistic initiatives, activisms, and experiments emerged synchronously to extend the means and methods of art into the realm of science and

1 PhD, Institute of World Literature SAS, Bratislava, Slovakia, e-mail: bsuwara@gmail.com, ORCID: 0000-0002-8000-1833

technology, where they could be perceived as artistic. There were projects created by the initiators of Experiments in Art and Technology (EAT), founded in 1966 by Robert Rauschenberg and Robert Whitman together with the engineers Billy Klüver (Klüver/Martin 2003) and Fred Waldhauer; these were artists enthusiastic about the application of the technological possibilities in art. EAT's main goal was to document the success of collaboration between artists and scientists through providing access to new materials (plastics, resins, video and electronic technologies, and even computers – which at that time were only accessible at research institutions). The organization allowed experimentation with now common technologies such as chat links, cable television, fax machines, lasers, and digital graphics. Indeed, Rauschenberg's sound sculpture Oracle (1962–1965) remains on display today.

Similar initiatives emerged in Europe. In 1969, the Institut de Recherche et Coordination Acoustique/Musique (RCAM) – which is an institute for the science of music, sound, and electroacoustic art music – was founded in France. Since 1979, the Ars Electronica festival in Austria has been dedicated to the research of digital art.

Whereas in the 1990s artists reacted mainly to problems related to communication technologies, or to communication via computer, at the turn of the millennium they were also trying to take a stance towards new biotechnologies. And that is why, until recently, information technology and even artificial intelligence have been hot topics; biotechnologies are ever riskier. The aim of this chapter is to highlight the projects of artists who respond to gene-editing biotechnologies and to explore the theories that elevate the use of specific biotechnologies in art. Two perspectives are available in these contexts: concepts developed by the discourse of posthumanism, and concepts promoted within the transhumanist movement. With the art world being more open to the discourse of posthumanism, transhumanist ideas are left aside. The question of why will be examined.

This chapter seeks to emphasize that, given the development of the real possibilities of biotechnologies (e.g. CRISPR/Cas9), it is appropriate to interpret art projects that respond to them in the context of transhumanism. This is because it is open-minded the modification of the content of gene information – of human enhancement towards a trans- and posthuman form – and more appropriate than the views of prominent posthumanists such as Katherine Hayles, Rosi Braidotti, and Francesca Ferrando, for whom the concepts of transhumanists are too optimistic and who advocate a posthuman form, which need not be considered. While it may seem that human enhancement is not a socially important topic and belongs only in the bowels of laboratories, the opportunities and risks that biotechnology promises in areas such as gene therapy, synthetic biology, and personalized medicine are increasing in importance. These tools bring with them many practical, social, and bioethical challenges as well as risks and opportunities. Some artists, such as Maja Smrekar and Patricia Piccinini, speak to this discursive and multimodal field. Projects that respond to the possibilities of biotechnology can inspire technologists to use it creatively; much more inspiring, however, is the mapping of bioethical dilemmas, contexts, reactions, and responses.

Such projects take on a deeper dimension in the context of the views of transhumanist authors about posthumanism, such as Julian Huxley and Nick Bostrom on human exceptionalism and the role humans can play in their evolutionary process (Huxley 1957)[2] and the role that advances in bio-transformative technologies and artificial intelligence can play within it (Bostrom 2008, 2020).

2 The text is referred to as the Manifesto because in its Huxley raised the issue of the refinement and evolution of humans through the discovery of their nature, and he proposed the use of the term "transhumanism".

Towards Posthuman Art

Although the transhumanist movement has been established in Anglo-American academic circles (Grassie/Hansell 2011), posthumanism has a stronger position and a longer tradition in that realm. According to Jay David Bolter (2016), posthumanism is grounded on the following pillars: postmodernism theory, studies of the history of science and technology 39 The text is referred to as the Manifesto because in its Huxley raised the issue of the refinement and evolution of humans through the discovery of their nature, and he proposed the use of the term "transhumanism". promoted by Bruno Latour, feminism, computer science, artificial intelligence research, and social network studies – with the fundamental form of the posthuman subject being the cyborg (Haraway 2016). Based on the frequency and intensity of influences on academics, theories, concepts, and views framed by posthumanism, Ferrando (2019) believes that it is no longer a process of their establishment at American universities but rather a fundamental change in the subject matter and methods of the humanities. This will be a new dominance of the humanities that insists on a new form as the New Humanities, which will remove from its centre the hitherto liberal subject. The subject of the New Humanities is the posthuman subject (Ferrando, 2019)[3].

As a movement, the New Humanities are conceived differently from the transhumanist movement, which both develops both the concept of the posthuman as a continuation of the humanist tradition (Bostrom, 2008; More, 2013) and the prefixes "trans-" and "post-" as references to evolutionary theory (Huxley, 1957). In art criticism, trans- and posthumanism function as synonyms as diverse relationships of subordination, inclusion, and conflict ("bias"; LaGrandeur, 2014) are projected between them. This is due to the influence of the discourse of posthumanism in the academic world and art world and the lack (or impossibility) of discussion of posthumans among figures within both discourses.

In the present discussion, transhumanism most often simply complicates definitions of posthumanism (Wolfe, 2010). Academics choose different solutions in this context; for example, Stefan Herbrechter (2013, p. 16) expands and opens the field of posthumanism in different aspects, proposing a twofold morphological division of posthumanism into "posthumanism" and "posthuman-ism". The former is understood as diverse critical reactions to the deconstructions of humanism, and the latter is reserved for the philosophy of such future beings who will transcend the limitations of today's humans. In this context, Herbrechter adopts the concept of transhumanism. Omitting transhumanism in the discourse on the posthuman is sometimes associated with a methodological solution that combines a deep affection for deconstruction with techno-scepticism, such as in Braidotti's book The Posthuman, where Nick Bostrom's views on the posthuman are simply pushed out of the discussion (Braidotti, 2013: 89).

In its extreme form, there are confused formulations. Art critics understand transhumanism as "a more radical form of posthumanism", as can be seen in Posthumanism and Contemporary Art (Kordic/Godward/Martinique, 2016), and thus as something opposite to what transhumanists themselves think. Why do art and academic critics neglect and ignore transhumanist thinking about the posthuman?

The intensity and unstoppable impact of posthumanism in the academic environment lets us believe that it will act with the same force in the art world. Postmodernism itself acted in an analogous way, which, according to Danto, from the mid-twentieth century onwards provided artists in the United States with theories and philosophies to frame the creation and interpretation of art and provide a prism through which to

3 Ferrando (2019) distinguishes three kinds of posthumanism centred around: critical theories (critical posthumanism), theories of culture (cultural posthumanism), and philosophies (philosophical posthumanism).

understand and interpret all the problems of the world in which they lived. Since the domestic environment did not provide a 40 Ferrando (2019) distinguishes three kinds of posthumanism centred around: critical theories (critical posthumanism), theories of culture (cultural posthumanism), and philosophies (philosophical posthumanism). suitable philosophical background, the imported creation that was at hand worked. Through such an open door into the world of art, posthumanism could easily enter and run behind postmodernism. This assumption is confirmed by publications such as Kevin LaGrandeur's essay "Art and Posthuman", published in the book Posthuman: Future of Homo Sapiens (2018) and an exhibition catalogue.

As is well known, since the 1960s, these academic and technological circles have been fascinated by the idea of human–machine symbiosis, which foreshadowed thinking about the future of humans as computer simulations and models of information systems. The posthuman was projected as a refinement of the process of adaptation of the human brain to a hybrid bioinformatics environment. LaGrandeur promotes the concept of the human understood as an information system in which the individual is constituted by a network of subjects and things. (As LaGrandeur writes, the value of today's human is determined by their activity on social networks.) The body is thus interchangeable with another substrate; it is extensible (through prostheses, interfaces, and biotechnologies) mainly because the human brain is a prosthesis that produces ideas.

This concept of the extension of the prosthetic brain suggests that the transformation to the posthuman – verbalized admittedly in much the same way by some transhumanists (the storage of human thought in inorganic substrates is also advocated by some transhumanists) – is seen by LaGrandeur as the projection of changes to the body and the brain beyond present day human nature through cyborgization and the addition of prosthetic systems, be they digital, genetic, or biotechnological. For transhumanism (as Huxley put it: the enhancement of the human through the refinement of its natural capacities discovered through scientific, especially biological, research), conceiving of the human brain as a prosthesis for the body is unacceptable. Even today's research on things such as emotions proves that it is impossible to separate the evolution of the brain from the evolution of the human species (or the evolution of the group of Anthropos). Already here one can see the distinctiveness of the concepts of the posthuman in the discourses of post- and transhumanists.

Prominent environments that promote a posthumanist perspective for art that collaborates with new technologies include MIT's Media Lab (LaGrandeur) and Silicon Valley (Hayles). It is in these environments, which intensively develop new technologies, that opinion-forming works with a global reach of collaborating experts in literature, art, and psychology emerge. On the one hand, they cultivate communication between science and art as well as the social sciences (the third culture), and yet they cannot resist the pressure of scientific authority, which, according to Danto, overwhelmed philosophy in the United States and confined it to the boundaries of analytic philosophy since before the Second World War – well before the period of the import of postmodernism (Danto 1997). The posthumanist discourse put forward by the MIT Media Lab is unfree. The interests of art, philosophy, and psychology presented by it cater to the demands of technology, and especially information technology. They leave biotechnology aside. It is a milieu that promotes the notion that scientists today can (reliably) predict the technological future. As Siegfried Zielinski (2013) summarized, traditional philosophical themes and methods are seen as narratives of philosophy's past (which, according to Norbert Wiener, the founder of cybernetics, will be replaced by technology) and as narratives of a humanist past that has been overtaken. This view can be reiterated and emphasized: posthumanism promotes the desire to get rid of the humanist past, forget the autonomous subject as an unnecessary burden, and think only of a future human in which there will be no trace of the human itself. More conservative viewpoints are given by some transhumanists (More, 2013; Bostrom, 2008).

Transhumanism as human exceptionalism

Human exceptionalism (the humanist subject) does not merely live in the philosophical rationalist tradition. Its transcendence (the posthumanist subject) is not linked, as is traditionally held in the discourse of posthumanism (Braidotti, 2013; Herbrechter, 2013; Wolfe, 2010), with the notion of the human as the Biblical lord of creation, as being hierarchically subordinate. Nor is it based solely on the Enlightenment uniqueness of the res cogitans. It is anchored in humans' destiny to navigate their own evolution (Huxley, 1957). According to Huxley, humans, despite being a life form younger than microorganisms, create a revolutionary life form capable of conceptual thought, self-awareness, and the conscious accumulation of experience. According to this pioneer of transhumanism, the human species has evolved to a level at which it has such promising prospects of self-knowledge and such a great yet not fully discovered potential of its abilities and its nature that – if it so desires – it can surpass itself through the realization of new possibilities. And not only individually; it can transform the whole of humanity into a transhuman form. The transhuman (Bostrom, 2008) will still be a human, but they will already have consciously fulfilled the destiny set in motion by their evolution; there will already be enough people alive who will have so deepened their natural human qualities and capacities that they will have reached the threshold of a new transhuman existence that is significantly different from that of Homo sapiens. The species differentiation that Huxley projects is analogous to how Homo sapiens differentiated itself from its predecessors (e.g. Peking Man). Huxley raises the continuation of the process of evolution, but he does not speak of crossing the threshold of transhumanism nor does he speak of what the new existence beyond the imaginary threshold should be called. This step has been taken by the futurist FM-2030 (Fereidoun M. Esfandiary by his own name) and Bostrom, who contemplate a new posthuman species. The followers of Huxley, especially the signatories of the Transhumanist Declaration, associate with the posthuman the very possibility of the coming of age and crossing this threshold. This raises an unresolved question, what does it mean evolutionarily and ontologically to reach the threshold of a new species? Will there be any distinct beings that will have to coexist and co-operate? Will people who have voluntarily chosen or been forced to transform shed the "dark side" of human nature? Huxley apparently assumed that the age of transhumanism would be a process of the transcendence of man, who would, however, must coexist with members of Homo sapiens. Will this stage of evolution come with a process of the co-evolution of man with transhuman individuals, a kind of symbiosis of man with his enhanced form? In this context, the discovery of man set forth by Huxley has found its Columbus in recent decades in the form of accelerating science and new technologies. The promoters of the transhumanist movement give them an essential place in the process of human transcendence: in particular, cryonics, artificial intelligence, and genetics (distributed by the Transhumanist Declaration). Technologies will participate in the fulfilment of human destiny (Bostrom, 2008; Vita-More, 2018), even if little (Bostrom, 2008) or almost nothing is left of humans in the next form of existence.

It is hard to know what path humankind will take and whether it will discover a suitable navigational model for fulfilling and using its potential. How will the adherents and participants in the procedures provided by science, technology, and transhuman business coexist with those who have no interest in undergoing them? What forms of human transcendence is art already noticing today?

Artists who are interested in human transformation into a transhuman or posthuman form (Vita-More, 2018) prefer digital tools, which is why their works are often assigned to digital and electronic art or refer to biotechnology and are associated with bioart. In addition to the typology based on the medium used (as a tool and a carrier), as the discourse of new media has it, what is important is the artists' attitude towards the idea of the future of the human as a being in which there will (or will not) be a human trace. We may naively believe that the transformation of humans to posthumans through pro-

cesses of enhancement – even[4] with gene-editing tools – gives it a chance. By contrast, if we limit a person to the mind and manipulation of it, this issue is irrelevant.

Similarly, Braidotti, a prominent promoter of posthumanism, is not open to the tools of biotechnology embedded in contemporary science. This can be concluded from her view of the natural basis of humankind and of life. According to her, "life manifests itself in a set of empirical acts," it "manifests itself in the actualization of the flow of energy," it "manifests itself in codes of vital information operating within complex somatic, cultural, and technologically networked systems" (Braidotti, 2013, p. 349); however, Braidotti says nothing about genetic information. Based on this and similar attitudes towards considering life in a posthuman discourse, and thus evolution, one can agree with Stefan Lorenz Sorgner (2013, p. 87) that the issue of the future development of humans in an evolutionary and bioethical sense is unacceptable for posthuman discourse.

The importance of the human footprint for trans- and posthumanism

From at least the mid-1990s onwards, ideas of determining culture through communication technologies (McLuhan, 1964) have strengthened. The development of information systems has fuelled the vision of a radical digital revolution and the notion of a future human development independent of corporeality, including the biological and sociobiological planes of the brain's functioning. In How We Became Posthuman (1999), a foundational book for the field of electronic art, Katherine Hayles asserts that the functioning of the human brain, which she sees as an interface, has acquired characteristics like Homo sapiens did in the past, and is acquiring characteristics in the present that have transformed it. She promotes the view that the brain has been a prosthesis for humans and presents the notion of an "extra-human condition/state". The result of this process will be a posthuman existence divorced from all that we consider to be human. Nonetheless, this is difficult and problematic; it can be accomplished through the storage of the mind in a new substrate through the transfer of brain functions to another information system. This perspective of the posthuman being as part of a network of systems of bytes and things has long inspired artists and experimenters, especially in the fields of computer art, electronic literature, software art, and code poetry (Suwara, 2014). Concentrating on projects both created and presented through computers has permeated posthuman discourse in art and literature (Bolter, 2016). What then is the difference between Hayles's posthumanism and the notion of a posthuman species of transhumanists?

Hayles's radical notion is aimed at a transformation that will create a new, perhaps irrational, existence in which no trace of humans remains, while the transhumanists maintain some elements. Max More (2013) highlights transhumanism's continued high regard for the values of humanism, such as respect for reason and science, commitment to progress, and admiration for the human (and transhuman) form of existence. Bostrom – even as he contemplates a transhuman whose goal is to become posthuman and as he projects a being that is admittedly different physically, cognitively, and emotionally from normal contemporary humans to the point where it will no longer be unambiguously human (Bostrom, 2020) – still desires that something of the human be preserved in the new being, even if this is very little. The fulfilment of this desire can be named the "human footprint" in the future form of the posthuman.

Although concepts and theories of posthumanism abundantly frame the discourse of the humanities and arts today, recent developments in CRISPR/Cas9 biotechnology

4 The risks associated with biotechnology should also be highlighted here; transhumanists do not underestimate them. In short, there is the risk associated with the fact that a little-known (as-yet) untested technology can cause consequences in the genome beyond what researchers have planned for, bringing consequences they have no idea or clue about (Johnson 2019).

inspire a return to transhumanism. This is especially so because of the gravitas that biotechnology poses for transhumanism.

Despite the introduced drawback of the notion of transhumanism, a return to its presented concepts provides an opportunity to single out from the typology of bioart those projects whose symbolic meanings are based more on an evolutionary model of human nature (e.g. Steven Pinker) than on a model of a network of agents or the "co-habitation" and "imbrication of distinct metabolisms" interpreted in terms of social relations (Haraway, 2016)[5] or the concept of a "new anthropology" (Sorgner, 2013).

In 2017, Smrekar won the main prize for experimenting with biotechnology on her own body. Her projects were created at Kapelna Gallery in Slovenia, which focuses on a practical collaboration between artists and science and research that should take into account the bioethical aspect; however, from a philosophical perspective, Smrekar's framing of the projects within the artistic and literary discourse of posthumanism confirms that the philosophical concepts of the transhumanists, which directly invoke biotechnology in the process of human transformation, do not reach the artists. This is not because of the local scope of transhumanism in the Anglophone sphere (Sorgner, 2013) but is rather because of the prevalence of concepts of human nature, freed from scientific essentialism, in the humanities and the arts. Donna Haraway's notion of the evolution of species, which highlights the strategies and metaphors of the rhetoric of science that scientists have used to talk about evolution and how they have thought about it from an anthropocentric and patriarchal perspective, is very influential. A second concept of relevance in this respect is Bruno Latour's (1997) sociology of science.[6] The tendency to remove the concept of species in the sense of evolutionary theory, or the natural human species, and to replace it with a kind of universal "cultural species" (analogous to the cultural concept of the human race) is crucial.

Transhuman art: the role of art for the human who will want to be posthuman

Huxley held the view that the exploration of man as an unknown territory for the discovery of his intellectual and mental faculties has been outlined by scholars and writers from antiquity to the present day, with the exception of the Romantic era; this was elaborated on by Bostrom (2008) as a time when artists rejected rational concepts and succumbed to irrationalism and were interested in the sublimation of the mind to perfection. Both scientific knowledge and art offer possibilities and provide opportunities to explore human nature. In the process of the transcendence of the human species, Huxley envisages the same role of exploration and qualitative deepening for science and art. This is simultaneously an anticipation of the tendency known as art@science.

Bostrom outlines the role of art for the person who will want to be a posthuman, in a paper titled "Why I Want to Be a Posthuman When I Grow Up". He suggests that the posthuman will be happy to create new art forms and styles and will shift the development of English under the influence of technology; new linguistic expressions will provide a means of expressing and discussing unimaginable feelings and experiences because they will be tied to enhanced cognitive and emotional abilities. This attributes an essential function to play (Homo ludens), which will co-create hybrid art and be a full-fledged agent. Virtual reality will provide artistic means to combine with dance and humour, and the newly acquired possibilities of interpersonal dynamics will allow us to make things related to bodily sensations and the mind more fun, enjoyable, and creative than we can imagine without technological enhancement. Art thus becomes a form of joy; art becomes a form of play and an opportunity to experience more intense and creative

5 See: Pavlovic (2019).
6 Bolter (2016) ranks both authors and their postmodern concepts among the pillars that constitute posthumanism

experiences through new means. It will be "new"; after all, what else can we call the fact that art will rely on means and materials hitherto unknown to us? Will it speak of a trans- or posthuman style of life? Does the idea of art as a wave of historical change therefore lose its meaning? Perhaps this is the case to the extent that Danto speaks of grasping and naming historical change always in hindsight. For us, however, it is mainly a question of what contemporary transhumanist art is about and by what means artists create it.

The Context of Biotechnology : CRISPR Projects

Designer Adam Peacock presented "The Genetics of GYM"[7] as a series of works at an exhibition at the Melbourne Gallery in 2018. Against the assumed effort of transhumanists to influence the process of human transformation, and against the freedom to decide on the form of bodily form, he contrasted marketing strategies that will put us at risk from the unforeseen but assumed interests of bio-business. In this context, today's design strategy, based on the principle of ignoring all standards, playing with crossing and erasing boundaries, and playing with things like tradition, must move towards responsibility and deliberation. If it were possible for gene-editing technologies to unleash the fantasy of designing human corporeality – for example into discordant forms such as those presented by the Genetics GYM project – the question arises as to what needs to be done to make today's humans fit and responsible enough for these tasks. These questions are relevant to both transhumanist art and bioethics.

The co-evolution of the human with the non-human animal

Maja Smrekar and Patricia Piccinini produce art which seeks inspiration and a means of expression in biotechnology and genetic engineering, and which, according to critics, is a part of bioart while also implicitly referring to and addressing the issue of transhuman art. Piccinini is dedicated to the promotion of modern science and the ethical problems of biotechnology. In her exhibitions, she organizes workshops – for example, with child visitors – on the subject of transplants and the creation of human organs in the bodies of non-human animals. Her activity does not merely refer to the question of the blurring of species boundaries that preoccupies posthumanists (Haraway 2016); it clearly also refers to the results of contemporary genetics.

Her Evolution and Curious Affection exhibitions were popular in several galleries, despite the fact that the sculptures on display represented a "bizarre beauty". The intention was not to pander to the predilection for anatomical or physiological anomalies, which was once the delight of visitors to fairs, circuses, and daguerreotypes. Instead, the aim was to document one form of a world in which DNA is understood as something universally interchangeable and plastically amenable to editing (genetic editing) (interview on YouTube).[8] At a time when the evolution of the human body is not complete and our proteins are extremely plastic (Piccinini), it is necessary to open our imagination to the various possible aspects and problems of the "transhuman human". In Piccinini's artefacts, according to the critics, these are chimerical beings, but the question that comes to the fore is how we will shape the relationship between the human and the trans- or posthuman being. What will be the place and value of human footprints: friendship, generosity, emotional alliance, belonging, intimacy, love, kindness, and generosity?

Smrekar's projects were created in collaboration with the Kaplna Gallery in Ljublja-

7 Available at: https://www.adampeacock.co.uk/Science-Gallery-Melbourne-Perfection (Accessed June 7, 2019).

8 Piccinini's presentations, which are also available on the internet, prove the validity of Danto's premise that in the time "after the end of art" an artist cannot lack knowledge of the subject they are dealing with (Danto, 1997, p. 193).

na, which focuses on cooperation with a medical faculty and a genetic engineering laboratory. (Similar science galleries have been created within universities, for example, in London, Dublin, and Melbourne, and as civic associations, such as Galeria Galtea in London). In 2017, Smrekar won an award at the Ars Electronica festival in Linz for her set of long-term projects entitled K9-Topology, Hybrid Family, and ARTEmis. The jury particularly appreciated her determination to experiment with her own body, which she put in danger when overcoming her fear of a wild animal and undergoing artificial insemination.

The K9-Topology multimedia installation refers to the process of the evolution of humans in the pre-cultural era, when they spent a lot of time with wolves. Visitors could enter a cave/tunnel lined with wolf fur, which had trays of synthetically isolated (by column 45 Piccinini's presentations, which are also available on the internet, prove the validity of Danto's premise that in the time "after the end of art" an artist cannot lack knowledge of the subject they are dealing with (Danto, 1997, p. 193). chromography technique) wolf (canis) serotonin and Smrekar's serotonin. This was an opportunity to experience, through olfactory sensations, a simulation of the relationship between humans and wolves. The visitor could smell the scents which humans had become accustomed to when, living with wolves, there was a co-evolution and mutual taming of humans and wolves, which is analogous to the symbiosis Hayles projects for humans and computers. This scent is not on the spectrum of acceptable smells today, and therefore, from an evolutionary perspective, the sense of smell as such is not stable; it has been diversely distributed in the process of evolution and has either deepened or narrowed. Smrekar explains that the process of the mutual domestication of humans and wolves (now dogs) is a scientific discovery based on the finding that in both species the genes responsible for the formation of transporters for enzymes enabling the metabolism of starch (cereals) appeared simultaneously as a stage of parallel evolution of the digestive tract. (In wolves, these genes have not evolved.) Olfactory perception was similarly strongly developed in both humans and wolves, but modern humans have lost the capacity for fine olfactory sensitivity; in its place, evolution fostered the visual and verbal faculties in humans. The degenerate olfactory senses in wolves, on the other hand, have been enhanced. Humans evolved the gene responsible for transporting serotonin, responsible for the ability to tolerate the presence of multiple individuals for long periods of time, and thus evolved social tolerance, as interpreted by researchers today. An enzyme reducing the aggression of the still untamed human made possible the changes that gave rise to human culture.

Through K9-Topology, Smrekar provided gallery visitors with the experience of encountering olfactory sensations that have been forgotten and that refer to the scientific discoveries of the details of evolution. She intended to create a matrix with which to explore issues of communication and understanding in society. Is it possible that the scents of the transhuman world will be similarly unusual and surprising, and that the adventures of the coevolution of Homo sapiens and the posthuman species will be similarly complex?

Smrekar attempted to provide an experience of developing our olfactory sensations, but in the second part of the project she undertook an experiment to explore and push the limits of the fear that was triggered by an encounter with a wild animal (a breed of dog akin to wolves). This is a fear caused by the presence of individuals of another species. The aim of the project was to overcome human fear, adopt and penetrate non-human company, and establish an understanding with the pack (three female dogs and three female wolves). The six-month project was carried out with the help of French ethologists. From the stage of enduring the artist's presence from behind metal bars, through several-minute-long visits to the animals' territory, Smrekar reached the moment when one of the females made contact with her (touching her hand, which meant acceptance into their society). This was a sign of acceptance based on the fact that the artist had already mastered the rules of communication well enough to provide a sense

of security to all members of the pack (not making visual contact with the alpha male and showing respect for the hierarchy in the group). The project concluded with a performance in which the audience, from behind the bars, participated in a climactic form of understanding between a human individual and non-human beings: the artist was lying on the ground (i.e. in the lowest position) and was smeared with grease, also spread outside her body; the pack then spent their time licking their favourite edible from her body.

Emotions were experienced by the visitors (shifting the initial fear from the artist to them) and by the main actor of the event (the need for concentration and relaxation). Another problem was one of responsibility: the ethologists and the trainers of the pack took responsibility for the artist in a certain way, but the animals could also be at risk if they interrupted the rehearsed modus and attacked due to inappropriate behaviour by the audience.

From a posthumanist perspective, the project gave the opportunity to participate in feelings of enforced subordination, in experiencing uncomfortable feelings of humiliation and fears for one's safety, as well as fear of the inscrutability of power experienced by a being in a more powerful position. The performance legitimized the questioning of the concept of the rationalist premise of human exceptionalism and dominance in nature (Bolter, 2016). The project non-intentionally also refers to extropism and to the notion of the expansion of emotional capacities (Bostrom 2008). In doing so, it opens the perspective of future human development, realizing an archaeology of the future. The concept of extropism was picked up by the signatories of the Transhumanist Declaration, who extended the idea of the nonhierarchical coexistence of human and non-human beings to artificial intelligence. The question arises as to whether today's humans, who often cannot tame their distance from members of other races and cultures, can accept the proximity of genetically modified humans or representatives of "other" species. Will humans be able to renounce their superiority and take responsibility for the fate of the more or less different "Other"? How will they interact with these other beings at the level of the concept of the self if they are not genetically identical to them? On a psychological level, one solution is training aimed at expanding the ability to experience unpleasant feelings and to control, for example, feelings of disgust, reluctance, and intolerance. According to Bostrom, a person coping with unpleasant feelings is also a part of the process of transformation.

Hybrid Family

In the Hybrid Family project, which lasted six months, Smrekar experimented with adopting a dog. In order to fulfil the role of a mother who breastfed her puppy with her own milk, she had to start milk production by adjusting her diet, enriching it with iron, taking a milkproducing product, and inducing oxytocin production by stimulating her nipples. Oxytocin sends instructions to the brain to produce milk, and the hormone itself boosts nursing tendencies.

Smrekar modified the gallery room into a cosy home, and eight weeks after adoption she was able to breastfeed the dog with her own milk. Visitors to the project were able to observe the feeding of the puppy. As a thirty-six-year-old childless woman, Smrekar experienced genuine maternal emotions and instincts through adoption and artificial stimulation, creating the experience of a hybrid family.

The artificial stimulation of the human body in order to achieve the natural nurturing instinct and care for one's offspring was an incentive to experience feelings of joy, fulfilment, love, identification, responsibility, and kindness – feelings and values valued by transhumanist hedonism. We can imagine that by using biotechnology (be it genetic or pharmacological), humans can overcome natural limitations and stimulate, for example, in old age, feelings associated with a high quality and value of life. In the context of (presumed) interspecies communication, we can imagine that a transhuman woman would

be happy to care for and adopt a Homo sapiens offspring with the possibility to fulfil, deepen, and refine feelings associated with motherhood.

ARTEmis

The third project, called ARTEmis, took the form of a demonic beast. Its starting point was the premise that humans, in relation to demonic animals, turn into the very same thing. The name of the project anticipates the name of the mythological goddess of hunting, virginity, and childbirth. According to some ancient texts, she was also a lover of animals. The use of the letter's "art" refers to the practice of assisted reproductive technology. The aim of the project was to empirically investigate the possibilities of creating a female wolf-like creature; however, from a genetic viewpoint, only a clone of her could have been created.

Smrekar had one of her eggs artificially fertilized with a somatic cell, the division of which created a blastocyst. She named it ARTEmis as a confrontation of mythology with technology. Informed by concepts interpreted in the discourse of posthumanism, Smrekar pursued the problem of interpreting the notion of humanism,46 which she understood as the incorporation of the essence of the human into the natural non-human universe and as an empirical confirmation of the animal continuum in humans, which is (and, at the same time, is not) alien. The concept of the human is the foundation of our exceptionalism and condescension. Smrekar's intention was to provoke public debate about the future of species hybrids: for example, those that would arise from the crossbreeding of humans and nonhumans. From a biotechnological viewpoint, interspecies crossbreeding is more difficult and less likely than introducing a series of genes that can transform the human species. This vision and the realistic technological possibilities of achieving it are the subject of bioethical debate, but this has not yet penetrated the realm of posthumanist discourse.

Conclusions

Biotechnologies have aroused the interest of creators of art, which for several decades has been coping with the search for a means of expression outside traditional media and has absorbed them into itself. These are technologies that touch both the present and the future of humanity. To interpret projects that respond to the possibilities and risks of using the tools of biotechnology, the art world reaches into the discourse of posthumanism (cyborgs and networks of systems) and ignores the significance of transhumanist concepts (the enhancement of human nature). This chapter emphasized that the reasons lie both in the persistence of the influences of postmodernism and in the authority of institutions that promote a technical vision of the world of the future (e.g. Silicon Valley and MIT's MediaLab) and, within it, present notions of a posthuman form of humans.

In this field, transhumanist conceptions of posthuman humans which emphasize the biological evolution of the nature of Homo sapiens are at a disadvantage, as is the case in posthumanist discourse. As a result, the art world interprets art projects, even if they are a 46 Discussions and reflections on the diverse contexts and implications of the notions of humanism, the humanistic, the humane, and the posthuman are inherent in publications on posthumanism. response and reaction to biotechnology, in an inappropriately narrow frame that concentrates on posthumanism.

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THE ROLE OF COMMUNICATION AND ADVOCACY IN RESOLVING CULTURE-BASED CONFLICT: LESSONS FROM EFFORTS TO COMBAT FGM PRACTICES IN KENYA

Christabel Odera[1], Israel Nyaburi Nyadera[2], Samuel Juma Ouma[3]

Abstract

This study examines the role of communication and advocacy in resolving culture-based conflicts in Kenya, focusing on the harmful practice of Female Genital Mutilation (FGM). While existing studies on conflicts in Kenya have focused on inter-group violence, such as class, political and ethnic conflicts, few studies have examined how cultural practices constitute violence, and few have offered recommendations on how to deal with cultural conflicts and violence. Culture-based conflicts in Kenya, particularly those related to harmful cultural practices like Female Genital Mutilation (FGM), have been a persistent challenge. While communication and advocacy are often cited as essential in conflict resolution, their application in resolving culture-driven violence in Kenya and many African countries remains low. This study aims to contribute to the growing literature and debates on cultural violence by (1) examining cultural-based violence in Kenya, (2) assessing how communication and advocacy techniques and strategies can be used in FGM advocacy campaigns in Kenya, (3) evaluating the potential impact of these strategies especially in changing attitudes and behaviors towards FGM. The study will conclude with a set of recommendations that are aimed at reducing cultural violence in Kenya through the use of communication and advocacy.

Key words: Communication, advocacy, FGM, Culture-based conflicts

Introduction

1 Graduate student at the School of Humanities and Social Sciences, African Nazarene University, Nairobi Kenya, e-mail: bellah.akinyi1@gmail.com ORCID: 0009-0008-0789-9633
2 Post doctoral fellow at the Department of Conflict, Development and Peacebuilding, Geneva Graduate Institute, Geneva Switzerland & Lecturer at the Faculty of Arts and Social Sciences, Egerton University, Njoro Kenya, e-mail: inyadera@gmail.com, ORCID: 0000-0002-0432-6935
3 Graduate student at St. Paul's University, Nairobi Kenya, e-mail: sammyayal68@gmail.com. RCID: 0000-0002-8445-0898

Culture-based conflicts are common in many parts of the world, and Kenya is no exception (Ajayi et al., 2022; Alesina et al., 2021; Song et al., 2021). Understanding culture is the foundation for effectively addressing and resolving cultural conflicts. It promotes awareness, empathy, and communication skills necessary to navigate the complexities of multicultural interactions and encourage harmony and cooperation in diverse settings. According to Foster (2018), culture refers to the shared patterns of beliefs, values, behaviors, customs, and artifacts that characterize a particular group or society. It encompasses the way of life and the social norms passed down from one generation to another, shaping the identity and worldview of individuals within that group. Johnson (2018) further defines culture as what different societies need to learn to function within their society, such as language, dress codes, and rules for social interaction and behavior. Culture includes various elements, such as language, religion, cuisine, art, music, literature, clothing, rituals, and social practices. These components are learned and transmitted through socialization, education, and interaction with others in a specific cultural group (Fata et al., 2020). Culture has been linked to several violent practices worldwide, although in many cases, such violence is often overlooked because culture makes both physical and structural violence appear natural. Examples of how culture has led to violence can be seen from the period of the slave trade when Africans were considered intellectually inferior and perhaps primitive compared to other races. Given the cultural dynamism, and in the context of the above example, culture was manipulated and distorted to justify or perpetuate violence. During the era of the transatlantic slave trade, Europeans held deeply entrenched cultural biases and stereotypes about Africans. These beliefs and biases were not based on scientific evidence but were used to justify the exploitation and enslavement of African people (Sibani, 2018).

European colonial powers, motivated by economic interests and the desire for power, used these cultural beliefs to legitimize the brutal treatment of Africans and the perpetuation of the slave trade. They portrayed Africans as subhuman, justifying their enslavement and dehumanization. These cultural biases and dehumanizing ideologies significantly enabled the violence and cruelty inflicted upon enslaved Africans during that period (Sibani, 2018).

Moreover, the European slave traders took advantage of existing conflicts and power dynamics within African societies, often exacerbating violence and discord to capture enslaved people. They manipulated cultural differences and tensions among African ethnic groups to their advantage, further contributing to violence and instability. The caste system in India is another example of how culture has been used to subject communities to an unending cycle of discrimination and marginalization for hundreds of years (Spear, 2003).

Therefore, culture-based conflict refers to differences in cultural values, beliefs, norms, practices, and traditions between individuals, groups, or communities. These conflicts occur when different cultural perspectives and expectations clash, leading to misunderstandings, tensions, and disputes. Culture-based conflicts can arise at various levels, from interpersonal interactions to broader societal issues, and they can encompass a range of topics, including religion, customs, gender roles, social practices, and more (Ting-Toomey & Chung, 2005).

Unaddressed cultural violence has affected many societies and countries worldwide, leading to prolonged conflicts, widespread suffering, and loss of human lives. These conflicts have affected many communities worldwide, providing ample evidence of how seemingly innocuous cultural practices can cause damage to individuals and communities (Gay, 2018).

One example of cultural violence that this paper seeks to address is Female Genital Mutilation (FGM). According to Serem and UNICEF (2021), FGM is a cultural practice involving total or partial removal of external female genitalia. FGM among most Kenyan communities is seen as an essential initiation component, often led by senior women.

The practice marks a new era of respect and relationships for the initiates depending on one's social, economic, gender, and age status. The initiation process is not only a cultural practice but also considered sacred, with community elders being the custodians of the process, and they oversee the excisions. For communities that practice FGM, it is a norm that the parents are the ones to decide when and if their child will undergo the initiation.

While culture-based conflict such as FGM remains a challenge, communication and advocacy efforts significantly address the issue. Trenholm (2020) defines communication as exchanging information, ideas, thoughts, and emotions between individuals or groups through various methods such as speech, writing, gestures, body language, or visual and auditory signals. It is a fundamental aspect of human interaction at all levels and plays a vital role in conveying messages, establishing understanding, and building relationships. Communication involves both the transmission and reception of messages. It encompasses the content or information being conveyed and the context (cultural or ordinary setting), tone, and intent behind the communication (Adler et al., 2012). Advocacy is another critical aspect of addressing cultural violence.

Conversely, Parcha and Kingsley Westerman (2020) define advocacy as actively supporting a cause, promoting a particular viewpoint, or influencing public opinion and decision-making processes. It involves speaking up for individuals or groups needing more resources, power, or platform to advocate for themselves effectively. Advocacy aims to bring about or policy changes that benefit the target population or address a specific issue. Resolving culture-based conflicts requires effective communication, mutual understanding, and sometimes a willingness to adapt or find common ground between diverse cultural perspectives. By examining the intersection of culture, conflict, communication, and advocacy, this paper highlights how strategic communication and advocacy efforts have been pivotal in addressing FGM and similar culture-based conflicts.

Background

According to Galtung (1990), cultural violence constitutes those aspects of culture demonstrated in language, religion, art, ideology, and empirical and formal science often used to legitimize and justify structural and direct violence. Some studies (Staub, 1996; Koyuncu & Chipindu, 2020) have elevated the role of culture in conflict by concluding that large-scale violence tends to have a cultural component or culture as an essential driver of that particular conflict. In addition, some have blamed culture for gender-based violence (Merry, 2011; Zinyemba & Hlongwana, 2022). Some also link culture to inter-ethnic conflicts (Susanto & Puryanto, 2022), while other studies have even associated culture with terrorism (Helbling & Meierrieks, 2022; Levitt, 2022).

One harmful cultural practice in Kenya that has continued for many years is Female Genital Mutilation (FGM). Usually, the average age when one undergoes initiation is between the ages of 5 and 20, making most of those initiated minors. However, the age varies between communities. For example, teenagers are considered eligible for initiation among the Samburu, Nandi, Nyambene, Meru, Muranga, Embu, Garissa and Nyeri. At the same time, among the Kuria and the Kisii, it is done at preadolescence age (Rao, 2018).

According to a study by Van Bavel (2020) that examined the intersection of place, gender, and ethnicity regarding FGM among Kenyan Maasai, the practice was found to be a complex social norm linked to marriageability and community identity and a source of conflict due to its intersection with various factors. Furthermore, Grose et al. (2019) states that in Kenya, the prevalence of FGM among women aged 15-49 is 21%, indicating that many still undergo this procedure. The conflict also arises from the tension between cultural preservation and modern human rights principles. Traditionally considered a rite of passage, FGM is now viewed through a human rights lens as a harmful practice affecting women's health and rights. Also, FGM as a cultural conflict manifests through

generational divides, as younger individuals often lean towards abandoning the practice while older generations cling to it as a cultural heritage.

Graamans et al. (2019) argue that FGM is a cultural norm in many communities and is often shrouded by secrecy and fear. In 2001, the Kenyan government established a national program to eradicate FGM, but the practice is still widespread among some Kenyan communities despite being recognized as harmful and illegal (Im et al., 2020). The prevalence is evidenced by Serem and UNICEF (2021), whose findings show that although nationally, the overall FGM prevalence percentage is 21%, it remains high in counties such as Samburu (86%), Kisii (84%), Somali (94%) and among the Maasai population (78%) (Serem & UNICEF, 2021).

The practice can be linked to many health problems, psychological impacts, physical pain, and suffering (Serem & UNICEF, 2021; Tammary & Manasi, 2023). A cross-sectional study conducted by Im et al. (2020) comprising 143 female Somali youth living in Eastleigh, Kenya, paints a picture of the rampaging effects of FGM. Their study's findings linked FGM with adverse physical and mental health outcomes. Among the notable outcomes of FGM include post-traumatic stress disorder and depressive, anxiety, and somatic symptoms. Furthermore, the study revealed that FGM was responsible for the victims' separation from a parent and poly-victimization experiences. The study noted that FGM and other traumas did not occur singly but were indicative of cumulative adversities, especially for women who were socially vulnerable and marginalized.

In order to address FGM as a cultural conflict, Sood et al. (2020) propose engaging individuals and communities through communication initiatives to raise awareness about FGM's physical and psychological harms, challenge misconceptions, and empower women and girls to make informed decisions. Moreover, communication campaigns can leverage religious, community, and social leaders to influence positive change by emphasizing the cultural and ethical reasons for abandoning FGM. Communication is a powerful tool to create a collective shift in perceptions, behaviors, and norms surrounding FGM, leading to its eventual eradication (Onyango, 2021). On the other hand, Bedri (2013) suggests that evidence-based advocacy is pivotal in ending FGM by using data to inform policies, engage stakeholders, and create awareness. It helps in dispelling myths, challenging norms, and promoting gender equality, all of which are essential for the abandonment of this harmful practice. Moreover, communication and advocacy approaches have played essential roles in social movements for many decades. Many activists and advocates have used these approaches to reduce inter-group and intra-group violence (Mwendwa et al., 2020).

Table 1. Statistics of FGM Prevalence among Girls and Women Aged 15 to 49 Years by Residence and Wealth Quintile (%) in Africa (2012-2020)*

Countries and areas	FGM prevalence among girls and women	Residence		Wealth quintile				
		Urban	Rural	Poorest	Second	Middle	Fourth	Richest
Somalia	99	99	99	99	100	99	100	99
Guinea	95	95	94	95	94	93	96	95
Djibouti	94	94	98	97	96	94	94	93
Mali	89	89	88	87	86	90	90	90
Egypt	97	77	93	94	93	92	87	70
Sudan	87	86	87	88	82	81	90	92
Eritrea	83	80	85	89	86	84	83	75

Countries and areas	FGM prevalence among girls and women	Residence		Wealth quintile				
Sierra Leone	83	76	89	90	90	87	80	72
Burkina Faso	76	69	78	77	78	78	80	69
Gambia	73	75	67	65	73	80	76	69
Mauritania	67	55	79	92	86	70	60	37
Ethiopia	65	54	68	65	69	69	69	57
Guinea-Bissau	52	43	59	41	62	70	54	38
Côte d'Ivoire	37	31	44	50	44	43	34	20
Sub-Saharan Africa	35	32	37	38	36	36	36	31
Chad	34	32	35	41	35	35	30	30
Liberia	32	25	43	48	42	38	22	17
West and Central Africa	27	28	27	29	27	28	28	24
Senegal	25	21	29	48	30	23	18	15
Central African Republic	22	12	28	29	27	26	19	9
Kenya	21	14	26	40	26	18	17	12
Nigeria	20	24	16	16	18	20	23	20
Yemen	19	17	19	27	21	13	20	14
Maldives	89	14	12	14	12	12	15	12
United Republic of Tanzania	10	5	13	19	10	12	9	4
Benin	9	5	13	16	14	10	7	2
Iraq	7	7	8	1	3	3	6	22
Togo	3	3	4	4	4	3	4	2
Ghana	2	1	4	7	2	2	1	1
Niger	2	1	2	2	2	2	3	1
Cameroon	1	1	2	1	4	1	1	1
Uganda	0	0	0	1	0	0	0	0

Source: Adapted from UNICEF (2023).

According to Table 1, in East Africa, Kenya has the highest FGM prevalence rate compared to Tanzania (10%) and Uganda (0%). Uganda and Cameroon have the lowest number of girls and women aged 15 to 49 years subjected to FGM at 0 and 1 percent, respectively. The statistics further reveal that in East Africa, FGM is more prevalent among low-income families in rural rather than urban areas (UNICEF, 2023). According to Kamer (2023), 8.9 million Kenyans live in extreme poverty, with the majority in rural areas. Moreover, 18 percent of Kenya's population lived below 1.90 U.S. dollars per day in 2022, and over 7.8 million Kenyans in rural communities lived on less than 1.90 U.S. dollars daily, 6.5 times higher than the residents in urban regions. The statistics show the connection

between low-income families and the practice of FGM.

Kenya as a country is a melting pot of over 40 different ethnic groups, each with its unique cultural practices and traditions. These cultural differences have often led to different forms of conflicts that have resulted in violence, displacement, and loss of life. The factors driving these conflicts are varied, including land disputes, political tribalism, and harmful traditional practices like Female Genital Mutilation (FGM) (Dyer, 2020). As evidenced in Table 1, over 21% of Kenyan women have undergone FGM. While this number may appear low, it is not reassuring to learn that the practice is only concentrated in a few communities (Kakal et al., 2022). In FGM-practicing communities in Kenya, girls are raised by their mothers from a very young age and taught that FGM is part of their culture.

Consequently, the practice spreads like a chain reaction, as it becomes another rite of passage for girls after they reach adolescence and are ready to begin developing into adult women. This practice and its persistence indicate that efforts to eradicate it have yet to be achieved. It highlights the need for innovative approaches to resolving culture-based conflicts in Kenya (Dyer, 2020).

Harmful Effects of FGM as a Cultural Practice

FGM is a form of violence against women and girls with severe physical, psychological, and social consequences. In addition, FGM implicates public health, well-being, sexuality, gender empowerment, and gender-based violence. The physical harm caused by FGM can be severe, leading to pain, bleeding, infection, and even death. A recent study in Somalia found that nearly 80% of women who had undergone FGM reported experiencing long-term physical health problems, including chronic pain, infections, and complications during childbirth. Furthermore, FGM is often performed without anesthesia or proper medical equipment, increasing the risk of complications and long-term physical harm (Sadia, 2018).

FGM violates a person's right to life, health, and physical integrity. It is a form of gender-based violence and discrimination that perpetuates harmful gender stereotypes and restricts women's autonomy and agency. The United Nations has declared FGM a violation of human rights, and it is recognized as a harmful traditional practice that must be eliminated (UNICEF, 2023). Despite the widespread recognition of FGM as a human rights violation, the practice continues in many countries, often due to cultural and social pressures. In addition to physical harm, FGM can cause psychological trauma and long-term mental health issues such as anxiety, depression, and post-traumatic stress disorder (PTSD) (Rao, 2018). A recent study conducted in Ethiopia found that women who had undergone FGM were more likely to experience symptoms of PTSD than women who had not undergone the procedure (Köbach et al., 2018). The psychological harm caused by FGM can have long-lasting effects, impacting a woman's mental health and overall well-being.

FGM can also cause sexual harm, interfering with sexual function and causing pain and discomfort during sexual activity. A recent study conducted by Kershaw and Jha (2022) found that women who had undergone FGM were more likely to experience sexual dysfunction and pain during intercourse than women who had not undergone the procedure. FGM can also increase the risk of complications during childbirth, such as prolonged labor, fistula, and hemorrhage, leading to maternal and infant mortality. In conclusion, FGM is a form of violence against women and girls that violates human rights, perpetuates harmful gender stereotypes, and restricts women's autonomy and agency. Furthermore, the study found that FGM can cause severe physical, psychological, and social consequences, including pain, infection, mental health issues, sexual dysfunction, and complications during childbirth. The elimination of FGM requires a comprehensive approach that includes education, advocacy, and legislation to raise awareness, change

attitudes, and protect women.

Table 2. Short and Long-term Impacts of FGM.

Types of FGM	Time	Impact
1. Partial or total removal of the clitoral glans 2. Partial or total removal of the clitoral glans and the labia minora 3. Infibulation 4. Other harmful procedures to the female genitalia for non-medical purposes, e.g., pricking, piercing, incising, scraping, and cauterizing the genital area.	Short-Term Complications	- Excessive bleeding - Urinary problems - Swelling of the genital tissue - Fever - Infections, e.g., tetanus - Severe pain - Wound infections and not healing - Injury to surrounding genital tissue - Shock - Death.
	Long-term complications	- Experiencing tract infections and pain when urinating. - Unending vaginal problems such as itching, discharge, and bacterial vaginosis. - Experiencing problems like painful menstruation and trouble in passing menstrual blood. - Pain during intercourse and decreased satisfaction. - Increased risk of complications during childbirth - Can lead to a need for later surgeries due to complications related to birth and - Psychological problems include depression, post-traumatic stress disorder, anxiety, and low self-esteem.

Source: own work.

Complexity and Challenges of Addressing Cultural Violence

Cultural violence is an old phenomenon that has affected communities in many ways. Finding a solution to any form of cultural violence will not happen overnight. It requires sustained efforts, but effective communication and advocacy strategies have been shown to significantly enhance these efforts' impact (Gay, 2018). According to Tridewiyanti (2019), addressing culture-based conflict requires analysis, including identifying the factors contributing to it and developing an acceptable communication approach. A recent literature review highlights several challenges that can hinder the resolution of

cultural-based conflicts. One significant challenge is the understanding and respecting of cultural differences. Furthermore, cultural practices deemed unacceptable by one group may be deemed essential by another, making compromise difficult. However, the barrier can be bridged through advocacy efforts.

Another challenge is identifying cultural factors that contribute to the conflict. There are often no clear demarcations between cultural practices and politics or between culture and religion, making it difficult to separate the elements of a conflict. Some conflicts may be driven by economic or political interests rather than culture, making it challenging to identify the cause. In addition, communities may not be willing to communicate about culture-based conflicts due to fear that it will lead to stigmatization (Staub, 1996). Communication and advocacy are often cited as essential tools in conflict resolution (Lee et al., 2022). They are essential in promoting awareness, education, dialogue, and policy change.

Another challenge is the power dynamics that exist between different cultural groups. The dominant group may be reluctant to compromise, while the minority group may feel marginalized and excluded from decision-making (Veldhuizen, 2022). Such a power imbalance can hinder efforts to resolve conflicts. Communication barriers can also pose a significant challenge in resolving cultural-based conflicts. Communication barriers can arise due to language differences, cultural misunderstandings, and mistrust (Veldhuizen). Misinterpreting cultural practices and beliefs can lead to conflict and tension between groups. Therefore, effective communication strategies that are culturally appropriate and sensitive are essential in resolving cultural-based conflicts (Reinholds, 2021).

Finding a balance between preserving cultural traditions and promoting human rights and equality is a significant challenge in resolving cultural-based conflicts. Some cultural practices may violate human rights and perpetuate discrimination and inequality, and finding a balance between respecting cultural diversity and promoting human rights and equality is crucial (Koyuncu & Denise, 2020). In conclusion, resolving cultural-based conflicts requires an understanding and respect for cultural differences, effective communication strategies, and a willingness to find a balance between preserving cultural traditions and promoting human rights and equality. Overcoming the challenges in resolving cultural-based conflicts requires a comprehensive approach involving education, dialogue, and mutual understanding between different cultural groups.

Corresponding to the complexity of cultural perspectives is the challenge of bridging conflicting and opposing views. Accordingly, understanding communication between the two parties requires understanding factors such as worldviews, ideologies, history, social structures, and dynamics that influence a given culture's beliefs and behaviors (Koyuncu & Denise, 2020)

Differences in values and beliefs are another challenge contributing to cultural conflicts. These differences can be deeply rooted and may be difficult to change. FGM as a cultural problem reflects deep-rooted inequality between the sexes and continues to be practiced in many cultures despite being condemned by international health organizations. Changing the cultural values and FGM-practicing community's traditions can be difficult, requiring a deep understanding of the cultural context. A study by Barrett et al. (2020) about transforming social norms to end FGM in the European Union established that cultural values and traditions were a significant barrier.

Fear of social exclusion in some communities has made FGM seen as a necessary part of social acceptance and inclusion, and families may fear social ostracism or exclusion if they do not participate in the practice. This fear can make it challenging to change attitudes toward FGM despite evidence of its harmful effects (Barrett et al., 2020).

Moreover, poor education and awareness amongst most women and communities practicing FGM remain a big problem. This situation means that many families may not

be aware of the harmful effects of FGM or may not understand the risks involved. A lack of education and awareness about the consequences of FGM can make it difficult to change attitudes toward the practice (Kakal et al., 2022). In addition, the lack of effective communication, essential for resolving cultural conflicts, makes it difficult to resolve conflict around FGM. This phenomenon may be due to language barriers, differences in communication styles, and other factors that can make it difficult for people from different cultures to communicate effectively.

Furthermore, historical and political factors also play a significant role. Cultural conflicts may be rooted in historical or political factors, such as colonization, oppression, or discrimination. These issues can be challenging and require significant systemic change (Ajayi et al., 2022).

Consequently, the lack of political will in some cases makes it difficult to resolve conflicts around FGM. With strong political leadership and commitment, efforts to change attitudes toward FGM may receive the necessary resources and support to be successful. Additionally, cultural conflicts may be exacerbated by power imbalances between different groups. For example, conflicts between a dominant and marginalized culture may be more difficult due to power dynamics (Alesina et al., 2021).

According to Barrett et al. (2020), FGM-based cultural conflicts are common because some believe that the practice reduces sexual desire in women, facilitates marriage and childbirth, and retains a woman's virginity before marriage. These three reasons are often intertwined with social norms involving purity and proper sexual function. However, today, there are millions of cases where it is practiced despite not having any functional or medical benefits. Throughout history, FGM has been justified by many myths and reasons. One of the most common myths is that female genital mutilation reduces a woman's sexual desire and provides some protection from "lewd acts." The opposite is true. Women who have undergone FGM are likely to have more sexual partners than women who have not undergone this procedure. FGM is often justified as a way to preserve virginity and, therefore, morality. However, it has been shown that FGM does not promote chastity before marriage or fidelity afterward.

Other myths include the belief that FGM will prevent adultery, which is why women do not want their daughters to undergo it. Though this may seem like a logical reason, it has been shown that women who have been circumcised may be more likely to commit adultery than uncircumcised women. It would seem that having a painful vaginal operation would deter women from cheating on their partners rather than encouraging it (Song et al., 2021).

The rapid pace of globalization and the increasing diversity of societies has led to more frequent cultural interactions, creating more opportunities for cultural conflicts (Koyuncu & Denise, 2020). As people from different cultures come into contact with each other more frequently, it becomes increasingly important to develop cultural intelligence and effective communication skills to navigate these interactions successfully. The challenge of resolving cultural conflicts is common because it arises from fundamental differences in beliefs, values, and norms between individuals and groups from different cultures. FGM is sometimes associated with religious or traditional beliefs, although any major religion does not prescribe it. Challenging these beliefs requires engaging with religious and community leaders, emphasizing the importance of human rights, and promoting alternative interpretations that reject FGM. (Song et al., 2021).

In Kenya, various government and civil society organizations have been working to raise awareness, provide education, and engage communities in dialogue. According to Van Bavel, arguments have been advanced to the effect that the Anti-FGM Act enforced by these organizations infringes on women's rights to culture, the best attainable health, and gender equality by criminalizing medicalized FGM thus denying willing adult women access to safe and hygienic circumcisions. Furthermore, the Act promotes unfair treat-

ment of women against men who are allowed and encouraged to seek voluntary circumcision. However, anti-FGM activists are against medicalized FGM because it threatens the efforts to eliminate the practice and supports the law criminalizing FGM.

Communication and Advocacy Efforts in Addressing FGM

Communication and advocacy are often cited as essential tools in conflict resolution (Lee et al., 2022). They are essential in promoting awareness, education, dialogue, and policy change. However, there is a gap in research on the effectiveness of these tools in resolving culture-based conflicts in Kenya, especially when efforts to apply these tools are seen as a Western agenda to dilute the local culture (Doucet et al., 2022). The practice of FGM has been linked to adverse effects, including psychological harm and heightened risk for other infections, and communication has been cited as an appropriate tool in mitigating the harmful effects of FGM. However, breaking the perceptions barriers held by members of the communities practicing FGM is still a subject of varied opinion. It requires acknowledging the importance of cultural heritage, establishing trust, and demonstrating cultural sensitivity to open avenues for effective communication. Communication models have much promise in changing attitudes and behaviors toward FGM (Cheruiyot, 2022). Reaching out to communities that practice FGM presents a unique challenge because these communities are often poorly connected to the mainstream media and its channels. They are also very wary of outreach programs by outsiders, as they view them as an invasion of privacy and an attempt to impose Western values on traditional African culture (Igboeli et al., 2020).

Scholars have, however, suggested developing and implementing an effective communication and advocacy strategy to enable communities to abandon their harmful traditional practices by changing their local norms and beliefs (Igboeli et al., 2020). Such a strategy must reflect a multi-stakeholder approach and address the cultural and economic factors that help sustain FGM. Moreover, a factor limiting progress is a lack of understanding about the drivers and nature of support for the practice (Sood et al., 2020; Bedri, 2013). A systemic failure to understand the local FGM phenomena also perpetuates the practice, undermines human rights, and has detrimental physical, psychological, and social consequences for affected individuals and communities. The glaring gap between eradicating this type of cultural violence and its persistence among respondents at the community level suggests a need for an effective communication and advocacy strategy.

Consequently, the strategy must consider various factors that help maintain the practice, as Igboeli et al. (2020) suggested, including cultural and religious beliefs and social norms. However, designing an effective communication and advocacy strategy requires understanding the cultural dynamics of the inter-generational transmission of these norms and the cultural sensitivities that draw women and girls to participate in FGM (Cheruiyot, 2022).

In this respect, cultural communication must focus on understanding and navigating the cultural norms, values, beliefs, and communication styles that shape how communities involved in FGM express themselves and interpret messages. The approach should be based on the understanding that culture shapes communication patterns, influencing language, nonverbal cues, social customs, and expectations (Trenholm, 2020; Adler et al., 2012 & Chung, 2019).

How Communication and Advocacy Efforts Have Impacted FGM Practice in Kenya

According to a study by Onyango (2021), communication was a critical aspect of advocacy, and both were established to be a requirement for influencing behavior

change. Moreover, other studies show that attitude change involves complex processes influenced by communication through education, religion, religious leaders' views, healthcare system performance, media coverage of FGM-related issues, and discourses on FGM in community gatherings (Igboeli et al., 2020).

The Maasai community in Kenya is one of the most well-known communities that practice FGM. FGM is a deeply rooted cultural practice in the Maasai community, with some estimates suggesting that up to 78% of Maasai girls undergo the procedure. Despite FGM's dangers and harmful effects, many Maasai families view the practice as an essential part of their cultural identity and a rite of passage for girls. While progress has ended the practice in some areas, it remains widespread in many Maasai communities. However, communication and advocacy efforts have helped raise awareness of FGM's health risks and negative consequences and promote alternative rites of passage that do not involve FGM. For example, Amref Health Africa has been working with Maasai communities in Kenya to promote alternative rites of passage and provide education on FGM's harmful effects (Mwendwa et al., 2020).

A study by Mwendwa et al. (2020) in Meru County delves into the complex landscape of Female Genital Mutilation/Cutting (FGM/C) within Kenya. According to the study's findings, the initiatives to tackle FGM have demonstrated considerable success, i.e., attitude change. The shame and disrepute that once were associated with those who had not undergone the procedure are shifted to those who still practice, support or enable FGM (change in attitude towards FGM). Key factors critical in this shift include changing gender roles, education, and the role of religious institutions. Notably, the role of advocacy and intervention strategies, specifically focusing on Anti-FGM/C advocates and Alternative Rite of Passage (ARP) initiatives, is associated with the shift.

Another initiative is advocacy and leveraging social media communication. Matanda et al. (2023) reviewed the effective FGM intervention strategies in their study. They found that advocacy initiatives have demonstrated the favorable role legislation can play in advancing the process of social change (enabling environment). Also, radio shows on the rights of women and girls positively impact norms related to FGM. The prevalence of FGM among girls aged 15–19 years declined in 10 of the 17 countries (Kenya included) because of communication initiatives, according to a report by UNFPA–UNICEF (2014), as cited by the study. Furthermore, public declarations of FGM abandonment are paramount in signaling a commitment and readiness to abandon FGM. The study further found that mass and social media and other forms of communication have played a central role in amplifying public declarations and, in turn, encouraged other communities to abandon FGM.

The Pokot community in Kenya also practices FGM, with some estimates suggesting that up to 95% of women and girls in the community have undergone the procedure. Communication and advocacy efforts can help challenge the beliefs and attitudes that perpetuate FGM in Pokot communities and promote alternative rites of passage and education on the health risks of FGM. One example of such efforts is the work of the Samburu Girls Foundation, which has been working to end FGM and promote girls' education in Pokot and other communities in Kenya (Van Bavel, 2021).

Also, Kenya's Somali community practices FGM, with estimates suggesting that up to 97% of women and girls in the community have undergone the procedure. Communication and advocacy efforts can help challenge the cultural beliefs and attitudes that perpetuate FGM in Somali communities and promote alternative rites of passage and education on the health risks of FGM. One example of such efforts is the organization Pastoralist Child Foundation, which has been working to end FGM and promote girls' education in Somalia and other communities in Kenya (Van Bavel, 2021).

Therefore, the examples of the Maasai, Pokot, Meru, and Somali communities in Kenya demonstrate how communication and advocacy can be crucial in addressing cul-

tural violence related to FGM. Using effective communication strategies to raise awareness and promote positive alternatives, engaging with community leaders to shift cultural norms and attitudes, reducing the prevalence of harmful cultural practices, and promoting more gender-equitable approaches to social and cultural issues is possible (Cheruiyot, 2022).

Research Approach: A Systematic Review

The research approach of this study can be classified into three phases:

Phase 1

The goal of interrogating existing literature was first to identify the trends, topics, and thematic areas of concern for researchers in conflict resolution and communication. In addition, a review of existing literature also provided invaluable insight into methodological, conceptual, communication, and advocacy strategies used to address cultural conflicts emanating from harmful practices like FGM. This information was useful in helping position this study in the existing literature. In this phase, the review of existing literature was guided by questions such as the qualitative and quantitative literature on the role of communication and advocacy in resolving culture-based conflicts in Kenya, particularly those related to FGM. What are the contributions and main objectives of existing studies? Which theoretical frameworks have emerged (new or modified), as well as the definitions of key concepts in conflict resolution and communication? Importantly, this phase also evaluated the link between the research question and existing literature. In Kenya, which cultural issues did researchers find worthy of consideration in their studies?

Phase 2

In this phase, we focused on identifying relevant literature that will be included in our study on the role of communication and advocacy in resolving conflict: Culture-Based Conflicts in Kenya, FGM. To achieve this goal, we used the inclusion/exclusion criteria presented. The search was limited to academic publications (mainly journal articles, policy reports, conference proceedings, and books) in specific disciplines such as communication, conflict resolution, cultural studies, advocacy, and gender studies. We deliberately ignored disciplines that would have produced a high volume of technical studies unrelated to our study areas, such as medicine, engineering, and physics.

Phase 3

Phase three of our research focused on examining the impact of communication and advocacy in resolving conflicts relating to Female Genital Mutilation. We gathered information from academic and government sources to understand communication strategies and techniques used in FGM advocacy campaigns in Kenya. We evaluated the effectiveness of these campaigns in changing attitudes and behaviors toward FGM. Our goal was to identify gaps in current communication and advocacy efforts, provide recommendations for future campaigns, and inform policy formulation on resolving conflicts around FGM. Understanding the relationship between communication and advocacy in conflict resolution is essential in addressing the issue of FGM. The phase sought to demonstrate how communication and advocacy are critical tools in raising awareness

and mobilizing action against the harmful practice.

Discussion: Communication, Advocacy, and Potential Merits for Resolving Cultural Violence

Communication and advocacy are essential in changing attitudes and behavior toward FGM and promoting alternative practices that respect the rights of women and girls. Effective communication strategies, such as community education programs, mass media campaigns, and social media outreach, can help increase awareness about FGM's harm and the need to abandon the practice. Advocacy efforts and working with community leaders can help to create an enabling environment for the abandonment of FGM. A study by Kandala and Shell-Duncan (2019), which examined the implementation of one advocacy program in Senegal, concluded that communication and advocacy efforts could significantly impact behaviors related to FGM. However, planning these efforts in close cooperation with the community is necessary to avoid unintended consequences.

Mwangoka (2022) states that communication and advocacy efforts unite various stakeholders, including government agencies, NGOs, healthcare professionals, and community-based organizations. This collaboration allows for sharing resources, expertise, and best practices. By pooling their efforts, these stakeholders can significantly impact addressing FGM and providing support services for survivors. Also, effective communication and advocacy can influence policymakers and lawmakers to enact legislation and policies that protect women and girls from FGM. Advocacy efforts can lead to the introduction of legal frameworks that ban FGM and enforce penalties for its practitioners. These policy changes provide a strong foundation for protecting the rights of individuals and act as a deterrent to the continuation of the practice.

One way in which communication and advocacy can be effective in resolving culture-based conflicts is by promoting awareness and education (Sood et al., 2020). By educating communities on the negative effects of harmful cultural practices like FGM, people can understand the need for change and take steps to eradicate these practices. This education can take various forms, including public campaigns, workshops, and community dialogues. Advocacy can also be an effective tool in resolving culture-based conflicts by engaging community leaders. Community leaders play a critical role in promoting change in their communities. They can use their influence to promote alternative cultural practices that do not harm women and girls. They can also use their influence to push for policy change that supports eradicating harmful cultural practices.

Empowering women and girls is another crucial aspect of resolving culture-based conflicts. Women and girls are often the most affected by harmful cultural practices like FGM. Empowering them to speak out against these practices can be a powerful tool in promoting change. This empowerment can come in many forms, including education, training, and providing access to resources such as survivor support services where counseling, healthcare, economic empowerment, and safe spaces for survivors are initiated (Sood et al., 2020).

Examples of Communication and Advocacy Strategies Used in Kenya

Pushing for Increased Community Involvement: Community involvement is an essential strategy used in FGM advocacy campaigns in Kenya. By involving the community in the advocacy process, advocates can build trust and gain the support of community members. This undertaking is significant given that FGM is deeply ingrained in many communities in Kenya and is often seen as a rite of passage for girls. Community involvement can take many forms, including community meetings, door-to-door campaigns, and engaging with local leaders and influencers. One example of successful community involvement in FGM advocacy campaigns in Kenya is the work of the NGO Amref Health

Africa. The NGO uses a community-led approach to advocate against FGM, with community members taking the lead in sensitization efforts. Through community meetings, door-to-door campaigns, and engagement with local leaders and influencers, Amref Health Africa has reached thousands of community members and encouraged behavior change (Shell-Duncan et al., 2017). According to Muhula et al. (2021), the community-led alternative rite of Passage (CLARP) initiated by AMREF has realized an FGM decline by 24.2% among girls, an increase in girl schooling years by 2,5 years, and reduced teenage marriages and childbirth. Moreover, there has been an increase in school retention and completion.

Use of Social and Mass Media: Mass media is another key strategy used in FGM advocacy campaigns in Kenya. Mass media can reach a large audience and can be used to raise awareness about the harmful effects of FGM and the importance of ending the practice. Mass media can take many forms, including radio, television, and social media. One example of using mass media in FGM advocacy campaigns in Kenya is the "Tunza Mama" campaign by the NGO Equality Now. The campaign uses radio dramas and talk shows in Kiswahili to raise awareness about FGM and encourage behavior change. The campaign has successfully reached a large audience and increased awareness about the harmful effects of FGM (Mwanza et al., 2021). Notably, the "Tunza Mama" campaign focused on an empowering approach by highlighting the importance of ending the practice and encouraging community members to take action. The campaign shifted the narrative towards empowerment, human rights, and positive change. It also highlighted the potential for personal growth, education, and opportunities for girls and women when protected from FGM.

Use of Social Norms Approaches: Social norms approaches are another critical strategy used in FGM advocacy campaigns in Kenya. The social norms approach focuses on changing the norms and beliefs that underpin harmful practices such as FGM. Social norms approaches can take many forms, including community dialogues, role-playing exercises, and the use of peer educators. One example of using social norms approaches in FGM advocacy campaigns in Kenya is the "Alternative Rite of Passage" (ARP) program by the NGO Samburu Girls Foundation. The ARP program provides an alternative to FGM by providing girls with education, life skills training, and a ceremony to mark their transition to womanhood. The program has successfully changed the social norms around FGM in the Samburu community and has significantly reduced the practice (Takayanagi, 2017).

Personal stories are another critical strategy used in FGM advocacy campaigns in Kenya. Personal stories can be a powerful tool for raising awareness about the harmful effects of FGM and encouraging behavior change. Personal stories can take many forms, including testimonials from survivors of FGM and stories from community members who have decided not to practice FGM. One example of using personal stories in FGM advocacy campaigns in Kenya is the "I Will End FGM" campaign by the NGO Safe Hands for Girls. The campaign features personal stories from survivors of FGM and community members who have decided not to practice. According to a study by the NGO Open Society Foundations, personal stories have effectively raised awareness about FGM and encouraged behavior change (Waigwa et al., 2018).

Advocacy Campaigns in Changing Attitudes and Behavior toward FGM

The effectiveness of FGM advocacy campaigns in changing attitudes and behaviors towards the practice in Kenya has been debated among scholars and activists. While some studies suggest that advocacy efforts have significantly reduced the prevalence of FGM in the country, others argue that progress has been slow and that more needs to be done to end the practice. Several studies have shown that FGM advocacy campaigns in Kenya have positively impacted changing attitudes toward the practice. For exam-

ple, a study by Shell-Duncan et al. (2017) found that the percentage of women in Kenya who support the continuation of FGM decreased from 49% in 1998 to 32% in 2008. The study attributed this decline to various factors, including advocacy campaigns that have helped raise awareness about the harmful effects of FGM on girls and women.

Another study by Cheruiyot (2022) that assessed the contribution of participatory communication in the fight against FGM found that advocacy campaigns significantly impacted changing attitudes towards FGM among the Marakwet community in Kenya, with participants reporting increased knowledge about the practice and a greater willingness to speak out against it. However, while FGM advocacy campaigns have successfully changed attitudes toward the practice, their impact on actual behavior change has been more limited. According to the study, while awareness of the harmful effects of FGM has increased in Kenya, the practice's prevalence has remained relatively unchanged. The study found that while most women and men in Kenya were aware of the harmful effects of FGM, only a small percentage had stopped practicing it.

Furthermore, some studies suggest that FGM advocacy campaigns may have unintended negative consequences, such as reinforcing harmful gender stereotypes and stigmatizing communities where the practice is prevalent. For example, a study by Nam (2021) found that FGM advocacy campaigns also stigmatized communities where the practice was prevalent, resulting in increased resistance to behavior change. While FGM advocacy campaigns in Kenya have positively impacted changing attitudes toward the practice, their impact on behavior change has been more limited. In order to be more effective in ending the practice of FGM, advocacy efforts should be combined with other interventions, such as improving health and education systems, to promote a positive environment and increased access to information. In addition, advocacy efforts should be

In order to be more effective in ending the practice of FGM, advocacy efforts should be combined with other interventions, such as improving health and education systems, to promote a positive environment and increased access to information. Additionally, advocacy campaigns should be implemented in conjunction with national and international organizations that aim to combat FGM by promoting sex education, promoting respect for women's rights, funding research into the effects of FGM on individuals and broader society, and working towards eliminating FGM. Additionally, advocacy campaigns should be designed to avoid unintended negative consequences, such as stigmatization and reinforcing harmful gender stereotypes.

Recommendations

Despite the successes of advocacy campaigns against FGM in Kenya, gaps still need to be addressed in future campaigns. Here are some recommendations for addressing these gaps:

There is a need to recognize the diversity within communities practicing FGM and tailor communication strategies to specific target audiences. Different age groups, genders, and cultural subgroups respond differently to messaging. It is, therefore, paramount to understand their needs, beliefs, and concerns and adapt communication approaches accordingly to resonate with them effectively (Chege, 2001). The approach can help communicate and advocate for girls and women's health rights when they resonate with the message (Mwendwa et al., 2020).

Communication and advocacy efforts must also focus on empowering women and girls to speak out against FGM. Providing them with information, education, and skills helps build their self-esteem and confidence to resist pressure to undergo the practice. These initiatives often include mentorship programs, support groups, and training sessions to equip girls and women with knowledge and resources to make informed decisions. Communication and advocacy efforts are instrumental in pushing for anti-FGM

law enforcement. By working with lawmakers, human rights organizations, and legal experts, advocates can influence the strengthening and implementation of laws and policies that address FGM and provide support to survivors (Onyango, 2021).

Advocacy campaigns should be monitored and evaluated to determine their impact on attitudes and behavior change toward FGM. Such an evaluation will enable stakeholders to assess the campaign's effectiveness and make adjustments where necessary. Monitoring and evaluation can be done through surveys, focus group discussions, and other feedback mechanisms. Building sustainable solutions: Advocacy campaigns should be designed to promote sustainable solutions for eliminating FGM (Barrett et al., 2020). The actionable areas include supporting the development of alternative income-generating activities for women and girls, promoting education and awareness, and empowering them to make informed choices about their bodies. Thus, communication and advocacy are crucial in resolving culture-based conflicts in Kenya, particularly in the fight against FGM. While progress has been made in reducing the prevalence of FGM in Kenya, there is still work to be done to eliminate this harmful practice. By addressing the gaps identified in current campaigns and implementing the recommendations provided, stakeholders can work towards achieving sustainable solutions for eliminating FGM in Kenya (Mwendwa et al., 2020).

Conclusion

Communication plays a vital role in raising awareness about the harmful effects of FGM on the physical and mental well-being of girls and women. In order to reach a wider audience, advocacy campaigns must utilize various communication channels, such as community gatherings, radio programs, television, social media, and community influencers. The focus is on disseminating accurate information, debunking myths, and promoting alternative rites of passage (Kandala & Shell-Duncan, 2019). According to Graamans et al. (2019), engaging with community leaders, including religious leaders, elders, and influential individuals, is crucial in addressing entrenched cultural practices sensitively. Advocacy efforts involve dialogue and collaboration with these leaders to change mindsets, challenge harmful traditions, and gain their support in advocating against FGM. Their endorsement can significantly influence community attitudes and behaviors.

Grassroots organizations and NGOs play a crucial role in advocating against FGM. They must work closely with affected communities, providing education, counseling, and support to families, girls, and women. These services can enhance resilience and foster positive relationships with community members. Proponents of the practice are more likely to turn against their traditions if they perceive themselves as outsiders of the tradition and a threat to community identity. By linking with local organizations, grassroots NGOs can gain more knowledge about the specific needs of affected communities. For instance, organizations such as AMREF and UNICEF may target marginalized or vulnerable women abandoned by their families after experiencing violence or other traumatic events (Kandala & Shell-Duncan, 2019).

Resolving culture-based conflicts is a long-term endeavor. Therefore, communication and advocacy efforts must be sustained to bring about lasting change. Continuous monitoring, evaluation, and adaptation of strategies are necessary to ensure effectiveness. Building local capacity and empowering community members to take ownership of the advocacy efforts is also crucial for sustained progress (Sood et al., 2020).

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COMMUNICATION APPROACH BETWEEN DOCTORS AND PATIENTS REGARDING COVID-19: A STUDY ON MHEALTH APPS

Sajida Ferdous[1]

Abstract

This study investigated the communication approach between doctors and patients on mHealth apps in Bangladesh. To fulfill the research objectives, this study employed a qualitative research approach. The study addressed the treatment-providing process concerning COVID-19. It outlined how the patients get informed about the apps and examined what type of communication is most beneficial to the users on these apps. In addition, it ascertained the users' views on considering the apps as an alternative to in-person communication. The findings suggest that mHealth apps have become more significant in the healthcare sector, as they provide convenient accessibility, specific care, and efficient ways to communicate for patients and healthcare professionals, particularly during times of crisis like the COVID-19 pandemic.

Key words: Communication Approach, Doctors, Patients, COVID-19, mHealth Apps.

Introduction

An important and noticeable effect on health services and outcomes in Bangladesh is how doctors and patients communicate with each other. It is true that this is a basic part of any relationship, but it is especially important between doctors and patients. Thus, the approach ought to be quite robust and comprehensive. A good method of communication with patients definitely makes them feel more connected and content, and it supports the idea that doctors should answer all of their patients' questions (Jahan & Siddiqui, 2019).

Patients' satisfaction, comprehensiveness, and trustworthiness are attributed to the establishment of effective communication between doctors and patients. Regardless of this fact, regrettably, all of these are severely obstructed due to COVID-19. During COVID-19, communication between doctors and patients was hindered owing to the rapid transmission of the virus. The doctors were required to wear personal protective equipment (PPE) and maintain a certain distance from the patients, which extremely impeded their ability to build an effective communication approach. Additionally, in-person communication was unfeasible in some contexts (Nwoga et al., 2020).

1 M.A. in Communication, Media, and Persuasion at Idaho State University, Pocatello, Idaho, United States. Email: sajidaferdous@isu.edu, ORCID: 0009-0005-9811-5440

During COVID-19, a pandemic that halted the entire face-to-face medicare approach, the global use of mHealth apps, which are run by an online system on a mobile device, increased significantly. Patients and others can monitor their health using the tools that health apps offer. These apps frequently allow users to monitor and log information about their weight, blood sugar, heart rate, blood pressure, and cholesterol. If levels rise or fall, a patient may be able to act instantly (Islam et al., 2020).

Mobile health (mHealth) apps are an indispensable component of electronic health, and moreover, they constitute an emerging field in medical and public health. Noticeably, over the past years, mHealth apps have obtained substantial attention for their ability to provide effective health services. The World Health Organization (WHO) defined mHealth as "medical and public health services supported by mobile devices such as mobile phones, monitoring devices, personal digital assistants (PDAs), and other wireless devices" (WHO, n.d.).

Mobile health (mHealth) apps have noteworthy potential in health services. Admittedly, the mHealth app is one of the most acceptable digital solutions in such circumstances when in-person communication is unfeasible. Evidently, it has been one of the most convenient health service platforms in Bangladesh for the last couple of years. In Bangladesh, there is colossal potential for using mHealth apps in the healthcare sector with a view to ensuring healthcare quality, accessibility, and affordability (Alam, 2018).

The study dissected the communication approaches between doctors and patients on health apps regarding COVID-19 through a qualitative approach. The research aimed at exploring the effectiveness of communication between doctors and patients on mHealth apps. Furthermore, the study examined the satisfaction of the users.

Patient-Doctor Relationships in Bangladesh

It has been an important part of healthcare studies to investigate the relationship between doctors and patients in Bangladesh for a long time. According to most reports, the relationship between doctors and patients in Bangladesh is negative. Both patients and doctors are unhappy with the level of care and communication. There are many reasons for this, such as the fact that Bangladesh only has one doctor for every 1,000 people, while the World Health Organization recommends one doctor for every 500 people (WHO, n.d.). This means that doctors often have too much to do and not enough time to spend with each patient. There is also the fact that many hospitals and clinics in Bangladesh are not well-equipped and lack basic things like clean water, sanitation facilities, and medical supplies (Hamid et al., 2021). This makes it hard for doctors to provide good care. In Bangladesh, doctors are usually paid very little, which can make them tired of their job and unhappy with it. There are also cultural factors in Bangladesh that make it hard for doctors and patients to get along. For example, patients do not always feel comfortable questioning their doctors' authority, and doctors can be overbearing when caring for their patients (Hamid et al., 2021). Because of these things, patients in Bangladesh often say they felt rushed, not informed, and unhappy with their care. Doctors also say they are overworked, underpaid, and treated badly by their patients (Hamid et al., 2021).

However, as the number of patients increases and with the recent development of mHealth apps in Bangladesh, things are starting to change. The relationship between doctors and patients is improving because people understand some of the complex medical terms thanks to the mHealth apps. Improving the relationship between doctors and patients is important because, as Hamid et al. (2021) stated, the relationship between doctors and patients has a big impact on how well medical treatments work and what outcomes they produce. The values and preferences of the patient, along with the medical facts that the doctors discovered, are very important for making clinical decisions. There is evidence that a good doctor-patient relationship and better treatment

in Bangladesh happen when people make decisions together. A good relationship and communication between a doctor and patient are linked to improving the health-related quality of life of people who have chronic illnesses. Most decisions about an accurate diagnosis, good treatment, and health outcomes in patient-centered care depend on how well the doctor and patient get along (Hamid et al., 2021).

On the other hand, medical outcomes are not as good when there is mistrust between the doctor and the patient. So, the relationship between a doctor and a patient is an important part of healthcare. The whole healthcare system is hurt when people do not trust their doctors because of bad doctor-patient relationships (Ridd et al., 2011). It is also important to know about the unresolved issues in medical language that have to do with health services in Bangladesh. The medical language barrier makes it possible for patients and health service providers to not understand each other, and it is hard for a country to get good health services without getting past the medical language barrier (Bhuiyan et al., 2019).

Improving the doctor-patient relationship is essential for improving the quality of healthcare in Bangladesh. By addressing the factors that contribute to the poor relationship, it can be ensured that patients receive the care they need and deserve.

Literature Review

Effective communication performs an essential clinical function, which is the heart and art of treatment, in order to establish a therapeutic relationship between doctors and patients. Admittedly, effectiveness in the communication approach between doctors and patients is crucial to ensuring a satisfactory treatment process. Nevertheless, the dissatisfaction and complaints of patients are due to the breakdown in the doctors' and patients' relationship. Ha & Longnecker (2010) demonstrated "how doctors attempt to augment their communication skills to eliminate issues with their patients" in their study. Razu et al. (2021) examined "hindrances that were confronted by the healthcare personnel while providing treatment and service during COVID-19 in Bangladesh." It has been demonstrated in their study that "healthcare professionals in Bangladesh had a massive workload during the period of COVID-19". Furthermore, the country witnessed a potential systemic collapse in the healthcare sector. The study substantiated that, the lack of adequate healthcare professionals, knowledge regarding COVID-19 and basic training were the predominant reasons that caused excessive workload. As a result, it significantly increased psychological stress among professionals.

Hamid et al. (2020) dissected "the pattern and magnitude of the communication approach and relationship between doctors and patients in Bangladesh." From the viewpoints of the public and the patients, the study demonstrated that "the relationship between doctors and patients is ineffective". On the contrary, from the doctor's point of view, "the relationship was strong." The study concluded that lack of time allocation, incomprehensible prescriptions, and discriminating against patients because of their social status caused an ineffective relationship between doctors and patients.

Khan et al. (2021) examined "the use of health apps and their consequences during COVID-19 in Bangladesh". The study explored "the impact of using health apps from the perspective of patients and doctors". Their findings demonstrated that, "due to the rapid transmission of COVID-19, the use of health apps has been considerably increased." Moreover, the study revealed "the role of the health app in establishing an acceptable means of communication during COVID-19 as the apps maintained social distance."

In response to the rapid transmission of COVID-19, Asadzadeh & Kalankesh (2021) observed that mHealth was consumed largely with the aim of diagnosing infection, disseminating health care information, and providing treatment. The efficacy of mHealth apps with regards to the treatment of COVID-19 was satisfactory. These apps provided significant capabilities for health solutions, investigation, and utilization of appropriate

mechanisms and applications to combat COVID-19, alleviating the patients' physical and mental illnesses. These apps were considerably productive in terms of providing treatment and containing the rapid transmission of COVID-19.

Research Questions

Dissecting the communication approaches between doctors and patients on health apps regarding COVID-19 is the foremost objective of the research work. The study addressed the following research questions to accomplish the research objective:

RQ 1: How did people get informed about the mHealth apps?

RQ 2: Have these apps become an alternative means of healthcare regarding the treatment of COVID-19?

RQ 3: Is the communication process between doctors and patients effective?

Theoretical Framework

The theoretical framework is the structure that can grip or support the theory of a research study (Nabi, 2021). The theoretical framework introduces and describes the theory that explains why the research problem under study exists. (Gabriel, 2013). This study employed uses and gratification theory to fulfill the research objectives.

Uses and Gratification Theory

In this study, the uses and gratification theory has been applied to figure out how people satisfy their healthcare needs by using the selected apps. It portrayed the level of satisfaction, hence the effectiveness of the communication approaches. The Uses and Gratification theory is a well-established mass communication theory rooted in socio-psychological principles. Extensive research has demonstrated its efficacy in identifying the factors that contribute to individuals' intentions to engage with various forms of media, including television, the Internet, mass media, online gaming, and other media platforms (Blumler & Katz, 1974). Based on the Uses and Gratification theory, individuals consistently engage in an active pursuit of media content that satisfies their specific needs. Mobile health, often known as mHealth, is a technological platform that has the potential to meet individuals' health requirements. From this standpoint, it is crucial to investigate the elements of pleasure that may serve as incentives for individuals to engage with mHealth.

The Uses and Gratification theory focuses "less on the substance of a given medium and more on the motivations behind its use" (Ferdous & Khatun, 2020). Unlike the tradition of "media effects," which is concerned with "what media do to individuals" (Shin, 2010). Uses and Gratification theory suggests that audiences actively seek out media in a goal-directed way that provides them with the means of gratifying a wide variety of needs (Littlejohn, 1996). The Uses and Gratification Theory presumes the adoption of an innovation and attempts to explain the user's acceptance and continued use of that medium (Stafford et al., 2004).

Millennials' utilization of a wide range of new media platforms to acquire information may influence positive shifts in their cognizance, attitudes, and conduct with regard to the substance of media discourse. Active information accesses within the framework of the Uses and Gratifications theory account for the audience's behavior of seeking gratification through media content. This theory examines the interests and requirements of engaged audiences in relation to the utilization of media messages. At this time, there are two worlds: the world before COVID-19 and the world after COVID-19. It brought about significant changes in various domains, including academia, careers, entertainment, social interactions, family dynamics, the financial landscape, healthcare, and long-

term viability (Echegaray, 2020).

Methodology and Sampling

In this study, qualitative methodology has been used. This study conducted in-depth interviews with a total of 30 patients and 10 doctors. According to Lindlof and Taylor (2011), in-depth interviews are highly appropriate for comprehending the experience, knowledge, and worldviews of social actors. Two mHealth apps named "Doctor Dekhao" and "Sebaghor" were selected as samples. It is to be noted that the apps were selected based on their frequency of downloads by users. In-depth interviews with doctors and patients from the two selected apps have been conducted to explore in detail a respondent's point of view, experiences, feelings, and perspectives. For the in-depth interviews, the interviewees first received communication via email, and if they consented to the interview, it took place in person. The timeframe for interviews was between January 2021 and April 2021.

As a population, five doctors and fifteen patients were chosen randomly from each app. The eligibility criteria for the interviews were doctors with at least five years' experience and patients who had COVID-19 symptoms or had COVID-19 before. No specific criteria were established regarding the demographic features of the interviewees, such as age, gender, educational level, and so forth. The data that was gathered has been subjected to analysis utilizing a thematic method. During the interview process, a set of predetermined questions were asked. The researcher transcribed the interviews in their entirety, subsequently amended them, and proceeded to examine the transcriptions. The researcher did not use any particular software tool for the purpose of data analysis. This transcription process facilitated the identification and categorization of various themes and subthemes. The research study gained clearance from the Idaho State University's Institutional Review Board (IRB), and each participant provided informed consent by signing the requisite form before taking part in the interview. In order to ensure the preservation of anonymity and privacy, the collection of any identifying information, such as names, phone numbers, residential addresses, or emails, was deliberately avoided.

Data Analysis & Findings

In this section, the data obtained from the interview has been analyzed. The researcher adhered to the procedural guidelines of thematic analysis as suggested by Braun and Clarke (2006) in order to ascertain topics that were pertinent to the research inquiries at hand. Initially, in order to obtain a comprehensive comprehension of the data, the researcher engaged in several readings of the interview transcriptions and documented overarching themes. Subsequently, the process of open coding was undertaken to discern preliminary groupings within the dataset.

Speno and Halliwell (2021) assert that the process of open coding is characterized by iteration, wherein thematic categories are continually developed, combined, and revised. The subsequent data segments were allocated to pre-existing categories or novel categories that were established. After that, the researcher went back and looked at the textual fragments that fit into each thematic category again to make sure they made sense and put together a coherent set of data. Ultimately, the transcripts underwent a final assessment in order to ascertain the most persuasive instances that exemplified each theme and subtheme. This section analyzed the patterns of communication between doctors and patients and the hindrances that obstructed the process. Furthermore, the study probed the strategies and effectiveness of the communication approach between patients and doctors on the selected mHealth apps.

Table 1: Interview of Patients

Interview of Patients		
Main Theme	Sub Theme	Number of participants mentioning this theme/ sub-theme one or more times (%)
Getting Informed about Apps	Facebook Page	15 (50%)
	YouTube	3 (10%)
	Friends, Relatives	12 (40%)
Mood of Communication	Video Consultation	20 (67%)
	Chat with the Doctor	10 (33%)
Treatment Policy	Payment and Appointment	30 (100%)
	Previous Health Record	26 (87%)
	Prescription	30 (100%)
Gratification	Receiving Feedback	24 (80%)
	Alternative Means of Face-to-Face Interaction	24 (80%)
	Satisfaction	26 (87%)
Technological Factors	Disconnection, Slow Speed, Breaking Voice	11 (37%)
	Overcoming Technological Barriers	20 (67%)
	Internet Speed, Spotty Video	25 (83%)
Comprehensiveness	Special Term Regarding COVID-19	14 (47%)

Table 2: Interview of Doctors

Interview of Doctors		
Main Theme	Sub Theme	Number of participants mentioning this theme/ sub-theme one or more times (%)
Mode of Communication	Video Consultation	7 (70%)
	Chat With the Patient	5 (50%)
Technological Factors	Internet Speed	7 (70%)
	Spotty Video	4 (40%)
	Overcoming Barriers	8 (80%)
Social Factors	Local and Religious Values	4 (40%)
	Eradication of Mental Stress	8 (80%)
Comprehensiveness	Feedback	10 (100%)
	Breaking down the Jargons	6 (60%)

Interview of Doctors		
Main Theme	Sub Theme	Number of participants mentioning this theme/ sub-theme one or more times (%)
Gratification	Satisfaction	7 (70%)
	Alternative Mode of Communication	8 (80%)

Getting Informed of Apps

In regard to the first research question, which is about how people knew about the selected apps, a total of 15 interviewees revealed that they learned about the apps from Facebook, while 3 interviewees learned from YouTube, and 12 interviewees from their friends and relatives. From the Facebook pages of the mHealth apps, they knew about their wellness and fitness services. Further, on YouTube, they watched the videos regarding the service and the doctor's advice. In addition, patients learned from their friends and relatives who took part in the service.

Mood of Communication

Twenty patients (67%) indicated that video consultations were their favored mode of communication. Due to the fact that the doctors could arrange visual conferences with their patients, the most preferred form of communication for the doctors was also video consultations. Through this form of communication, they could see their patients live, and this way they could understand well about their health conditions. The voice and color of the eyes were also essential factors for providing treatment, and moreover, through video consultations, they could easily understand them.

Treatment Policy

The interviewees revealed that these apps offer an online-based doctors' appointment service. For booking appointments, patients can find a specific option on the apps or call a given number for the initial appointment slot booking. With the Bkash or Rocket payment systems, these apps let patients pay the fee. It is rooted in the fact that appointments are booked as per the availability of the doctors; users get a confirmation of their appointment via phone call, email, or text message. The patients revealed that the doctors checked their previous medical documents. A total of 26 patients mentioned that the appointed doctors checked all the previous necessary information about their health, whereas the other four revealed that they only took their information concerning COVID-19. The interviewees mentioned that digital prescriptions were used in the treatment process. They highlighted that sometimes doctors write the name of the medicine on the chat box, and in other cases, they upload the picture of the prescription on the chat box.

Gratification

The interview data revealed that each and every doctor attempted to get feedback on their treatment from the patients. Further, they gave their patients a chance to talk about any word or process that they did not understand. The doctors attempted to let them ask questions concerning their treatment. The interview process investigated that mHealth apps have been widely used for various purposes for mitigating the COVID-19 pandemic. It delivers mobile access to a wealth of COVID-19 knowledge resources, in-

cluding up-to-the-minute guidance, tools, training, and virtual treatment. The patients revealed that the COVID-19 pandemic led to an augmentation in health app downloads, as most of the time, in-person consultation was rather impossible due to the risk of viruses. In the view of the interviewees, this kind of service can be a viable way to reach people in remote areas, such as rural regions.

At this time of pandemic, these apps were an alternative solution that helped people from remote areas connect with experienced doctors. They believe that these apps are working as a future endeavor, and moreover, during the pandemic, they have become an alternative way of communication between doctors and patients. This answers the second research question, whether these apps became an alternative means of healthcare during COVID-19. Likewise, most of the interviewees expressed their satisfaction with this app. According to them, though there are some obstacles, this type of communication is effective. Because they were able to receive feedback and resolve technological and terminological issues. This answers the third research question, in the light of the Uses and Gratification theory, which concerns whether or not the communication process between doctors and patients was effective. As one of the doctors mentioned:

> "mHealth apps have emerged as a promising development in the healthcare sector, significantly transforming patient involvement and communication in the face of the problems posed by the pandemic. Although certain obstacles persist, the utilization of digital tools is progressively facilitating the advancement of a future in which healthcare becomes more accessible, tailored to individual needs, and effective."

Technological Factors

According to the patients, the most common hurdles included technology that was not working properly, technical issues that made it hard for them to connect with their providers, and technology that was not being tested properly. There were also barriers like not knowing about mobile health apps, not having enough technical skills, and not having enough time or confidence to use them. Thirteen of the people interviewed said that they did reconnect with the video chat after getting cut off. They were going to leave their house to get a better connection. The other people interviewed, on the other hand, said they did not face any major problems. They even got around small problems, like sound system issues, by wearing headphones.

Social Factors

The study dissected how the doctors valued local and religious observances concerning COVID-19 as a pandemic. It is rooted in the fact that eight doctors revealed they considered the patient's health first rather than local and religious observance, while four doctors affirmed that they considered local and religious observance as well. Nevertheless, 80% of doctors attempted to eradicate any mental stress regarding COVID-19.

Comprehensiveness

There are many technical terms related to COVID-19 that were not comprehensive for the common people, such as isolation and sanitization, which were pretty difficult to understand for people from rural and marginalized localities. The interviewees highlighted that the doctors mostly broke down those terms, which were difficult to understand for their patients. According to one patient:

"During COVID-19, doctors played a crucial role in facilitating effective communication between the medical community and the general public. They helped patients

understand complicated medical terms like "isolation" and "sanitization" by translating them into simpler language. This kept patients from getting lost and confused as the crisis situation changed quickly."

Discussion

Due to the fact that both doctors and patients performed as active speakers and listeners as the doctors accepted feedback from the patients, those apps used a two-way communication approach between doctors and patients. Moreover, the doctors checked the previous medical documents of the patients. Additionally, they attempted to break down the particular terms concerning COVID-19 for the patients. Moreover, the doctors attempted to mitigate the mental torments of the patients. All the doctors accumulated feedback from the patients. By the same token, most of the patients revealed they could express their concerns and thoughts, whereas some patients experienced inconvenience while providing feedback.

According to the findings of this study, mHealth apps significantly contributed to reducing the difficulties presented by the COVID-19 pandemic. The increased app downloads that occurred during the pandemic as a result of the inadequacies of in-person consultations underscore the viability of these applications as a remedy, especially in remote areas. Both patients and doctors conveyed contentment with the apps, validating their efficacy as a substitute method of providing healthcare.

On the other hand, the research also highlights impediments and difficulties. A few users encountered challenges such as technical difficulties, limited knowledge regarding mHealth apps, inadequate technological proficiency, and time restrictions. The aforementioned obstacles highlight the criticality of user education and ensuring the dependability of the technological infrastructure that underpins these applications.

The examination of doctors' viewpoints demonstrates divergent strategies regarding the incorporation of religious and local observances into the pandemic framework. Although certain doctors prioritize patient health above these observances, others do take them into consideration. Nevertheless, a significant proportion of medical professionals' endeavored to mitigate the psychological strain associated with COVID-19, placing particular emphasis on the value of comprehensive healthcare in the midst of a public health emergency.

Previous studies outlined that the use of apps for healthcare has become a focal point of innovation that could aid patients in their everyday healthcare management. These apps can contribute to increasing the effectiveness and reducing the costs of healthcare delivery, as well as preventing illnesses through behavior change (Khan et al., 2021). This study is relevant to other previous studies because it reveals the effectiveness of these apps in terms of communication between doctors and patients. Furthermore, it is based on a pandemic context and attempts to evaluate the approach as a substitute for face-to-face consultation. In summary, there were significant findings regarding the efficacy and adoption of mHealth apps throughout the COVID-19 pandemic. This statement emphasizes the potential of these applications as a future undertaking in healthcare while also recognizing the importance of tackling technological obstacles and taking into account various cultural and religious contexts when providing healthcare.

Recommendations

The findings of this study highlight the potential of mHealth apps to improve healthcare access and communication, particularly during times of crisis like the COVID-19 pandemic. However, addressing technological and social barriers is crucial to ensure wider adoption and effectiveness. Here are some recommendations based on the find-

ings:

- Increased public awareness of mHealth apps through targeted campaigns is important, especially in rural communities.
- Training and support to help people with limited technical skills are needed so that they can use mHealth apps effectively.
- Local and religious beliefs need to be considered when designing mHealth app content and communication strategies.
- Finally, the use of simple language and visuals will be helpful in explaining complex medical terms and procedures.

Conclusion

mHealth apps have become more significant in the healthcare sector as they provide convenient accessibility, specific care, and efficient ways to communicate for patients and healthcare professionals. Through the identification and mitigation of prevailing obstacles and the implementation of user-centric methodologies, mHealth apps have the potential to significantly enhance both the accessibility and outcomes of healthcare services. For the treatment of COVID-19, the mHealth apps were widely used. Due to lockdown and other reasons during the pandemic, it was pretty difficult for people from rural areas to come to the city and consult doctors. In the view of the interviewees at that moment, those health apps worked as an alternative platform for conducting communication between doctors and patients. The two-way communication process among doctors and patients on these selected mHealth apps performed as active speakers and listeners as the doctors took feedback from the patients. Although, unlike in-person communication, there were some technological barriers while communicating. However, thanks to the collaboration of doctors and patients, these types of obstacles were mostly overcome. In spite of the fact that they attempted to combat all of the barriers, sometimes they had no control over various contexts, such as poor internet connections.

Further research in this sector is required in the near future to ascertain the applications of mHealth apps beyond the COVID-19 pandemic and to obtain a better understanding of how these emerging modes of communication are currently being implemented in the health sector.

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THE PROMOTION OF VEGANISM BY INFLUENCERS. A CASE STUDY OF SELECTED INSTAGRAM PROFILES

Barbara Sitko[1]

Abstract

Social media functions as a space for various activities, not only in the personal or business dimension, they are also a tool for promoting important ideas. Social media can be used by both institutions and private individuals – especially influencers who reach a wide audience with their message. The article discusses the issue of the promotion of veganism by (social) influencers. The author analyses, in a form of a case study, selected Instagram profiles in terms of content and form of messages in order to do this. The starting point for the considerations is the characteristics of social media (with particular emphasis on Instagram) and the explanation of the term influencer and other related issues. The article also introduces the issue of the multidimensionality of veganism.

Key words: social media, Instagram, influencers, promotion of veganism, multidimensionality of veganisms

Introduction

The topic of veganism appears in social discourse in various contexts and dimensions. One of such contexts is the issue of social activity undertaken by people living on a plant-based diet. It can be noted that vegans can be, in general terms, a potential source of social change., They set an example for other people by signing petitions or participating in protests related to the issue of veganism. This type of activity is written into the broader psychological literature on minority influence, according to which a minority of committed individuals presenting a coherent message can contribute to a wider social change over time (Judge, Fernando & Begeny, 2023, p. 2).

Madeline Judge, Julian W. Fernando and Christopher T. Begeny describe two orientations of veganism. The first of these, deontological, has the dimension of a moral duty. It means that inflicting harm on animals is perceived by vegans of this orientation as intrinsically evil and they base their beliefs on this foundation, regardless of other consequences of veganism. The second orientation is related to the positive consequences of veganism for the environment or human health (Judge, Fernando & Begeny, 2023, p. 4) (discussed later in the publication).

The wide range of plant-based products available for at least a few years now and the consumers' interest in them almost all over the world had made the "plant-based

1 Ph.D. cand., Faculty of Social Sciences, The Pontifical University of John Paul II in Krakow, e-mail: sitko.barbara.k@gmail.com, ORCID: 0000-0001-7770-1858

diet" popular and adopted by the general public. The interest of media in this area is also important. Veganism, generally speaking, is a lifestyle promoted especially by celebrities, athletes and even politicians (Cader & Lesiów, 2021, pp. 10-11).

People associated with the broadly understood vegan movement take action in various areas. Currently, the Internet has become a significant area of activity of individuals. An important place on the Internet is occupied by influencers, i.e. the Internet content creators are building a community around themselves. Typically, they work with different brands, primarily for commercial purposes, but they can also promote certain ideas or beliefs among their audience, thus using their influence.

The main goal of this article is to outline the role of (social) influencers in the promotion of veganism, in the context of the issues they raise in this area. The achievement of the goal of the study required formulating research questions. The main research problem was formulated in the following question: "How do Instagram influencers promote veganism?". In addition, the following specific questions were raised:

1. What type of veganism content do the influencers post on their Instagram profiles?
2. What is the thematic range of messages published by the influencers on their Instagram profiles?
3. Which dimensions of veganism do the materials published by the influencers on their Instagram profiles refer to?

In order to answer the questions, a qualitative analysis of the messages on selected Instagram profiles in terms of content and form will be carried out as a case study.

The subject of research, consisting of profiles of vegan influencers, requires the introduction of the most important concepts in the area of social media. The question about the multidimensionality of veganism indicates the need to discuss its individual dimensions. An outline of this issue will form the background to these considerations.

An outline of the multidimensionality of veganism

According to the original definition created by Donald Watson and The Vegan Society (founded in 1944 in the UK), veganism is: "a philosophy and way of living which seeks to exclude—as far as is possible and practicable—all forms of exploitation of, and cruelty to, animals for food, clothing or any other purpose; and by extension, promotes the development and use of animal-free alternatives for the benefit of animals, humans and the environment. In dietary terms it denotes the practice of dispensing with all products derived wholly or partly from animals" (*The Vegan Society*). This quoted definition is still valid. It is, therefore, necessary to elaborate on its individual elements, indicating the multidimensionality of veganism.

Veganism in the ethical dimension refers primarily to not harming animals, as a consequence of which, these beings should not be used or exploited by people in any form. This question is addressed in the arguments of various philosophers and ethicists. Nonetheless, it is generally based on two basic approaches or directions of ethics, namely the theory of animal rights and the idea of animal welfare, which are two strands within the Animal Liberation Movement. According to the first concept, represented by the American philosopher and theologian Tom Regan, animals (like people) have basic rights – to live and not to be harmed, due to the fact that their life has an intrinsic value (Regan, 1985). The second concept, on the other hand, is based on a utilitarian philosophy, of which the main proponent is the Australian philosopher Peter Singer. It must be understood above all in the context of the equal interests of all creatures, and therefore also of non-human animals, because of their capacity to feel pleasure and suffering (Singer, 2004, pp. 17-19). It is worth adding that the above postulates are reflected in the increased activity of various organisations (especially belonging to the third sector) dealing with animal rights and improving their welfare.

Nowadays, veganism in the ecological dimension also performs a special role, which is related to the progressing climate and ecological crisis, for which responsible is, among others, large-scale industrial farming. The production and consumption of meat and dairy products is one of the factors contributing to global warming, hence the elimination (or at least a significant reduction) of animal products from the diet is beneficial for the environment (Hayek, 2019, p. 10).

In addition, it cannot be ignored that veganism is also associated with the health benefits of being on a plant-based diet. Health specialists emphasise that people adopting a diet excluding animal products are less likely to suffer from cardiovascular diseases than people on a traditional diet, but it is necessary to properly balance the plant-based diet (Parol & Mamcarz, 2015, pp. 92-99).

Veganism is, therefore, understood as a philosophy, a lifestyle or a diet, which indicates its multidimensionality. However, not all vegans share the same values and norms attributed to veganism; hence, Jessica Greenebaum distinguishes three groups of vegans: health vegans, environmental vegans and ethical vegans (Greenebaum, 2012, p.130). Furthermore, it is worth mentioning that researchers such as Christopher J. Hopwood, Wiebke Bleidorn, Ted Schwaba and Sophia Chen developed the Vegetarian Eating Motives Inventory (VEMI) in their study. They included three main themes for adopting a plant-based diet: health, the environment and animal rights. Based on the study, they noted that the most common reason for people following a traditional diet to consider a plant-based diet is health, followed by environmental and animal rights reasons (Hopwood et al., 2020, pp. 1-20). However, a person may have more than one reason for becoming a vegan. Individual reasons can also cross permeate and complement each other. At the same time, it should be mentioned that in the literature on the subject, there are other motivations for going vegan, such as (Cader & Lesiów, 2021, p. 11):

a. practised religion (Jedlecka, 2016);
b. a set of moral principles (Collier et al., 2021; Gadzała & Lesiów, 2019);
c. a cultural factor, influence of tradition on the consumed food (Maj, 2018);
d. rejection of mass production due to unwillingness to consume globally-produced goods (Urbański, 2016);
e. a protest against the way of conduct of dishonest concerns and large production companies, e.g. through exploitation of the labour force (Mamzer, 2018).

It should be emphasised that the widespread trend of eating in a meat-free way requires both a lot of awareness and specific knowledge. Vegans often acquire this knowledge on the Internet, especially from various social media platforms (Kozioł & Błońska, 2021, p. 80). In general, there are various messages about veganism on the Internet, covering different dimensions. In order to discuss its individual aspects[2] in the online space, an inseparable element of these considerations is to introduce the specificity of social media and related issues – constituting the area of research.

Characteristics of social media their creators

According to one of the most popular definitions, developed by Andreas Kaplan and Michael Haenleinen, social media are a "group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of User Generated Content" (Kaplan & Haenlein, 2010, p. 61). In general, the definition of social media is broad, because it also includes not only basic social networking sites, such as Facebook or Twitter, but also dating applications, discussion forums, messengers (such as the popular WhatsApp or Snapchat) and even online games

2 In this study, they are limited to three main dimensions, covering health, environment and ethics.

(Roguski, 2020, p. 15).

Instagram is one of the social networking sites owned by Facebook (now rebranded as Meta), where visual content dominates. This platform has a wide range of functionalities and a growing number of users, which makes it an extremely attractive place not only for marketers (Grzechynka, 2021, p. 52) but also for all other network users. Especially for those who want to share photos, video materials and content attached to them with other users of this medium This application is a kind of a phenomenon, because it "affects the behaviour of recipients in the real world, redefines life attitudes or motivates to act" (own translation) (Roguski, 2020, p. 117). It also allows gaining popularity and, consequently, earning money.

A special place on Instagram is occupied by influencers. The term influencer means a person who: "thanks to their activities on the Internet, including social media, gathered a community of fans around themselves and became recognisable outside the circle of their closest friends. In addition, their actions have an impact on the decisions or attitudes of people whom they reach with their message"(own translation) (Roguski, 2020, pp. 59-60).

Influencers, therefore, perform an important role in marketing, hence discussing the phenomenon of influencer marketing is worthwhile. Radosław Wilusz defines this concept as "searching for popular and influential people in a given field and cooperation with them on the promotion of a brand or product through the use of a community organised around this persona" (the author's translation) (2017, p. 250). The researcher also drew attention to the benefits of using influencer marketing. These may include:

- relationships – the possibility of continuous contact of the influencer with their followers;
- active participation of recipients – social media users are sensitive and responsive to the message, which is conductive to their mobilisation;
- trust – consumers trust someone who arouses sympathy in them more than the traditional message. And the influencer's personality traits can inspire general sympathy in the audience, which leads to trust;
- authenticity – the influencer is seen as the voice of the consumer. This allows assigning a human dimension to a brand, which in turn is appreciated by the recipients (Wilusz, 2017, pp. 251-252).

It should be noted that there is no consensus among researchers on how many followers of a profile on a given social network are needed to have the influencer's status. However, it has been assumed that it should be at least 10,000 followers on Instagram to enjoy this status (Roguski, 2020, p. 60). Kinga Stopczyńska (2021, p. 140) distinguishes six types of influencers – according to the criterion of the number of their followers on social media. Their market potential is determined on this basis. These include:

- Nanoinfluencers – the number of followers of their profile ranges from 1,000 to 10,000;
- Microinfluencers – they have from 10,000 to 50,000 followers of their profile;
- Macroinfluencers – they have between 500,000 and 100,000 followers of their profile;
- Topinfluencers – the number of followers of their profile exceeds 1 million;
- Megainfluencers –the number of followers of their profile ranges from 1 to 5 million, they are referred to as celebrities;
- Stars – these are well-known personalities who, due to fame, reach over 5 million followers of their profile.

The term "influencer" is often intertwined with the term "celebrity", but there are some differences between them. In general, society admires celebrities, they are an in-

spiration to people. On the other hand, they are perceived as rather inaccessible. Influencers, on the other hand, are perceived as "ordinary" people with whom it is easier for the recipients to identify (Biesalska, 2022).

In addition to the quoted typology, there is also a division of influencers according to the type of content they create. According to this division, following Artur Roguski, we can distinguish (2020, p. 60): bloggers, podcasters, YouTubers and social influencers – operating on social media, i.e. Twitter, Snapchat, TikTok, Facebook or Instagram.

Profiles of vegan influencers on Instagram – a case study

Characteristics of influencer profiles and the criteria for their selection

As it had already been mentioned, social influencers operating on Instagram are the subject of research in this study. However, it is the material they post on their Instagram profiles that had been analysed. Due to the fact that it is not possible to trace all the profiles of vegan influencers on Instagram, it was necessary to choose their exemplification. This selection was made arbitrarily, in accordance with the following criteria:

- the user's description ("bio") and materials posted on a given profile indicate that it is mainly devoted to the issue of veganism;
- the number of followers of the profile is at least 10,000, which means that the person running the account has the status of an influencer (Roguski, 2020, p. 60);
- profiles are varied in terms of the number of followers. One profile belongs to a creator referred to as a microinfluencer, while the other belongs to a macroinfluencer;
- profiles are varied in terms of the nationality of the influencers (one profile belongs to a Polish influencer and the other to a foreign influencer).

After the initial observation of vegan influencers' Instagram accounts[3], two profiles meeting the above criteria were selected for analysis. They are briefly characterised in the context of profile description or the number of followers' criteria.

The first of the Instagram profiles selected for the analysis is the profile of Orestes Kowalski (@everydayheropl). He is a Polish vegan activist who also runs a YouTube channel and TikTok account, where he promotes a plant-based diet and educates about the situation of livestock on large-scale farms. The number of followers of his Instagram profile is 14.8 thousand, while the total number of posts on his profile is 734[4]. The account was created in August 2015. In the description of this user's profile ("bio") there is a link under which, among others, information about the possibility of purchase of a book on veganism of which he is the author – *Go vegan! 17 powodów, dla których porzucisz jedzenie mięsa (Go vegan! 17 reasons why you give up meat eating)* can be found. There are also links to his other social media profiles, including also his other pro-vegan publications. Moreover, he described himself as a digital creator, as well as a vegan, atheist and a supporter of street epistemology[5].

The second profile examined belongs to Ed Winters (@earthlinged). This UK user describes himself in his "bio" as a vegan activist and educator speaking on the topic of veganism even at the British universities. He has 597,000 followers and 805 posts on his Instagram profile[6] (it is the total number). The account was established in February 2016. The influencer advertises his book on the subject of veganism entitled *This Is*

3 According to the selected lists of Polish and foreign (in English) vegan influencers available on the following websites: https://infovege.com/listing_category/aktywisci-influencerzy/ and https://influencers.feedspot.com/vegan_instagram_influencers/

4 As of 05.11.2023.

5 Information taken from @everydayheropl Instagram profile.

6 As of 05.11.2023.

Vegan Propaganda on his profile. In his profile description, there is also a link redirecting to the page where the book can be purchased. In addition, there are links redirecting users to an online store offering several products like clothes with a veganism motif, or to an Instagram profile advertising the clothing brand[7] I.D.E.A Studios (Instagram profile @i.d.e.a.studios) – they indicate the cooperation of this influencer or an advertising contract with this brand (Instagram profile @earthlinged).

Characteristics of the research material and research methodology

The research material was collected in three months – August, September and October in 2022. The selected messages were analysed in the context of their content and form, based on the author's categorisation key consisting of three parts. In the first part, the profile from which the message came, the date of its posting and the type of message – photography, video, and boomerang – were coded. In the next part, the subject matter of the material was coded (categories: recipe, product promotion, opinion on a given topic, ethical issues, environmental aspects, an event in the life of an influencer, "mixed"[8], other). The last part covered the dimension of veganism in the message. This part of the categorisation key, in accordance with the considerations regarding the multidimensionality of veganism includes: health veganism, ethical veganism, environmental veganism, mixed, other.

The study used the media content analysis method, which is "a set of various techniques for the systematic study of streams or collections of messages, consisting in the most objective (...) distinguishing and identifying their possibly unambiguously specific, formal or content, elements and on the most precise (...) estimation of the distribution of the occurrence of these elements and mainly in comparative inference. Such an analysis is to move through getting to know the content of messages towards getting to know other elements and conditions of the communicative process" (Pisarek, 1983, p. 45). The study was carried out in accordance with the method of a qualitative paradigm.

Profile of Orestes Kowalski (@everydayheropl) – content analysis

During the analysed months, Orestes Kowalski published 37 posts on his profile. On average, he published 12 pieces of material per month. The footage was slightly dominated by photos – 21 in total, while 16 videos were posted.

The topics of this user's messages included the following issues:

- Plant-based diet – 1 material (photos) in a form of a recipe.
- Opinion on:
  a. ethical issues (animal welfare) – 21 materials (photos and videos, including influencer's statements);
  b. environmental aspects – 4 materials;
- other – 11 materials. Several posts including an undefined topic, some referring to other values of the influencer, unrelated to veganism or to events from his life, and also concerning the topic of pets.

Distance and a playful approach to individual topics can be observed on this creator's profile. This is expressed in some humorous visual and audio-visual messages, such as the one shown in Figure 1. This post refers to veganism in an environmental dimension. It contains a video created by this influencer that shows scenes involving animals and funny captions.

7 Also with motifs referring to the idea of veganism.
8 This means that a given message relate to the different dimensions of veganism.

Figure 1. An example of a post on Orestes Kowalski's Instagram profile having a humorous and creative form. Source: Orestes Kowalski's profile

On the other hand, Orestes Kowalski refers to scientific research in some posts, as illustrated in Figure 2. In this post, this influencer also used a video he had created. He cited the results of scientific research on the topic relating to environmental issues in the context of mass farming in it. It is presented in the form of specific graphs/tables.

Figure 2. A post on Orestes Kowalski's Instagram profile (referring to the environmental dimension of veganism), which received the highest number of likes in the surveyed period Source: Orestes Kowalski's profile

The above message received the highest number of likes on the @everydayheropl

profile (1059)[9]. The following comments on this post (3 out of 29 comments) have (randomly) been selected and may indicate the potential impact (similar to other materials published by this user):

"Więc hodowle zwierząt są nieopłacalne pod jeszcze większą liczbą względów niż do tej pory myślałam xd" (So animal farming is unprofitable in even more ways than I thought so far xd), (Instagram profile of Orestes Kowalski).

"Dlatego dieta roślinna jest najlepszą opcją!" (That's why a plant-based diet is the best option!), (Instagram profile of Orestes Kowalski).

"Niech to idzie w świat!" (Let it go out into the world!), (Instagram profile of Orestes Kowalski).

Profile of Ed Winters (@earthlinged) – content analysis

During the analysed months, Ed Winters published 23 posts, i.e. an average of about 8 materials per month. These messages constitute a thematically diverse content, especially videos – a total of 22. During the selected period, only 1 post with four photographs containing text was recorded on his profile.

Materials from the period covered the following topics:

- plant-based diet – in the form of 2 videos containing culinary recipes;
- opinions on such topics as:
  a. ethical issues (animal welfare) – 1 photo; 17 videos (including interviews, influencer statements and edited videos. Some of them have a positive overtone[10]);
  b. environmental aspects – 1 video;
- politics in the context of animal welfare – 2 videos;
- event promotion – 1 video.

Ed Winters' messages apply to all dimensions of veganism, as do Orestes Kowalski's messages. In the examined time period, ethical topics also dominate the profile of this user but drastic or shocking visual or audio-visual materials were not used. Figure 3 illustrates selected visual messages published by this author.

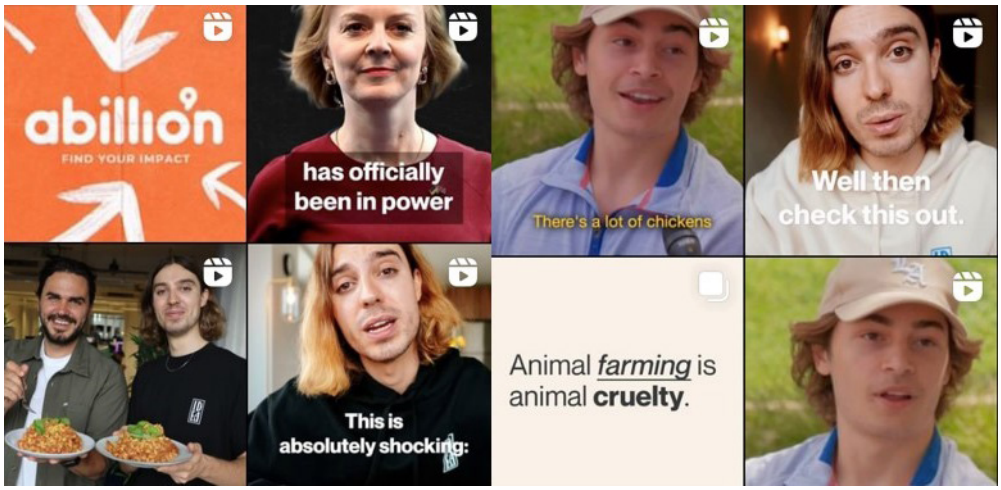

Figure 3. Examples of visual messages on Ed Winters' Instagram profile
Source: Ed Winters' profile

9 As of 10.11.2023. It should be added that the post in which Orestes Kowalski promotes his book received more likes. However, this post was categorized as 'mixed', so the author did not choose it as an example.

10 The positive tone of the message should be understood as evoking emotions such as curiosity or delight.

The potential impact of materials posted on the profile of this user can be evidenced by the content of comments to the message that received the most likes in the examined period[11] (number of likes – 43 515). This material refers to veganism in the ethical dimension. The following 3 out of 1108 comments are listed (randomly):

"All animals deserve respect", (Instagram profile of Ed Winters).

"so sad but so true – people need to make the connection, all animals deserve kindness", (Instagram profile of Ed Winters).

"Very well said", (Instagram profile of Ed Winters).

Figure 4. shows the post discussed above. The author cited scientific data relating to the scale of animal suffering on factory farms. He put this issue in the context of an incident that had occurred in the UK at that time - the killing of a dog by a famous person while hunting. In this post, Winters condemned hunting, focusing on some paradox - social outrage over the death of this dog while the killing of huge numbers of farm animals is accepted. He expressed it in the following words: "So if the death of one dog is morally wrong, the question we have to ask ourselves is, how can we possibly morally justify the deaths of hundreds of billions of animals every year who feel and suffer in the exact same way", (Instagram profile of Ed Winters).

Figure 4. A post on Ed Winters' Instagram profile (referring to the environmental dimension of veganism), which received the highest number of likes in the surveyed period
Source: Ed Winters' profile

Common features and differences in the discussed case studies

One of the key elements present in the messages of both influencers is the reference to scientific research (in both cases foreign research). In this type of a message, influencers present their own opinions on a given topic based on scientific research – most often in the form of quotations attached to visual and audio-visual materials or links redirecting to their source. In both Orestes Kowalski and Ed Winters' cases, this element is used within the two dimensions of veganism – ethical and environmental one. In the ethical dimension, arguments based on scientific facts relating to the suffering of animals on factory farms are mainly presented. In the context of the environmental

11 As of 12.02.2023.

dimension of veganism, on the other hand, they present the results of scientific studies showing the negative impact of factory farming on the environment and the climate.

Another element that plays a special role in the messages of both influencers is the promotion of a book on veganism, by each of them. The posts are used both to promote the idea of veganism (in various dimensions) and to increase the sales of these books, which makes them also a form of advertising. It should be added that in the posts of both authors there are also political issues related to the topic of farm animals.

It is worth noting that the influencers did not share content from other influencers or organisations on their profiles during the studied period. Instead, there were links redirecting to other communication platforms where they also have their profiles, as well as websites related to their activities.

In general, despite the fact that the analysed profiles are diverse, the messages on their profiles are similar in terms of content and the forms of communication used, as discussed above. The main difference, however, is that on the @everydayheropl profile during the period studied, some of posts (almost one third) were categorised as 'other', which are not related to the topic of veganism, whereas on the @earthlinged profile all posts are dedicated to this issue. This may indicate that his followers include people for whom issues related to veganism are distant. In this way, Orestes Kowalski could promote the idea to different audiences.

Summary and conclusions

To sum up, social media are a good space for various activities, not only in the personal but also in the business dimension. Social media can also be a tool for promoting important ideas and can be used by both institutions and private individuals – especially influencers, who have a great potential to reach a wide audience with their message. This makes vegan influencers good promoters of the idea of veganism on the Internet, mainly by inspiring others to adopt a vegan lifestyle. On the other hand, the promotion of a book of their own authorship, strictly on veganism, noted on both profiles, is one of the possible forms of promoting this idea. The cooperation of one of the creators with a brand offering clothing with the motif of broadly understood veganism also has a similar overtone.

The materials published on the influencers' profiles refer to all three dimensions of veganism indicated above, in various scopes. Animal welfare materials prevail on both profiles. In the context of a plant-based diet, they take the form of recipes, accompanied by attractive photographs or videos of vegan dishes. If, on the other hand, ethical issues are raised in a given post, the visual materials attached to it take a subtle, often humorous or creative form, which is intended to attract the attention of recipients and, consequently, lead to the problem being noticed. This is confirmed by the sample of illustrative materials. The advantage of this type of content also results from the specificity of Instagram, which is a communication platform on which drastic photos or videos are not posted.

It should also be noted that the promotion of veganism by influencers takes place in various ways, for example by inspiring their followers to try new plant-based dishes or making them reflect on important ethical topics and social issues, in the area discussed, as reflected in specific posts on their Instagram profiles. The potential of influencers' impact in the area can be evidenced by the reactions of recipients to their publications, as exemplified by the selected comments to them. They are a kind of interaction between the creators of pro-vegan content and their audience. The messages published on social media by vegan influencers stimulate discussion on various aspects of veganism.

It should be emphasised that the issues discussed in this article and the study carried out are an introduction to the in-depth research in this thematic area. This ap-

proach to the issue of promoting veganism serves to outline this issue and indicate one of possible directions of research. The profiles are not representative. Their analysis was aimed at identifying trends in the area of social influencers with this specific profile. This type of research is justified and desirable due to the growing popularity of veganism and the importance of the media in its promotion.

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ENGAGEMENT OF MICRO-INFLUENCERS IN THE FIELD OF SUSTAINABLE FASHION

Zuzana Schlosserová[1], Michaela Pániková[2]

Abstract

The presented article deals with the issue of micro-influencers on social networks, focusing on micro-influencers in the field of sustainable fashion. In the theoretical part, we deal with social networks, influencer marketing, a closer definition of a micro-influencer and the sustainable fashion industry. With the help of a questionnaire survey, we are trying to find out their engagement in this sector from the point of view of users of social networks. We analyse the obtained data in more detail in several sections. In order to fulfil this goal of the work, we set several research questions, which we answer at the end of the work and compare them with other researches.

Key words: engagement, micro-influencer, on-line questionnaire, social networks, sustainable fashion

Introduction

In this study, we delve into the dynamic world of micro-influencers and their pivotal role within the realm of sustainable fashion. We have chosen this topic due to its timely significance and the potential for uncovering innovative insights, as our research environment has yet to witness studies of a similar orientation. Our research journey comprises an extensive literature review, leading to the logical formulation of research questions and the identification of our research problem. Additionally, we will expound upon our chosen research methodology—an online survey conducted via a questionnaire, an increasingly popular and expedient approach. We will also provide insights into our research framework and proceed to analyze the data we have meticulously collected.

Review of the Literature

In recent years, sustainability has emerged as an increasingly prominent concern. Beyond its application to personal consumption, including aspects like sustainable food practices and waste reduction, sustainability has also garnered significant attention in the corporate sector. Moreover, there is a growing awareness among the public regarding the significance of sustainability within the realm of fashion and clothing. Sustainable fashion manifests itself in diverse ways, encompassing the realm of second-hand apparel and garments crafted with a mindful approach to economic, ecological, and so-

1 Zuzana Schlosserová is Assistant Professor at Constantine the Philosopher University in Nitra, Slovakia, zschlosserova.ukf@gmail.com, ORCID https://orcid.org/0000-0001-5143-9986
2 Michaela Pániková is an independent researcher.

cial sustainability during their production.

We can say that social networks are nowadays an important part of the personal, work and actually everyday life of an individual. Social networks are tools for building virtual communities and networks for groups or individuals with similar interests, education, lifestyle, beliefs and activities (Bolotaeva, Cata, 2011). The history of social networks extends far into antiquity, envisioning them as intricate webs of human connections. As Kerpen (2011) posits, the origins of social networks can be traced back to the earliest recorded individuals on Earth, namely, Adam and Eve. Nevertheless, as technology has evolved over time, social networks have undergone a profound transformation. Conventional face-to-face communication has yielded ground to the digital realm of online social networks. Their fundamental purpose now revolves around establishing and nurturing virtual relationships among the users of a particular social network (Bednář, 2011). The primary characteristic of social networks lies in the user-driven creation of content. Each user possesses a dedicated space within the platform to publish content that aligns with their personal interests and beliefs. The form and nature of this content are inherently shaped by the specific social network in question. While social networks are constructed upon a diverse range of communication modalities, sharing remains the cornerstone. It is important to note that this act of sharing is inherently public, effectively transforming the user into both a content creator and a disseminator (Kopecký 2013, Bednář, 2011). The distinctiveness of social networks extends beyond mere interpersonal communication; it primarily revolves around the potential for self-expression and visibility. This unique feature has the potential to foster connections that might otherwise never have materialized (Haythornthwaite, 2011). Multimedia elements such as audio-visual, imagery, and sound content play pivotal roles, serving as potent vehicles for the dissemination of fresh ideas among users. These dynamics have paved the way for the emergence of novel digital spaces known as multimedia social networks. These platforms serve as the foundation for various contemporary phenomena, including, but not limited to, viral marketing and influencer marketing, which have gained immense popularity in today's interconnected world (Kaya - Alhajj, 2019).

Companies today recognize that social networks represent one of the most formidable avenues for establishing direct connections with prospective customers. These platforms facilitate the cultivation of profound relationships with the public by enabling direct communication, fostering trust, and serving as powerful tools for presenting ideas, attitudes, or products within the online sphere. The relentless market saturation compels businesses and content creators active on social networks to embrace novel strategies at an unprecedented pace. In the contemporary landscape, the absence of a substantial online presence is simply untenable (Sajid, 2016).

Turning our focus to social networks within the context of marketing, experts and enthusiasts concur that Instagram, YouTube, and Facebook stand out as the paramount and most efficacious platforms for 2021. They emphasize that, for both individuals and companies seeking to bolster their promotional and public relations endeavors, a judicious selection of the right tools is instrumental in achieving marketing success (Adobe, 2021).

Traack (in Sutherland, 2020) perceives influence in the case of an influencer as a complex of three main factors, which are reach, relevance and resonance.

1. Reach defines the size of the audience to which a given influencer can present their content.

2. Relevance expresses the applicability and relevance of the content to the target audience.

3. Resonance is what creates impact. It must be understood that the audience is not only interested in the content, what really resonates with them is the connection on an intellectual, emotional and psychological level.

From a fashion marketing perspective, influencers can be perceived as individuals possessing the unique capacity to exert a transformative influence on the consumer purchasing decisions of others. This influence stems from their established position, knowledge, authority, or the profound rapport they share with their audience. Furthermore, influencers often cultivate and actively engage within their own dedicated communities, as highlighted by (Schlosserová, Pániková, 2022). It is essential to recognize that these individuals extend beyond mere marketing instruments; rather, they manifest as invaluable social assets that brands can collaborate with to achieve their marketing objectives.

Influencers represent individuals who have meticulously constructed their personal brand and reputation through their proficiency, convictions, or expertise in a particular domain. Over time, they methodically foster a devoted following by disseminating their ideas, thereby garnering significant attention and trust from their audience, as elucidated by Geyser (2021). In essence, an influencer can be any individual capable of effecting behavioral changes in others through their actions. These influencers may encompass public figures, brands, or individuals who have ascended to fame owing to their captivating presentation and dissemination of substantive content across various social media platforms. In the digital realm, they may also be identified as opinion leaders, influencers, recommenders, or opinion makers.

It is paramount to acknowledge that influencer marketing stands as one of the predominant marketing strategies of contemporary times. Traditional advertising approaches that primarily target the younger demographic have proven to be notably ineffective. Consequently, enterprises have begun to explore innovative means of forging closer connections with their target audience. Recommenders within the online sphere of social networks emerge as a potent and novel tool for kindling the interest of the younger generation in advertising messages and advertising itself, as discussed by Deges (2018).

Micro-influencers are significantly different from macro or mega-influencers, who got their influencer status through traditional media. They are not celebrities or publicly known people from television. These are people who have earned their influencer status on the social network with their charm, personality, hobbies, knowledge, and something new they have been able to offer society. So we can say that they arose against the background of social media (Küçük, 2020).

This type of the influencer has gained a lot of attention in recent years. Many companies have switched from using influencers with more than 50,000 followers to personalities with a smaller community of followers. Lina et al. (in Panetto et al., 2018) stated that these influencers hold one of the most important roles in social networks in terms of company marketing. They also add that a number of recent studies focused on this area have shown that this type of an influencer has a much higher level of engagement and interaction from followers compared to big referrals. And one of the main reasons is deeper relationships between the influencer and the audience.

Experts have realized that influencer marketing does not necessarily need a big influencer. It is more effective to focus on smaller recommenders, who are more attractive to brands and customers (Trzcielinski et al., 2021) also because they give the brand access to a small group of people with the same specific focus and interests (Ehlers, 2021). Micro-influencers are most often active in the fashion sphere, cosmetics industry, sports, or they present lifestyle and excel in deep relationships with their audience. At the same time, the use of these recommenders in brand advertising campaigns shows 60% more interest than the average campaign on social media (Trzcielinski et al., 2021).

While Ehlers (2021) sees the following as benefits when using a micro-influencer by a brand:

- price: since this type of a recommender does not have such a large community of followers, the price is significantly lower compared to larger influencers, and there is also a greater probability of repeated cooperation

- authenticity and reach: authenticity is a trait that the public is looking for. By publishing authentic content, the influencer appears credible when presenting a certain product, service or brand with which he is identified and creates the audience's interest
- multiple use: by making their cost per job lower, a brand can use multiple referrers for its promotion at the same time, allowing it to target multiple communities of individuals
- targeting: as micro-influencers focus mainly on one area of interest, they have an audience that has the same interests and preferences as themselves. This fact allows the brand precise targeting, which is only possible with a small community of followers (Ehlers, 2021).

Sustainable fashion

In recent years, the adoption of a sustainable lifestyle has emerged as a prominent cultural trend. According to Sustainablejungle (2021), this lifestyle embodies a profound philosophy centered on minimizing personal and societal impacts on the environment through affirmative changes that exert a constructive influence against climate change and other detrimental environmental factors. As Chiras (1995) elucidates, sustainability transcends the ecological realm, encompassing economic and social dimensions, necessitating a judicious approach to resource utilization and process management. This all-encompassing definition underscores our responsibility to ensure that our present actions and decisions do not imperil future generations or the delicate balance of our environment.

The realm of sustainable fashion, also known as slow fashion, has been progressively gaining momentum due to its enduring longevity, sustainable manufacturing practices, unique creations, superior craftsmanship, ethical production conditions, and positive environmental footprint. Slow fashion places great emphasis on ethical considerations, ensuring optimal production conditions while prioritizing quality over quantity. It is firmly rooted in principles of recycling, modernization, the utilization of traditional production techniques, and the utilization of renewable natural resources. Notably, sustainable fashion extends beyond the creation of new garments; it encompasses the realm of second-hand clothing and the art of upcycling, a creative practice currently embraced by numerous fashion designers (Gordon & Hill, 2014).

Yet, the concept of sustainable fashion has not always been readily embraced by the average consumer, often perceived as being constrained by limited style options, higher price points, or inconvenience in the shopping experience. In their illuminating work, Legere and Kang (2020) portray sustainable fashion as a movement that not only prioritizes the materials used in clothing but also emphasizes the deceleration of production and consumption, fostering sustainable values throughout the entire fashion ecosystem.

According to Fletcher (2007, 2015), the philosophy of sustainable fashion is built on the following pillars:

- Local production
- Preservation of the ecosystem
- Traditional values
- Sustainability
- Diversity of resources
- Responsible approach

The UN Alliance (2021) dealing with sustainable fashion adds that slow fashion also takes care of improving the working and economic conditions of workers, or solves environmental issues including reducing waste and water pollution in the fashion sector.

This fashion is not about responding to trends, it is about changing the mindset of consumers, which includes an interest in the origin of clothes and buying timeless pieces of clothing that will last the consumer for a long time (Pookulangara - Shephard, 2013).

In the nascent stages of community development within the realm of sustainable fashion, four pivotal cohorts of stakeholders converged on social platforms. These groups encompassed brands, notable public figures, conscientious consumers, and aspiring fashion creators with a vested interest in sustainability, who later ascended to influential roles in this domain (Ataman, 2021). Champions of sustainable fashion not only serve as conduits to thrust issues related to sustainability in fashion into the limelight but also aspire to catalyze tangible change through their endeavors. Their mission extends beyond mere information dissemination; instead, they ardently seek to foster transformative shifts. These advocates do not merely extol the virtues of the slow fashion movement; rather, they resolutely shed light on the detrimental facets of fast fashion, thereby awakening societal awareness (Minney, 2016).

Ataman (2021) talks about influencers in the sphere of sustainable fashion as recommenders who present their life philosophy to the public. Against the background of social networks, these recommenders can communicate sustainable fashion in 3 ways.

1. Photographs of sustainable outfits
2. By presenting the wardrobe with an emphasis on the sustainability of the pieces
3. Educational contributions

We consider this method of communication to be effective, which is also confirmed by the research of Riyant and Nurfadil (2020), who say that in the case of fashion, publishing photographic or audio-visual content is what attracts the public's attention most effectively, even in the case of promoting products. So, recommenders should encourage consumers to change their fashion consumption, by reducing the purchase of clothing and focusing on sustainable pieces when purchasing. It is important not to act forced, as this communication could ultimately create negative associations with sustainable fashion in the consumer and be counterproductive. When communicating this issue, influencers should act authentically, refer to the functionality and exclusivity of sustainable fashion (Jung – Jin, 2016).

Puspita and Chae (2021) found that due to the higher price of sustainable clothing, consumers tend to seek opinions from public figures who are social media influencers before making a purchase decision. These influencers are proven to positively influence consumer behavioral intentions and act as trendsetters. By showing consumers a positive experience with sustainable clothing shopping, they arouse their interest, which actually slows down shopping in fast fashion chains. And this also in the case of the presentation of sustainable clothing brands and second-hand shopping (Abbes et al. 2020).

When discussing sustainable fashion, it is common for authors to refer to the 3R concept. This concept forms the foundation of the slow fashion philosophy, which emphasizes mindful consumer practices. The 3R concept consists of three key pillars:

1. Reduce: The primary objective here is to curb impulsive clothing purchases. Decision-making regarding purchases should be premeditated, considering their long-term impact.

2. Reuse: Another crucial aspect involves reevaluating one's wardrobe. Discarded clothing items can be either passed on to new owners or deposited into collection containers for further use.

3. Recycle: Lastly, recycling involves repurposing old clothing items for alternative uses or donating them to organizations that specialize in recycling textiles (Pintu et al., 2020).

Subsequently, the 3R concept evolved with the addition of two supplementary elements, Repair and Rewear, although these may vary depending on the author. Repair per-

tains to mending damaged clothing items, extending their lifespan. Rewear encourages the practice of wearing garments repeatedly (Nayak, 2020).

Based on the theoretical findings we have summarized, we have taken the initiative to define our research parameters. In the scope of our investigation, we have carefully curated a selection of fashion micro-influencers operating within the Slovakian fashion landscape, each with a profound commitment to sustainable fashion principles.

Our inaugural subject of inquiry is the renowned public figure, Denisa Vyšňovská. We have singled her out due to her conspicuous presence on social media platforms, predominantly for her distinctive fashion sense and her ability to convey to her audience that dressing elegantly does not need to be synonymous with extravagance. Denisa Vyšňovská actively advocates for second-hand shopping, endorses local manufacturers and sustainable brands, fosters the culture of quality clothing acquisitions, all the while addressing the pressing issue of fast fashion consumption.

Our second subject of interest is Stylemon, also known as Lenka Madlenová, a prominent fashion blogger known for her vibrant and diverse wardrobe choices. Stylemon, too, frequently lends her voice to the discourse on sustainable fashion within her digital sphere. Her online presence predominantly champions homegrown fashion producers, encourages second-hand shopping, and urges conscientious contemplation when engaging in fast fashion purchases, with a focus on ensuring that each item serves a purpose in the wearer's wardrobe.

From the given knowledge, we can define the following research questions:

VO1- Do fashion influencers with a focus on sustainable fashion help influence public awareness of slow fashion?

In the case of the first research question, we focus on the fact whether the public perceives these recommenders as one of the main pillars in spreading the given topic.

VO2 – Do consumers look for social media reviews of recommenders when purchasing sustainable clothing?

With the second question, we monitor consumers' interest in the opinion of micro-influencers when purchasing sustainable clothing. At the same time, we monitor whether consumers change their attitudes in the case of a positive or negative review.

VO3 - Do these recommenders encourage consumers to buy more sustainable clothing items?

With the third question, we find out whether the presentation of slow fashion by recommenders encourages the public to buy and influences the thinking of consumers.

VO3a – Do fashion micro-influencers influence the interest in buying in second-hand stores?

By means of the given sub-question, we find out whether the influencers in this sphere arouse the public's interest in shopping in second-hand stores, or second-hand purchases.

VO4 – Do slow fashion micro-influencers minimize interest in fast fashion?

The fourth question investigates whether the presentation and highlighting of the negative aspects of fast fashion by micro-influencers reduces consumers' interest in fast fashion.

This brings us to the identification of our research problem, which can be articulated as follows: In recent times, there has been a notable surge in interest surrounding sustainable fashion, fostering a fertile ground for its dissemination through various influential figures. These individuals have meticulously crafted their personal brands around the ethos of sustainable fashion, whether they are widely recognized personalities, established brands, influential blogs, and the like. Despite this escalating interest in sustainable fashion, it remains imperative to underscore the importance of effectively

communicating this message, with the aim of raising awareness and stimulating the consumption of sustainable goods.

In light of the aforementioned context, we have formulated the following research objective for this study:

> To assess the perceived level of engagement of micro-influencers in the realm of sustainable fashion among discerning fashion consumers.

Research method

The increasing prevalence of Internet usage has paved the way for the development and utilization of online surveys. This expanded accessibility to the Internet has mitigated potential disparities in respondent coverage, thereby minimizing the likelihood of selecting biased survey participants. To partake in an online questionnaire, individuals necessitate access to the Internet through a compatible device. In contemporary times, this device encompasses not only personal computers but also tablets and mobile phones.

Online questionnaires can be divided into two types.

- The first type is an online questionnaire (provided to the respondent in person), which displays individual questions to the respondent personally on a selected computer. The questioner reads the questions to the respondent and at the same time answers them by pressing the keyboard.
- The second type of online questionnaire is a self-administered method, i.e. the respondent fills out the questionnaire electronically using their device (computer/mobile phone) and it does not matter where they are, as it is only necessary for the respondent to have an Internet connection (Johnson et al ., 2001).

In the process of constructing the questionnaire, a critical consideration lies in assessing the existence of prior research investigations pertaining to the given research problem. In our specific case, no analogous study has been identified thus far (Bowling, 2005). The chosen methodology offers several advantages, including rapid information processing, enhanced accessibility to otherwise challenging target demographics, and the incorporation of multimedia elements (Machková, 2009).

Another crucial determinant that may influence response rates is the order of questions within the questionnaire. It is generally advisable to commence with straightforward queries, formulated with precision and grounded in factual accuracy to prevent respondent confusion. In instances where the questionnaire necessitates the inclusion of sensitive or potentially embarrassing inquiries, it is prudent to position them towards the end, leveraging the respondent's investment of time in completing the survey, thereby enhancing the likelihood of obtaining responses (Marshall, 2005).

Respondents were provided with an electronic questionnaire comprising closed-ended queries. The primary objective was to assess the extent to which sustainable fashion recommenders can exert influence over consumer behavior in favor of sustainability. Additionally, we explored whether individuals consult these recommenders when making sustainable fashion purchases and whether they can influence the preferences of fashion consumers. Simultaneously, we examined the role of these recommenders as information disseminators. The questionnaire addressed research questions 1 to 4 inclusively. Distribution of the questionnaire occurred through various platforms, including Facebook and Instagram, as well as private profiles of female scientists and university groups in Slovakia. Data collection took place between March 9th, 2022, and March 17th, 2022. Subsequent to data acquisition, an extensive analysis was conducted employing a combination of statistical methodologies facilitated by Excel and Google Docs. Subse-

quently, results were presented through graphical representations and tabulated formats for interpretation.

In the light of time constraints, preliminary research was omitted in our study, thereby establishing the boundaries of our investigation. Additionally, the limitations of our research can be attributed to the constrained accessibility of our questionnaire. The distribution method and its inherent restrictions inadvertently limited the pool of potential respondents. Notably, the principal constraint lies in the modest size of our research sample. Enlarging the sample size would undoubtedly contribute to a more comprehensive understanding of the issues under investigation. Furthermore, it is worth noting that our study exclusively focuses on the online environment of the Instagram social network, which presents another limitation.

Research file

The target demographic for our study encompasses individuals aged 15 to 40 in Slovakia, including both genders, who actively engage in social media and share an interest in the world of fashion. The rationale behind this age bracket is rooted in two key considerations. Firstly, it hinges on the intersection of gainful employment, which allows for independent clothing purchases, and the frequent use of social networking platforms. The selection of our research participants was executed using the random sampling method, given that our research cohort was not narrowly defined. We administered the questionnaire through an online platform, extending invitations to consumers with a proclivity towards fashion, encompassing both the fast fashion and slow fashion sectors. A total of 130 respondents partook in our research endeavor. The questionnaire revolved around the clothing industry, and as anticipated, a higher proportion of female participants (68%) engaged in the inquiry compared to their male counterparts (32%). To dissect the data further, we categorized our respondents into three distinct age groups. The largest contingent was found within the 21 to 30-year-old age range, followed closely by the 15 to 20-year-old group. Conversely, the 31 to 40-year-old category recorded the fewest responses, representing the elder segment of our sample. The demographic composition of our respondents is visually represented in the subsequent graph.

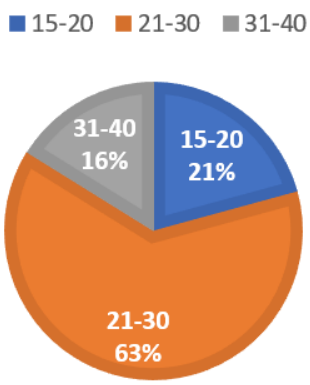

Fig. 1 Distribution of respondents by age
Source: The authors' own research

Analysis of the obtained results

The analysis revealed that out of the 130 respondents involved in the study, a substantial 97% were actively engaged users of social networks, leaving a mere 3% categorized as inactive. Each of the survey questions was designed as closed and mandatory,

requiring respondents to select a single answer.

Moving to question number 4, participants were queried regarding their primary source for acquiring clothing. As respondents had the option to choose multiple answers in this question, the percentage figures denote a cumulative value of 100%. Among the six provided choices, e-commerce platforms offering clothing emerged as the favored method, garnering a notable 63%. In the second position, stores situated within shopping centers were cited by 58% of respondents. A preference for second-hand clothing was expressed by 38% of participants, while 19% reported acquiring clothing through inheritance from third parties. In this context, the least frequented options were purchases from local brand boutiques or small-scale producers, accounting for a mere 18%. Additionally, only 8% of respondents indicated a liking for markets and stores specializing in Asian goods, a trend visually represented in the subsequent graph.

Fig. 2 Method of obtaining clothing
Source: The authors' own research

Promotion of sustainable fashion

This section encompasses inquiries centered on the promotion of sustainable fashion while concurrently assessing the significance of disseminating information about sustainable fashion through micro-influencers and the corresponding particulars. Given the escalating prominence of sustainability and sustainable fashion as industries of interest, the fifth query inquired, "Are you familiar with the concept of sustainable fashion, often referred to as slow fashion, which emphasizes ecological, economic, and social sustainability throughout its production?" This question yielded responses that shed light on the primary inquiry concerning awareness of slow fashion. The responses were stratified into three categories, comprising two affirmative responses and one negative response.

The subsequent graph visually portrays the results, revealing that a substantial 47% of respondents are acquainted with the term and concurrently engage in purchasing this category of clothing. Additionally, 35% of respondents are aware of the concept of sustainable fashion, while a mere 18% admit to being unacquainted with it. In summation, it can be inferred that a noteworthy 82% of respondents are cognizant of sustainable fashion, with only 18% remaining uninitiated in this domain.

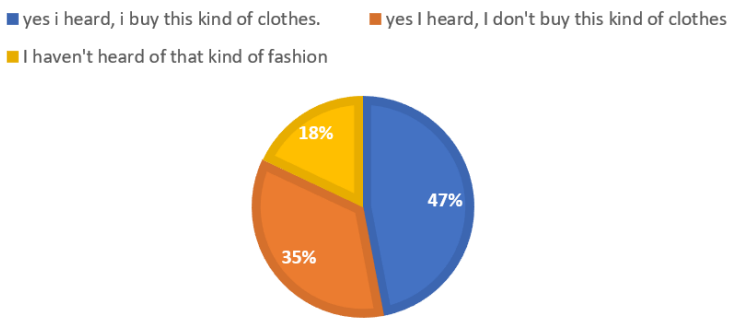

Fig.3 Awareness of sustainable fashion
Source: The authors' own research

The study also investigated the role of question number 6, designed to elucidate the individuals' perception of key influencers in the promotion of sustainable fashion and where they acquired their knowledge about this subject. Participation in this particular inquiry was voluntary, contingent on a positive response to the preceding question. Respondents were provided with four response options. Notably, a substantial 46% of respondents identified social media influencers as pivotal figures in the advocacy for sustainable fashion. The second most prevalent choice, selected by 36% of participants, was social media platforms associated with fashion brands. In contrast, blogs and periodicals garnered the least attention, each receiving a mere 9% of responses. This data strongly suggests that social media platforms play a prominent role in disseminating information about sustainable fashion and serve as a primary channel for communication within this domain.

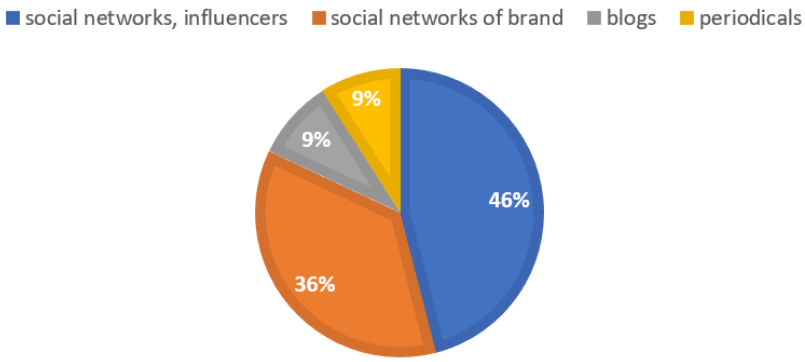

Fig. 4 Promotion of sustainable fashion
Source: The authors' own research

In question number 7, we inquired about whether respondents had ever observed the promotion of sustainable fashion on influencers' social networks. The objective was to assess the effectiveness of conveying sustainable fashion through influencers, particularly in terms of raising awareness about the subject. Of the respondents, 71% affirmed that they had indeed noticed sustainable fashion promotions on influencers' social networks, while 29% indicated that they had not encountered any such promotions.

Moving on to question 8, it aimed to gauge whether the public agrees with the assertion that promoting sustainable fashion through micro-influencers has a positive impact on public attitudes. In response, participants were provided with a scale, offering options ranging from "yes" to "no," as illustrated in graph number 5. The results revealed that 40% of respondents agreed with the statement, 35% leaned towards a positive response, 19% expressed uncertainty with the response "I don't know," 4% firmly disagreed with "no," and only 2% disagreed entirely with the idea that communication of sustainable fashion

by micro-influencers positively influences public attitudes. To arrive at an average value, we employed an arithmetic mean calculation, where "yes" was assigned a value of 5 and "no" a value of 1. The resulting average value of 4.06 indicates a tendency towards positive responses among the participants. In other words, the majority of respondents are in agreement with the given statement. The accompanying graph visually represents the number of respondents' answers for question number 8.

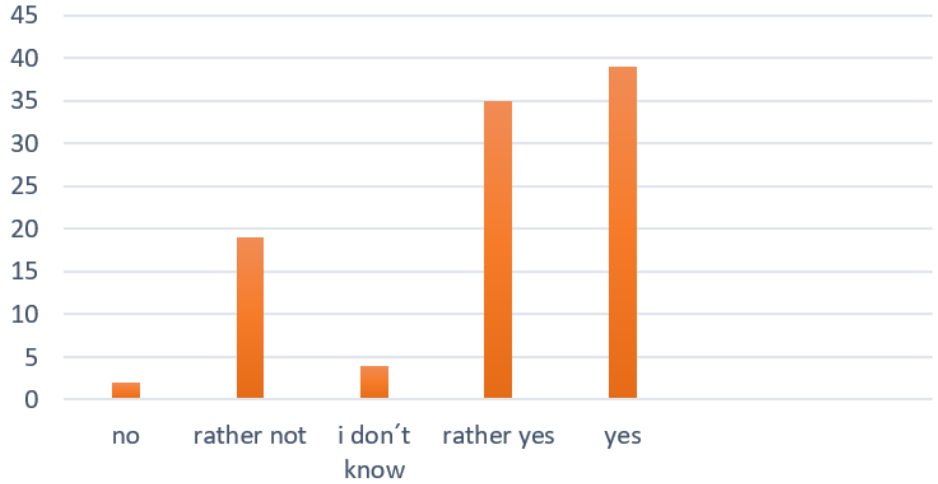

Fig. 5 The importance of communicating sustainable fashion by micro-influencers
Source: The authors' own research

The Importance of Micro-Influencer Recommendations in Sustainable Fashion

This section addresses the necessity of issuing a recommendation or conducting a review concerning the realm of slow fashion, specifically focusing on the influence wielded by micro-influencers, the extent of their desirability, and the significance of their viewpoints in shaping consumer purchasing patterns.

In the pursuit of our research objectives, we examined the extent to which consumers exhibit a willingness to invest in more sustainable apparel when guided by the endorsements of micro-influencers, a phenomenon explored in question number 9 of our survey. Analogous to the preceding query, respondents were presented with a graded scale encompassing responses spanning from affirmative to negative. The ensuing graph offers a visual representation of the distribution of responses among survey participants.

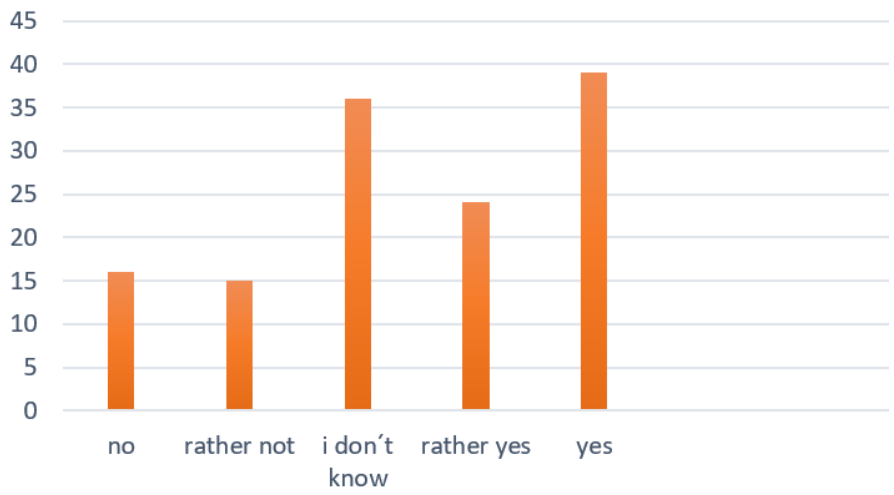

Fig. 6 Interest based on the recommendation of a micro-influencer
Source: The authors' own research

The graph presented above illustrates respondents' preferences concerning the potential purchase of sustainable clothing based on the recommendations from micro-influencers. 39 individuals, constituting 30% of the total group, were among the highest representation of respondents who expressed their intention to definitively purchase a sustainable clothing item following such a recommendation. Conversely, the "I don't know" option garnered the second-highest number of responses, while the "rather not" option received the fewest responses, with only 15 individuals selecting this choice. It is noteworthy that, in terms of overall sentiment, up to 17% of respondents exhibited a more positive disposition towards influencer recommendations, while 28% adopted a neutral stance.

In the context of the eleventh question, we explored whether consumers are susceptible to negative opinions expressed by influencers when considering the purchase of sustainable clothing. An intriguing discovery emerged: exactly a half, or 50% of the respondents, indicated that a negative review from an influencer would significantly impact their decision, leading them to definitively forgo the product in question. Conversely, the remaining 50% leaned towards the belief that such negative opinions would not exert influence on their decision-making process. Instead, they would rely on their personal experiences and preferences when making their sustainable clothing purchases, maintaining their steadfast commitment to these principles.

Second hand as part of sustainable fashion and their presentation

Questions 12 to 14 are pertinent to this domain of inquiry. In this context, the primary focus of these inquiries was to assess the potential efficacy of micro-influencers in influencing consumer behavior within a shopping sphere that is often met with negative perceptions. Each respondent was presented with a binary response format for questions 12 and 13, with questions 12 and 13 being obligatory. The necessity to answer question 14 was contingent upon providing an affirmative response to the preceding question.

The primary objective of question 12 was to ascertain whether the respondents engage in shopping at second-hand stores. The findings unequivocally indicate that a significant proportion of respondents, precisely 75 (58%), frequent such establishments, whereas 55 (42%) respondents abstain from patronizing second-hand stores. Concurrently, question 13, phrased as follows: "Have you observed the promotion of second-hand stores on influencers' social media platforms?" revealed that a substantial 65% of respondents noted instances of influencers endorsing and accentuating sec-

ond-hand stores on their social media channels, while only 35% reported a lack of awareness regarding promotional efforts within this industry. This disparity in awareness is further elucidated in the accompanying graphical representation. Additionally, this query sought to discern whether micro-influencers serve as an efficacious conduit for the promotion of second-hand stores.

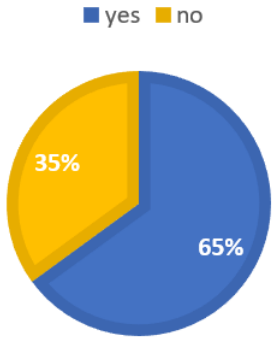

Fig. 7 Promotion of second-hand goods against the background of micro-influencers
Source: The authors' own research

The subsequent inquiry in this section builds upon the preceding question, specifically question number 13. As previously indicated, it is worth noting that this question was presented as an optional query, with respondents required to provide a response only if they had observed second-hand shops engaging in promotional activities. Consequently, question number 14 was formulated to explore whether those respondents, who did, in fact, record instances of these aforementioned stores promoting their merchandise, were influenced to such an extent that they patronized these establishments. However, given that this question was also answered by respondents who had responded negatively to the preceding query, it became necessary to segregate the responses with respect to the previous question.

Respondents were presented with two response options, and the findings unequivocally reveal that out of a total of 84 participants, 57 respondents, constituting 68% of the sample, answered affirmatively. This indicates that the promotional efforts were sufficiently compelling to prompt them to make purchases at the mentioned stores. In contrast, 27 respondents, accounting for 32% of the sample, chose not to respond affirmatively. This group indicated that the promotional communication employed by the aforementioned stores did not sufficiently impress them to engage in actual purchases at these establishments. The results substantiate the proposition that the communication of sustainable fashion through micro-influencers exerts a positive influence on public preferences and stimulates purchasing behavior.

The influence of micro-influencers on interest in fast fashion

Questions 15 and 16 were assigned to the fourth part of the questionnaire, which focused on communicating the negatives of fast fashion through micro-influencers. Specifically, question number 15, which is: Do you perceive communicating the negative impacts of fast fashion on the environment through micro-influencers as important? Investigated public attitudes in relation to the importance of fast fashion communication through micro recommenders. Respondents were offered answers using a scale ranging from definitely yes to definitely no. 62 respondents, representing 48% of the total number of respondents, marked communicating the negatives of fast fashion as very important and marked the answer definitely yes, and thus, this item had the largest representation in the answers. The second most frequently optional item was rather yes, and this

item was marked by up to 28 respondents representing 22%. 17 (13%) respondents were neutral in this case. In this case, the option definitely not had the lowest representation, namely only 3%. If we divide the scale into positive and negative attitudes, 69% of respondents agreed with the importance of communicating the negative impacts of fast fashion on the environment, while only 18% perceive this issue negatively, which can also be seen in the graph below. We can therefore claim that up to 69% of consumers are aware of the importance of communicating the negative aspects of fast fashion, which can ultimately lead to a change in purchasing behavior towards a more sustainable path, which is followed by the following question.

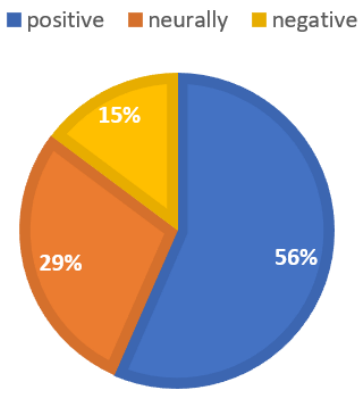

Fig. 8 The importance of communicating the negatives of fast fashion
Source: The authors' own research

Question 16: Does communicating these negatives minimize/would minimize your interest in buying fast fashion? followed up on question 15 and investigated the influence of the public towards avoiding the purchase of fast fashion based on communicating its negative impacts on the environment. As many as 93 (71%) respondents confirmed that communicating the negative would affect interest in buying fast fashion, and 37 (29%) respondents expressed their disagreement by answering no, and thus they would continue to buy and are buying fast fashion, which we can also see in the following graph. And thus the effectiveness and importance of this communication is confirmed by 71% of the respondents.

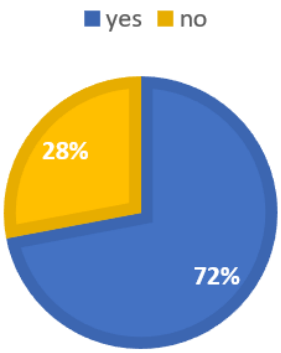

Fig. 9 Changing preferences based on communicating negatives
Source: The authors' own research

Answers to research questions and Discussion

The first research question explored the impact of fashion influencers specializing

in sustainable fashion on public awareness of slow fashion. Our investigation aimed to assess whether the public perceives fashion influencers as significant contributors to the dissemination of sustainable fashion concepts. The results of this inquiry reveal that the public indeed regards influencers as primary agents in promoting sustainable fashion. A noteworthy 47% of respondents reported gaining insights into sustainable fashion through influencers' social media platforms. In contrast, 36% acquired information from brand social networks, 9% from blog articles, and only 8% from periodical publications. Consequently, we assert that social media platforms serve as highly effective channels for information dissemination, with influencers assuming a pivotal role as the principal conduits for this topic. Additionally, a substantial 71% of respondents acknowledged encountering sustainable fashion promotion on influencers' social media profiles, with 75% perceiving micro-influencers as effective agents in reshaping consumer purchasing behavior. These findings align with the recommendations made by Riyanto and Nurfadila (2020), who advocate for the utilization of recommenders when communicating about sustainable fashion, as they are considered influential figures in shaping public opinion on such subjects. Consequently, the results validate the role of fashion influencers in raising public awareness of slow fashion, affirming their status as key pillars in disseminating this topic.

The second research question investigated whether consumers seek out social media reviews from recommenders when purchasing sustainable clothing. This inquiry delved into consumers' receptiveness to micro-influencers' opinions when making clothing purchases. The findings indicate that, when it comes to searching for reviews prior to buying sustainable fashion, negative responses are predominant, with a substantial 57% of respondents reporting that they do not seek reviews on social networks before making such purchases. In contrast, 43% do actively seek these reviews before making a purchase decision. However, when it comes to the impact of a negative review shared by a recommender, 50% of respondents affirmed that such a review would influence their purchasing behavior, dissuading them from buying the product and underscoring the recommender's influence on their buying choices. The remaining 50% indicated that such negative reviews would not sway their decisions, as they prefer relying on their own experiences. As previously mentioned, Puspita and Chae (2021) have posited that consumers express interest in influencers' opinions when purchasing sustainable fashion, emphasizing the role of recommenders in shaping consumer perspectives. Therefore, while negative responses dominate, the significant percentage of positive responses suggests that consumers do, to some extent, consult reviews on recommenders' social media platforms prior to making purchases. Additionally, the fact that half of the respondents are willing to alter their buying behavior based on a negative review underscores the influence of recommenders in this context. Thus, even though positive responses do not predominate in our findings, it is evident that reviews from recommenders exert a certain degree of influence on consumer purchasing decisions, making their opinions a crucial factor in this matter.

The third research question aimed to discern the influence of micro-recommenders on consumers' interest in purchasing sustainable clothing. The study explored whether the presentation of slow fashion via micro-recommenders effectively stimulates consumer buying behavior. The findings revealed that nearly half of the respondents, constituting 49% of the total sample, expressed their willingness to purchase the showcased product based on an influencer's recommendation. Another 28% remained neutral, uncertain about whether they would buy the endorsed product. Only 24% definitively stated that they would not buy the recommended item. The average score across respondents was 3.42, indicative of a predominantly positive response. Consequently, it can be inferred that upon encountering sustainable fashion products promoted by recommenders on social networks, nearly half of the respondents exhibited a willingness to make a purchase. This suggests that the presentation of slow fashion plays a significant role in encour-

aging public consumption. This finding aligns with Kong and Ko's (2017) assertion that sustainable fashion's communication through influencers, particularly micro-influencers, profoundly influences consumer attitudes and their propensity to purchase sustainable fashion items. As an extension of research question number 3, the study explored whether fashion micro-influencers influence interest in shopping at second-hand stores. It was examined whether micro-influencers, by promoting sustainable fashion and emphasizing second-hand purchases and stores, generate increased interest among consumers to patronize second-hand establishments. Abbes et al. (2020) had previously reported that influencers' positive experiences and endorsements of second-hand products stimulate public interest in second-hand stores. The research addressed this sub-question through two inquiries and discovered that 65% of the respondents observed communication about second-hand stores within influencers' social networks. Among this group, an impressive 68% of interviewees indicated being influenced and encouraged to purchase more sustainable items as a result of this communication. Conversely, only 32% remained unswayed by the promotion of second-hand items. These findings echo those of Abbes et al. (2020), affirming that fashion influencers indeed have a positive impact on fostering interest in sustainable clothing and second-hand shopping.

The fourth research question sought to ascertain whether slow fashion micro-influencers could diminish interest in fast fashion by highlighting its negative aspects. Respondents were asked about the significance of influencers communicating the drawbacks of fast fashion through their social networks. A substantial 69% of respondents acknowledged the importance of such communication, while an even higher percentage, 72%, confirmed that these negative portrayals would, indeed, reduce their interest in fast fashion and promote a more sustainable mindset. These findings align with Minney's (2016) perspective, which posits that communicating the downsides of fast fashion through micro-influencers can effectively minimize consumer interest in this industry. The results of this study support this viewpoint and emphasize the potential of slow fashion micro-influencers in shifting consumer preferences toward sustainability.

Conclusion

The objective of our study has been successfully met, and our research findings have yielded a number of noteworthy conclusions. Our investigation has revealed that micro-influencers hold a prominent role in shaping the public's perception of the subject matter in question. Furthermore, they possess the capacity to instigate shifts in public awareness and attitudes within this domain. Our results have also unveiled that encouraging the public to patronize various sustainable fashion retailers while simultaneously highlighting the drawbacks of fast fashion has the effect of diminishing interest in the latter.

In summary, we have ascertained that the involvement of micro-influencers in the realm of sustainable fashion is favorably perceived by our survey respondents. However, it is imperative for these influencers to continue their efforts in order to fortify the dissemination of sustainable fashion-related discourse.

In delineating future research directions, in the context of micro-influencer involvement, we propose the implementation of investigative methodologies grounded in personal inquiries. These inquiries should be strategically designed to elucidate the prevailing public perceptions pertaining to the scrutinized micro-influencers in their capacity as advocates for sustainable fashion promotion. Concurrently, in the realm of the scrutinized personalities, it is imperative to extend the scope of research to encompass the channels of communication prevalent on social networking platforms such as TikTok and Facebook.

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COLOR AS A TOOL FOR CONVEYING INFORMATION IN INFOGRAPHICS

Gabriela Piechnik-Czyż[1], Zuzanna Gruszczyńska[2]

Abstract

Color is a powerful tool that can be used to influence our emotions, behavior and perception of the world. Therefore, color has not only an aesthetic function, but it can also fulfill certain purposes. In addition to the symbolic transmission of information, it can help organize content or draw attention of recipients to specific elements. This is one of the key components that build an infographic. The importance of color in information graphics and some of the mechanisms of its effect are described in this article. Examples of infographics showing the importance of appropriate colors in practice are also analyzed. Colors can be used to highlight the most important information, grab the reader's attention, and make the data easier to understand. Properly selected colors can make the infographic more engaging.

Keywords: colors, infographic, information design, meaning of color

INTRODUCTION

In modern civilization, certain features of information society and the dominance of image can be noticed. Media broadcasters are increasingly looking for innovative solutions to draw the attention of recipients and contribute to the efficiency of conveying content. Meanwhile, one of the forms of communication combines most of the features that may be desirable – condensed information in the form of an image, which can be easily shared, for example on the Internet. This concerns visual messages presented as infographics, which Randy Krum (Krum, 2013, pp. 2-8; 27) defines as more complex entities than data visualization (e.g. charts), containing, texts, icons, illustrations. However, above all, he points out that an infographic should tell a story (Krum, 2013, pp. 2-8; 27). The name is a combination of the words: information and graphics, so the purpose of infographics is to graphically visualize data, information or knowledge in a quick and understandable way for the recipient, enabling them to see trends or patterns (Szklarek, Klamka, 2020).

A different point of view in the case of infographics as a journalistic genre is taken by Lech Mazurczyk (Mazurczyk, 2010, pp. 364-378). According to one of the best Polish

1 Gabriela Piechnik-Czyż, University of Information Technology and Management, Corresponding author e-mail: gpiechnik@wsiz.edu.pl, https://orcid.org/0000-0001-8394-7483
2 Zuzanna Gruszczyńska, Student of Computer Graphics and Multimedia Production, University of Information Technology and Management, https://orcid.org/0009-0000-8773-9411

infographic designers, information graphics is a full-fledged, separate journalistic genre. He states that infographics can take different forms, sizes or degrees of complexity. However, readability is still very important, so the information presented must be simple and clear. In addition, the effectiveness of the infographic is the most important – that is keeping the recipient's attention only for the time necessary to understand the message (Mazurczyk, 2010, p. 364-378). As Lech Mazurczyk points out, infographics can complement the text, and sometimes it is a separate entity and serves itself. There is one criterion in this case: if the infographic exhausts the topic, then the text becomes redundant. However, such cases, according to the author, are an exception (Mazurczyk, 2010, p. 364-378).

While discussing the elements of visual communication, it is essential to note that it is closely intertwined with visual culture, the roots of which extend to prehistoric times (Eddy, 2020). Visual communication is a powerful communication tool that is crucial in the interaction of individuals and groups. It involves conveying ideas and information through various visual elements. Visual messages can impact emotions and shape specific behaviors in recipients, motivating them to take action (Kujur and Singh, 2020). Another definition says that: visual communication is a discipline similar to graphic design, encompassing knowledge of ways to visually convey ideas using media such as typography, television, photography, film, illustrated writing, and comics (Wolny-Zmorzyński, Furman, 2013, p. 90-91).

For the purposes of this article, it is assumed that visual communication is the act of conveying information through images between different individuals or groups, and presenting information through images is crucial in imparting knowledge about reality. However, it should be noted that visuality is becoming commonplace, and to engage the audience, one should constantly explore newer methods and tools for delivering information through images.

COLOR IN INFOGRAPHIC – ITS MEANING, USE AND SELECTION

Infographics can help people understand complex data faster and easier. It can also be used to increase awareness of a given topic or encourage recipients to act or create specific attitudes. The readability of infographics is related to their correct structure, which consists of: appropriate layout, used elements, such as the amount and appearance of text, data visualizations, illustrations, the number of decorative elements, but also color palettes. Color can not only affect the mood of the entire project, but it can also segregate information, indicate what is important, be a guide for the recipient's eyes while reading, etc. These areas will be discussed in this paper.

Human brain acts more impulsively under the influence of emotions, color can trigger a specific sensation. Therefore, in graphic designs, it is a tool that serves specific purposes, and fulfills not only aesthetic functions. It can also be a substitute for the word, which is important in infographics. For example, it is enough to divide the image into two parts, one green, the other red and immediately the recipient knows that in one part there are things that are good or allowed to do, and on the other side those forbidden or harmful. It also refers to the knowledge of the meaning of color, a certain symbolism related to culture, which has been assimilated by a given recipient.

Well-balanced colors and friendly graphic design make the infographic noticeable and evaluated positively at a glance. The effect of the first impression can work here. The designer should arrange a color scheme in order to deal with possible problems resulting from poor color selection. It is also important not to choose colors randomly. They should correspond to the topic or content to which they relate. In addition, the selected colors used on the infographic should also harmonize with each other. Colors should be chosen in a way that is pleasing to the reader's eye and considers the preferences of the target group of the designed infographic.

Sneh Roy (Roy, 2009) in her article about elements of building information graphics and the principles of its construction, also points out the legitimacy of paying attention to color. Analyzing the anatomy of infographics, she distinguishes three categories: visual, related to content and knowledge. The first of them – visual – includes color coding of information, graphics and dedicated icons that correspond to the selected topic. The content layer is time frames, statistics, and sources of information. The third category, knowledge, refers to facts and conclusions arising from the presented information. In terms of the principles of building infographics, the author (Roy, 2009) lists five key principles of constructing a good infographic message. The first one is skeletons and flowcharts, i.e. mind maps that help organize content. The second stage is the preparation of the color scheme. The third stage is graphics. Roy points out that there are two types of graphics: thematic and reference. The first is the graphic theme of the entire project, and the second is described as icons that relate to a given theme, all kinds of visual indicators. The fourth stage, titled research and data, refers to the category of content described above in the anatomy of an infographic. The fifth and final stage is the knowledge that the infographic will convey to the recipient. In this case, it is worth paying attention to the second stage - the color scheme. As the author points out, coloring is very important to convey a wide horizon of information and at the same time maintain the reader's interest. If there are no colors that focus the recipient's thoughts, his attention will be distracted. Choosing the color scheme and assigning the meaning will allow better color management in the infographic (Roy, 2009).

A color wheel on which the primary and derived colors are shown can be useful in choosing the right set of colors. The process of finding the color sets according to the rules of color ordering as an easy process will be described below. It is also necessary to mark the basic distinction between warm and cold colors. Each color also has three properties that distinguish a color from others: hue, tone, and saturation. Hue refers to the name of a color – we are talking about red, blue, etc. Each of the colors has also many varieties – from light to dark - and these are the tones. Saturation, in turn, refers to the intensity of a given color (Dabner, Casey, Calvert, 2012, p. 92).

Color sets can be selected based on several rules: analogously, complementary, triadically, tetradically or based on monochrome. In the analogous scheme, three colors lying next to each other are used. The resulting palette is usually calm and harmonious. Complementary colors are those that lie opposite each other on the color wheel. Such a combination is very contrasting and not very pleasant to receive, but this does not exclude its use in infographics. The most important issue in this scheme will be the right tone and saturation of the selected colors. The triadic scheme uses three colors that are separated by an equal number of others on the wheel. The tetradic scheme, on the other hand, is a set of two pairs of complementary colors (Zimniak-Rucińska, 2019, pp. 129-130). Bo Bergström, relying on the NCS system, lists colors that whisper, speak and shout. The Natural Color System (NCS), developed by the Scandinavian Institute of Color, is built of colors naturally occurring in nature and the way they are perceived by the human eye. It is distinguished primarily by yellow, red, blue, green, white and black. The other colors are combinations of them. (Bergström, 2009, p. 203). Colors that whisper are those lying in the same square in the NCS scheme and harmoniously blend (e.g. orange and red). Colors that speak are contrasting, lie in different but adjacent squares of the scheme (e.g. blue and red). Finally, colors that scream - extremely contrasting and come from opposite squares of the scheme (e.g. green and red). However, it should be remembered and what the author also points out, such strong, screaming colors will attract the attention of the recipient, but they can also give the impression of cheesiness and lack of professionalism (Bergström, 2009, p. 203-204).

Color, especially in data visualization and infographics, is supposed to be useful, and it will be when it highlights key information or groups it. It is then easier for the recipient to refer to the viewed information (Biecek, n.d.). Bo Bergström also writes about

such color properties in *Visual Communication* (Bergström, 2009). He claims that color can organize and teach, for example, marking an important issue with intense color will make it more visible than other information. Bergström divides colors into functional and non-functional, pointing out that only the former is important in effective visual communication. Its impact should be aimed at attracting (colorful elements in vivid tones and a high degree of saturation will attract the attention of the recipient more), creating a mood (depending on the symbolism, the recipient may feel, for example, relaxed or anxious), informing and the already mentioned ordering and teaching (Bergström, 2009, p. 200-202). Referring to infographics, color can support the reception and understanding of a given topic, but also arouse misunderstanding or inappropriate reactions. The use of bright, warm colors will create a positive mood in the recipient. For example, discussing the subject of war using colors associated with the sun and fun could cause some dissonance.

COLOR PERCEPTION

The structure of the human eye is adapted to distinguish many colors. Thousands of years ago, man had to recognize the right color of plants to know which one was poisonous. He also had to spot and recognize a possible enemy. Hence, the eye and brain were able to quickly register and use information about color (Biecek, n.d.). Therefore, communing with color is a natural thing for human and accompanies him from an early age.

However, color perception can depend on many factors. The color may look different in the print and displayed differently on the monitor, in a dark room and in a light room. Also, the type and temperature of lighting will affect the perception of color (Biecek, n.d.). Also, the other colors, with which it appears on the design, can determine how it will be read by the recipient. There is a possibility of optical illusions, such as simultaneous contrast. The circle shown in the two backgrounds (Figure 1.) has the same color, tone and saturation, but depending on which one it is on, it seems to have a different intensity. Placing a color next to an intense color may cause the former to appear less saturated, while situating it next to a color with lower saturation may make it seem more intense (Peng, Tong, et al., 2022).

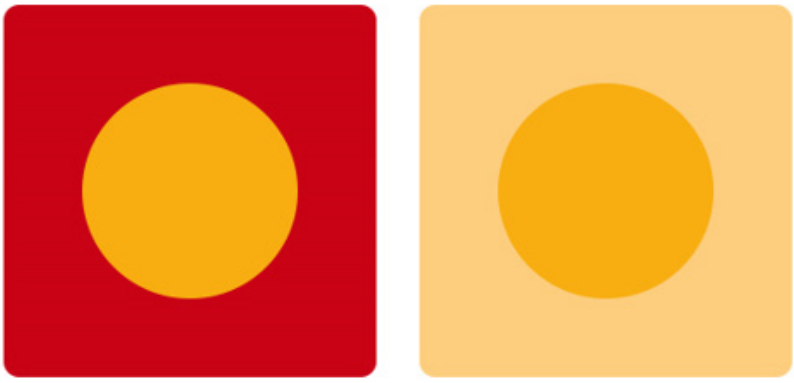


Figure 1. Example of simultaneous contrast; based on Dabner, Casey, Calvert, 2012, p. 94

Color affects the perception of the characteristics of objects in different ways. The size, distance and weight of an object may be perceived differently depending on the used color and its brightness. Light colors such as white, orange, or yellow optically enlarge objects, while dark colors such as black, brown, purple will reduce the surfaces on which they occur. In addition, warm, bright colors optically bring closer objects that also seem lighter, and cold and dark ones move away element and increase its weight. The color can also convey the impression of dryness (oranges, yellows) or humidity - blue-

ness, greens (Zabawa-Krzypkowska, Groń, 2017, p. 85).

As mentioned earlier, color is a way to make content stand out. Preattentive processing may apply here, which is an early stage of information processing and takes place before the conscious mind begins to work. This reaction takes place at the moment of processing external stimuli. The information is stored in the iconic memory before it goes to the short- or long-term memory. The former has been adapted to react quickly to changes in the environment. Therefore, with proper manipulation, e.g. the color of elements, the recipient (Pielużek, 2020) could more quickly notice it. To illustrate how these treatments (called preattentive attributes) work, the graphics shown in Figure 2. are often used.

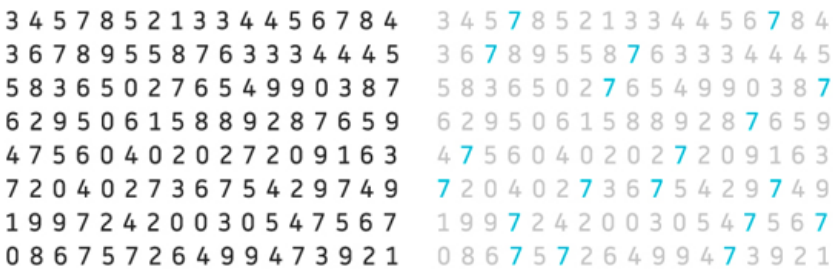


Figure 2. Use of preattentive processing; based on datascience.aero/brain-data-visualization/, online 31.03.2023.

In both examples, the information is the same, but in the second case the concentration falls on the numbers highlighted by color. Thus, the recipient needs less time to search for specific information than in the first graphic, where all digits look the same. Thanks to such operations, a fast, unconscious, and automatic process of perceiving differences is triggered. There is no need for the recipient to search for issues important sequentially and analytically to him, because knowing the process of preattentive processing, designer can use it to make it easier for the recipient to reach the desired information or suggest to him that these highlighted issues are important and worth noticing in the first place. This type of distinction can also be made with different intensity of colors that have been used.

It is also essential to consider the significance of colors and select them not only based on the principles mentioned above but also in terms of their potential meanings. Some reactions to colors are intuitive and universal, while others are acquired and dependent on the culture of a given society. For instance, red, one of the most potent colors, is often associated with love, warmth, as well as violence, warning, danger, and significance. On the other hand, shades of blue symbolize reliability, tranquility, wisdom, loyalty, but also sadness and coldness. Gray is frequently used in infographics and is associated with technology, industrialism, and intelligence. It serves as a neutral color and is often employed as a background (Güneş, Olguntürk, 2019).

To sum up, color, as well as the context in which it appears, has been an extremely important part of human life since the dawn of its history. It also has a huge impact on recipients, so, it can cause specific emotions or reactions, also draw the recipient's attention to a specific thing. Hence, it is a very important tool in graphic design, and in infographics it expresses much more than text.

THE USE OF COLOR IN INFOGRAPHICS – A CASE STUDY

In order to observe the essence of color in infographics and the operation of the mechanisms described above, it was decided to analyze sample infographics published on one of the Polish information portals (Figure 3.).

The analysis used the classification of infographics into its individual types between which the following types can be distinguished:

- data infographics (mainly statistical data, numbers play a major role),
- infographic of the place (the main element of the construction is a map),
- time infographic (a timeline or chronological order of events appears),
- a comparison infographic (compares two or more things)
- process infographic (each stage of a given process, development, etc.)
- visual infographic article (appearing with the article, referring to it, summarizing, may contain more text than the average infographic),
- characterizing infographic (describes the most important features of the presented thing/character, which is the dominant element of the image),
- quiz (characteristic construction on a question-answer basis).

The first example (a) shows an extensive infographic combining the infographic of the place and the characteristics of the topic - in this case it is about time changing. It can be considered that the infographic consists of five panels, starting with a title panel with a distinctive title and a few sentences of introduction to the topic. The next segments are maps showing in which countries daylight saving time applies and time zones exist. The last two parts are a small text panel and a final block describing the consequences of changing the time. It consists of icons and text. The information is given one by one with increasing detail – starting from global data to Europe, ending with data that may concern individual countries, institutions, and individuals. It is also information that can help the recipient draw conclusions about whether the time change is needed or make them aware that such time organization affects many elements. However, attention should be paid to the colors, which are neutral in relation to the discussed issue, they do not interfere with the reception. They are like a natural element of this construction. First of all, color has an ordinal and distinctive function here. At the top of the infographic, color segregation of information and indication of specific places on the map can be observed. In the last panel, apart from the blue color, red has been introduced, distinguishing elements that are associated with the negative effects of time changing. It is true that red is not used in this project anywhere else, but using this color for this data makes them additionally emphasized as negative.

The second example (Figure 3. b) shows an infographic representing a combination of types characterizing, data and infographic of the place. The topic is the fire at Notre Dame Cathedral. It has more diverse elements conveying information than could be observed in example 3a. Illustrations, icons, timeline, map, text blocks, and a bar chart can be distinguished here. As in the first example, the information is arranged in panels and is given to the recipient gradually. Despite the dominant neutral gray, the red color is strongly visible. Appearing on a gray background and next to gray elements, it indicates to the recipient what stands out from other data. For example, in the case of a bar chart showing funds donated to rebuild a cathedral, the red bar indicates the highest donor. In the first panel, red indicates the place of the building where the fire started, focusing the viewer's attention even more on this area. The location of the text on the red frame, in addition to a large exclamation mark, suggests that this information is extremely important, so such a visual procedure will certainly not be missed by the recipient. All red elements are visible almost automatically and immediately. The mechanism of preattentive processing works here. This mechanism is also noticeable in the third example (Figure 3, c), in which compulsory vaccination is marked with red dots. The infographic is not constructed from many different elements, mainly repeating shapes (circles), so without color distinguishing features, the analysis would be difficult. Color-coded data is more visible than if it were represented by numbers or shapes without color. Their color also segregates information and indicates those to which the recipient should pay spe-

cial attention.

The analyzed examples of infographics (Figure 3.) have neutral background colors, which is also an important element affecting the readability of the provided information. None of the icons, maps, data visualization or text competes for visibility with the background. As described earlier, it is important to keep in mind the issue of simultaneous contrast, especially when choosing a background color. Its color will not always be neutral, but it cannot compete with other objects and significantly affect the appearance of the shade of the colors used in them.

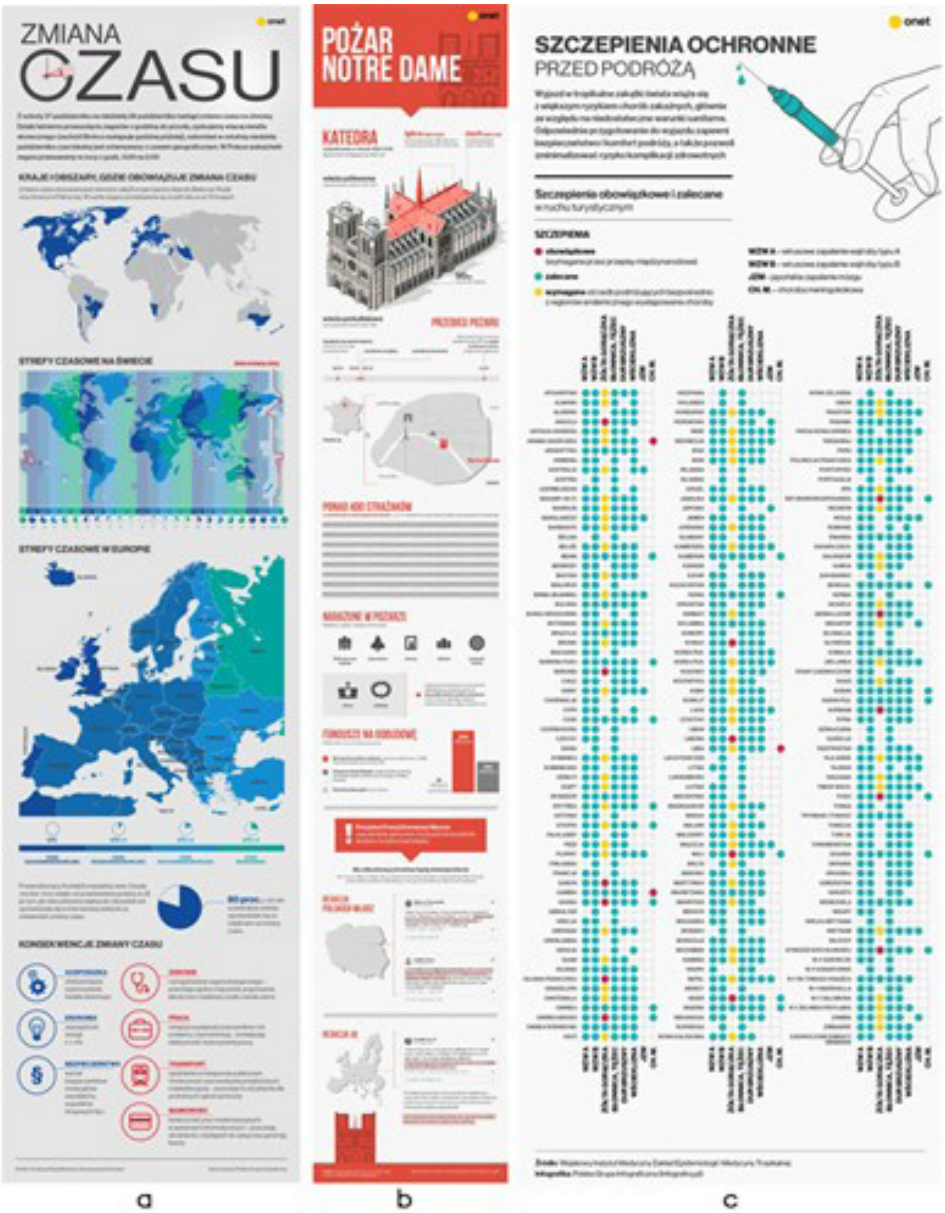
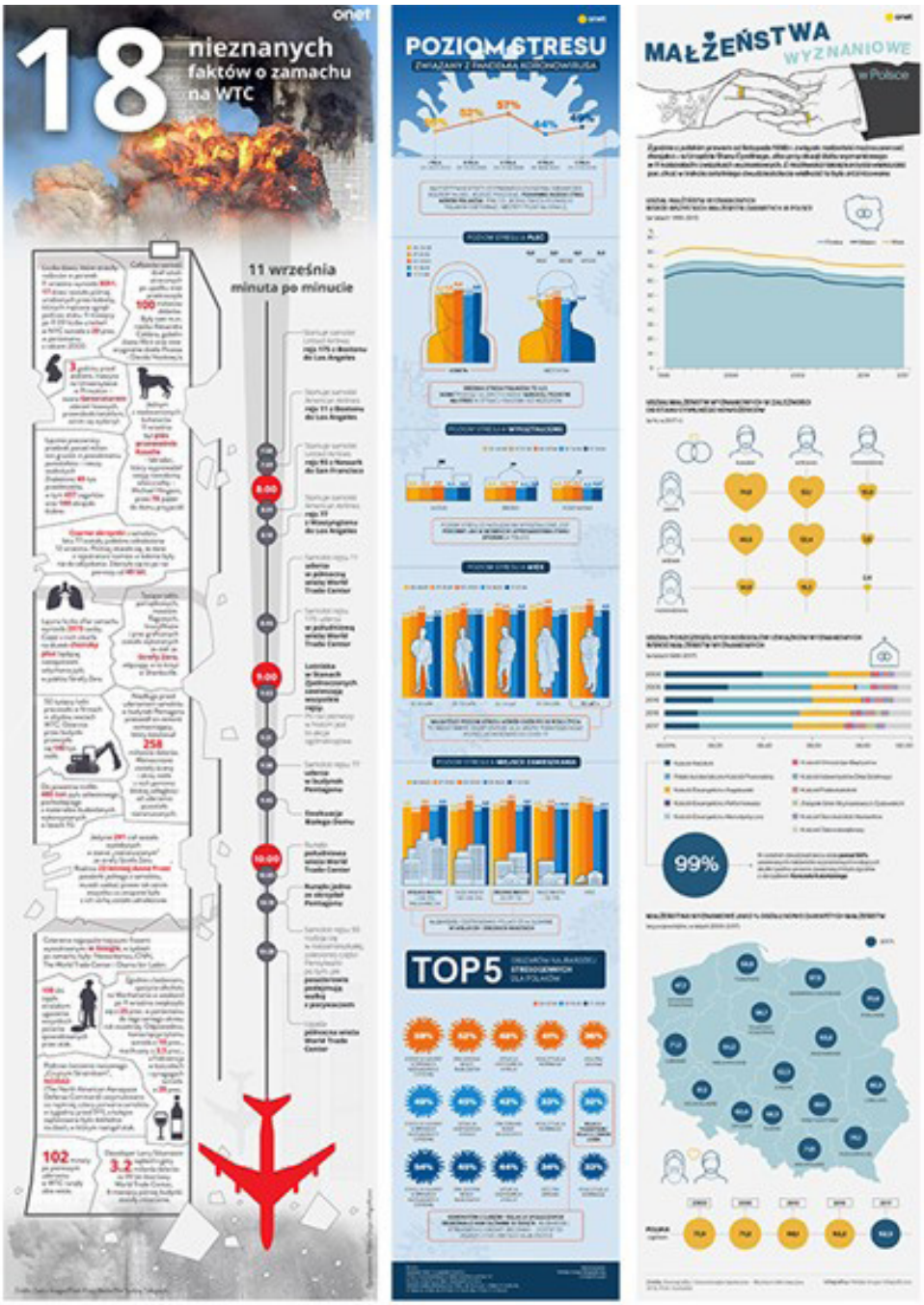


Figure 3. Use color in infographics; onet.pl, online 31.03.2023.



a b c

Figure 4. Use color in infographics; onet.pl, online 27.11.2023

The infographics from Figure 4. also illustrate the use of color as a tool for highlighting and organizing information. This distinction is particularly evident in the first example (Figure 4.a), where key elements are marked in red, signaling those that the recipient should notice amidst other information. This infographic combines two types: a visual article and a timeline. Highlighting crucial elements, using color, besides other methods, facilitates the recognition of essential information especially in visual articles, where content is typically more abundant than in an average infographic. In this example, apart from a strong red hue, no other intense colors are used, and dominant neutral gray color prevails. This choice makes the elements indicated by the infographic's author even more conspicuous. The second example (Figure 4.b) is a data infographic that is more extensive in terms of color than the previously analyzed example. Shades of orange and blue are employed mainly. The darkest shade of orange serves as the highlight for the

largest data points in the dataset. By using different hues and adjusting the size or length of elements, the recipient can discern which elements indicate the highest figures. The logical arrangement of elements is connected to their color. Additionally, color serves here as an organizing function for the information presented in the infographic – each color is associated with a specific data category. A similar organizational function is performed by color in the data infographic in the third example (Figure 4.c). In the multivariate bar chart in particular, the differentiation of colors is crucial to enable the recipient to easily associate numerical data with categories and compare results. However, there is a lack of using color as a distinct marker. For instance, in the chart in the second panel, the data point with the highest numerical value could be additionally highlighted with at least a different shade of color. Similarly, on the map in the penultimate panel of the infographic, this would facilitate a quicker identification of which data point indicates the highest value.

It should also be noted that color, beyond its distinguishing and organizing functions, serves a distinctly aesthetic purpose. Therefore, a thoughtful combination of colors is crucial to generate interest aesthetically for the recipient. The examples of color use for aesthetic purposes can be observed in the infographics from Figure 5. The first infographic (Figure 5.a) combines various types of infographics, including location, timeline, and characteristics. The color scheme is consistent throughout the project, but in this case, the color primarily organizes information instead of highlighting the most crucial elements. Although red is highly noticeable, it does not appear to function as a distinct marker. Due to the cohesive color palette, the infographic is visually pleasing, indicating that, in this case, colors also serve an aesthetic function. The second example (Figure 5.b) relies mainly on shades of blue with small accents of warm colors – shades of red, orange, and yellow. Here, in addition to aesthetic purposes, color also serves an organizing function for the presented information, with the appropriate color shade matched depending on numerical data. The colors from the third example (Figure 5c) also form a very consistent combination – using two cool colors, blue and green. They are well-suited to the discussed theme of gaseous pollution as a remedy for smog. Although, when discussing smog-related data, colors less associated with nature and ecology could be considered. Therefore, color serves an aesthetic function here, ensuring that the infographic looks coherent and harmonious. Additionally, color organizes information, but it is not evident that any of the colors function as a distinctive marker for information that the recipient should notice first. All data appear to be on the same hierarchy level, allowing for intuitive data interpretation from top to bottom.

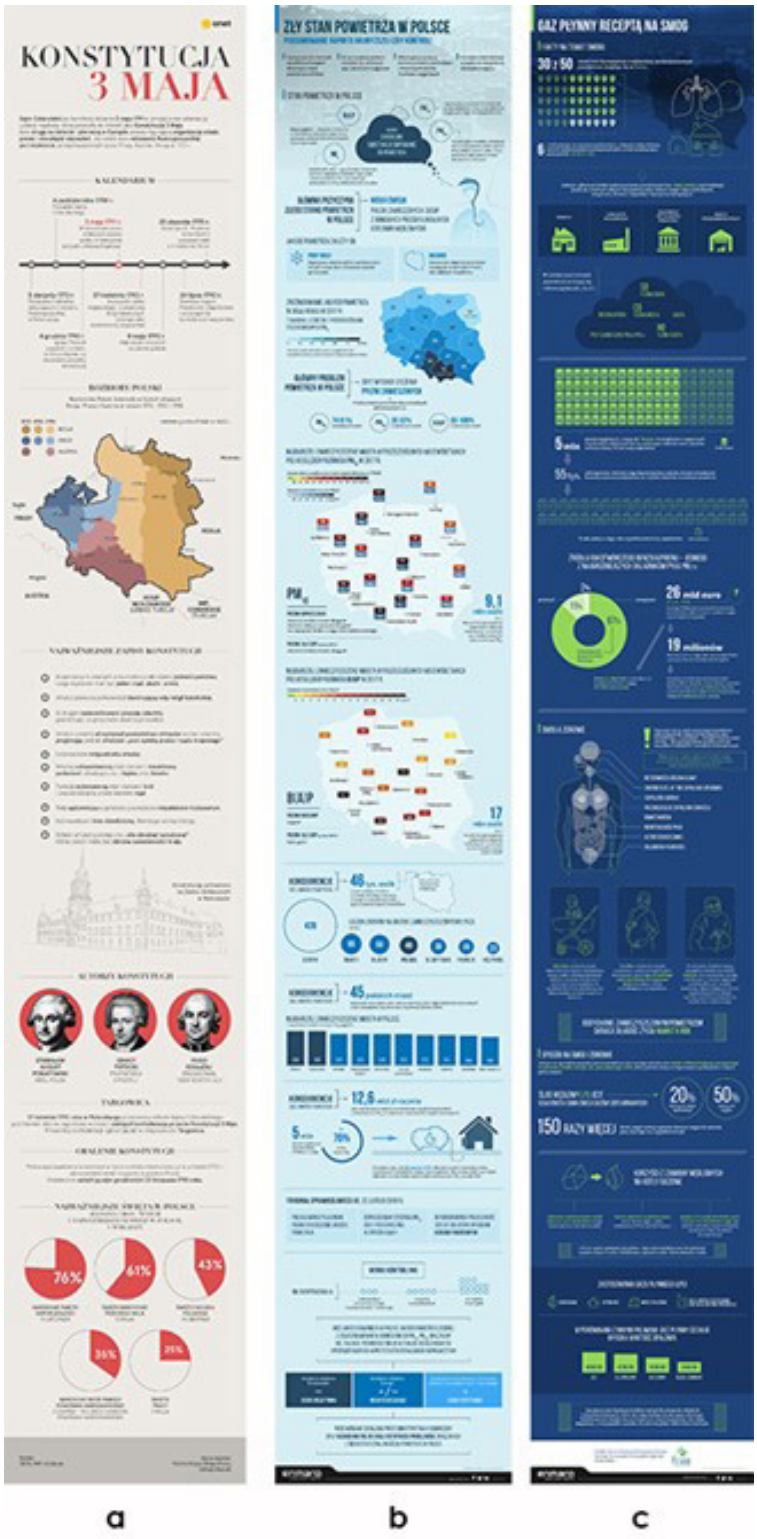


Figure 5. Use color in infographics; onet.pl, online 27.11.2023

An informative function of color emerges from all the described examples. Color can encode information about data categories, values, and convey hierarchical content information. It can be utilized to indicate trends or changes in data over time. A change in color or intensity can subtly indicate the development of a situation or the evolution of data. Additionally, it can highlight differences or similarities, thereby communicating relevant information to the recipient.

This phenomenon is even more noticeable in an entertainment infographic: quiz –

What type of music fan are you? (Figure 6.) – due to the used color scheme. Turquoise background and intense pink create a contrasting combination. It consists of text frames, lines leading the reader to the appropriate parts of the image and illustrations. This type of construction is readable and intuitive, the colors draw attention, but due to such a strong contrast it can also be tiring for the recipient's eye.

Therefore, a small change in the intensity of colors and their different adjustment to the elements making this information graphic more accessible should also be considered.

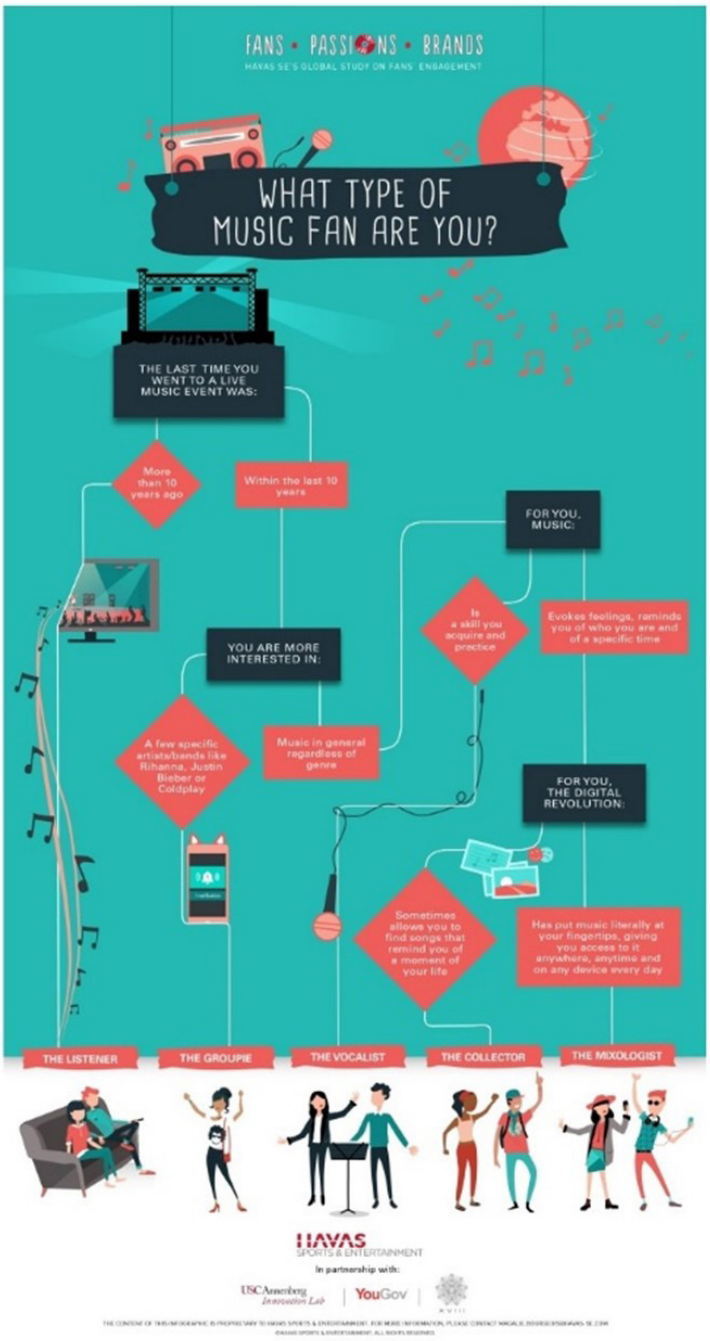


Figure 6. Entertainment infographic, quiz; reasonwhy.es, online 31.03.2023

The color scheme, as well as the arrangement from Figure 7. reflects the quiz infographic from Figure 6. published on the web. Originally, the background is a saturated shade of turquoise, and, on it, there is an equally saturated pink and several dark, na-

vy-blue elements. The bottom panel is fully white with colorful illustrations of the figures. However, to turquoise and pink colors show the effect of simultaneous contrast in practice. Both colors strongly interact with each other, creating a contrast that is not pleasant to the eye. Pink seems more saturated and flashier than it really is. Separately, both colors look attractive. Together, in such proportions on one project, they pay more attention than information. In the second example, two of the same colors of navy blue and pink were used, and turquoise had reduced saturation and had been brightened. The colors were used in different proportions - pink was applied to the blocks that were originally the title, final answers and questions, that is, those elements that should be noticeable and set the direction of reading for the recipient. On a dark background, they seem to be crucial. It is also important that pink no longer competes with any other color. Thanks to this, information, not contrasting colors, plays the leading role. This procedure shows that working with colors in infographics is important and can significantly affect the recipient's perception of content.

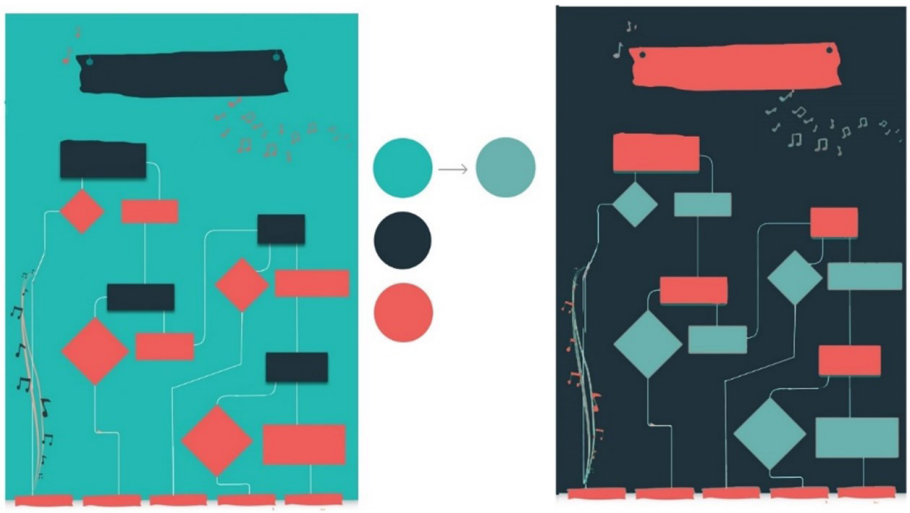


Figure 7. Example color scheme in infographic; based on infographic from reasonwhy.es, online 31.03.2023

CONCLUSIONS

The aim of the article was to identify the functions and roles that color can fulfill in infographics. As it turns out, color in graphic design can serve various roles and fulfill different functions. Four fundamental functions can be highlighted:

- organizational: helps organize information, creating a visual hierarchy and aiding in the structured presentation of data.
- differentiating: highlighting specific elements or data points. This function draws attention to crucial information, making it stand out from the rest and facilitating the viewer's focus on key details.
- aesthetic: thoughtful color combinations improve the aesthetics of the design, making it more engaging and visually attractive to the audience.
- informative: color informs about hierarchy, similarities, differences, trends, significance, encoding categories, and numerical values.

In the case of infographics, the right color scheme is important because it can highlight the most essential information. This can help users understand the information and focus on what is most relevant to them quickly. Moreover, color can also organize

the knowledge given in the information graphics. With the appropriate arrangement of elements, but also colors, individual sections and group of information could be designated. It will also help the recipient to trace visual messages easily. The color can be used to determine the way of reading, which will also positively affect the intuitiveness of the project. In addition, the color, simply, has an aesthetic function. It can create a visually attractive design, attract the attention of the recipient, and encourage to watch the presented content. However, the color palette used in the infographic can also be an obstacle to its reception. Therefore, planning the color scheme in advance and matching colors to the appropriate elements is essential. Then, they may not be irritating to the eye of the recipient.

Connections that may cause optical illusions or interact with each other in such a way that they do not look attractive or suggest different data than intended should be avoided. Colors can also correspond to the purpose of the infographic, creating a specific mood. Information graphics can be an effective tool for conveying information and engaging users while applying the right and clear design of infographics, including the correct selection of colors or information graphics.

Color plays a significant role in infographic design, influencing both functionality and aesthetics. Designers should strive for a balance between visual appeal and the comprehension of conveyed content, with an awareness of the mechanisms of image processing by the audience constituting a crucial element in this process.

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VOD IN POLAND. MARKET DYNAMICS AND DEVELOPMENT DIRECTIONS

Aleksandra Chmielewska[1], Nikodem Sarna[2]

Abstract

In this article we try to understand the structure and dynamics of the Polish VOD market. An analysis of VOD consumption data provided by Gemius shows that Polish VOD market consists of both global and local players offering international and local productions. The number of viewers has flattened over time suggesting that in the future there will be less room for organic growth and the competition will likely shift to persuading users to spend more time watching videos by multiple attempts to make the library more sticky and interesting. The results of an additional technical analysis suggest that the top player is also the most technically advanced one and provides best experience, which might have an impact on the market performance.

Keywords: VOD, video, platform, streaming, television, viewership

Introduction

The concept of Video on Demand (VoD), or "video on demand", has its roots in the mid-1980s, when the first plans to create an integrated network of videos were born in Japan and when they were aimed at revolutionizing the video content (Lea 1994). Unfortunately, at that time, technological limitations prevented the implementation of this ambitious project. It was only in the 1990s that new innovations in the field of media coding and transmission appeared and there was a significant increase in the bandwidth of Internet connections. These infrastructure changes opened the door to the creation of the first experimental VoD networks. In the following decades, as the Internet developed and expanded, the popularity of video-on-demand services increased rapidly. They have become available at any time, for any number of recipients, and still continue their dynamic expansion. (Greece 2021). This phenomenon is an integral part of the broader changes taking place in the field of television as a result of the development of digital technologies and non-linear viewership patterns (Nowak, 2019, s. 245-274). These changes are not only revolutionizing the way video content is consumed, but also shaping the evolution of the entire television medium. They are sometimes referred to as "post-television", "post-network television" (Lotz 2011) or "hypertelevision" (Scolari 2009), emphasizing

1 PhD., University of Warsaw, Institute of Information and Book Studies, email: a.chmielewska11@uw.edu.pl, ORCID: 0000-0002-5701-8098.
2 PhD., Warsaw School of Economics, Collegium of Business Administration, email: nsarna@sgh.waw.pl, ORCID: 0000-0002-7105-4108.

that these transformations go far beyond traditional television.

On the Polish market of VoD services (Video on Demand, video on demand), dynamic development and growing interest in this form of entertainment, which is confirmed by the data of the National Broadcasting Council from 2021 (KRRiT 2021) can be observed. Local viewers have wide access to a variety of VoD services nowadays. This includes domestic offers such as Player.pl, Polsat Go or TVP VoD, but also global giants such as Netflix, Amazon Prime and HBO Max, which provide their content to the Polish market (Interaktywnie 2022).

There are various business models on the VoD market. We can find services offering paid subscriptions (SVoD), free platforms financed by advertising (AVoD) and models where you only pay for specific content (pay-per-view).

This article has two main goals. Firstly, a better understanding of the current Polish VOD market, taking into account the dynamics and specificity of viewership, as well as the characteristics of providers and available content. Secondly, to identify potential directions of development of VoD services on the Polish market. By examining trends, business models, competition, consumer preferences and technological changes, the work aims to provide insight into what factors shape this market and what are the potential directions of its development. Previous literature focuses on general VoD trends in the global market or analyzes more developed markets such as the US market. However, there is a gap in the literature regarding a thorough analysis of the VoD market in Poland, which is a dynamically developing market with its specific characteristics. There is also a lack of research that combines technology analysis with market analysis, which can provide a more comprehensive understanding of this sector. This work aims to fill this gap, focusing on the specificity of the VoD market in Poland and combining market analysis with technological analysis.

The research methodology adopted consisted of an in-depth literature analysis, the analysis of market reports and a detailed consideration of data on VoD consumption on the Polish market provided to the authors by Gemius. Additionally, the authors conducted an in-depth technical analysis of VoD services. BuiltWith Technology Lookup tool (https://builtwith.com/) was used to identify technologies used in VoD services available on the Internet. In terms of mobile applications, they were downloaded from the Google Play platform and then decompiled in order to obtain a full picture of the technologies used in the process of building these applications.

The structure of the article is based on three main chapters. The first chapter presents an introduction to the VoD concept and the criteria for describing VoD service providers. The second chapter is devoted to a brief discussion of the structure of the American market, which is an important reference due to its maturity and developed technologies. The third chapter, which is the main part of the article, analyzes the Polish VoD market, taking into account research objectives and a detailed analysis of technologies used in Internet applications, using the BuiltWith Technology Lookup tool.

VoD - key characteristics

VoD, as a technology and form of video content distribution, is one of the evolutionary forms of television in the face of the development of digital technologies (Szkudlarek-Śmiechowicz 2022). These changes, however, go much deeper than just technical aspects, affecting various aspects of this medium. As Mirosław Filiciak (2013) points out, in addition to the technological revolution, the place of consumption is also changing, which can now take place outside home, on portable devices. The method of production is also changing, moving towards outsourcing, and the content is becoming more and more entertaining. Even the social aspect is being transformed due to the development of social media platforms.

Comparing VoD to traditional television based on a fixed program schedule, significant differences can be seen. The key difference is the non-linearity of VoD, which means that viewers can choose when and what they want to watch. Content is available anywhere and at any time, and its distribution takes place via various platforms, mainly online and on mobile devices (Jakubowicz 2011).

Amanda Lotz (2011) identifies similar changes in television and describes them using the "5C" model: Choice, Control, Convenience, Customization, and Community. It is worth noting that VoD television, compared to traditional television, remains popular, although its nature and consumption model differ significantly.

VoD platforms use various business models, the most common of which are (Grece 2021):

a. SVoD (Subscription Video on Demand) - An example of SVoD is, for instance, HBO Max. In this model, users pay a fixed monthly fee for access to the video library. In return, they receive high-quality video materials and an ad-free guarantee.
b. AVoD (Advertising Video on Demand) - This model works on the principle of free access to a video library, such as some of the content on TVP VOD. Users do not pay for access, but advertisements are displayed while watching videos or between them. In this case, the main source of revenue is advertising budgets, not subscriptions.
c. TVoD (Pay-per-view Video on Demand) - This model is relatively rare and involves charging for specific video materials. The users pay only for what they want to watch. The BVoD (Broadcaster Video on Demand) model, which refers to VoD platforms that are an extension of traditional television broadcasters is also worth mentioning.

Nowadays, we increasingly come across the concepts of VoD and OTT, which are often juxtaposed. OTT (Over the Top) technology allows users to access VoD video content and live TV broadcasts on any device and at any time. It is a new trend in the programming offer, combining live content with a VoD library. Unlike traditional distribution methods, OTT technology does not require signing contracts with cable or satellite operators, and the content is transmitted directly over the Internet.

VoD platforms give users the ability to play a selected collection of VoD video content at any time, as well as access to podcasts, music and many other media. When it comes to VoD, there are two main categories: VoD service, which requires a traditional cable connection, and VoD platform, which delivers content directly over the Internet.

The SVoD (Subscription Video on Demand) model allows users to access the entire library of multimedia content through a subscription that they pay periodically. In the AVoD (Advertising Video on Demand) model, the platform is financed by displaying advertisements before, during or after the video, and users do not pay for access directly. The TVoD (Pay-per-view Video on Demand) model allows users to purchase specific content by paying for it based on the "pay-per-view" model.

All these models are already available on platforms such as Netflix, Hulu, Amazon and Prime (Gudsho, 2022).

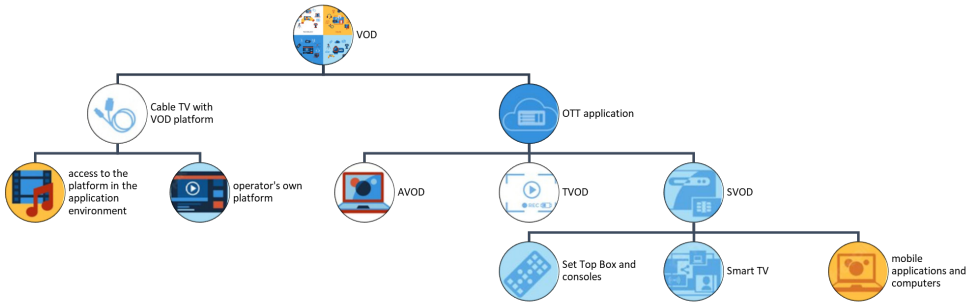

Fig. 1. VOD ecosystem. Source: the authors' study based on https://www.gudsho.com/blog/difference-between-vod-and-ott-platforms/, accessed on: March 11, 2023.

An interesting way of analyzing the differences between VoD services is presented by Amanda Lotz (2022). Looking at VoD from four perspectives: the number of markets in which they operate, the characteristics of their libraries, ownership of materials and connections with other media companies is suggested.

The first dimension is the geographical perspective. There are local VoD services operating only in one market, such as the Polish Player.pl. There are also international services that cover more than one market, e.g. Canal +, and global services that operate on a global scale, such as Netflix.

Another aspect is the characteristics of VoD libraries. They can be general and contain a variety of content that is not profiled for a specific group of viewers, as is the case of HBO Max. They can also be specific, consisting of material belonging only to a selected category, as, for example, Crunchyroll.

The third dimension is material ownership. Some films and content are owned by the respective VoD providers, as in the case of Disney+, while others have licenses from producers. Proprietary materials may be prepared specifically for the needs of a VoD service or may also be broadcast in other places, e.g. on linear television, if a given company owns this channel.

The last aspect of the analysis deals with possible ownership connections with larger organizations. Amanda Lotz distinguishes three main categories of players: specialized VoD providers such as Netflix; branches of large media and entertainment corporations, e.g. HBO Max and Disney+; and VoD services belonging to enterprises where the main business profile is related to a different industry, such as Amazon Prime.

The application of the above criteria facilitates the understanding of the scope of activities of various VoD providers and the strategies applied for building their libraries and competitive advantage. Thus, using these perspectives to analyze websites operating on the Polish market to understand their development dynamics seems worthwhile.

Global VOD market

In recent years, we have observed a dynamic increase in the popularity of VoD (Video on Demand) services on a global scale. Thanks to VoD, users gained access to a rich catalog of films, series and other television programs anywhere and at any time (Zing 2005).

Starting in 2011, American SVoD (Subscription Video on Demand) providers began to expand into international markets. Amazon Instant Watch SVoD has expanded its of-

fer beyond the US, reaching the UK, Germany and Austria. Unfortunately, the unsuccessful debut in Norway, Denmark and Sweden in 2012 was due to cultural differences and expectations regarding content. Nevertheless, in 2016, Amazon's video service became available worldwide.

In September 2013, Netflix debuted on the European market, and in the following years it expanded its services to most European countries. Although films and series from HBO were previously available, they were only available to subscribers of selected cable networks and satellite platforms. Only since 2016 have they become available online. Netflix has become the most popular VOD service in Europe, attracting more than half of users. Other services such as Amazon, Sky and Viaplay (which also offers access to HBO content) are the main competing options. In 2018, Amazon and Netflix dominated the VoD market, taking as much as 73% of the share, while other domestic services accounted for approximately 17% (KRRiT, 2021).

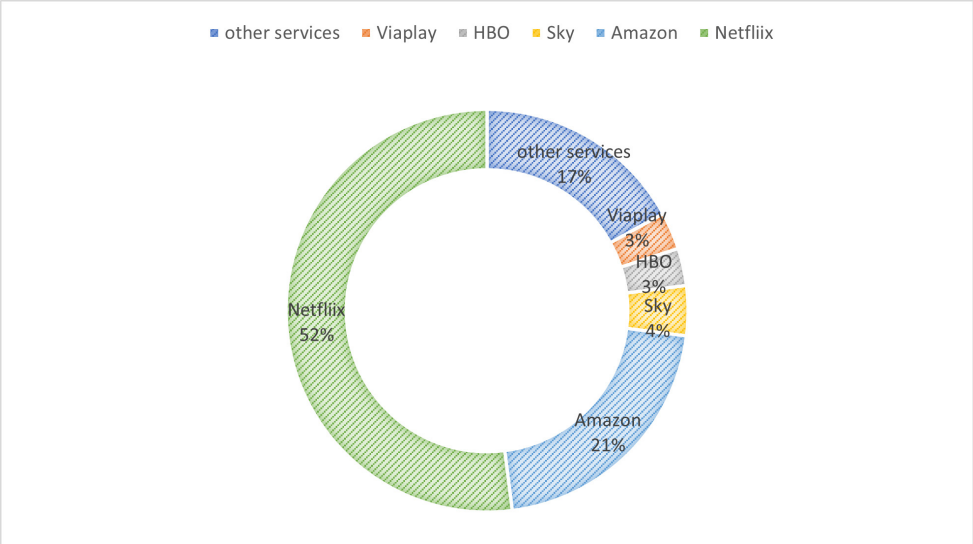

Fig. 2. Share of the largest services in the group of VoD audience. Source: the authors' study based on KRRiT 2021

The value of the VoD (Video on Demand) market on a global scale exceeded US$ 50 billion in 2021, and forecasts indicate that it will continue to grow at an annual rate of 12.5% in the period from 2021 to 2028. Over-the-top (OTT) TV and video services revenue is expected to reach over US$242 billion by 2028, almost doubling from 2021. The VoD market has experienced a huge boom in recent years, and its revenue has grown exponentially, from US$ 6.1 billion in 2010 to more than ten times that amount in 2021.

In the US alone, the OTT penetration rate was 85.6 percent in 2022. Many users use popular VOD platforms such as Netflix, Hulu, Amazon Prime and Disney+. Netflix, which has over 220 million paying subscribers worldwide, is the leader in the global VoD market. In 2021, US-based users of OTT services spent an average of more than two hours per week with them. As OTT services begin to replace traditional media such as television, these platforms have become attractive to both consumers and advertisers.

Users of OTT services are more receptive to advertising than TV viewers, and these platforms allow advertisers to target specific demographic groups or types of consumers who show greater interest in their products or services more precisely (Statista).

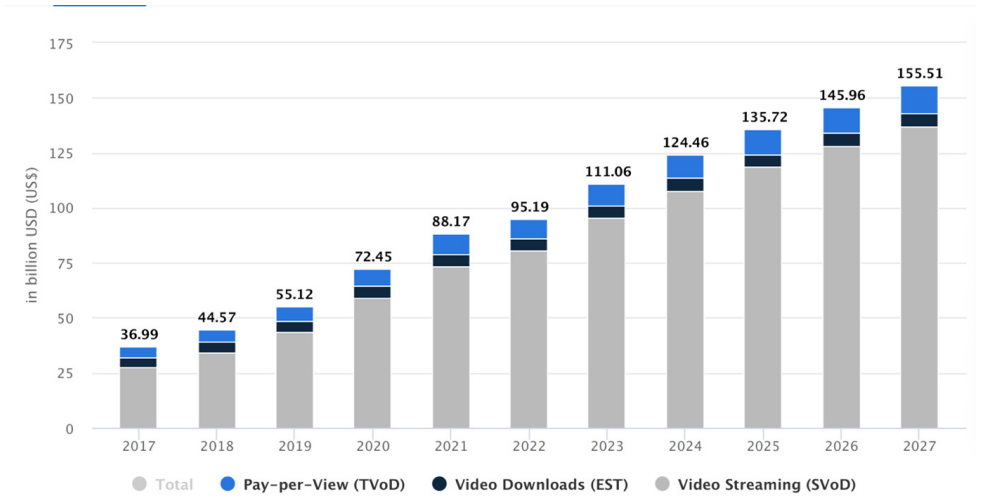

Fig. 3 Video on Demand - Worldwide. Source: https://www.statista.com/outlook/dmo/digital-media/video-on-demand/worldwide accessed on March 24, 2023

The Video-on-Demand (VoD) market is forecast to reach an impressive US$111.10 billion in 2023, with an annual growth rate of 8.77% over the period 2023 to 2027. This translates into a projected market size of US$155.50 billion by 2027. It is worth noting that the dominant segment of this market will be Video Streaming (SVoD), its market value will reach an impressive level of USD 95.35 billion in 2023. The largest share in this segment will be in the United States, where the value of the VoD market in 2023 will be US$ 43.39 billion.

Moreover, the number of Video-on-Demand users is expected to grow to 1.92 billion by 2027, with a user penetration of 21.0% in 2023 and is expected to reach 24.2% by 2027 (Statista).

It is also worth noting that this market is dominated by major players, including Netflix, Amazon Prime Video, Hulu, Disney+, HBO Max and Apple TV+. All of these platforms offer a variety of video content to their users and use business models based on subscriptions or fees for specific video content.

The name of the VOD service	Popularity 2022	Monthly subscription price	Library type	Ownership of materials
Netflix	70%	$15.15	Series, movies, documentaries	own and licensed
HBOmax	9.91%	$12.49	Series and movies	own
HULU	3,86%	$9.99	Series and movies	licensed from the DC Universe, Marvel, 21st Century Fox.
Amazon Prime video	19%	$14.99	Series and movies	own and licensed
Disney+	6,18%	$7.99	Series and movies	own
Paramount+	2,70%	$7.49	Series and movies	owned and licensed including Marvel, MGM EPIX.
AppleTV+	2,70%	$4.99	Series and movies	own and licensed
Peacock	4,25%	$7.49	Series and movies	own and licensed

Table 1. The most popular websites in the US in 2022. Source: the authors' study

Netflix is currently the undisputed leader in the global VoD services market, attracting over 200 million subscribers. In Western Europe, most people use this website. In addition to Netflix, other popular VoD services include Hulu and Amazon Prime Video, which offer access to the latest episodes of TV shows, and Disney+, which specializes in films and series for the whole family.

Polish VoD market analysis

The Polish VoD market has been growing fast over the last decade. However, it is still a part of a more complex television landscape with linear TV still playing a dominant role. As can be seen in the table and the chart below, the position of pay TV in Poland is extremely stable. Nevertheless, there is a noticeable subtle decline in the popularity of pay TV in favor of paid VoD services, the interest of which is constantly growing, with one exception - AVoD services (Video on Demand containing advertising).

	2014	2015	2016	2017	2018	2019	2020	2021	2022
Pay TV	9,00	8,96	8,97	9,02	9,05	9	8,94	8,92	8,9
Pay VoD	1,18	1,63	2,18	2,9	3,66	4,59	5,69	6,91	7,93
SVoD	0,78	1,06	1,36	1,79	2,36	3,05	3,93	5,06	6,03
AVoD	3,58	3,74	4,13	4,41	4,62	4,69	4,46	4,33	4,27

Table 2. Number of households (in millions) with access to pay TV and paid VoD services, including SVoD and AVoD services in Poland, 2014-2022 Source: the authors' study based on the report of the television and VoD market in Poland PMR 2022

Research conducted by Gemius/PBI allows us to determine the most popular VoD services on the Polish media market. The results are presented in Table 3.

Media channel	Properties
Netflix	Netflix.com, Netflix app
Disney+	Disneyplus.com, Disney+ app
Player.pl	Player.pl, player.pl app
HBO Max	Hbomax.com, HBO Max app
Prime Video	Primevideo.com, Amazon Prime Video app
Canal Plus	Canalplus.com, Canal Plus app
TVP	Vod.tvp.pl, TVP Stream app, TVP Go app
Polsat Box Go	Polsatboxgo.pl, Polsat Box Go app
WP	Wp.pl, WP Pilot app

Table 3. The most popular OTT/VOD services in Poland. Source: Medaipanel Gemius/PBI

In December 2022, Netflix, although not audited by Gemius/PBI, maintained its leading position as the most popular VoD service. The average time users spent viewing content on this site was 7 hours and 10 minutes. This is almost three times more than the results achieved by Disney+, which took the second place in the VoD services ranking. HBO Max took the third place, and Player took the fourth place. The TVP VOD took the fifth place.

No.	Media channel	Real Users	Market Share	ATS
1	NETFLIX (www+app)	12 904 434	43.47%	7h 13m 51s
2	DISNEY+ (www+app)	4 159 350	14.01%	3h 6m 52s

3	HBO MAX (www+app)	4 024 242	13.56%	2h 31m 31s
4	PLAYER (www+app)	3 766 500	12.69%	2h 26m 52s
5	TVP (www+app)	3 166 128	10.67%	3h 21m 28s
6	PRIME VIDEO (www+app)	2 626 182	8.85%	1h 17m 53s
7	CANAL PLUS (www+app)	2 510 514	8.46%	2h 39m 17s
8	cda.pl / Serwisy VOD and OTT	2 414 124	8.13%	46m 5s
9	WP.PL (www+app)	1 960 362	6.60%	1h 1m 14s
10	POLSAT BOX GO (www+app)	1 841 292	6.20%	1h 28m 24s

***ATS - the average time that real users spend on a given media channel (real users' total watching time divided by the number of these users)**
Table 4. Leading VoD services in January 2023. Source: the authors' study based on Medaipanel Gemius/PBI

Customers expect an application that works flawlessly, is responsive devices, can handle heavy network loads, and works well even with poor Internet connection. To meet these expectations, it is necessary to test the application in many aspects namely: playback launch speeds, the amount of time it takes to load the content, the ability of the buffer to cope with momentary internet disruptions, and the ability of the application to resume operation after a connection loss.

To understand the results of manual testing fully, it is also necessary to understand the technologies used in VoD applications thoroughly. In order to do this, technical tests were carried out on OTT-VoD platforms such as Netflix, WP Pilot, VoD.pl, TVP VOD, Player, HBO GO, IPLA and CANAL+. The study was conducted on the Polish market in December 2022 and January 2023. The study included a technological analysis of the platforms, enabling verification of their technical aspects.

Additional conclusions can be reached by comparing the dynamics of the number of users of VoD services and the average monthly time spent on content consumption on these services in a slightly longer time frame - from July 2021 to January 2023.

The charts presenting both dimensions can be found in Figure 4 and Figure 5 below.

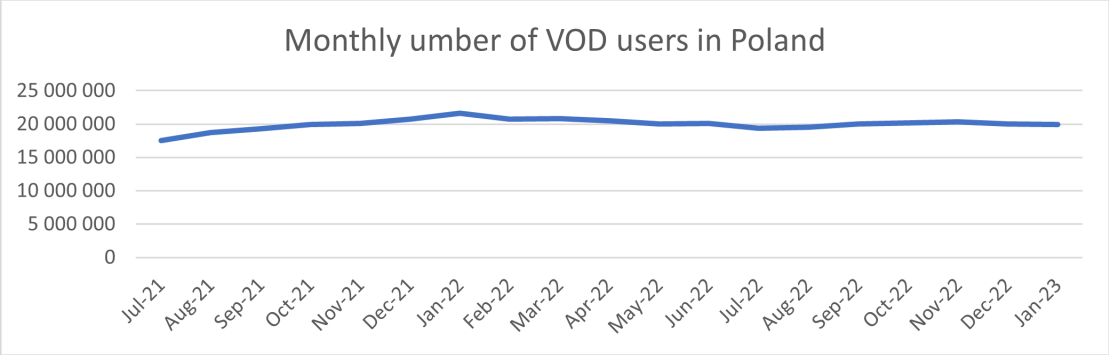

Fig. 4. Number of VoD users in Poland from July 2021 to January 2023. Source: the authors' study based on Medaipanel Gemius/PBI

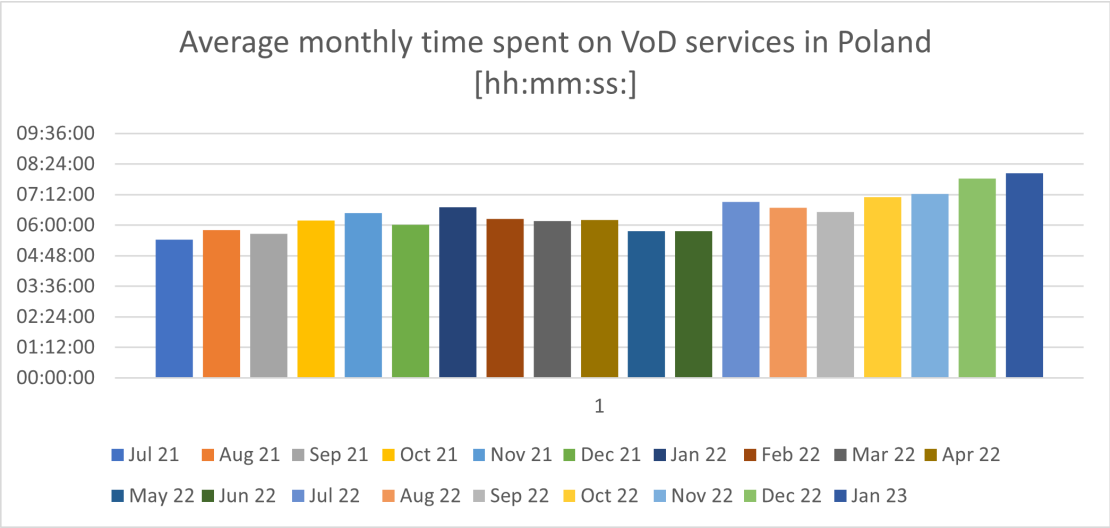

Fig. 5. Average monthly time spent on VoD services in Poland from July 2021 to January 2023. Source: the authors' study based on Mediapanel Gemius/PBI

The number of users did not change significantly in the analyzed period. Relatively intensive growth could be noticed only in the third quarter of 2021 and at the beginning of 2022, then the curve flattens out at the level of approximately 20 million. As for the average time spent on VoD services, it increases from July 2021 until January 2022, then decreases for several months and increases again from July 2022. This may result from a certain seasonality, greater propensity to watch video materials in the autumn and winter seasons and the greater intensity of premieres, however, comparing the corresponding periods in 2021 and 2022, an increase in the analyzed values is visible. Due to the limited scope of available data, it is difficult to draw clear conclusions, but it can be suspected that we are dealing with an upward trend when it comes to spending time on VoD services.

The relative stabilization of the number of users with the simultaneous increase in the average time spent on VoD services may be a sign of the maturing of the Polish market. It will be increasingly difficult for suppliers to rely on organic growth, as the number of potential new users has significantly decreased. Interestingly, the dynamics of the number of users represented by age group is more or less similar as all groups show similar upward trends at the beginning of the analyzed period and stabilize in its second half. Regardless of the month, the 35-49 age range is dominant, followed by 20-34. The details are presented in Figure 6.

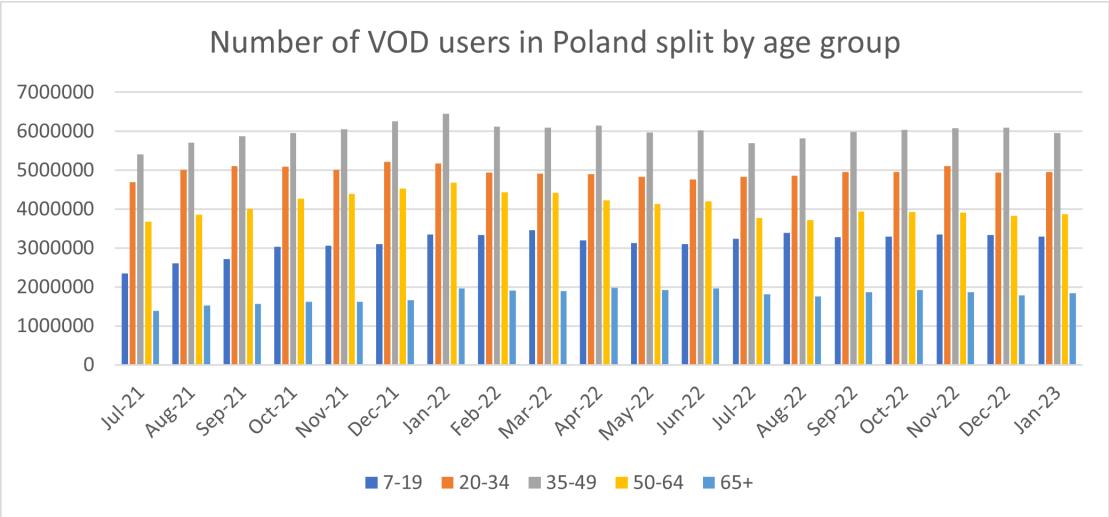

Fig. 6. Monthly number of VoD users in Poland by age from July 2021 to January 2023. Source: the authors' study based on Mediapanel Gemius/PBI

It seems that the efforts of providers should focus on extending the time spent on video content consumption, with a strong emphasis on building a competitive advantage through the uniqueness or size of the library. The attractiveness of Polish market can be implied by the investments of new (not yet operating) local platforms. SkyShowtime platform, which debuted in February 2023, shortly before the article had been written (Wirtualnemedia 2023b) serves as a good example.

Looking at the structure of the Polish VoD market through the prism of the dimensions proposed by A. Lotz, discussed in the first chapter, it should be noted that:

- Global platforms offering libraries of a general nature dominate – Netflix, HBO Max, Disney+, Prime Video, Canal Plus – their local competition with similar libraries are e.g. TVP, Player.pl, WP.pl and Polsat Go Box and cda.pl;
- They include both content licensing services (e.g. Netflix, HBO Max, cda.pl), with their own content (e.g. Disney+) and mixed content (e.g. Player.pl, TVP);
- Netflix and cda.pl are "pure" VoD platforms that operate exclusively in this sector; the others are either websites belonging to larger media companies (HBO Max, Canal Plus, Disney+, Player.pl, TVP, Polsat Go Box, WP.pl) or a branch of a company with its main activity not related to the media (Amazon Prime Video).

Therefore, Polish viewers are eager to watch diverse materials, both of local and foreign productions. The lack of even one specialist service among the top ten may be a bit shocking, but it should be remembered that some Polish providers also offer sports and news programs in packages - these are, for example, Player.pl and TVP. However, further research regarding the characteristics of the consumed content, requires additional study beyond the scope of this article.

At the end of this section, a technical analysis of the technologies used in the applications was carried out. Due to this, technological differences between suppliers that are large enough to affect their popularity, at least partially, can be verified. This analysis was performed in December 2022 and January 2023 and covered the following VoD platforms: Netflix, WP Pilot, vod.pl, TVP VOD, Player, HBO GO, IPLA and CANAL+. The comparison included technologies, frameworks, libraries and manifests of web and mobile applications. The tool used to analyze the technology of web applications was BuiltWith Technology Lookup (https://builtwith.com/), while mobile applications were downloaded from the Google Play store and decompiled to get a detailed picture of the technologies used to build them.

The details of the analysis are presented the Table 5 below.

Platform name	Description of content distribution technology
Netflix	Netflix used its own manifest implementation based on a JSON file, which was additionally extended by a list of available content distribution servers (CDNs) for video materials. This made it easy to switch between sources in the event of a failure of one of the sources. This also meant that Netflix had to adapt the players on each platform to interpret its own manifest implementation and handle these cases. The analysis of the manifest shows that it contains up to 9 video tracks, the smallest of which is adapted to connections with the lowest parameters, i.e. 100 kbps (320x240 resolution). Tests confirmed trouble-free playback of the material even at 80 kbps. The use of the CMAF standard seems to indicate the effectiveness of individual implementations. There are noticeable differences between the platforms. Android TV is largely based on "webview" and uses a modest number of libraries, while on the Android mobile platform the developers have largely used native technologies such as Kotlin and exoplayer. The code has been obfuscated, making it difficult to analyze.
HBO GO	The Smooth Streaming standard has been used by HBO GO to describe media delivery manifests. The lowest quality provided by the application was 482 kbps at 396x224 resolution. The VoD platform offered 8 levels of quality. The Android TV app, created using Apache Cordova, is only 7MB in size and uses Exoplayer version 2.0 for playback. On the other hand, the application for the Android mobile platform was created using native components, and the player created by the Korean company Inisoft is used for playback, instead of Google's exoplayer - which distinguishes it from other compared applications.
CANAL+	The application uses the Smooth Streaming standard to describe the delivered media. The quality of the delivered materials is 400Kbps with a resolution of 480x270, and 5 possible qualities are offered. Clean architecture and the Kotlin language were used to create the project, thanks to which the latest technologies and thoughtful programming practices were used. The code has been obfuscated, which is also an advantage of the application. The exoplayer 2.0 player library was used to support Android mobile and Android TV.
IPLA	IPLA uses the MPEG DASH standard to describe the delivered video media, using the CMAF extension. The platform for the tested material provides 4 different qualities, of which the lowest possible offers 128 kbps at a resolution of 384x216. It is the second platform to use the CMAF standard after Netflix. The developers used Java to a large extent in the development of the application, the code also mentions the use of Kotlin, but the obfuscation of the code does not allow for easy analysis. The player used in the application is the exoplayer library in version 2.0. Application developers maintain both platforms within one application: Android TV and Android mobile, which is a definite advantage.
TVP VOD	Video material provided by CDN servers is standardly described by HLS, and the VoD application offers 7 possible qualities for the tested video material, starting with a resolution of 400x224 and a bit rate of 528 kbps. The language used to create the application was Kotlin, however, the code is obfuscated, so it is difficult to make a more detailed analysis. Exoplayer version 2.0 was used to play the video, on Android TV and mobile platforms. With a limited connection, the application had problems with video playback, because the adaptation to the connection parameters did not work properly. Each time the player was restarted in poor quality, the application tried to load the material in a higher quality, which resulted in video pauses, which was not acceptable to the user.

VOD.PL	MPEG DASH is the standard that defines the content delivered for applications. The lowest quality level provided by the platform is 295 kbps at a resolution of 284x160, and the number of video quality levels available for testing was 7. Java is still used for application development, but in the future, it is worth considering a gradual migration to Kotlin, recommended by Google. As part of unifying the code in the application, the developers used it both on the Android TV platform and on mobile devices. Unfortunately, during the video playback, above-average CPU and memory usage was noticed, which may be the reason for the rapid consumption of power, which in turn negatively affects the overall reception of the application.
Player	The MPEG DASH standard was used to describe the delivered video media in the tested sample manifest. The VoD platform offered 7 possible video qualities, the weakest of which allowed a bit rate of 240 kbps and a resolution of 320x240. During the analysis, it was shown that the application is characterized by low CPU and memory consumption, which may result in lower energy consumption. However, there are also disadvantages such as delays when switching to the previous screen. Moreover, there are two versions of exoplayer: 1.5 and 2.0, it is also the only platform that still maintains them. The application is available for both the Android TV and mobile platforms, even if they are very similar. The programming languages used to create it are Java and Kotlin, but the developers did not obfuscate the code.
WP Pilot	WP Pilot uses the MPEG-DASH standard format, with which it offers 4 possible video qualities for the tested video material, starting with the lowest quality, which offers 150 kbps at a resolution of 262x144. To enable the application to work on different platforms, the developers used the Kotlin language and the "viper" architecture. The video is played using the exoplayer player library version 2.0.

Table 5. Technical analysis of selected applications on the Polish market. Source: the authors' study

Legend:

JSON - data exchange format

CDN - Content Delivery Network - a server or network of servers distributing content

Video content signal with audio

CMAF – Common Media Application Format for Segmented Media is an extensible standard for encoding and packaging segmented media objects for delivery and decoding on end-user devices.

Kotlin is a cross-platform, statically typed programming language

Apache Cordova is a mobile application development platform

Clean Architecture is an approach to application programming that assumes the separation of four main functional VoD modules in the project.

A standard for streaming video materials that allows you to adapt the displayed media to the capabilities of the player and connection, as well as the user's needs.

HTTP Live Streaming is an HTTP-based, adaptive bitrate communication protocol.

The technological analysis conducted on VoD as part of this project included a review of technologies, frameworks, libraries and manifests of web and mobile applications. The tool used to analyze the technology of web applications was BuiltWith Technology Lookup (https://builtwith.com/), and the mobile applications were downloaded from the Google Play store and decompiled to obtain a detailed picture of the technologies used to build them.

The VoD market in Poland is dynamic and developing at a fast pace. VoD is becoming more and more popular in Poland, as users value the convenience of watching their favorite video content, films and series anytime and anywhere, which favors the development of VoD platforms. The leading players on the Polish VoD market are platforms such as Netflix, HBO GO, IPLA, VOD.PL, Player, WP Pilot and TVP VOD. Each of these platforms offers a variety of content and subscription models.

The technical analysis shows that the leading VoD platforms differ significantly in the level of advancement of their technological infrastructure, which translates into the comfort of playing video content. The fact that Netflix is the best in this respect and is also the market leader seems to be a reason to hypothesize that this aspect of suppliers' operations may also have an impact on the potential success of a given supplier. VoD platforms in Poland use various content distribution technologies, such as MPEG DASH, Smooth Streaming, CMAF and others. The choice of technology may affect the quality of available video content. Personalization of content and high quality of materials are key factors that attract users. Offering multiple levels of video quality and tailoring content to viewer preferences are important strategies for VoD platforms.

Summary

The VoD market in Poland is developing dynamically, and competition between platforms leads to constant improvement of services. Users can enjoy access to a variety of video content and choose from a variety of subscription options, which is supporting the growth of this market.

Popularity of specific VoD platforms in Poland is the result of multiple factors. First of all, the variety of available video content plays an important role. Users expect access to a wide range of content, including films, series, television programs, as well as original productions. Video and sound quality, availability of subtitles and dubbing also influence user preferences. Additionally, personalization and recommendations tailored to the viewer's tastes are increasingly important. User preferences vary, which means that VoD platforms try to provide personalized content tailored to individual preferences. The price of subscriptions and the availability of promotional offers also have a significant impact on the popularity of VoD platforms.

Technological analysis and analysis of existing data suggest that content distribution technology is a key element of competition between VoD platforms in Poland. Platforms must adapt their applications and infrastructure to ensure smooth and high-quality video playback. The standards used, such as MPEG-DASH, CMAF or Smooth Streaming, affect the quality of the delivered video materials and the ability to adapt to the changing parameters of the user's Internet connection. Differences in the technologies used may affect the efficiency of content delivery and the user experience.

The challenges and opportunities for the development of the VoD market in Poland are related to the evolution of the way media content is consumed. More and more people use VOD services on various mobile devices, which requires adapting the platforms to different screen sizes and connection parameters. At the same time, content providers must pay attention to aspects related to copyright and content licensing. As internet access becomes more widespread in rural areas, there is potential for the VoD market to expand there. However, the challenge is to adapt offers to different demographic groups and cultural preferences. Building user trust is also crucial for the VoD market in Poland, especially in the context of personal data protection and the security of online transactions.

Changes in consumer behavior and the development of technology have led to the emergence of a new form of VoD video content consumption in the form of VoD platforms. More and more people choose digital video content providers that offer the ability to access live and on-demand programs on any device, anytime and anywhere.

The use of the VoD model in hybrid offers is clearly visible among Polish operators and television broadcasters. However, competition from global suppliers is very strong, and global platforms offering subject libraries occupy a dominant position in the local market. This increases the pressure to constantly improve the quality of material reproduction and the attractiveness of the library.

The plethora of the Polish market includes both standalone VoD services and those belonging to media industry tycoons. There is both licensed content and content produced for VoD – both local and international. The dynamics of this market indicate slow maturation. The number of users of VoD services has recently stabilized, but the time they spend watching video content is constantly growing. This means that companies can no longer benefit from the wave of organic growth typical to technological innovations, but must focus on acquiring viewers from competitors and attracting their attention for longer by appropriately shaping the programming offer.

The VoD market in Poland is competitive, and platforms compete with each other for users' attention. This leads to continuous improvement of services and offering attractive subscription prices. VoD is impacting traditional television and changing the way consumers consume media content. It also offers the opportunity to access international content in the original language versions.

However, the challenges related to the quality of Internet access, both in cities and rural areas should be addressed too. Providers of the services must ensure smooth content streaming even in difficult network conditions.

Finally, the directions for further possible VoD scientific research in the VoD area should be mentioned. It seems that a particularly important topic of VoD as the market matures is a better understanding of viewers' preferences and the scale of meeting their VoD needs in the current balance of power. This would allow for a better understanding not only of the perspective of VoD service users, but also of suppliers, because a natural effect of in-depth VoD research in this area would be the identification of the factors most important for the attractiveness of VoD services.

The use of OTT services will continue to increase VoD in the television industry. Transmitting video content is moving VoD towards mobile devices and streaming. Transforming television does not mean eliminating live broadcasts. Broadcasting VoD video in real time is essential because it provides viewers with completely unparalleled engagement. When this type of communication is supplemented with social media, real-time VoD interaction and advanced data, the Internet becomes an excellent platform for many industries, including VoD for sports. As technology develops and viewers' perceptions change, the relationship between sports and OTT will become stronger.

The analysis of reports and existing data indicates that the popularity of VoD services will continue to grow. There will be a growing pressure on providers in terms of content quality, the wide range of available options and the speed and technical quality of the application. To meet these demands, VoD platforms will need to invest in VoD global and local content and advanced technologies such as lossless systems, multi-CDN, and hybrid content distribution solutions.

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THE SOCIAL POTENTIAL OF FACT-CHECKING IN VERIFYING INFORMATION ABOUT THE WAR IN UKRAINE - A CASE STUDY

Joanna Urbaś[1]

Abstract

The emergence of new media has turned the formerly passive recipients of content into active users who, as a part of various initiatives, are willing to establish virtual communities. The aim of the argument is to present the social dimension of fact-checking in social media through the example of the analysis of the profile of the Demagog Association in the first month after the outbreak of the war. The author will attempt to answer questions about the social nature of fact-checking - what topics and values the community in the Demagog profile gathers around, whether fact-checking has social potential and whether the community around fact-checking organizations has the potential to educate and activate the rest of society in social media.

Key words: fact-checking, fake news, post-truth, Demagog, social media

Introduction

The transition from passive observation to active participation related to content creation is a characteristic element of new media, closely intertwined with digitization. This transformation has not only accelerated the dissemination and reception of information but has also enabled the exchange of content and influence over it (Szymkiewicz, 2022, pp. 45-46). One noticeable phenomenon in this context is the pursuit of fact-checking as means to verify the accuracy of media messages. This phenomenon aims to establish a discipline of content verification in the infosphere, primarily on the Internet. It involves the verification of facts, data, and the accuracy of claims circulating in the public sphere (Szymkiewicz, 2022, p. 49). What are the implications of this and where do they result from? What is the social potential of this phenomenon and what risks does it entail? This article attempts to address these questions. Theoretical concepts related to the topic will be juxtaposed with an analysis of the content of a selected fact-checking profile. The issues raised in this work can serve as a starting point for further exploration in future research.

The study of the changes occurring in a previously well-explored issue regarding the role of media, should be started by reflecting on the role of media in a democratic

1 PhD candidate, Pontifical University of John Paul II in Cracow, e-mail: joanna.urbas@doktorant.upjp2.edu.pl; ORCID: 0000-0001-9475-3326

system. In the publication *Mass Media: Art, Entertainment, Business,* Mrozowski highlights the role of media in a liberal democracy model. He writes that media's stimulation of communicative interactions among all social actors leads to the activation of society and triggers social-political engagement. (Mrozowski, 2001, pp. 122-124). Current research indicates that social media, too, can serve as a tool for communication between citizens and public entities (Allcott, Braghieri, Eichmeyer, Gentzkow, 2020).

While the researcher was writing about mass media, social media can fulfill a similar role. Communication through them is a significant feature, and acquainting oneself with information through fact-checking organization profiles can contribute to community building.

Thus, in order to consider the phenomenon of social fact-checking, a definition of social media needs to be provided. In 2010, Kaplan and Haenlin identified two key characteristics defining social media. According to them, social media are "internet applications based on the ideological and technological foundations of Web 2.0, which allow for the creation and exchange of user-generated content" (Kaplan, Haenlein, 2010, pp. 59-68). In more recent definitions, authors indicate that social media are a digital space created by people and for people, providing an environment conducive to interactions and connections on various levels, including personal, professional, business, political, and social dimensions (Kapoor et al., 2018).

Theorists emphasize three components that play an equally important role and are referred to as the social media triangle: social networks, content, and Web 2.0. Specific content is not only created by community members but also shared with a broader audience, modified, and commented on. This includes photos, videos, information, reviews, comments, and more (Popiołek, 2015, pp. 60-71). "The content of websites is generated and modified most often by users (user-generated content). Creating this content is made possible by the specific rules of Internet functioning, known as Web 2.0. This concept is mainly associated with content generated by users. But as Dominik Kaznowski points out, Web 2.0 has a slightly broader meaning, especially in the common discourse, and also refers to the ways technology is used" (Popiołek, 2015, pp. 60-71). The quoted definitions underscore the dimension of content creation and sharing by users. This multi-directional communication sets new media apart from traditional media. Key attributes which had been ascribed by researchers to new media include interconnectivity, users acting as both senders and receivers, interactivity, a multitude of use cases, openness, ubiquity, spatial indefiniteness, and delocalization (Skrzypczak, 1999, p. 376). All these characteristics enable the formation of communities around the phenomenon of fact-checking.

The network, however, continues to evolve, contributing to the distinction of successive generations of networks. In Web 3.0, artificial intelligence mechanisms have been enhanced, especially in the aspects of data segregation and transmission (Tasner et al., 2011). In the further evolution of the network, referred to as Web 4.0 or the symbiotic network, a period is anticipated for the so-called Internet of Things and the symbiosis between humans and computers (Aghaei, 2012). Web 5.0, on the other hand, aims to implement sensory solutions from the field of neurotechnology, capable of recording and analyzing users' emotions in real-time (Chomiak-Orsa, Smoląg, 2021).

Virtual communities are a collective of individuals whose interactions take place through the Internet, hence the use of the term "online community". (Bonek i Szabo, 2013) Online communities primarily revolve around similarities, such as interests, opinions, or values. Members participate in them intentionally, having full freedom and flexibility in their engagement. Furthermore, these communities are non-spatial and asynchronous, which promotes intentionality as interactions are not limited by space or time (Siuda, 2006, pp. 179-185). The author hypothesizes that the fact-checking community also gathers around similarities, primarily in interests and values. These similarities include a shared interest in contemporary world events and values such as truth, honesty,

and critical thinking.

Participation in new virtual groups allows individuals to decide on their affiliation with these groups. These are referred to as new nomads, characterized by the absence of traditional structures in terms of stability. They are based on emotions, tastes, interests, or common pursuits. (Mazur, Kuć, 2020, pp. 165-183) The community gathering around fact-checking profiles can thus be associated with one of the classical types of virtual communities – a community of interests, distinguished by shared hobbies and a higher degree of communication than, for example, a transactional community where people focus solely on buying and selling (Armstrong, Hagel, 1996).

Undoubtedly, new media, including social media, with their openness and interactivity, offer many opportunities for the development of civic engagement. One of such initiatives can be fact-checking activities. Despite the fact that, as indicated in the *Disinformation Through the Eyes of Poles* report, only 5% of respondents use fact-checking portals as a source of information, and 12% declare that they visit them when they want to verify information, attention is drawn to the increasing number of initiatives related to fact-checking. Examples of such activities that emerged after February 24th include the activities on social media by the state research institute NASK (National Academic Computer Network) as part of the *Engage in Verification* project and the initiative by the company Brand24, *Debunking Disinformation*.

An inherently related concept in the realm of fact-checking is fake news. The term "fake news" refers to media messages that are neither true nor false, often based on misinformation, and frequently containing elements of truth (Gillin, 2017). Yuval Harari expands the definition, describing fake news as a deliberate implementation of falsehood in the public domain, not limited to the media space (Harari, 2018). In many definitions (Elliot and Culver, 1992; Gans, 2004; Allcott and Gentzkow, 2017), the aspect of conscious creation of fake news to shape public attitudes is emphasized.

According to a study conducted in 2019 on a sample of 1,000 individuals aged 15 and above, the primary responsibility to combat disinformation on the Internet aimed at influencing the outcomes of democratic elections in Poland, should lie with website, portal, and app administrators, as believed by 55% of respondents. These are followed by the police, the prosecutor's office (27.5%) and the Polish government with its central offices (26.6%). The significant difference in percentage points between the first position and the subsequent ones signals that those recipients have high expectations regarding those responsible for managing online content and consider them to bear the greatest responsibility for presenting accurate information (Bochenek, Lange, 2019, p. 7).

The first organized forms of such activity began to emerge after 2000, with FactCheck.org being an example, launched in 2003 to monitor political issues (Łódzki, 2017, pp. 19-28). In Poland, the first fact-checking organization is the Demagog Association, which has been a member of the International Fact-Checking Network (IFCN) since May 2019. As a member of this network, the Association is obliged to adhere to principles such as impartiality and fairness, source transparency, funding and organization transparency, methodological transparency, and a policy of open and honest corrections.

Under the "Methodology" section on the Association's website, there is a description of the fact-checking process. It involves the analysis of all statements that can be fact-checked without random selection – more frequently, objectively verifiable political statements appear on the website. Sources include recordings of radio and television programs, transcripts of parliamentary sessions, direct statements by politicians on social media, as well as requests from readers submitted through forms or social media profiles. The last element is particularly important in the context of this article because it demonstrates the community-oriented nature of fact-checking.

Research Methodology

The aim of the study is to determine the potential for the formation of a community around the phenomenon of fact-checking using the Demagog Association's Facebook profile as an example. The main research question posed by the article's author is: What are the ways in which the social character of fact-checking is implemented on Facebook? Specific research questions concern the categories of content that the Demagog profile's community gathers around and the roles played by various social behaviors. The research is exploratory and can contribute to the development of a tool for future research initiatives.

The author opted to analyze the profile of the Demagog Association due to its status as the first fact-checking organization in Poland. Additionally, it is a particularly active organization on social media platforms, having amassed a significant number of followers.

The research was conducted in the following stages: initially, the author isolated the activity in the profile for a specific period. The selected period was one month from February 24th to March 24th, 2022, as this was the first month of Russia's aggression against Ukraine, which was associated with a particularly high intensity of misinformation activities on the internet and increased vigilance among fact-checkers. Social media are the primary source of information for 54% of individuals aged 18-34 (Digital Poland, 2022). During times of war, this is particularly associated with an increased risk of misinformation (Institute of Central Europe 2022).

The author aims to draw attention to the aspect of the social media war, as the conflict described here is increasingly referred to as the first social media war. (Suciu, 2022) This is because the involved parties consistently publish frontline reports on social media platforms, followed by rapid sharing by users. Consequently, there is an enhanced potential for the dissemination of disinformation, underscoring the particularly crucial role of fact-checking organizations during this period.

Basic quantitative analysis was also conducted to present numerical data related to interactions in various thematic content categories. The author analyzed posts, rather than original publications on the Demagog Association's website, because she believed that it was these posts, through their presence on social media, that had a greater potential to build a community around fact-checking.

The author, within the framework of her research, employs the method of content analysis. The origins of the method can be tracked by some scholars in Medieval analyses of the Bible conducted by theologians. (Krippendorff, 2003) The content analysis is described by Walery Pisarek, "a set of various techniques for the systematic study of streams or sets of messages, consisting of the objective (in practice, usually intersubjectively consensual) identification and categorization of their as unambiguously formal or content-related elements and an approximate (usually quantitative) estimation of the distribution of these elements and mainly comparative inference, aiming at understanding the content of the messages and other elements and conditions of the communication process" (Pisarek, 1983, s. 43). The application of this method for the purposes of this article is justified by the fact that, as Lisowska-Magdziarz indicates, it is a method that is particularly suited for chaotic and unorganized material, which social media content undoubtedly represents (Lisowska-Magdziarz, 2004).

The criteria for the content analysis include qualitative criteria such as the category of social behavior, form of interaction, and type of comment, as well as quantitative criteria such as the number of posts on a given day, the number of reactions, and the number of comments. Subsequently, the author identified social behavior in the comments section using her own categorization and provided interpretation for it. The corpus of the analyzed comments comprises of 15,209 entries categorized and based on data from the study, capturing their structure and enabling the description of their role in commu-

nity building.

The author identifies a gap in the available research related to fact-checking. Therefore, the article is intended to provide a new perspective on the subject with an emphasis on the community. The knowledge derived from the research may have value not only for new media researchers and sociologists but also practical significance for administrators of profiles dealing with information verification.

The research finding

Social behaviors are associated with interactions between users or between users and profile administrators. Therefore, the author identifies the following indicators of the social nature of fact-checking: reactions to posts, comments, and shares. These are the basic forms of community communication available on the Facebook platform. While they do not exhaust the full potential of Facebook, these are the most observable forms, especially in the case of the Demagog profile.

The study identified two key categories of social fact-checking behaviors, which are evident in the comments on the Demagog profile: active and passive actions. Active actions include comments on posts and sharing posts, while passive actions involve observing the profile and reacting to posts. Active actions provide an opportunity to convey information from the post to other users (mainly friends) or reflect greater engagement through commenting. The mere observation of the profile and clicking reactions to posts, is contributing to fact-checking, but is still considered as passive due to the lower user engagement and lesser contribution to the viral spread of content.

From the analysis of comments, it can be concluded that they can be classified into the following thematic categories- as shown in Table 1. Below - along with descriptions, examples, and an attempt to outline their functions.

Type of Comment	Characteristics	Example (comment in the original spelling and translation)	Role for the Community
Approving Comment	Expression of support or approval for the post's content or Demagog's profile, thanking for the publication	„Demagog świetna robota, szerujemy link w anglojęzycznym internecie gdzie tylko się da!!" 27.02 "Demagog, great job, we'll share the link in the English-speaking Internet wherever we can!!" 27.02	Draws attention to content important for the user - when it appears among the most popular comments, it can act as social proof of correctness (Cialdini 2013).
Criticizing Comment	Critique of the post's content or Demagog's profile, often including accusations of bias or lack of objectivity.	„Serio nie powinniście tracić czasu na takie bzdury, russkij mir tworzy kilogramy fejków na minutę które zalewają polski internet". 4.03 "Seriously, you shouldn't waste time on such nonsense, the Russkij Mir creates kilograms of fakes per minute flooding Polish Internet." 4.03	Highlights controversial issues and often stimulates discussion - responses to such comments often clash with opposing views. People with one perspective, for example, those disagreeing with the criticism, can gain a sense of community in their opinion.

Comment Mentioning Another Person	Mentioning another person is a way to draw their attention to the content of the post, encouraging them to check it out.	„Damian patrz, nie potrzebny był nam demagog ale jest potwierdzenie pozdrów "zaufane zrodla" ;)))" 3.03 "Damian, look, we didn't need Demagog, but there's confirmation for 'trusted sources' ;)))" 3.03	Allows reaching people who may not have noticed the post or are not following the profile themselves. Through mentions, users are more likely to engage in discussion, respond, or at least react to the post. Mentions can be a source of new page likes once the mentioned person checks it out, thus expanding the community.
Comment with a Suggested Topic for Verification	Not directly related to the post's content but suggests another topic or specific fake news that, according to the commenter, Demagog should address	„Czy to że rok 2022 we Lwowie jest rokiem UPA to jest sprawdzona informacja,jeśli można ? Bo nie wiem czy na całej Ukrainie,ktoś gdzieś pisał,ale tego nie mogę nigdzie sprawdzić ?" 24.02 "Is it true that 2022 in Lviv is the year of UPA? Can you check it? Because I don't know if someone, somewhere wrote about it, but I can't verify it anywhere?" 24.02	Expresses uncertainty about the proposed topic and, at the same time, trust in the profile's accuracy and knowledge. Serves as a clear tool for social fact-checking by involving in expanding the content on the profile.
Comment Responding to the Post's Content	Directly refers in the comment to the content of the post but without clear approval or criticism of the portal's activities or criticism.	„Jest gdzieś nagranie gdy ta rakieta uderza. Trajektoria lotu nawet jest inna (powietrze ziemia niż ziemia-powietrze)" 27.02 "Is there a recording somewhere when this rocket had hit? Even the flight trajectory is different (air-to-ground than ground-to-air)." 27.02	Engaging in discussion or making a neutral comment often serves as an opportunity for further discussion in the responding comments. It often serves an informative but also persuasive function. Demonstrates an interest in the post's topic.
Comment Referring to Another Topic	Refers to another topic, often loosely related to the post's content. Sometimes includes elements of criticism. Different from the previous category, it doesn't necessarily propose a fact-checking topic - it may be more of a discussion starter.	„To jeszcze nic! Zobaczcie co jakaś antyszczepionkowa kretynka wkleiła pod postem o wojnie w Ukrainie. To jak oni mają sprane mózgi przechodzi jakiekolwiek pojęcie…" 4.03 "That's nothing! See what some anti-vax moron posted under the post about the war in Ukraine. It's beyond any understanding..." 4.03	Serves an informative function, introduces a new topic, shows an interest in fact-checking or broader news from the world.

Reply to Another Comment	A response from the profile's administrator or another user, a discussion with another comment or agreement with it, directly referring to the previous comment, e.g., by mentioning the person who posted it and clicking the "reply" option.	„Damian Ostrowski masz rację zwłaszcza, że Ty tak mówisz... i jeszcze Putin". 11.03. (odpowiedź na: „Kolejny artykuł typu: jest jedna prawda i to ta najprawdziwsza bo ja tak mówię".) "Damian Ostrowski, you're right, especially since you say so... and Putin too." 11.03.	Expresses interest in the topic, often showcases the user's knowledge. Multiple responses to comments are a sign of the dynamics of users' actions in social media. They can be emotional or ironic. Despite the clash of different views, they show critical thinking and a willingness to engage in a discussion.
Language Correction	Correction of the post's content, either linguistic or regarding typos.	„zestrzelono 2 czołgi" 24.02 "2 tanks were shot down." 24.02	Indicates that the user read the post's content and is engaged in its form, often more than in the content itself.
Link to a Charity Fundraising	In cases where the post's topic often appeared in the observed period, it is most often a link to charitable organizations, initiatives related to helping Ukraine.	„Tu info jak można pomóc https://m.facebook.com/story.php?story_fbid=10226942079363856&id=1409532436" 24.02 "Here's info on how to help	Indicates engagement in specific charitable actions. In the case of some posts related to charitable activities, they build a community around humanitarian values.
Technical Issue Comment	Draws the attention of administrators, for example, to a non-functional link in the post.	„Strona nie działa. Wszystko w porządku?" 24.02 "The page isn't working. Is everything okay?" 24.02	Indicates user engagement and the user's attempt to open the link to another webpage included in the post.

Table 1. Thematic categories of the posts and their functions.
Source: own work.

All the discusses types of comments are active actions, and although their significance for building a community varies, each of them signifies a willingness to interact with the profile administrators or other users. Through this communication, which reflects engagement in fact-checking activities—especially in the case of approving and critical comments, comments mentioning another person, and comments suggesting topics for verification—a community gathers around the profile with the potential to grow.

The posts that appeared on the profile during the study period can be classified into the following thematic categories: self-produced initiatives/products (e.g., podcasts, educational campaigns), war, health, climate and energy, foreign policy, changing profile pictures/cover photos, recruitment. The vast majority of posts were related to the war, with only 10 posts being associated with the "self-produced initiatives" category of the Demagog Association, 2 related to "health," 3 related to "foreign policy," 1 related to recruiting new team members, 1 related to energy issues, and all others were more or less loosely connected to the war-related theme.

The Demagog Association's Facebook profile has over 47,000 fans (as of June 2021) and has been active since March 2014. From the basic quantitative analysis, it is evident that during the study period, 149 posts were published, indicating a high level of activity by the administrators. This activity was particularly pronounced in the first part of the study period when the topic was fresh and elicited the most emotions. A total of 3,429 comments were posted under all the posts. The posts were shared 3,542 times, and there were 21,254 reactions to the posts. The detailed results of the quantitative analysis are presented in the table 2 below.

	Number of posts	Number of reactions	Number of comments	Number of shares	Topic with the highest numer of interactions
24.02	11	1801	163	487	War
25.02	7	750	133	55	War
26.02	2	138	9	33	War
27.02	8	3431	310	211	War
28.02	6	1130	334	342	War
1.03	4	706	108	127	War
2.03	5	652	88	212	War
3.03	11	1754	133	365	War
4.03	8	979	142	304	War
5.03	5	588	150	114	War
6.03	3	171	12	14	War
7.03	4	278	30	32	War
8.03	6	552	49	211	War
9.03	7	1249	208	203	War
10.03	8	1329	148	180	War
11.03	5	1234	764	122	War
12.03	2	151	35	19	War
13.03	2	169	15	22	War
14.03	4	249	57	26	War
15.03	4	591	103	118	War
16.03	4	434	41	40	War
17.03	5	262	88	20	War
18.03	4	575	131	85	War
19.03	3	189	10	24	War
20.03	2	213	11	15	War
21.03	4	340	18	31	War
22.03	4	315	51	39	Foreign policy
23.03	5	599	157	42	War
24.03	6	425	29	49	War

Table 2. The detailed results of the quantitative analysis.
Source: the author's research.

Posts with the highest cumulative number of reactions appeared on February 27th. This corresponds to the onset of the war when emotions among social media users were the most intensive. Additionally, on this day, a noteworthy total of 8 posts were published, representing one of the highest posting frequencies during the examined period. The trend of posting seems to decline over time, as the days with the most posts are concentrated in the first half of the research period. It should be noted that the post with the highest number of reactions is not simultaneously the one with the most comments;

it was added on February 28th. This may suggest that depending on the specific topic and format of the post, different levels of engagement are elicited. The same pattern holds for the number of shares, as the highest number occurred on the first day of the war (February 24th).

The topics that generated the most engagement during the study period were related to the war in Ukraine. This topic formed a community of interests and values and served as the foundation for the community's actions during that time. This was determined by a procedure that involved identifying the topic of the posts that received the highest number of interactions each day of the study month. It became evident that the topic of war consistently sparked the most interactions almost every day. Only on March 22nd, a post related to Marcin Błaszczak's statement on foreign policy generated more interactions than those related to the war.

Significantly, during the study period, various fact-checking organizations conducted numerous educational campaigns on misinformation. These initiatives may have attracted new followers to fact-checking profiles. Infographics aimed at educating people about misinformation were also highly popular, such as the one on February 28th, which received 252 shares.

There was a noticeable variation in user engagement based on the days. Early in the study period, charitable actions stirred strong emotions, and posts related to them were shared by a large number of users. This could indicate that, on social media, communities focus not only on interests, current events, and fact-checking but also on humanitarian values and the pursuit of truth. An example of expressing such values is a comment on the post from March 2nd, which said, "Thank you! Stay true during these times, all the best," and received 6 reactions.

It should also be emphasized that some posts may have been shared more frequently and to a larger audience due to paid advertising. However, the author does not have access to the advertising account of the profile and cannot determine which posts were sponsored.

The creators of the profile utilize various tools available on the Facebook platform to maximize their reach. The primary form of posts consists of graphics that clearly indicate the verification of information with labels such as "truth," "fake news," "manipulation," and "photomontage". These labels stand out against a uniform navy background. Other forms of content include links to articles that provide in-depth coverage of various social, economic, and other issues, short video clips, and posts promoting other communication channels of the Association, such as podcasts and newsletters. By using these various communication forms, the content can reach groups with diverse expectations regarding the format.

One form of community engagement in fact-checking activities is through reactions. Facebook provides several reaction options, including Like, Love, Haha, Wow, Sad, and Angry. The most common reaction is "Like," which suggests agreement with the content and serves as a form of praise for the post. These reactions are directed at both the content posted by the Demagog Association and comments from other users. Similarly, the "Angry" reaction is used in response to information that elicits negative emotions or is perceived as untrue. This is where the theory of social proof comes into play, which posits that in times of uncertainty, people tend to conform to the majority's beliefs and actions (Cialdini, 2013).

In addition to the previously discussed aspects of social fact-checking, it is also important to consider other forms existing on various social media platforms. While a comprehensive analysis of these forms goes beyond the scope of this article, they provide a broader context for the research.

One significant aspect of fact-checking is the practice of comments that highlight inaccuracies beneath posts from news outlets. When these comments receive a high

number of likes, algorithms tend to promote them by sorting them at the top of the comments section, giving them more visibility.

The role of influencers is yet another manifestation of building a fact-checking community. Content created by influencers often supports campaigns related to critical thinking and fact-checking. Education, through virtual opinion leaders, in line with the two-step flow of communication model, can influence the audience (Katz, Lazarsfeld, 1955). Communities built around influencers consist of engaged followers who actively participate in online discussions, leave comments, and share content. An example is the involvement of YouTuber Kasia Gandor in fact-checking initiatives related to the Demagog portal discussed above.

Can internet memes be considered a form of social fact-checking? On one hand, when memes playfully and ironically expose myths and conspiracy theories, they can stimulate critical thinking, and their virality is particularly strong. On the other hand, misleading memes may become more popular due to their sensational and emotional content. Short videos and graphics shared on platforms like Instagram and TikTok provide an opportunity to reach younger generations of users and shape their critical thinking. However, it is essential in this context to ensure that these memes do not become yet another source of fake news, embedding false information in the minds of the audience.

It is also worth noting the mechanisms of the social media platforms themselves. Facebook, for instance, has partnered with Agence France Presse to launch a fact-checking program that assesses the accuracy and reliability of published content. When content is deemed false, it is demoted in users' News Feeds, limiting its distribution. Additionally, pages that regularly share false information may lose access to advertising and monetization tools, and their reach could be reduced by up to 80 % (Szczęsny, 2019). These measures aim to reduce the spread of misinformation on the platform.

These various forms of social fact-checking contribute to the broader landscape of efforts to combat misinformation and promote critical thinking in the age of social media.

Summary and Conclusions

One of the threats is the question of the independence of fact-checking platforms, which has been occasionally raised in critical comments. Another issue is users relying on social proof, where in moments of uncertainty, simplified thinking prevails, and what the majority of people in their surroundings believe is considered correct behavior (Cialdini, 2013).

Another threat is that the Internet itself is a breeding ground for post-truth phenomena, and their scale may still surpass the efforts of some parts of the community. The sensationalism and emotional appeal of fake news easily capture the attention of a large audience, facilitating their uncontrolled and anonymous dissemination (Mroczka, 2022, pp. 86-128).

So, can social fact-checking have an impact on traditional media journalists to counter the spread of false information? Can such actions exert pressure on politicians to refrain from manipulating facts in their public statements? Although this is an open question and leaves room for further research, it should be considered that broad societal education through campaigns, such as those conducted by the Demagog Association, may yield the aforementioned results, and building a community of critical thinkers has the potential to counteract fake news through content sharing among profile authors, peers and acquaintances.

New media is both an opportunity and a threat. On the one hand, untrue content is spreading virally, and the problems of fake news or information bubbles are not the only challenges faced by the information society. On the other hand, in response to these

phenomena, initiatives appear to counter the spread of false information in the media.

The analysis of the Demagog Association's profile indicates further interesting research areas and provides a preliminary framework for understanding the community aspect of content verification organizations, offering a research tool in the form of comment categorization.

In response to the main research question, "what are the ways in which the social character of fact-checking is implemented on Facebook," it can be observed that the primary means are the active engagements of users on the profile. These activities hold particular significance for the formation of a community around the issue of content verification—they reflect users' willingness to interact with profile administrators or other users and often include suggestions for additional content to be fact-checked. During the studied period, the majority of interactions occurred under posts related to the war, indicating not only the significance and emotional impact of this topic but also the prevalence of misinformation surrounding it.

In the face of the war, numerous new initiatives have emerged with the aim of combating misinformation. Engaging in such actions provides social media users with an opportunity to participate in social fact-checking, which, in turn, has significant potential to educate and activate society in the field of digital literacy, including skills related to information verification. In the post-truth era, this form of education is of considerable importance and offers a chance to enhance information literacy among users of not only new, but also traditional media.

Well-organized fact-checking activities can serve as a catalyst for triggering mechanisms of community-based content verification through comments and reactions, not only on the organization's profile but also on news platforms. Additionally, the community vigilantly monitors the activities of influencers engaged in promoting the fight against misinformation, readily sharing the content they create as a part of social campaigns.

New media provide an opportunity for user engagement in verifying the accuracy of information, even in seemingly lighthearted forms such as memes or short videos. Furthermore, social media platforms themselves are getting involved in the battle against misinformation by implementing mechanisms that restrict the publication of certain content. Although the objectivity of these mechanisms is widely debated across various communities, it is unquestionably essential in the post-truth era to capitalize on every opportunity to promote the importance of truth and content reliability.

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"CONFRONTATION" AND "RIVALRY" IN SELECTED FACEBOOK PROFILES FOR/ABOUT WOMEN. SHORT QUANTITATIVE AND QUALITATIVE ANALYSIS

Przemysław Pawelec[1], Wojciech J. Cynarski[2]

Abstract

This article discusses the nature of discourse about confrontation and rivalry which takes place between women (and men) as portrayed in materials published in 50 selected Facebook profiles for/about women. The women portrayed in those profiles were competing with other women or men, on a number of levels relating to their professional careers, sports and other elements of their lives. The areas in which confrontations were identified included: promotion; management of staff and subordinates; salary increases and success. Both quantitative and qualitative analysis (BuzzSumo and Atlas.ti as a research tools) of the discourse were applied. The answers to questions regarding the tone of the materials in this sector of selected Facebook profiles were obtained.

Key words: mass media, a woman, confrontation, discourse, qualitative analysis

Introduction

Almost all forms of activities of contemporary women are analysed in a variety of scientific and popular scientific publications. Therefore, research (from the perspective of social sciences and humanities) about the activities of contemporary women who are striving to fulfil their own ambitions is being undertaken. A popular theme is the rivalry with competitors who also want to achieve the material and non-material goods that are desired – from business, through politics, to judo and other sports (Cynarski & Szajna, 2014; Wolska et al., 2017). In addition, many other roles are attributed to women: biological, social and cultural (e.g. being a mother, a Catholic, or a sex object), and the fulfilment of these roles is also the subject of interest by the mass media. The issue of "competition" between women and between women and men has become an even more prevalent topic. Mass media contents addressed to women have probably also played a role in this respect, as taking this rivalry as one of the main themes has exposed social roles differing from those prevailing in social media (Slater, 2015).

1 MA, Pontifical University of John Paul II, email: przemyslaw.pawelec@idokan.pl, ORCID: 0000-0003-1658-6133
2 Professor, University of Rzeszów, email: ela_cyn @wp.pl, ORCID: 0000-0003-1252-5456

Recognition of women's narratives devoted to the types of confrontation in the media will help to find answers to the following research questions:

1. Do selected Facebook profiles addressed to women mention the problem of confrontation resulting from mutual rivalry?
2. What are the confrontations about?
3. Which confrontations ("a woman against a woman" or "a woman against a man") dominate?

The analysed issues of the selected Facebook profiles will concern women who are professionally active in economic and political sectors (as the most exposed ones), excluding the unemployed, who do not represent the media model of a successful woman. This short article is a report on the analysis carried out, it is divided into several sections containing appropriate definitions and an outline of the general characteristics of the media for women which cover the subject. It will consist of a methodological section, the results obtained, discussion, conclusions, summary and literature.

The examined sample included Facebook profiles that appeared in the mentioned search engine as a result of entering the following words: Facebook, profile, women, career. It was assumed that the randomly selected profiles were primarily created for/about women (Oberts et al., 2016).

Review of literature on the subject

Literature which refers to the subject being addressed was divided into three thematic categories:

1. the characteristics of the social media profiles addressed to women,
2. descriptions of the models of women distinguished as being present in these mass media,
3. an outline of current knowledge about competition between individuals in society.

This limited framework, however, allows us to select only a few items from innumerable types of studies.

Media images significantly influence narratives and discourses related to gender in the content targeted at women on social media. Therefore, analysing the role that women play in social media allows us to understand the models of behaviour that inspire women today (Roberti, 2017).

Profiles targeted at women may be dependent on psychological factors, motivating individuals to participate in social media. This type of inquiry is particularly significant in the continuously expanding network created by creators and consumers of such media (Correa et al., 2010).

The subject of the analysis is profiled thematically in terms of consumers interested in stimulating and fulfilling their own professional ambitions. These media create their own discourses (Djafarova & Rushworth, 2017), using information and journalistic genres (Jahng & Littau, 2015) that appear with varying frequency (Felt, 2016). Their role in influencing consumers' perception of social reality is also underlined (Carr & Hayes, 2015). This can be interpreted based on the ways it is presented, the genres used, the narrative and the related intertextuality. Media content is therefore a description of some facts, while the descriptions used have to – in accordance with the expectations of their authors –convince the recipients about the advantages of accepting the subjective ideas of those who create and transmit them (Rantakari & Eero, 2017).

Mieke Ceulemans and Guido Fauconnier at the end of the 1970's emphasized the great importance of media discourse in creating widespread perception of women between their audiences. To achieve this, various media forms were used, ranging from low-profile magazines to the so-called television "soap operas", along with advertising

messages which referred to the various sociological models of women (1979). However, Rebecca L. Collins proves that women are underrepresented in various media, and if they are the main figure they are "sexualized", unprofessional, housewives, wives and/or mothers. The dominant factor is their subordination in private and professional life. However, there are numerous opinions among authors about the stereotyping of such roles (2011).

Gawin J. Kilduff, Hillary Angel Elfenbein and Barry M. Staw try to prove the assumption of possible and legitimate analysis of all forms of competition at the level of individuals, groups and other communities. This rivalry becomes particularly important when the competences of individuals taking part in it play a significant role (2010). However, the factor affecting its course may – as noted by for instance April Bleske-Rechek and Melissa Lighthall – be informal contacts and accepted strategies that start, develop and end or sustain each competition for any desirable good (2010).

Outline of the confrontation issue

Existing rivalry between women allows them to acquire both the resources needed for survival and reproduction as well as a preferred partner. The selected forms of actions are characterized by different levels of aggression, which are limited depending on the constraints formed. They may include: having offspring (determining the selection of less risky options for resolving conflicts), personality traits and the level of attractiveness of the desired goods (Stockley & Campbell, 2013). The diverse levels of competition can take the form of aggression, either 1) direct and unrestricted or 2) limited, and thus serving as an indispensable element of every confrontation, 'when one actor signals to another actor that his or her behaviour has violated a rule or expectation for appropriate conduct within the relationship or situation. A model of social confrontation, developed over a series of studies, is presented' (Newell & Stutman, 2016, p. 266). In the first case, the consequence may be a temporary or total elimination of the opponent, while in the second case it may for example be a reduction in the value of the goods owned by one or other of the protagonists in the conflict, or their total loss. Therefore, – motivated by concern for their own possessions – competitive interactions between women cover a wide repertoire of strategies adapted to both the duration of events (short or long-term) and social conditions (favourable or unfavourable to their actions) at the social and/or individual level (Stockley & Campbell, 2013).

One of the areas in which this competition – usually a confrontation – is present, is in women's professional environment. Women, when finding a job, employment; maintaining their position at work or achieving success – as evidenced by American researchers – need to overcome a number of obstacles.

Professional environments in which women operate can be spaces where specific paradoxes occur. This phenomenon does not exclusively apply to women occupying 'elite' professional roles. The first paradox (*The Pay Paradox*) affecting the levels of competition and the confrontational dimension concerns remuneration, which is usually inadequately low in relation to the skills of the women employed in a given position with a significant number of duties. The second paradox (*The Double-Bind Paradox*), is the desire to be liked while exercising power over subordinates, when the appropriate balance between these two elements is not adhered to. The third paradox (*The Promotion Paradox*) concerns self-promotion by women who want to occupy high positions, with (allegedly) less aggression and less determination to achieve such success in comparison with men. *The Networking Paradox* is a lack of ability to use the social network of close relatives and peer groups in order to gain employment or gain promotion. The fifth paradox (*The Start Up Paradox*) is based on the fact that women receive trust from employers in the initial stages of ventures but are replaced by men in the further implementation phases. The sixth paradox (*The Careful-What-You-Wish-For-Paradox*) concerns the

combination of the desire for promotion with that of maternity care, which is in turn associated with stereotypes about the limited occupational opportunities for women given their family plans (potential contradiction of goals) (Flynn et al., 2013).

The paradoxes, the sources of all the rivalry among competing employees, are characterized by the existence of desirable goods without an unambiguous economic dimension. The internal compulsion to be accepted or trusted can also be in a form of goods on which rivals may take confrontational positions.

The manifestations of women's confrontations

The activity of women as employees concerns not only a specific position, but also a discussion about the chances for their professional development. In this aspect, two opposing approaches clash: the positive (women are more difficult to be promoted than men, but this phenomenon is not common) or negative (women must accept male domination in gaining well-paid positions) (Seppälä et al., 2012). Both can be the starting point to create a model corresponding to the definition of women characterized by their careers.

The theoretical issues related to rivalry have been divided into selected categories related to a professional career, in particular, building one's own position through the process of competition, and against the possibility of confrontation. This choice was dictated by a later assumption about the possible occurrence of just such categorization of the subject in media addressed to women.

According to the assumptions of some researchers, the reason for rivalry (and the shaping of confrontational attitudes) in the professional field is the phenomenon of the so-called "glass ceiling", distinguished by Wendy C. Wolf and Neil D. Fligstein This is the identification of barriers encountered by "successful women" in developing their professional careers, This is favoured by the (allegedly) established universal patriarchal system perpetuated by stereotypes dividing professional reality into "feminine" and "masculine", according to which – generally speaking – women achieve success only in the dimension accepted by men. Therefore, women's careers usually develop only to a level that does not threaten male domination (e.g., in the form of gained promotion). However, some women manage to break the "glass ceiling" and – as a result of competition – occupy positions due to their knowledge and competences (1979).

Another phenomenon of the discouragement of women's vocations is the so-called "velvet ghetto". It involves not allowing women to manage technical, production or marketing issues. If women have the right knowledge, they are directed to lower positions (Fletcher & Meyerson, 2000). This is due to decision makers' mistaken belief in the lack of involvement of women who also have to manage their own family life, as Christine B. Whelan reminds us (2012). The subject of competition and confrontation are therefore positions adopted from these areas. Rivalries and confrontations become visible in the different ways the two sexes communicate, because women create different communication cultures from those of men, seeing the goals that are paramount in the communication itself. An active woman creates messages, and a passive one accepts the content as presented which contributes to the formation of stereotypes (Kiprotich & Chang'orok, 2015).

In the first case, the woman who creates the message has an impact on the perception of specific issues by the recipient. The message strives to influence the group (or groups) of recipients, so that the content presented by them is considered to be particularly important. Thanks to this it can be treated as authoritative. Passive users, on the other hand, may be exposed to manipulation aimed at inducing desires or aspirations in the undertaken competitions (Kiprotich & Chang'orok, 2015). Furthermore, the female style of communication is "affiliated". The main features of this are: dynamism and fluency, valuation and expressiveness of language. The male style is "dominant", that is:

messages in the first person singular, use of conversational rituals, lack of admission to ignorance. Confrontation at a professional level may result from the style of the authority superior to other women and/or men. The power exercised by a career-making woman can be strengthened by financial factors. Both her professional career and the standard of living of many men may depend on her decisions. However, this power has limitations, as it can only put pressure on representatives of the other sex in the professional sphere. The place to exercise such power may be a company run by a woman (or women), where the role of subordinates will be fulfilled by men (Hoobler et al., 2018). In addition, fulfilling professional duties requires women to supervise their subordinates. However, some women would be more likely to see men other than their male superiors as their superiors, as they are more likely to favour male supervision of a company or office (Eagly & Carli, 2007).

Content depicting rivalry in Facebook profiles designed "for women"

In media, there is some information about women working in professions considered typically 'feminine'. The accompanying descriptions attribute the role of a teacher, a nurse or a secretary to the protagonists of these publications. In addition to their other functions (e.g. political ones), they have diverse economic and material statuses, but for most of them home and family, and above all, children remain the supreme value. Some of them start the next stage of education, which is necessary to obtain or maintain a satisfying job. In some media addressed to women, the issue of women's activity in public life is rarely considered, while they devote a significant amount of space to social practices (Saleem et al., 2014). It must be mentioned that hierarchization of their professions in terms of social prestige and earnings is an important issue in considering the image of working women (Cheng, 2020).

From a cultural perspective, the aspiration of women to achieve professional success in – as the authors of this approach claim – a traditional model, based on male dominance, has been supplanted, by, for example, the "feminist" model. The rhythm of men's lives and ways of achieving success has been replaced by a rhythm of life that also takes into account the aspirations of women, the potential consequence of which may be the taking over of "men-only" positions (Johns, 2013). In media, there is information about women working in professions considered typically 'feminine' and it was decided that the research value in this case would be represented by media aimed directly at women. The rationale for this choice is the existence of a continuous communication process in which the presence of variously defined media images of women is not only a response to the expectations of people "consuming" the media, but also evidence of changes in the treatment of women in cultural messages.

Aim and research methods

The study of dimensions of confrontation and rivalry involved the description and analysis of attitudes of the authors and/or figures of publications appearing on 50 randomly selected (using the Google.com search engine) Facebook profiles (in Polish and English) between July 2022 and July 2023 (Regardless of who the creators of these profiles were (e.g. influencers, media, organizations, or ordinary people). At the same time, the following questions were asked:

1. Do Facebook profiles addressed to/about women mention the problem of confrontation resulting from mutual rivalry?

2. What thematic categories are associated with the subject of confrontation and rivalry?

3. Which categories of confrontations and rivalry (" a woman against women" or "a woman against men") are more often presented?

The confrontation content of these profiles revolves around the expression of values and beliefs regarding the role of women in professional careers, sports, and other aspects of their lives. The presence of this theme was related to content related to antagonism, dissonance, conflict, and polemics.

Rivalry content will refer to women competing against women and/or men to achieve a specific goal. Contents related to competition will apply struggles, races, competition, games, and conflict

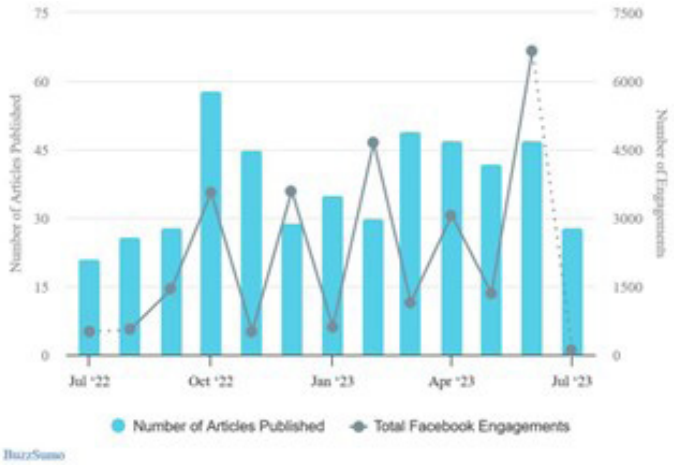
Written, audio and audio-visual publications were examined using the qualitative and quantitative method of content analysis of Małgorzata Lisowska-Magdziarz (2004). It was assumed that in the materials posted on the selected Facebook profiles, there were:

1. "direct quotes vs. indirect references",
2. "references to persons",
3. "use of modal expressions",
4. "expression of personal beliefs",
5. "overt expression of judgments" and
6. "first person singular forms" (Gruber, 2011).

In addition the Atlas.ti computer program was used to code, segregate codes, create categories and search for potential relationships and dependencies between codes and categories (Niedbalski, 2014). BuzzSumo was used to analyse of trends of content about women and "confrontation" and "rivalry" terms on Facebook.

Results

Based on the conducted analysis, the results obtained are presented below.



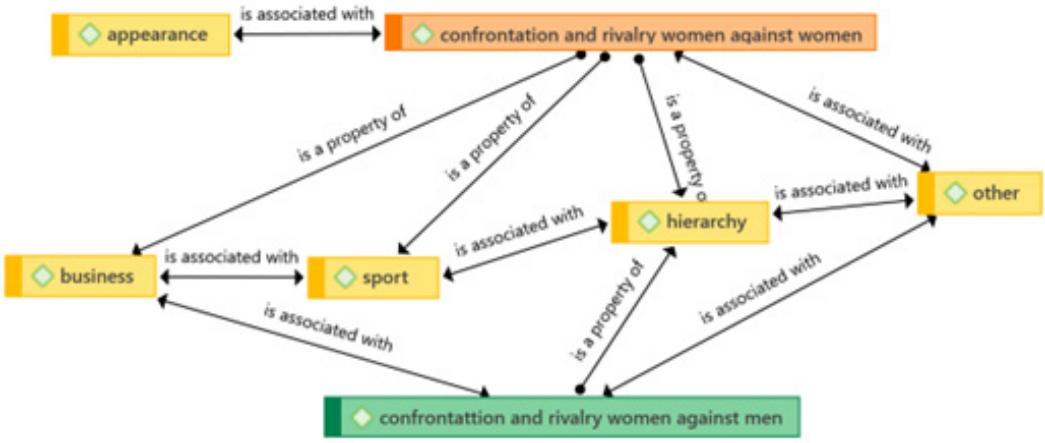
Graph 1. "Confrontation" and "Rivalry" as Facebook profiles theme – a quantitative analysis Source: the authors' research.

The answers to the first research question allowed to identify the occurrence of this topic on Facebook profiles (62% of confrontation; 38% of rivalry materials). Significant differences appeared only in the frequency of its appearance in individual profiles. The number of publications on these topics ranged from 18 in July 2022 to about 60 in October 2022. Facebook Total Engagement (user reactions to presented content. The indicators include clicks, comments, shares, and likes) as, on the other hand, ranged from about 500 in July 2022 to about 7,000 in June 2023.

The calculations which were made with regard to the second question showed an even distribution of emphasis in the journals studied. The most likely explanation for this

is the combining of the subjects of rivalry and confrontation in the context of both sexes all Facebook profiles.

Separation categories contributed to the answer to the second question. In this case, the results (sport, appearance, business, hierarchy and other) obtained are presented on a graph no. 2.



Graph 2. "Confrontation" and "Rivalry" as Facebook profiles – a qualitative analysis
Source: the authors' research.

The results of the qualitative study show that the content contained in the analysed materials on Facebook profiles regarding confrontation and rivalry women against women concern:

1. the interdependence between appearance (emphasizing the beauty and attractive condition of the body) and other categories (e.g. having a family),

2. dependence on business topics, sports and occupied hierarchy (both social and professional). On the other hand, in the case of confrontation and rivalry women against men, interdependencies occur in business, hierarchy and other topics. The theme of sports and the physicality of women based on biological determinants of sex appeal did not occur (emphasized, for example, within media discourses).

As a complement to the above-mentioned results, it can be indicated that in these social media profiles there were:

1. references to people,
2. modal expressions,
3. personal beliefs,
4. explicitly expressed assessments, and
5. first-person forms of the singular in each of the analysed publications.

The use of direct quotes against indirect references did not occur in the selected Facebook profiles. This is evidenced by the elements of statements utilized in the discourse concerning the presented issues and present in the examined profiles.

The following examples of profiles with materials classified into the category of "confrontation and rivalry women against women" can be presented:

1. Fair Play For Women (Confrontation against transwomen in society as the other category),

2. Female Sports Forum (Rivalry against women in sport as a sport category),

3. Miss World (Confrontation against in appearance as an appearance category),

4. Women Against Feminism (Confrontation against in hierarchy as a hierarchy category), and

5. Women Startup Competition (Rivalry against women as a business category).

On the other hand, profiles with materials classified into the category of "confrontation and rivalry women against men" are, for example:

1. Women Employed (Rivalry against men as a business category),
2. Equality Now (Confrontation against men in society as the other category),
3. Free Women Writers (Confrontation against men in religious aspects as the other category).

Discussion

Women's professional supervision of men may be accompanied by gender-based rivalry. The scheme of such confrontation can, for instance, be determined by psychological factors placing a specific gender as either dominant or dominated in the process of exercising power. Domination and dominance may be supported by stereotypes about certain features of both sexes, which were determined in a study conducted by David J. Schneider, and used for instance by Sylwia Celińska and Zdzisław Nieckarz.

The combination of expressing opinions by the creators of individual materials, communication and promotion via Facebook serves presenting content regarding possible relationships of confrontation and/or competition between women and women and women and men. Facebook, as a social media, can therefore raise the awareness of its users regarding their economic, social and other roles. Facebook is, as José van Dijck (2013) puts it, a tool for creating identity. Therefore, the presented results of the analysis can be interpreted in the context of the discourse on creating and/or modifying recipients' beliefs regarding the shapes and ways of gaining or losing specific benefits (material and non-material) by women.

The conclusion that "framing" content provides readers with possible patterns that facilitate the interpretation of information present on Facebook is also debatable. Stereotypes are then created, which may also have negative consequences, which are factors influencing the course and effects of confrontation and competition between women and men (Power et. al, 2020).

Summary

Taking into account the above outline of the subject, the assumption is that the research area requires further studies. This is supported by the multi-faceted nature of the "illustrative" content presented in the media, which shows women's competitiveness with men in all aspects of their, for example in their professional career. Besides, it can be agreed that although the phenomena of confrontation and competition have been fairly well established in literature, more work is needed to assess the importance of gender differences in competitiveness in accounting for gender differences in educational and occupational outcomes. This new and vibrant literature has made some progress in asking when competitiveness is harmful, when it is useful, how valuable it is, and how to change it; however, many open questions remain" (Niederle & Vesterlund, 2011, p. 626).

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USAGE OF TIKTOK BY LOW-COST AIRLINES IN COMMUNICATION WITH NEW GENERATION OF CLIENTS

Michał Wichrowski, Mateusz Bacik, Wiktoria Stelmach

Abstract

The purpose of this article is to examine different approaches to TikTok of two low-cost Anglo-Saxon air carriers based on an analysis of their presence on the social media platform, TikTok. It seeks to the answer of the questions of how airlines are using the platform to reach new audiences, how low-cost airlines adapt their communication strategies to align with the unique characteristics and trends of TikTok and what factors contribute to the success or failure of TikTok content in capturing the attention and interest of the target audience. It assesses the effectiveness of Ryanair and EasyJet respective strategies in terms of engagement, reach and share of voice. The article also discusses the challenges and opportunities posed by TikTok for airlines and the travel industry in general.

Key words: TikTok, Ryanair, easyJet, Generation Z, airlines, social media

Introduction

TikTok is a social media platform where users can create and share short-form videos, often accompanied by music and other audio. It was created by a Chinese company called ByteDance which, in 2017 bought Musical.ly (Tran, 2017). As of July 2022, the platform had over a billion monthly active users over the world which made it the seventh-most popular social media platform in terms of users. It is a huge success because TikTok is one of the youngest social media applications (Kepios n.d.).

TikTok has gained a lot of attention from researchers as it has become an increasingly popular platform for content sharing. Studies have found that people are more likely to watch and engage with TikTok videos than they are with other social media platforms due to their highly personalized algorithm and addicting content format (Liang, 2023). It is said that TikTok's algorithm is one of the best in the industry – it requires the shortest period and examples to "learn" about the desired videos by the new use (Okraszewski, 2023). Another factor influencing users is the ease of use of video editing tools so that everyone can create entertaining content (Xing, Wu, Liu, n.d.). It accurately pushes content according to the preferences and needs of younger generations across the globe (Weimann, n.d). Videos are often very short, trendy, funny and highly interactive which

makes them easier to digest (Mou, 2020).

Studies have also looked at the impact of interaction between users on the platform. A higher level of video interaction (comments, likes, and shares) increases the likelihood that the algorithm will promote a video to the trending area. Additionally, it was discovered that releasing videos at particular times enhances their potential for trending and growing in popularity (Klug, 2021).

One of the threats of TikTok is its competition, which can be both an opportunity to improve and a challenge to maintain the title of the leader in the industry. Before TikTok went viral there were no such things as Instagram reels, YouTube shorts or Facebook reels. Creators of other community platforms have noticed how quickly TikTok is gaining popularity so that is why they have decided on such a move. Instagram was even thinking of changing its formula to reels only and after the update, people were seeing short movies on their FYP (for you page – means, main page) but the idea was quickly rejected after protests of the users. TikTok is a platform that has gained a lot of attention from researchers due to its popularity and the way in which it encourages creative expression and meaningful interactions (McQuail, 1984).

According to Dr. M. Saravanakumar and Dr. T. Sugantha Lakshmi, social media is becoming widely used by almost every company to promote itself and the product. It is currently the most effective platform to earn recognition when used wisely. Social platforms can help in terms of raising brand awareness, increasing website visits, creating the identity and reputation of the brand and engaging with the audience (Aytan, 2021).

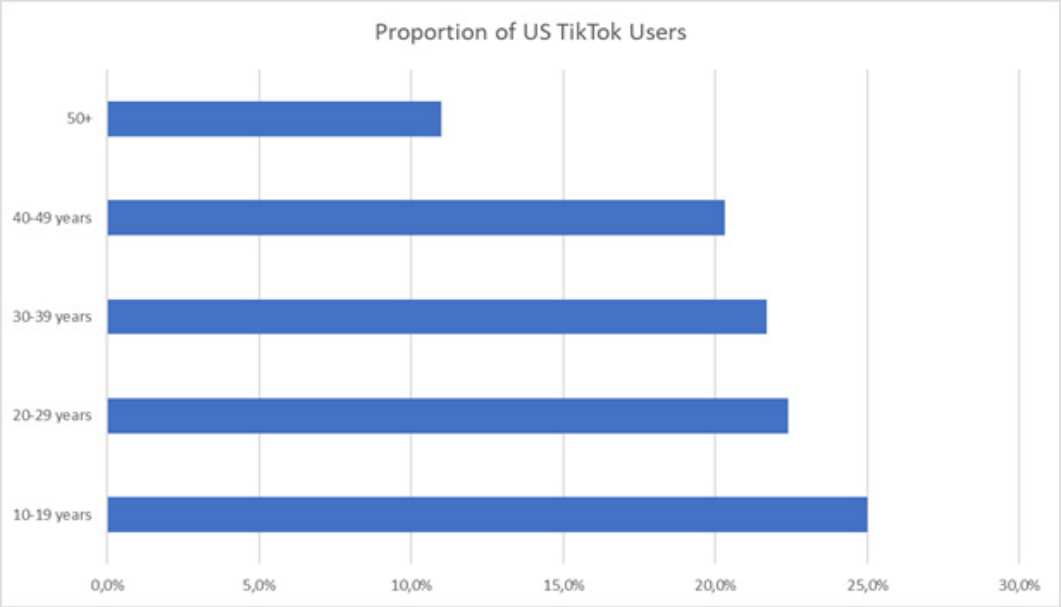

Figure 1 - Proportion of US TikTok users, Source: Howarth, 2023

Traditional models of consumer behavior are being altered by Web 2.0, particularly social media, by replacing some of the previous relationships and algorithms and by adding new variables (Pokul, Voronina, Malkova, n.d.). The last few decades changed marketing from product-centered to customer-centered which means that nowadays, a customer would like to be served individually and exclusively. As a result of that, the need for highly personalized products is rising (Peng, 2021). Profitability of a company is highly based on customers and the client base (Stanková 2022). Digital marketing can reach a wider range of users. Using AI, TikTok learns your preferences and interests and then shows you the content according to what you fancy (Xu, Xiaohui, Zhengwu, 2019). To enhance the accuracy of recommended videos, we can choose if we liked videos shown before, so the similar content is presented more or less on our “For you page”. TikTok

is quickly establishing itself as an essential component of the marketing mix, especially for those wishing to target the youngest wave of consumers. Research supports the necessity of successful integration of TikTok content into a brand's marketing strategy if seeking to target an audience consisting of members of Generation Z. These are the people who are entering adult life and starting to gain more and more purchasing power (Yang, Yuzhen, Yifang, 2019). As can be seen from the graph, more than 40% of TikTok users are between ages 10-29 and advertisements on the platform are mostly targeted at them. However, in recent years more users in the 40-50+ age group have joined the platform which indicates the need to implement the platform into the marketing strategies of most firms. According to studies, these short videos positively influence consumers' behavior by making them laugh, cry or learn something (Araujo, n.d.).

Nowadays, an extremely common way to advertise a product on TikTok is to make a video that goes "viral". This happens when a video spreads quickly and gains likes and shares. The most effective way to achieve it, is to record a TikTok which is trending at the moment, for example with a trending sound. That is what every company nowadays is trying to achieve.

Methodology

The purpose of this article was to check the differences in the TikTok of two low-cost Anglo-Saxon air carriers based on an analysis of their presence on this social media platform.

TikTok was selected for this research because it is currently one of the most popular marketing tools and platforms among the younger generation (known as Gen Z). One of their purchasing features is to travel as much as possible, while minimizing their costs, so it is a perfect place for the low-cost airline to advertise themselves in a way that appeals to their main target audience.

To examine the activeness and engagement of the airlines on TikTok, the empirical method and observation were conducted. Initially, primary quantitative data of every post was collected. It was then cross-referenced with qualitative data in order to obtain more accurate results. The process of collecting data took 1 month and the study was carried out in June, 2023. Sample consisted of 155 videos in case of Ryanair and 342 in case of EasyJet which were spread across 2 years, from December, 2020 to December, 2022. The researchers were checking and reviewing each post (so-called TikTok) on personal account of both airlines. This included quantitative data such as the number of followers, likes, comments, saved videos and shares for each airline in order to measure the audience's response to the content. This data was then compared between each other to get a better insight of the differences between their marketing strategies.

Next, the comparative analysis was carried out using data from the airlines' TikTok accounts from the dates they were created. (again by checking the TikTok accounts of airlines). Data was collected from both airlines' accounts and analyzed to determine their respective marketing strategies. What was also analyzed, is the type of content that each airline was producing and how it affected the TikTok account in terms of numbers (i.e. if the video was trending and generating high reaches).

Empirical and observation methods were used as the most accurate and precise to check the research question. In researchers option those methods were accurate, since there is no other available and free of charge tool to check the responses and engagement of the TikTok users. Additionally, number of views, likes and comments is a real reflection whether post on social media is "trending" or not. Further investigation into these phenomena and the hypotheses developed by this study can be facilitated through exploratory research in this field.

Data Analysis Ryanair

Ryanair is an ultra-low-cost airline from Ireland. It was founded in 1985 as one of the first European airlines with a low-cost business model. Currently Ryanair operates to 36 countries (mostly in Europe, but also in Africa, Asia and Middle East), 231 destinations on 2453 routes. In last pre-covid year, namely 2019, there were over 148 million of Ryanair's passengers (Ch-aviation, 2023).

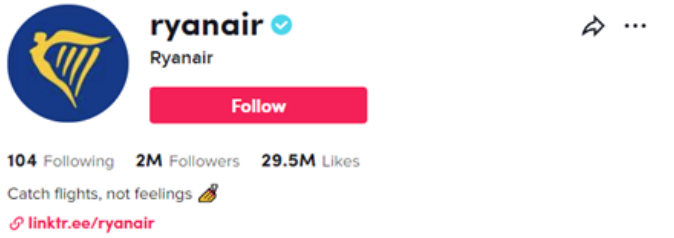

Figure 2 - Ryanair's TikTok profile, Source: Ryanair's TikTok profile.

The business model of Ryanair is a typical example of ultra-low-cost. In the basic fare the airline provides no-thrills service, such as lack of free seat allocation, checked luggage, even no standard size cabin luggage. The whole philosophy of the airline is to avoid as many costs as possible not only on on-board services, but also on the operational and sales side. Consequently, Ryanair's fleet consists of Boeings 737 only, 293 in total. Fleet familiarization gives great financial advantage in terms of crew training and maintenance savings. Whole official sales are provided only by the airline's website.

Similar approach was set in terms of marketing and advertising. Most of such activity can be found on its website and social media. Again, thanks to this solution, Ryanair does not spend resources on advertisement on foreign platforms, can target advertising to specific types of receiver and controls fully the information about the audience type. Consequently, in order to promote its services and fulfill the marketing contracts with airports, cities or regions, Ryanair needs to be very active on its social media by adding new content and increasing the number of its followers.

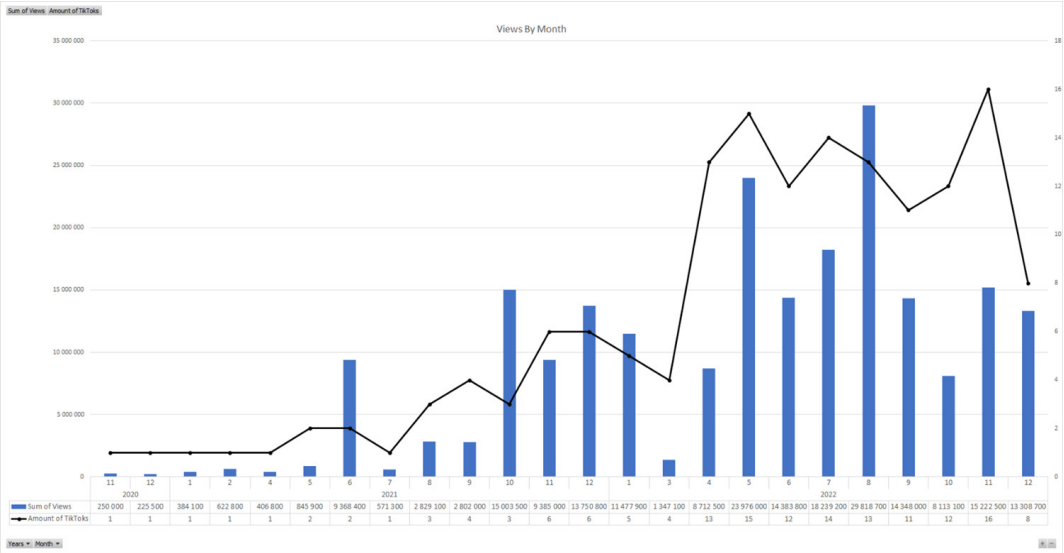

Figure 3 - Ryanair's views of TikToks by month, Source: own research based on Ryanair's TikTok profile

Ryanair's first TikTok was posted on 16th of November 2020 which was the year during which the pandemic started to spread globally. People were locked in their hous-

es, as a result they spent more time online. According to studies performed by MIT, the trend of increased usage of social media is forecasted to continue even post COVID-19 (Mou, 2020). Ryanair was seeking an opportunity to advertise itself and attract new customers, so that they could return to traveling after the COVID-19 restrictions were abolished. From the graph it can be observed that the start was rather harsh, for the first 3 months after the TikTok account of the airline was launched, it was not generating many views, the average of these months was around 300.000. It was because at the beginning the airline was posting only one short video a month and then the number was increasing which led to higher number of views. In June, their first viral TikTok was released, with the sound which was popular at that time. They started a trend where the person responsible for running the account was using a filter where the lips and the eyes were displayed on the photo of their aircraft.

Thanks to the fact that people liked it, most of their videos are kept in a very similar style. Ryanair is using controversy to gain views and popularity. In their videos they are not afraid of being controversial.

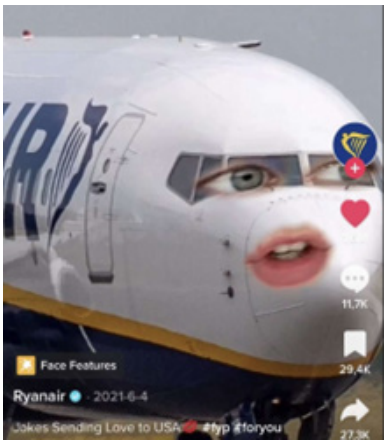

Figure 5 - Ryanair's "eye trend" example 1 on TikTok profile, Source: own research based on Ryanair's TikTok profile

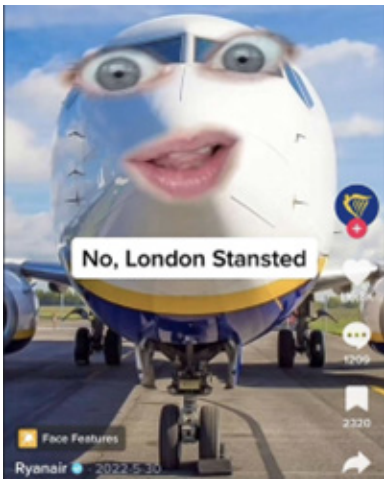

Figure 6 - Ryanair's "eye trend" example 2 on TikTok profile, Source: own research based on Ryanair's TikTok profile

They are using sounds that contain explicit words, swearing and disapproving of their competition and many destinations that are not in Europe. For example, they made a video in which they swear that they would never fly to the USA (especially to Nebraska). They are also using celebrities popular among the Generation Z, which is their main target audience. Marketers nowadays use content marketing which is more focused on consumers' interests rather than selling the product (Holliman, Rowley, 2014). Ryanair's strategy is to nurture a new generation for themselves so they can maintain their profits high. The airline is focused on transporting passengers around Europe at the lowest possible cost. It is not the most comfortable, but it is cheap which attracts young people, often without a source of income, who can thus travel cheaply.

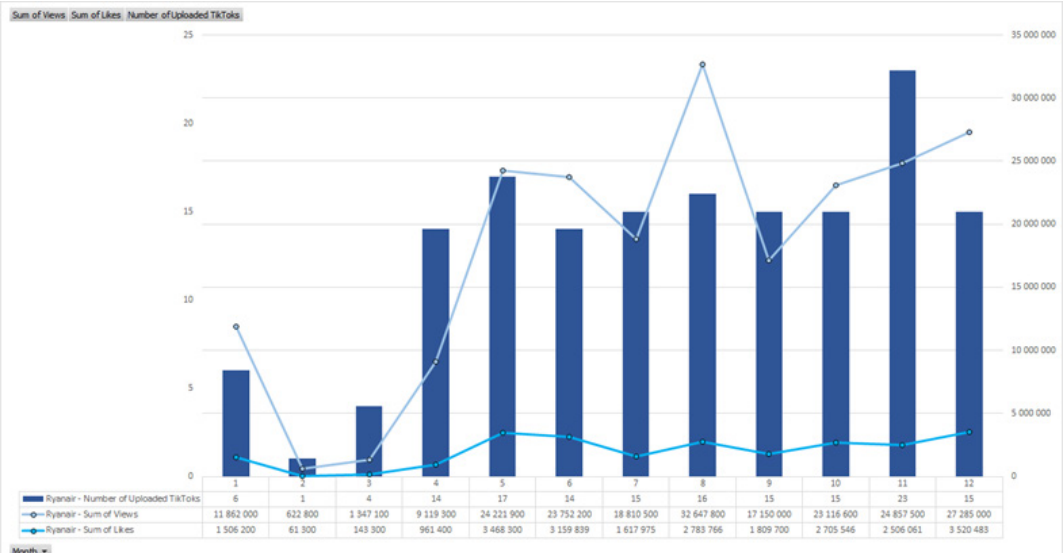

Figure 7 – Ryanair's Like View Ratio Considering number of uploaded TikToks from 3 years, Source: own research based on Ryanair's TikTok profile

The graph is presenting the number of TikToks Ryanair was uploading each month from all 3 years summed, it can be noted that after March they were uploading a constant number of videos. From April to June their views grew from around 9.000.000 to 24.000.000. It was also the time they generated the biggest number of likes, in May the number exceeded 3.500.000 threshold. Looking at the following months enables to observe that Ryanair has rebounded and generated higher numbers than before, August seems to be the best month for them in case of views generating almost 33.000.000, while May, June and December are the best months for them in case of likes with an average of 3.400.000. Looking at the statistics presented, we see that the Ryanair's base of followers may be growing as they are generating more views and likes with an upward trend.

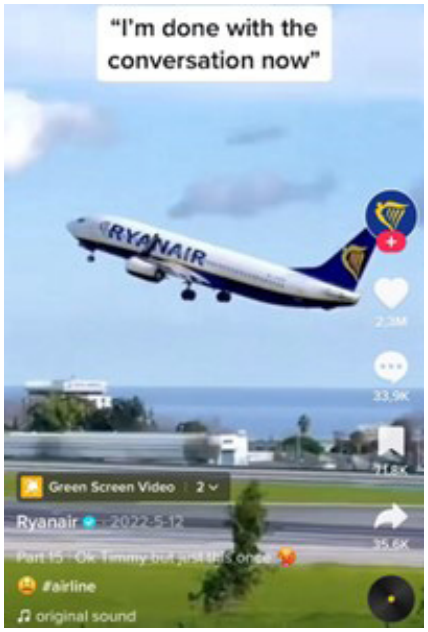

Figure 8 - Timothee Chalamet trend print screen, Source: own research based on Ryanair's TikTok profile

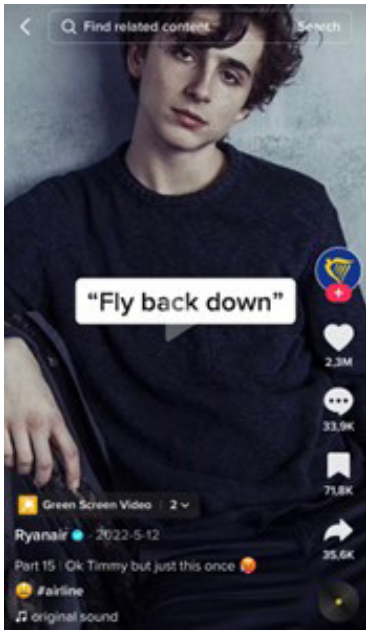

Figure 9 - Timothee Chalamet trend print screen 2, Source: own research based on Ryanair's TikTok profile

Ryanair's strategy is quite straightforward – they are looking for the things or people that are currently trending and they are implementing them into their TikToks. For example, in May, actor Timothee Chalamet was trending because of the recent roles in movies he played. He was all over the TikTok and users was aroused by how handsome he is. Ryanair used his image to create a TikTok in their own style with a bit of their specific sense of humor. As it can be observed, just one video itself generated almost 2.500.000 of likes, 35.000 of shares, 34.000 comments and people saved the video 70.000 times. It is controversial and has made quite a stir around it, as the star's image was used in an objectifying way, and most importantly, was added by one of Europe's major airlines, which may have surprised some people.

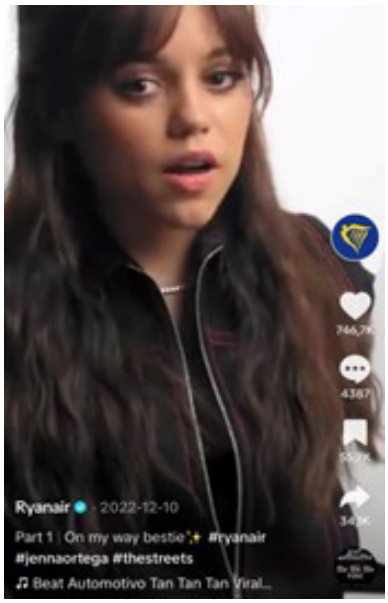

Figure 10 – Example 1 of Jenna Ortega trend, Source: own research based on Ryanair's TikTok profile

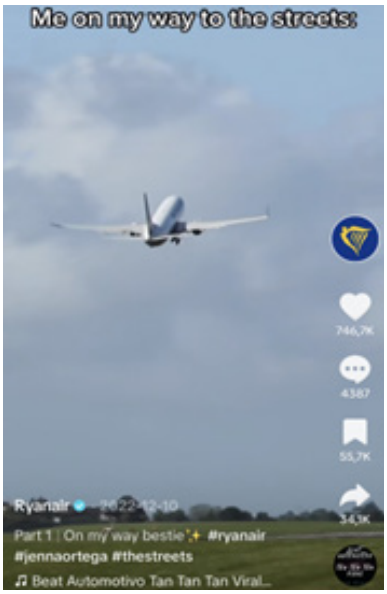

Figure 10 – Example 2 of Jenna Ortega trend, Source: own research based on Ryanair's TikTok profile

Another example of the use of a celebrity image by Ryanair is Jenna Ortega, who was popular after the role she played in the TV series - Wednesday. There was a lot of buzz around her in November and December, and a lot of people raved about her role and personality, which quickly contributed to new trends featuring her. This one TikTok alone generated 5.500.000 views and 750.000 likes.

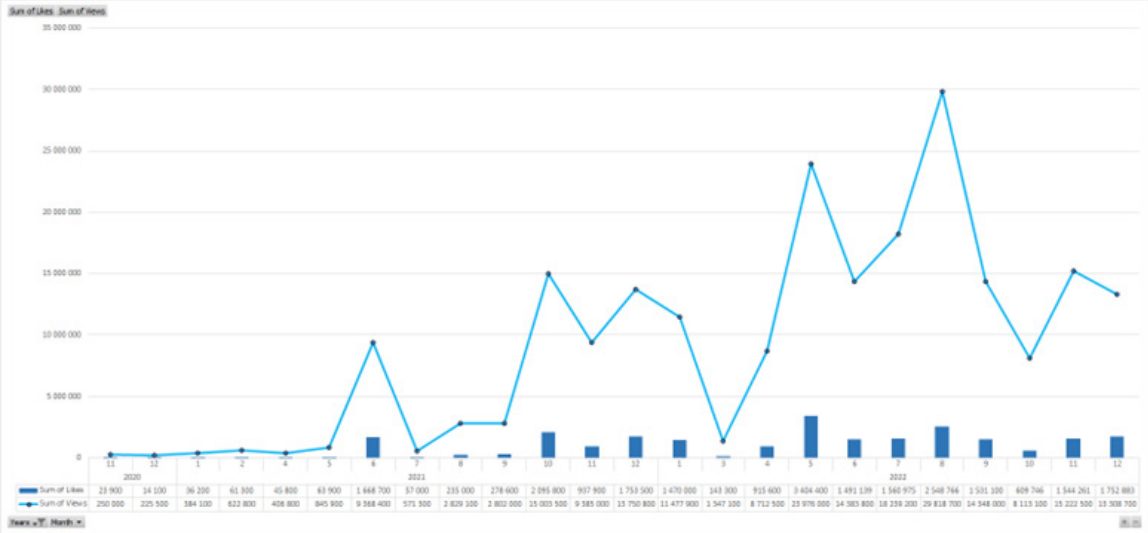

Figure 11 - Ryanair's likes and views for each year of TikToks, Source: own research based on Ryanair's TikTok profile

This graph represents Ryanair's activity from when they first started their operations on TikTok platform, likes and views are shown separately taking into consideration each year individually. The number of views exceeds the amount of likes but nonetheless, the numbers they are generating each year are high. The average number of likes in 2021 is around 650.000 and views are around 5.000.000, while in 2022 the average of likes is above 1.500.000 and views around 14.500.000. It might be observed that Ryanair is expanding and due to its wider recognition around the platform their statistics are more constant. As well as from this graph and the previous ones which were analyzed, it can be seen that there is an upward trend in case of numbers, with just one month at the beginning of 2022 where the views and likes plunged. However, the like view ratio is higher in 2021 with it being at a level of 13% (taking into account average number of views and likes), and in 2022 it is at a level of 11%.

In December 2022, there was a trending word, to be precise the word "slay" (Urban Dictionary, 2023), which simply means to succeed in something amazing. Ryanair was using this word and its hashtag on their most popular video from this month. In this TikTok, Ryanair not only uses youthful words but also features curse words, and the TikTok itself can be perceived as quite controversial because the airline criticizes itself in it. In the video the airline lists things it lacks and when asked what it has to offer they show their airplane.

In October 2022 there was a trending song by a well-known rapper Lil Yachty called "I took a Wock to Poland" (Urban Dictionary, 2023). It was a sound that was used by a lot of people back then and everyone on the platform including Ryanair was focused on Poland and this song.

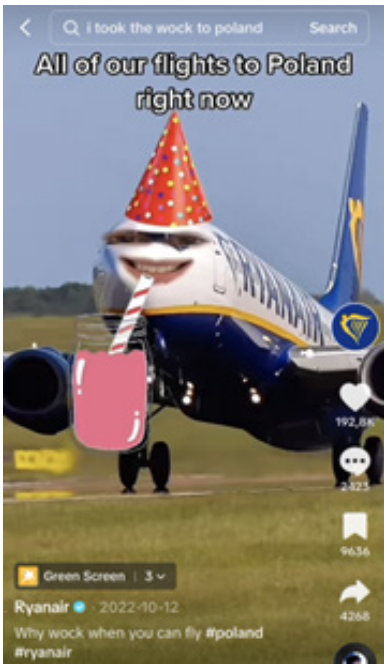

Figure 13 - "I took a wock to Poland" trend Source: own research based on Ryanair's TikTok profile

They used words" why wock when you can fly" but their TikTok shows a plane drinking the title Wock which from the slang means "a type of cough syrup containing Promethazine and Codeine which is used for its sedative effects" (Urban Dictionary, 2023). It generated around 200.000 likes, this amount could be smaller because of the certain target group, which were Poles, however it is still a good result.

From this particular example, it can be observed that Ryanair is using a lot of slang in their videos that not all of the people know, it is used among generation Z who spend most of their time on TikTok. Assumption that the majority of likes and views where slang is used, are generated by younger people that understand the language the airline is using, can be made. That might be the reason why in December the amount of likes was smaller than for example in May or August.

August which was the month in which Ryanair had 5 viral TikToks in terms of views and one that exceeded 1 million threshold we can tell that not only slang helps them to gain good statistics. As already mentioned before, Ryanair's is controversial and they are not afraid of showing their weaknesses, instead they just make fun of them and it makes people laugh.

Figure 14 - Ryanair's most viral TikTok from August 2023, Source: own research based on Ryanair's TikTok profile

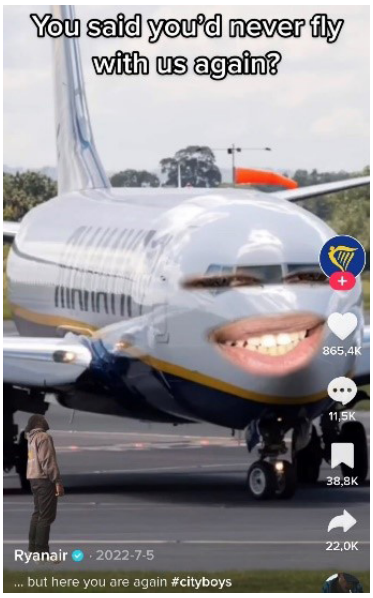

Figure 15- Ryanair's TikTok, flying trend Source: own research based on Ryanair's TikTok profile

As can be seen on the attached screenshots, Ryanair knows that people complain about them and that they say they will never fly with them again, however, as they themselves comment " you said you would never fly with us again...but there you are again" or "when you realize that no matter how much they complain, they will always fly with you" and what they answer is "Welcome back to the party" with the usage of the devils emote which translates to being "sassy" (Urban Dictonary, 2023). It can be assumed that either the content is easy for everyone to understand and people like it, or that it has some hidden subtext that a particular audience will understand. Looking back at the previous screens of TikToks, it is shown that even though Ryanair targets different audience, their content is sometimes suitable for every age group.

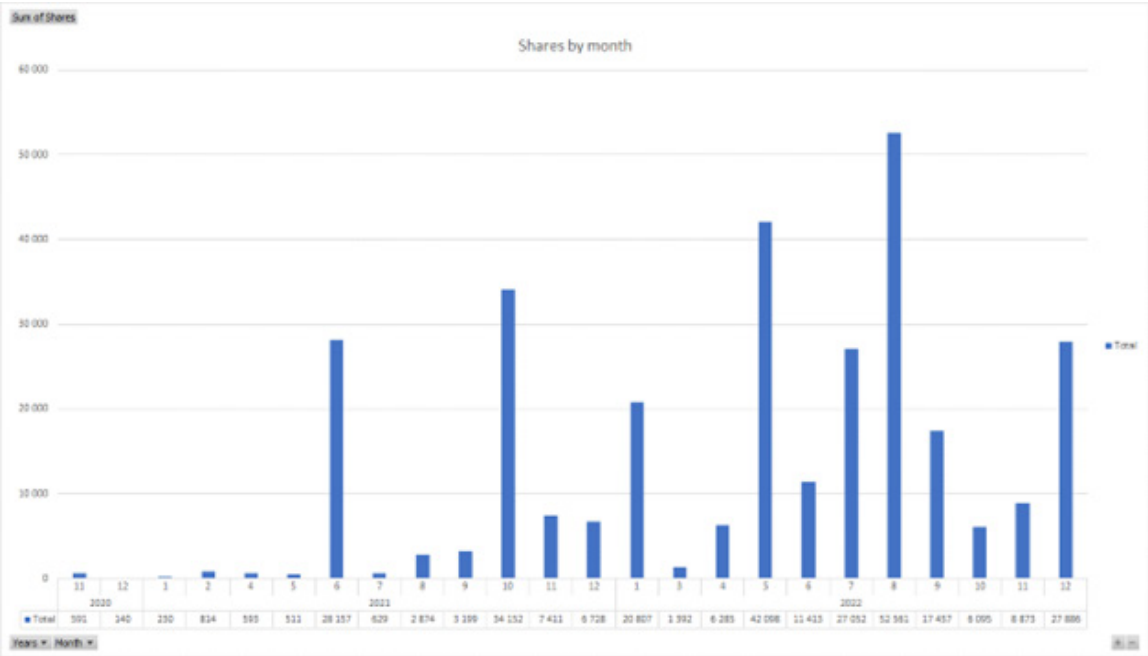

Figure 16 - Ryanair's Number of TikToks shares, Source: own research based on Ryanair's TikTok profile

This graph shows that in terms of the number of shares, Ryanair was doing well in most situations. For example, in the first months of their operations, when they were not yet known so well and they were building a base of their followers, shares were pretty low, then in June 2021 the number of shares skyrocketed, and it is connected with the amount of likes analyzed on the previous graphs. All statistics are strictly connected with each other and the higher the number of likes and views and the better the content is, more shares will probably occur. Their one of the best TikToks generated in May 2022, 13.000.000 views, 2.300.000 likes and almost 36.000 shares, while their most viral TikTok generated in August 2022 almost 16.000.000 views 1.500.000 likes and almost 41.500 shares which is 4/5 of their whole shares.

Data Analysis EasyJet

EasyJet is a low-cost airline from the United Kingdom. It was founded in 1995. Currently easyJet operates to 32 countries (mostly in Europe, but also in Africa, Asia and Middle East), 132 destinations on 453 routes. In last pre-covid year, namely 2019, there were over 96.000.000 EasyJet's passengers (Ch-aviation, 2023).

Figure 17 - EasyJet's TikTok profile, Source: easyJet's TikTok profile

The business model of easyJet has similarities and differences in reference to Ryanair. In the basic fare the airline also provides no-thrills service, such as lack of free seat allocation, checked luggage, even no standard size cabin luggage. Despite the fact that easyJet currently concentrates on the fleet of Airbus's A320 family, it is also an example of fleet familiarization. One of the main differences is that easyJet schedules many operations to main airports in Europe such as Amsterdam Schiphol or Paris Charles de Gaulle. Additionally, it has implemented the transfer solution for the passengers called Worldwide by easyJet (easyJet, 2023). Those reasons made the statement of the author of this article, that easyJet is a low-cost airline (or maybe even a hybrid one), rather than ultra-low-costs.

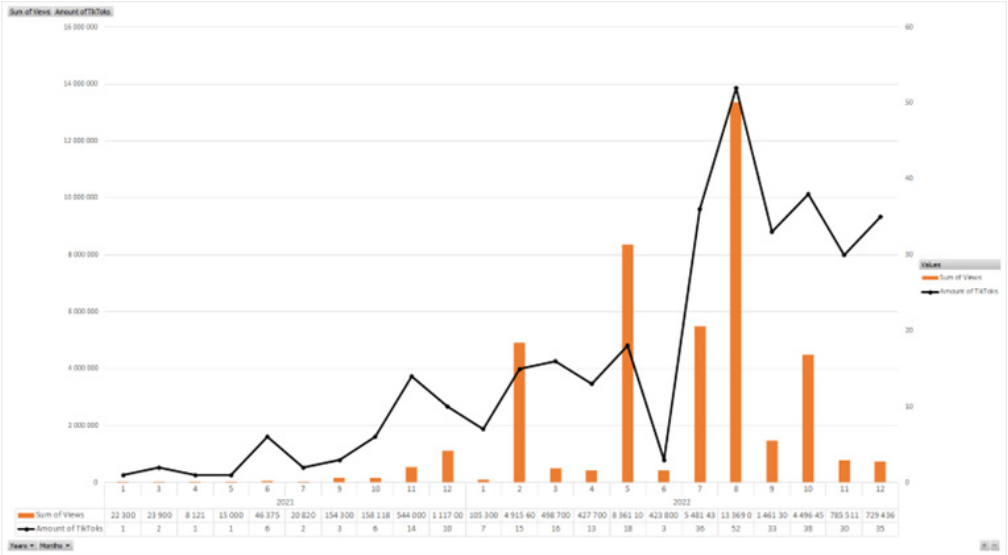

Figure 18 - EasyJet's TikToks views by month, Source: own research based on easyJet's TikTok profile

As well as Ryanair, easyJet uses its own marketing platforms. However, since easyJet might target different types of passengers, due to its network to main European airports, its activity and content on social media should be different and adjusted to its passengers' expectations and taste.

EasyJet's first TikTok was posted on 14th of January 2021, just 2 months after Ryanair. It was during the same year when the COVID-19 pandemic was already spreading globally. Hypothetically, they have seen that Ryanair already made a TikTok account and noticed that it is generating many views and decided to also incorporate TikTok into their marketing strategy.

It was the right decision, considering the fact that TikTok is the biggest app right now and it was the fastest developing app at the time. For the first 5 months of their operations, they were only uploading one short video a month, and as we can observe from the graph the sum of views was pretty low comparing it to Ryanair. It was not that bad considering they were new in the app, but Ryanair did noticeably better. Furthermore, EasyJet is almost 10 times smaller than Ryanair in terms of the number of followers.

The views were overall rather low taking into account the amount of videos EasyJet was producing. What is also worth mentioning, is the fact that in August 2022, Ryanair posted only 16 TikToks and generated almost 30.000.000 views, while EasyJet posted 52 TikToks and generated around 13.000.000 views. Only by posting a higher number of videos, EasyJet was able to compete with Ryanair in terms of views.

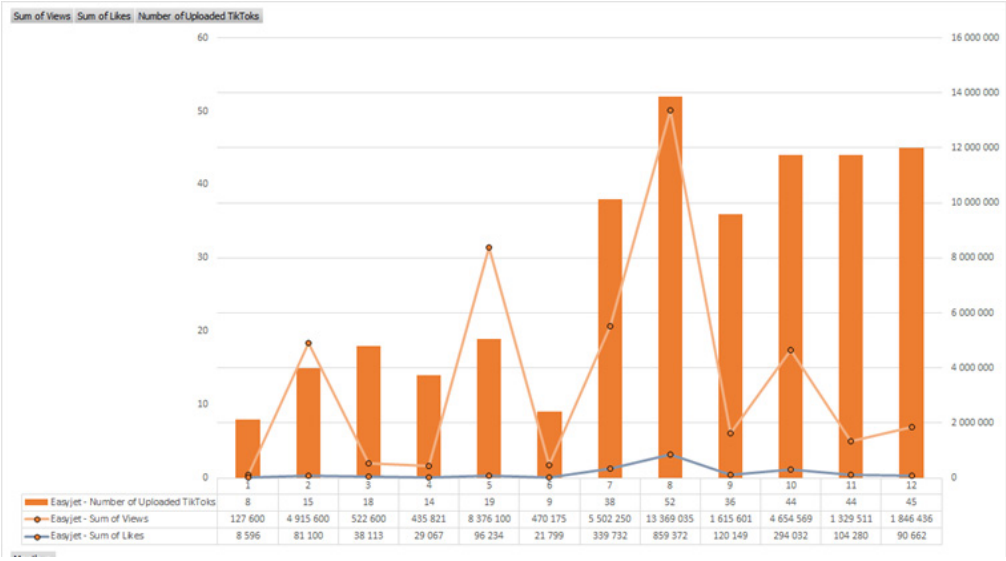

Figure 19 – easyJet's Like View Ratio Considering number of uploaded TikToks from 3 years, Source: own research based on easyJet's TikTok profile

The graph shows that EasyJet in the first months of their operations was trying to keep the numbers of videos at a low level but then they changed their strategy, and the average of posted videos in the year 2022 was 25, while Ryanair's average in the same year was only 10. The number of likes per month in most cases did not exceed the 100 000 threshold.

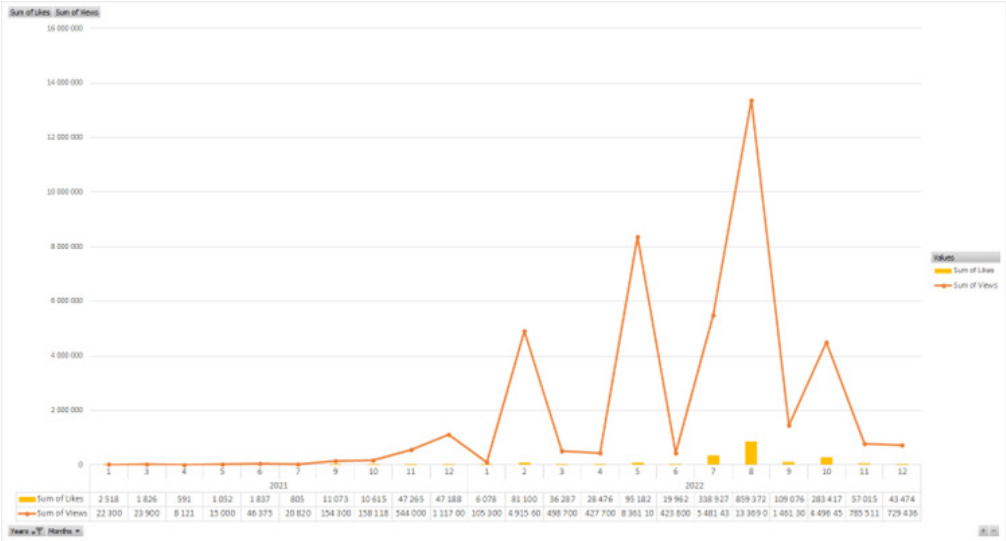

Figure 20 - EasyJet's likes and views for each year, Source: own research based on easyJet's TikTok profile

Graph presented above tells us that even though EasyJet was generating huge amounts of views, numbers of likes it proves that people did not enjoy their content or it did not reach the proper audience. For example, in August 2022 they had around 900.000 likes, they also posted 52 TikToks this month and they generated above 13 million views but their average like-views ratio from this month was 7%. After detailed analysis of the data and TikToks, conclusion that EasyJet is in fact missing their target audience, was made. Furthermore, their problem in comparison to Ryanair is lack of "fixed content".

Ryanair is known from their trend with the eyes and it is generating the biggest amount of numbers, while EasyJet is struggling in terms of consistency, they are posting

many different things, without anything that stands out.

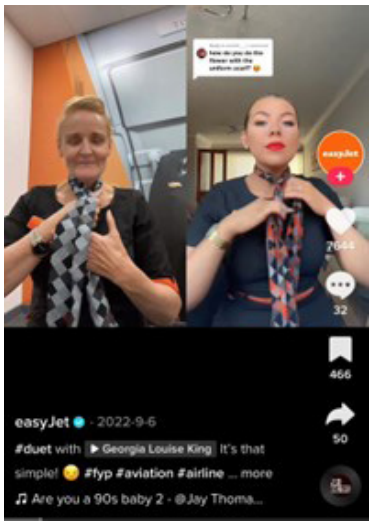

Figure 21 - Easyjet's Q&A video, Source: own research based on easyJet's TikTok profile

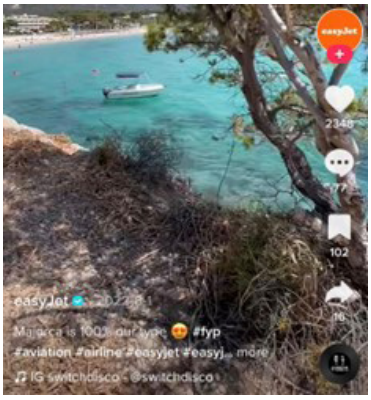

Figure 22 - Easyjet's Majorca destination, Source: own research based on easyJet's TikTok profile

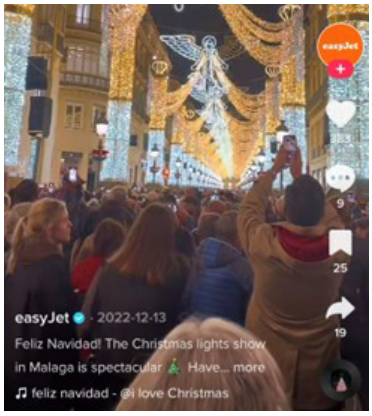

Figure 23 - Easyjet's Malaga destination, Source: own research based on easyJet's TikTok profile

EasyJet posts a lot of Q&A videos which are very informative, but they do not evoke emotions, the videos seem too long and may not interest everyone. What is also posted, is showing their destinations to encourage people to travel with the airline, but this type of videos is not as popular. This content could generate high views and likes but, on another platform, such as Facebook or even Instagram. The style and length would be more suitable for a different type of recipient which is spending less time on TikTok.

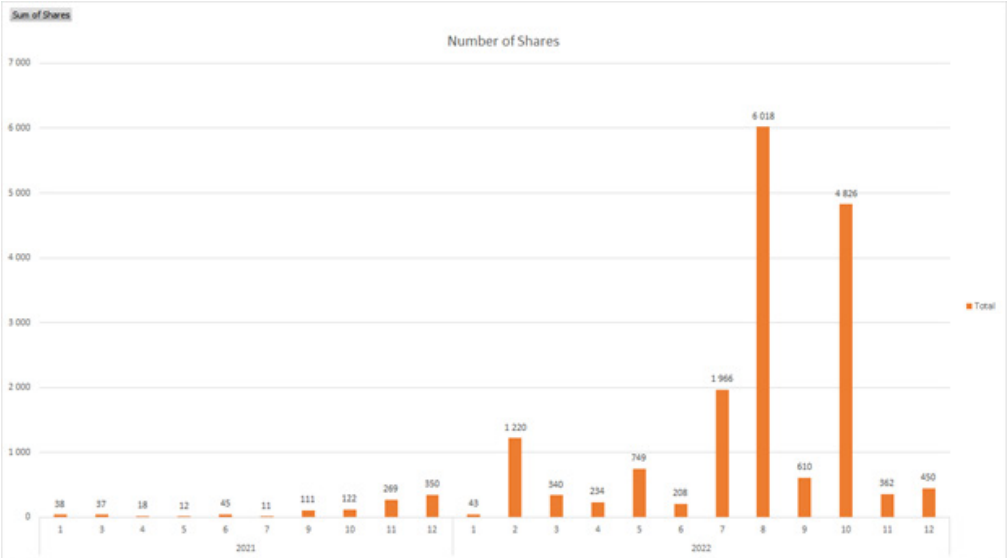

Figure 24 - EasyJet's Tiktoks number of shares, Source: own research based on easyJet's TikTok profile

Shares determine whether people like something, or something is funny for them and if it is they want to share it with their friends, in case of EasyJet the numbers of shares are usually low, the audience that they reach is not that interested in sharing their content or they just do not find it entertaining.

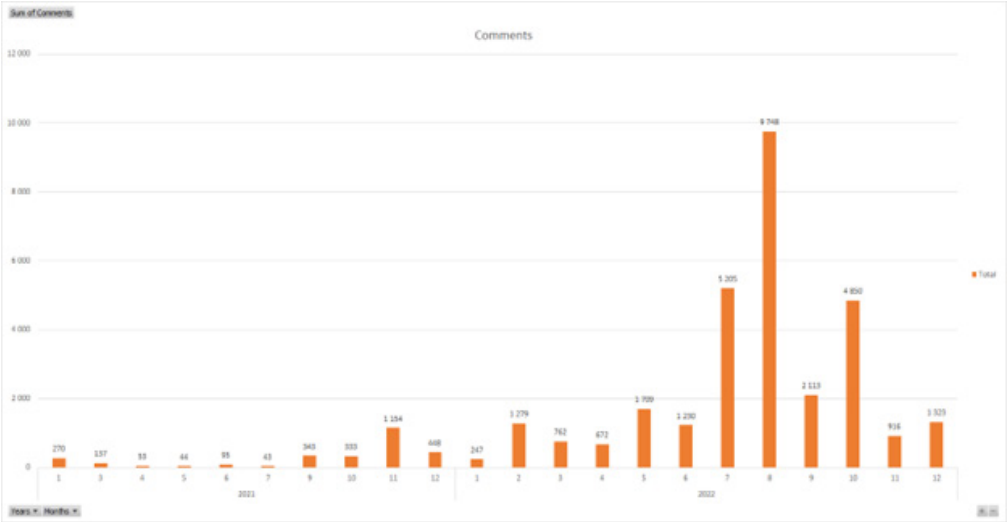

Figure 25 - EasyJet's Tiktoks number of Comments, Source: own research based on easyJet's TikTok profile

Number of comments is also pretty low, it may not only be due to the fact that EasyJet reaches are lower than Ryanair's, but most of their TikToks are difficult to comment. People nowadays tend to like something that follows the trends and if the topic is not engaging enough for them, they will simply resist commenting it or discussing the topic.

Conclusions

After analyzing all the data gathered, it can be concluded that both airlines use TikTok as a bridge between them and their customers, but they their content is targeting different age (generation) group. Additionally, EasyJet does not follow most of the trends, the videos are sometimes out of context and they are trying to sort of copy Ryanair but in an inefficient way. At the same time Ryanair is closely following the trends and even sometimes start them.

Almost every TikTok of Ryanair can be recognizable as a successful. They are able to reach their main audience (Gen Z) due to their controversial content filled with British humor and slang. As can be seen from the way that TikToks are posted, they first analyze what is currently trending and think of what can make people laugh or sometimes be annoyed with. The goal is to evoke emotions so that the audience will engage with videos through likes, shares and comments. If something it is controversial and not socially acceptable, it causes people to talk about it or formulate opinions. As a result, users recognize this brand and are more likely to choose it from others in the future. By matching up to Generation Z humor, it creates an image of being "modern".

EasyJet's videos are mostly very enlightening, aesthetic and polite. However, it is not something that will stand out on the platform, which is full of different, sometimes extreme emotions. With the target market that EasyJet aims at, it will be difficult to achieve recognition on TikTok app. This type of content would be more appropriate for example to Facebook.

Both of these airlines specialize in some type of content even though they aim at different groups. EasyJet has tried implementing trends into their content but it did not generate many views so that is why they decided to stick to their usual content. Many of their passengers would consider it unacceptable or even weird if they used words such as "slay", "wock".

It was discovered that Ryanair was more successful in terms of engagement with their followers and producing creative content, while EasyJet was rather focused on making as many videos as possible that were more informational and ill-considered in

our opinion. Data collected also suggests that EasyJet targets different passengers than Ryanair. U2 is focused more on upper leisure and business passengers while Ryanair is already building relationships with members of Generation Z whose purchasing power is increasing rapidly. As many of them are still in school or studying, they are more likely to cut costs as much as possible which makes them the perfect audience for Ryanair.

To put it briefly, we believe that both airlines have huge potential, but on different markets and platforms. Even though EasyJet is not as successful on TikTok, it is still a leader on the European market with a well-established reputation.

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SOCIAL NETWORK ANALYSIS: FROM GRAPH THEORY TO APPLICATIONS

Wojciech Golędzinowski[1], Władysław Błocki[2]

Abstract

Social Network Analysis (SNA) is a powerful interdisciplinary field that explores the patterns and dynamics of relationships between individuals, groups, organizations, and even entire societies. This article provides an overview of SNA, tracing its roots in graph theory and highlighting its various applications in fields such as sociology, computer science, business, and epidemiology. By examining the theoretical foundations of SNA and its practical implementations, this article aims to demonstrate the importance of SNA in understanding social structures, information diffusion, impact dynamics, and collective behavior. In addition, the article discusses the methodologies and tools used in SNA research, including data collection, network visualization and network metrics. Through a comprehensive analysis of SNA techniques and their applications, this article contributes to the growing knowledge in the analysis of social networks and encourages further exploration of this rich field.

Key words: analysis of social networks, graph theory, networks, relationships, dynamics, applications, methodology

Introduction

In the digital age, social media has become a key part of our daily lives, changing the way we communicate, receive information, establish social relationships, and engage in a variety of activities. Platforms such as Facebook, Twitter, Instagram, YouTube or LinkedIn allow users to create and share content, communicate with other users, actively participate in discussions on various topics, and interact with brands, companies and celebrities. It's a place where events and trends spread rapidly and information reaches millions of people in seconds. However, the enormous scale and complexity of these platforms means that the analysis of this digital ecosystem requires modern tools and methods. The formalization of the SNA began in the 1950s and 1960s with the work of researchers such as Alex Bavelas and Anatol Rapoport. They introduced mathematical graph theory to model social structures and interactions. Graph theory provided a rigorous framework for representing social networks through nodes and edges, laying the groundwork for a more systematic and quantitative approach to the study

1 PhD student at the University of Information Technology and Management in Rzeszów, e-mail: w.goledzinowski@doktorat.wsiz.edu.pl, ORCID: 0009-0002-1606-7309.
2 PhD student at the University of Information Technology and Management in Rzeszów, e-mail: w.blocki@doktorat.wsiz.edu.pl, ORCID: 0009-0000-0006-9479.

of social relationships. Social network analysis (SNA) is a methodological approach that examines patterns of social relationships and interactions between individuals, groups, organizations, or other social actors. It involves analyzing the structure of social networks, identifying key actors or nodes in the network, and understanding the flow of information, resources or influences between these nodes. In a few words, the analysis of social networks (SNA) can be described as "the study of interpersonal relationships using graph theory" (Tsvetovat & Kouznetsov, 2011). At its core, SNA is based on the understanding that social structures and relationships play a fundamental role in shaping individual behaviors, attitudes, and outcomes. By representing social interactions as a network of nodes (representing individuals or entities) connected by edges (representing relationships), SNA provides a visual and quantitative framework for the study and analysis of these social structures.

The importance of social network analysis lies in its ability to reveal hidden patterns, dynamics, and emerging properties that are not readily apparent at the individual level. It helps to discover how relationships and social connections affect the dissemination of information, the spread of behaviors or ideas, community formation, the flow of resources, and the exercise of power and influence. SNA can provide insight into social phenomena that cannot be adequately understood by focusing solely on individual attributes or characteristics. SNA has a variety of applications in various fields. In sociology, it has been used to study social capital, social support, social impact, and social cohesion. In computer science, SNA has contributed to the development of recommendation systems, understanding of online social networks, and analyzing the diffusion of information on the web. In business, SNA has been used to explore organizational structures, collaborative networks, and diffusion of innovation. In epidemiology, SNA has proven valuable in understanding the spread of disease, identifying influential individuals in the transmission process, and designing effective intervention strategies. Overall, social network analysis provides a powerful framework for understanding the complex relationship between individuals and their social environments. It enables researchers, policymakers, and practitioners to gain insight into the structure, dynamics, and consequences of social relationships, which ultimately leads to a deeper understanding of social systems and the potential for informed decision-making and intervention. In this paper, all graphs and most calculations will be performed in Jupyter Notebook using the Python programming language.

Theoretical basis of social network analysis

The theoretical foundations of social network analysis (SNA) are rooted in graph theory, a mathematical discipline that deals with networks of interconnected nodes and edges. SNA adopts key concepts and measures from graph theory to study the complex patterns of social relationships and interactions that underlie human society. In the SNA sphere, nodes represent people, entities or social actors, while edges symbolize connections or ties between them. By mapping social interactions to the network, SNA provides a powerful visual and quantitative framework for studying the basic structure of social systems. Central to SNA are the various network metrics that shed light on the importance of nodes in the network. The centrality of the degree measures the number of node connections, which means its importance and impact in the social tissue. Interinstitutional centrality defines the extent to which a node serves as a bridge between other nodes, acting as a critical link for the flow of information or impact. Proximity centrality, on the other hand, evaluates the average distance between a node and all other nodes, emphasizing its availability on the network.

Figure 1. 220kV network graph with degree centrality. Source: the authors' research.

SNA delves into network properties such as the clustering factor, which reveals the tendency of nodes to form groups or clusters, suggesting the presence of coherent substructures. The phenomenon of the small world emphasizes the efficiency of social networks, since most nodes can be reached from any other node with an extremely small number of steps.

With SNA, researchers gain valuable insight into the dynamics of social systems. By studying the flow of information, influence, and behavior through social networks, SNA allows us to capture the diffusion of innovation, the spread of rumors, and the mechanisms behind collective decision-making.

The theoretical foundations of SNA go beyond traditional sociology to include computer science, business, epidemiology, political science, and more. He revolutionized fields such as computer science, contributing to the development of recommendation systems, link prediction algorithms and understanding of online social networks. The theoretical basis constantly shapes the evolution of the SNA. Researchers are exploring advanced methodologies for analyzing multi-layer and multiplex networks, integrating different types of relationships to gain a comprehensive understanding of social interactions. Moreover, the application of machine learning, natural language processing, and advanced statistical techniques enhances SNA's analytical prowess, opening up new dimensions of social network analysis.

In summary, the theoretical foundations of social network analysis, rooted in graph theory, provide a scaffolding for understanding the complex web of social connections that shape human behavior, communication, and influence. As SNA progresses, researchers must address challenges such as ethical considerations, data quality, and scalability while exploring new frontiers of interdisciplinary applications. With its enduring importance, SNA can make a significant contribution to our understanding of social systems and informing meaningful decisions for a more connected world.

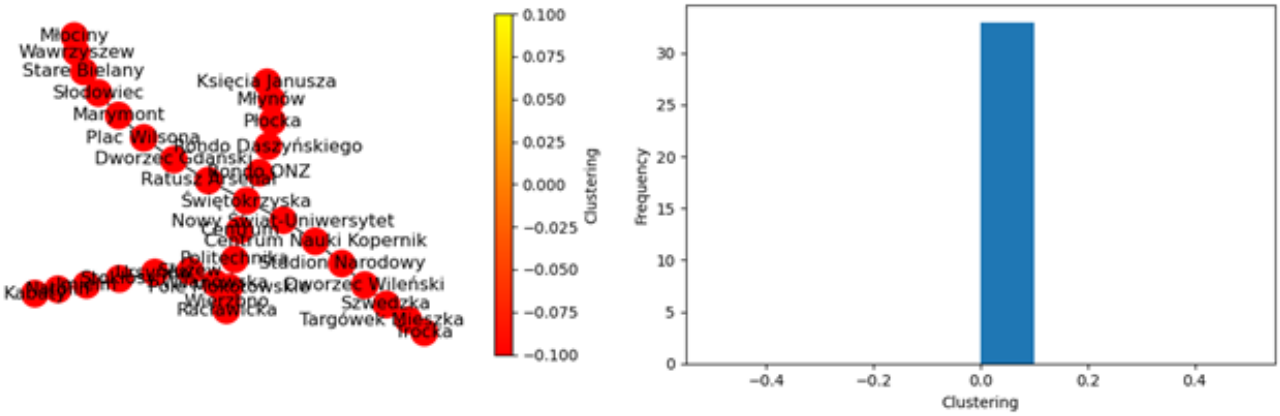

Figure 2. Grouping factor (Warsaw metro network). Source: the authors' research

Methodologies in the analysis of social networks

Social Network Analysis (SNA) methodologies include a diverse array of techniques that enable researchers to study, analyze, and interpret the complex structure of social networks. These methodologies play a key role in collecting network data, representing relationships, visualizing structures, and extracting valuable information from the interconnectedness of social actors.

One of the fundamental aspects of the SNA methodology is data collection. Researchers use a variety of techniques, such as surveys, observations, and the use of online data sources, to gather information about social ties and interactions. Surveys allow individuals to provide valuable data on their relationships, while observational methods offer a more direct approach to studying social interactions in real-world settings. In addition, the growing prevalence of online social media platforms has opened up new opportunities for data collection, allowing researchers to delve into online social networks and study virtual communities.

The representation of network data is another critical aspect. SNA uses two basic methods: the neighborhood matrix and the neighborhood list. The neighborhood matrix represents nodes and their relationships as a square matrix, providing a clear overview of the network structure. A neighborhood list, on the other hand, represents nodes as a list, along with their connected nodes, which is more efficient for infrequent networks with fewer connections.

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Figure 3. Neighbourhood matrix (Warsaw metro network). Source: the authors' research

Visualization techniques are essential for understanding the complex structures of social networks. Node connection diagrams offer a visually appealing representation in which nodes are represented as points or circles and edges as lines connecting them. This visual image makes it easy to identify key actors, communities, and structural patterns in the network. Matrix diagrams are another visualization method in which the network is represented in the form of a matrix, allowing a clear view of relationships and connections.

Sampling methods are used to manage the computational complexity of large networks and provide generalization. Random sampling involves randomly selecting a subset of nodes or edges, while snowball sampling starts with a few known nodes and expands to collect additional nodes nominated by existing ones. Properly addressing missing data is essential, as incomplete or unavailable data can lead to biased analysis and interpretation. Thanks to proper planning, we can better use human work, as well as machines used in transport, production or distribution of goods and services (Alsina, 2011).

Figure 4. Distribution of vertex degrees. Figure showing two networks with the same number of vertices and connections, but with different degree distribution. Source: http://www.if.pw.edu.pl/~agatka/moodle/charakterystyki.html

Analyzing and interpreting social networks is based on a wide range of network indicators and algorithms. Measures of centrality, such as degree, interinstitutionality, and centrality of proximity, help identify influential actors, bridges, and people who are well connected in the network. Community detection algorithms reveal consistent subgroups, providing insight into group dynamics and social grouping. In addition, studying the dynamics of networks over time is critical to understanding how relationships evolve and adapt to changing circumstances.

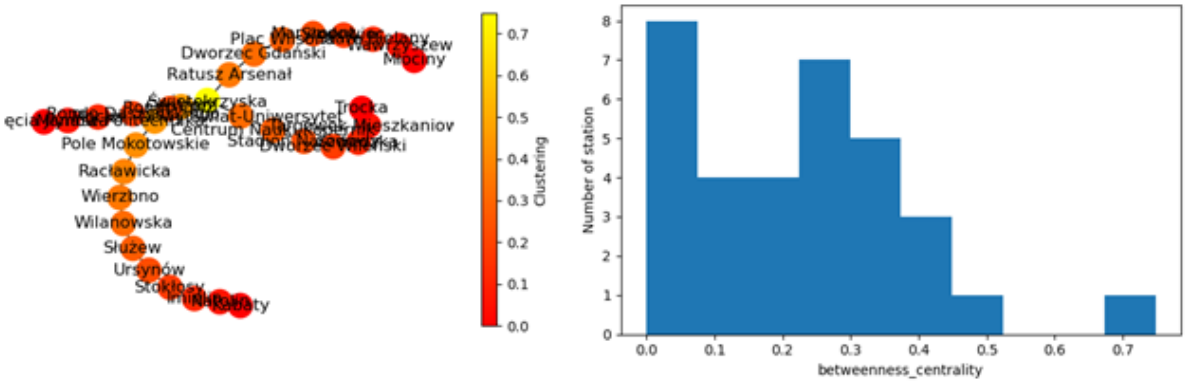

Figure 5. Interinstitutional centrality (Warsaw metro network) Source: the authors' research

Looking ahead, the future of SNA methodology includes exploring multi-layered and multiplex networks, integrating contextual information, and combining SNA with other analytical approaches such as machine learning and natural language processing. As methodologies advance, SNAs will continue to unlock new dimensions of social network analysis, enabling researchers to gain deeper insight into the complex dynamics of human interaction and their far-reaching implications across fields.

Applications of social network analytics

Social Network Analytics (SNA) offers a wide range of applications in different fields, each of which harnesses the power of network relationships to uncover valuable insights and inform decision-making processes. In the field of sociology, SNA plays a key role in understanding social structures and dynamics. Researchers use SNA to identify communities on social networks, revealing subcultures and interaction patterns. In addition, SNA helps study the diffusion of information, behavior, and opinion in social sys-

tems, shedding light on social impact and the spread of innovation. Computer science finds great value in SNA for building personalized recommendation systems. By analyzing social connections and user preferences, SNA increases the accuracy of recommendations across e-commerce platforms, social media, and content distribution networks. In addition, link prediction algorithms, derived from SNA principles, predict future connections, enabling better friend recommendations, targeted marketing strategies, and efficient collaborative networks.

The business world benefits from SNA by gaining insight into organizational structures and collaboration patterns. By exploring communication networks in companies, SNA uncovers the formal and informal dynamics of power, facilitating effective decision-making and knowledge transfer. Social network analysis (SNA) has become an invaluable tool for companies and organizations, providing valuable information about their internal dynamics and social interactions. By visualizing and analyzing communication patterns and relationships within a company, SNA helps uncover hidden structures and optimize collaboration. One of the key applications of SNA in companies is to understand organizational structure and communication flows. By mapping the connections between employees and teams, managers can gain comprehensive insight into the formal and informal relationships that influence decision-making and the dissemination of information. This knowledge allows for more effective coordination, identification of communication bottlenecks and filling gaps between departments. SNA allows you to indicate techniques for encouraging the individual to express knowledge and transmitting it in the organization and giving it formal rules understandable to employees (Adamus-Matuszyńska 2013). What is more, SNA helps businesses leverage social media marketing by identifying influencer users and detecting trending topics for successful brand promotion. In the field of social media, SNA has changed the way platforms engage their users. Using SNA techniques, social media platforms gain insight into user behavior, content consumption patterns, and influencer users. Using this knowledge, they can create personalized experiences for users by recommending content that aligns with their interests and preferences.

In the field of epidemiology and public health, SNA is becoming a key tool in understanding the spread of infectious diseases. Governments, NGOs, experts and epidemiologists are trying to use models to understand how to respond, fight and treat a pandemic (Alguliyev et al. 2021). By mapping social contacts, researchers identify high-risk individuals, develop targeted vaccination strategies, and conduct contact tracing during disease outbreaks. Political science and policy analysis harnesses the potential of SNA to study policy networks and implement policy. By analyzing the relationships between policymakers, interest groups, and stakeholders, SNA uncovers hidden power structures and the flow of political influence, helping to effectively evaluate policy and make decisions. The analysis of social networks has proven to be a valuable tool in various real-world scenarios. For example, during the COVID-19 pandemic, SNA played a key role in controlling and containing the disease. Public health officials have used SNA to track and understand the spread of the virus by analyzing social interactions and identifying high-risk individuals. Through contact tracing efforts, SNA has helped map networks of infected individuals and their contacts, enabling targeted interventions and isolating potential transmission chains. This approach has proven crucial in limiting the spread of the virus and guiding public health strategies.

In addition, SNA applications cover interdisciplinary fields. In urban planning and transportation, SNA helps optimize traffic flow and identify transportation hubs based on connectivity in the city. In finance, SNA offers insight into the resilience of financial systems and the impact of contagion during economic crises. In addition, SNA helps energy companies understand energy distribution networks, optimize supply chains, and identify key players in energy consumption patterns. As SNA continues to evolve, emerging trends promise exciting opportunities. The analysis of online social networks and user

behavior remains a living area of exploration, shedding light on the complexity of the virtual landscape. The integration of SNA with machine learning and natural language processing has the potential for powerful predictive models and semantic network analysis. Moreover, the use of SNA to design and evaluate network interventions, promote positive behavior change and mitigate negative effects represents a promising way forward.

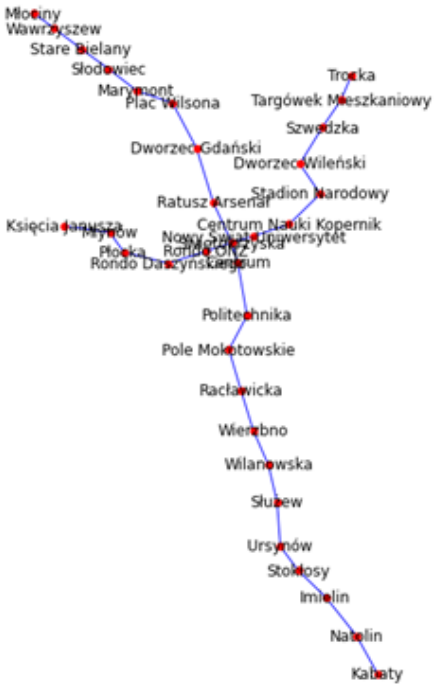

Figure 6. Warsaw metro network Source: the authors' research

Academic researchers also use SNA to gain insight into scientific collaboration. By examining co-authorship patterns and citation networks, SNA reveals influential researchers and the flow of knowledge in scientific communities. This information helps to understand emerging research trends, interdisciplinary collaboration and disseminate breakthroughs. In addition, SNA helps you understand online communities and foster positive interactions. By detecting distinct groups or communities on social networks, platforms can implement effective content moderation and create environments that encourage constructive discussions. This helps maintain platform integrity and user satisfaction while reducing the risk of misinformation and toxic behavior.

Structural holes are gaps or missing connections between people in a network. The individuals who fill these gaps are known as "brokers." SNA helps to identify structural holes and brokers in social networks. Intermediaries play a key role in facilitating the flow of information and access to different resources in different parts of the network. In sociology, understanding structural holes is essential to analyze the dynamics of power and social capital. Intermediaries often have a unique advantage in controlling the flow of information and have access to more diverse perspectives, which can increase their influence and opportunities for social and economic benefits. For example, in an organizational context, identifying intermediaries that bring together different departments can lead to better knowledge sharing and increased efficiency. In economic networks, brokers can use their position to broker transactions and create value by bridging gaps between separate entities. Social network analysis is a powerful tool in sociology, allowing researchers to explore community structures, social impact dynamics, and the importance of structural holes in shaping social interactions and behaviors. By discovering these patterns, SNA contributes to a deeper understanding of human social systems and enables more effective interventions and strategies in a variety of sociological contexts.

In criminal investigations, social network analysis (SNA) has become a powerful tool for understanding and dismantling criminal networks. Law enforcement and investigators use SNA to analyze the complex web of relationships between criminals and their accomplices. Representing criminal activity and relationships as a network of nodes and edges, SNA allows investigators to visualize the structure of criminal networks and identify key actors within them. Nodes represent persons or entities involved in criminal activity, while edges represent connections or relationships between them, such as joint criminal ventures, communications or financial transactions. One of the main goals of the SNA in criminal investigations is to identify and target influential nodes, often referred to as "kings" or "crime bosses." These are people who occupy central positions in the network and play a key role in coordinating criminal activities, distributing resources and controlling their criminal enterprise. With the SEN, investigators can trace the flow of information, contraband or illicit funds within a criminal network. This knowledge helps to understand the modus operandi of criminal operations, identify patterns of criminal behavior and predict potential future criminal activities. Moreover, SNA can uncover hidden links between seemingly unrelated criminal actors. It helps to expose the existence of bridges or "brokers" who act as intermediaries, facilitating illegal exchanges or enabling cooperation between different criminal groups. The identification of intermediaries is essential for dismantling criminal networks, as they can be targeted to break links between criminal actors that would otherwise be disconnected. In addition to identifying key actors and their relationships, SNA helps gather key evidence for litigation. By analyzing communication patterns and identifying common criminal connections, an SNA can provide supporting evidence to support other investigative activities. SNA also contributes to strategic intelligence in criminal investigations. By exploring the overall structure and patterns of criminal networks, law enforcement agencies gain a deeper understanding of the broader criminal ecosystem, helping to develop more effective long-term strategies to prevent and disrupt crime. However, ethical issues and data privacy must be taken into account when conducting SNA in criminal investigations. Ensuring the protection of individuals' rights and data integrity is crucial to maintaining the credibility and validity of SNA findings in court.

In summary, the applications of social network analysis span a broad spectrum of fields, providing valuable insight into the complex web of social relationships and their profound impact on individuals, communities, and society as a whole. The versatility of SNA, combined with continuous progress, ensures that it continues to be an indispensable tool in exploring the complex dynamics of human interaction and driving positive change in various fields.

Example of using network analysis

This research seeks to conduct an in-depth analysis and comparison of sample social networks using graph theory. The primary objective extends beyond the mere calculation of network parameters. Rather, it aims to uncover the underlying dynamics and nuances within the selected networks. The study is designed to be comprehensive, considering various aspects of network topology and statistical characteristics.

In the initial phase, a diverse set of social networks will be curated, ensuring representation across different sizes, structures, and purposes. Importantly, only networks with a minimum of two connections will be included to facilitate meaningful analysis. The analysis will encompass a thorough investigation of graph theory parameters, including node degree, centrality measures, and connectivity patterns. The goal is not only to identify these parameters but to explain observed differences across the diverse set of social networks. Moving beyond individual parameters, the study will scrutinize topological characteristics such as average node degree, Pearson correlation coefficient, network efficiency, and clustering coefficient. These metrics aim to reveal the intricate

relationships and patterns within the networks, providing insights into their organizational principles and information flow dynamics.

Additionally, the research will explore statistical characteristics, delving into node degree distribution and shortest path distribution. This analysis is crucial for understanding the variability and robustness of the networks under examination. Given the potential presence of disconnected components in some networks, a pragmatic approach will be adopted. The "connected_components" method will be employed to calculate parameters for interconnected components, ensuring a comprehensive understanding of network structures.

The findings from both graph theory and topological analyses will be integrated to derive overarching conclusions about the characteristics and behaviors of the sample social networks. Practical implications of the research will be discussed, considering how observed network characteristics may impact real-world scenarios in fields such as social sciences, communication studies, or network optimization.

Furthermore, the research will suggest future directions, proposing additional parameters for exploration, considering the impact of external factors on network dynamics, and advocating for the application of advanced graph theory concepts. Through this expanded goal, the study aims to provide a nuanced and insightful perspective on the intricate dynamics of social networks, contributing to both theoretical understanding and practical applications. The test results will be shown in the table "Topological characteristics of social networks".

	N	M	< k >	Max k	r	d	E	< l >	C
Network no.1	22	26	2,363	6	-0,221	8	0,337	3,342	0,179
Network no.2	34	41	2,412	8	-0,177	9	0,340	3,780	0,034
Network no.3	11	10	1,818	3	0,184	3	0,326	2,357	0,212
Network no. 4	15	15	2,0	4	-0,602	7	0,415	3,238	0,0
Network no.5	24	26	2,167	6	-0,323	9	0,347	3,238	0,051
Network no.6	17	18	2,4	4	-0,204	10	0,372	4,029	0,166
Network no.7	13	14	2,154	5	-0,538	5	0,475	2,718	0,077
Network no.8	17	17	2,0	4	0,177	7	0,330	3,2	0,225
Network no.9	15	13	1,733	4	-0,099	6	0,460	2,987	0,128
Network no.10	15	13	1,733	3	-0,262	8	0,286	3,485	0,0
Network no.11	2	1	1	1	-----	1	1	1	0,0

Table 1. Topological characteristics of social networks
Source: the authors' research

N number of vertices, M number of edges, < k > average vertex degree, Max k maximum vertex degree, r Pearson degree correlation, d network diameter, E network efficiency, < l > average shortest path, C clustering coefficient.

In conclusion, the examination of the topological characteristics of the analyzed social networks reveals a rich tapestry of structural diversity and connectivity dynamics. The variations in network sizes, ranging from a modest 2 vertices to a more intricate 34 vertices, underscore the heterogeneous nature of these social structures. The number of edges, indicative of interconnections, further emphasizes the complexity inherent in these networks.

The average vertex degree (< k >) showcases the diverse interconnectivity patterns among nodes, while the maximum vertex degree (Max k) highlights the presence of in-

fluential hubs with substantial connections. From the analysis we can conclude that <k> does not depend on the size of the network. Properties such as the average vertex degree or the maximum node degree can be used for further analysis, including examining the empirical distribution of the node degree. The scope of the nodal degree is similar to other networks. The Pearson degree correlation (r) provides valuable insights into the assortativity or disassortativity of the networks, elucidating the nature of relationships between nodes.

Network diameter (d) and efficiency (E) elucidate the varying degrees of accessibility and information flow within the networks. Taking into account the diameter and efficiency of the network, in theory the first value (diameter) should increase as the network size increases, and the second value (efficiency) should decrease with the increase. Although in the first case the analysis showed that this thesis was correct, it did not necessarily prove true in terms of efficiency. The size of the network (number of vertices and nodes) has no impact on performance. This is because although the network has more connections, the distance between the vertices is smaller and the network is more condensed than networks with fewer vertices, which can be seen in the appropriate graphs. The range in average shortest path length (< l >) underscores differences in the speed of information dissemination across these social structures. The clustering coefficient (C) reflects the propensity of nodes to form local clusters, influencing the overall network cohesion. The results of the clustering coefficient can be compared with random graphs with the same number of vertices and edges, using the fact that the coefficient in such a graph is equal to the probability of randomly selecting an edge from all possible edges.

It is noteworthy that smaller networks, as observed in Network no. 11, introduce unique challenges in drawing statistically robust conclusions. Caution is warranted in generalizing findings from such limited datasets.

Overall, these insights into the topological nuances of social networks contribute to a deeper understanding of their functionality and organizational principles. The diverse array of parameters examined provides a comprehensive view, paving the way for future research avenues that delve into the specific contexts and applications of these social structures. This study lays the groundwork for further exploration into the intricate dynamics that govern social networks and their implications in real-world scenarios.

Challenges and future directions

Social Network Analysis (SNA) faces various challenges that researchers and practitioners must face in order to fully exploit its potential. Ethical considerations are important because SNA often deals with personal and sensitive data. Striking a balance between data availability and privacy protection is key to ensuring responsible use of data. Acquiring high-quality data and eliminating bias are ongoing challenges at SNA. Incomplete or biased data can skew analyses and lead to misleading conclusions. Researchers must carefully select and pre-process data to ensure their reliability and validity. SNA scalability presents a computational challenge as networks become larger and more complex. Efficient algorithms and visualization techniques are required to handle the vast amounts of data generated by vast social networks. Understanding dynamic networks that change over time requires novel methodologies. Analyzing changing relationships and capturing time patterns requires a sophisticated approach to accounting for time-varying data. Multi-layer and multiplex networks create new complexities. Social interactions often occur in different contexts, requiring the integration and analysis of multiple layers of connections. Researchers need innovative techniques to study the interaction between different network dimensions.

Network sampling and representativeness are essential to draw meaningful conclusions. Researchers need to make sure that the samples they choose accurately represent the entire network, avoiding bias and generalizing the results more effectively.

Handling missing data is a constant challenge. The development of robust imputation methods is crucial to address missing information without introducing bias.

Integrating SNA with other analytical techniques, such as machine learning, creates both opportunities and challenges. Combining methodologies can improve predictive modeling and unlock deeper insights, but it also requires interdisciplinary collaboration and methodological consistency. Addressing these challenges, the future of SNA remains promising. Advanced methodologies will continue to emerge, providing innovative solutions for scalability, dynamic networks, and multi-tier structures. The use of large data sets and computational advances will allow the analysis of even larger and more complex social networks. Contextual information will enrich SNA analytics by offering a deeper understanding of social interactions in specific settings. Researchers can study the influence of geographical, temporal and semantic factors on network structures and dynamics.

The potential of network interventions is an exciting avenue for SNA. Designing and evaluating interventions can drive positive behavior change, optimize social systems, and solve pressing social problems. The interdisciplinary applications of SNA will expand, fostering collaboration with fields such as neuroscience, economics and climate science. These interdisciplinary approaches will provide novel insights and solve complex problems from multiple points of view.

Explainable AI in SNA will improve the interpretability of the results, making the findings more accessible and feasible for policymakers and stakeholders. By prioritizing ethical data practices, researchers will respect transparency, privacy, and responsible use of data in SNA research.

In conclusion, SNA challenges offer opportunities for growth and innovation. Taking future directions, researchers can gain deeper insight into the complexity of social networks and their impact on individuals and society. With ethical considerations in mind, SNA will continue to empower informed decision-making, drive positive change, and provide a clearer understanding of human interaction and social systems.

Summary

Social Network Analysis (SNA) offers a powerful framework for understanding the structure, properties, and dynamics of social networks. Using concepts from graph theory and using various methodologies, SNA enables scientists to discover hidden patterns, study the diffusion of information, analyze the dynamics of influence and study collective behavior in social networks, as well as the dependencies of structure on the attributes of individuals and the impact on the processes that occur through relationships (transactions, information flow, and cooperation) (Kawa, 2013).

The importance of SNA lies in its ability to provide insights that cannot be obtained by focusing solely on individual attributes or characteristics. It allows us to understand how social relationships shape behaviors, attitudes, and outcomes at both the micro and macro levels. SNA finds applications in a variety of fields, including sociology, computer science, business, epidemiology, political science, and more. Although SNA has made significant contributions, challenges remain. Ethical considerations, data quality and availability, scalability and methodological progress are areas that require attention. Overcoming these challenges will pave the way for future progress at SNA. Looking ahead, SNA holds promising opportunities. Studying multi-layer and multiplex networks, integrating contextual information, and combining SNA with other analytical approaches are areas of ongoing research. In addition, the impact of online social networks, the design of network interventions and interdisciplinary applications offers exciting opportunities for exploration.

In conclusion, SNA continues to be a valuable tool for researchers, practitioners and

policymakers in understanding and analyzing social phenomena. By addressing challenges, pursuing methodological advances, and discovering new applications, SNA will contribute to a further understanding of complex social systems, ultimately supporting informed decision-making and improving the well-being of individuals and communities. The overarching goal is to contribute to the understanding of social network structures, fostering insights that can inform various fields, including sociology, communication studies, and network optimization. Through the exploration of diverse parameters and methodologies, the research aims to uncover patterns, variations, and potential applications within the complex landscape of social connections.

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THE ROLE OF OWNERSHIP IN SHAPING ONLINE NEWS CONTENT: A POLITICAL ECONOMY ANALYSIS

Md Masud Un Nabi[1]

Abstract

There is a correlation between the ownership of media outlets and the selection of news content in Bangladesh because of the growth of online media. This study examines the ownership and media content of www.prothomalo.com, the most prominent online news portal in Bangladesh. The analysis was conducted using a qualitative approach and in-depth interviews. Four important elements are discussed: the ownership pattern and their reasons for investing in this sector; the corporate relationship between the business firms and www.prothomalo.com; news content categories and their presentation on www.prothomalo.com; and cited sources on www.prothomalo.com. The findings suggest that the ownership of online media outlets by corporate conglomerates raises concerns regarding the independence, objectivity and restricts the diversity of online news in Bangladesh.

Key words: Political Economy, Ownership, Online Media, Prothom Alo, Bangladesh.

Introduction

Now is the time of "digital" media, which is also called "new media." Cross-media platforms, made possible by new media technologies, let journalists work together to make stories and materials for different media. Now we can find the same information in a lot of different places, like newspapers and magazines, websites, smartphone apps, and social media. As stated by Quarmal (2020), "like other parts of the globe, increased and easier internet access has made a significant change in the Bangladeshi media landscape; all media outlets are moving towards digitalization". All of the major newspapers have websites with news stories and social media pages. TV stations do the same thing and stream live on YouTube and/or their own websites. There are websites for news sources even in a lot of small towns. With the rise of "new media," the online news portals in Bangladesh have become an integral part of the ruling parties' politics. It is impossible to maintain a profitable news service without the support of the ruling party. In Bangladeshi society, it is a well-kept secret (Khan, 2013).

The purpose of this study is to investigate the exceptional growth of the online news sector in Bangladesh, as well as how the country's increasing tendency toward market liberalization has affected the structure, content, and method of news production. The aim is to conduct a political economy analysis in the case of Bangladesh. This study builds on the work of McChesney (2000), Mosco (2009), and Peers and Smythe (1982).

1 Idaho State University, Pocatello, Idaho, United States, e-mail: mdmasudunnabi@isu.edu, ORCID: 0000-0003-0603-217X.

They stressed in their analysis how media and communication systems, as well as their content, reinforce, challenge, or alter existing social and economic ties. They also looked at how ownership, support mechanisms (including advertising), and government regulations influence media behavior and content. Using the website www.prothomalo.com as a case study, this study discusses the political economy and ownership of online news in Bangladesh.

Organizational Structure of www.prothomalo.com.

The Transcom Group Limited owns www.prothomalo.com. They are a corporate conglomerate from Bangladesh. This group of companies includes beverages, pharmaceuticals, newspapers, radio stations, electronics, food, etc. Transcom is the regional distributor of many global brands (Transcom, n.d.). They are one of Bangladesh's earliest and largest companies. Their operation in Bangladesh began as a tea plantation firm in 1985 (Khan & Shnaider, 2021). www.prothomalo.com has a highly adaptable organizational structure in which diverse departments have sufficient autonomy and can collaborate (ProthomAlo, n.d.).

The Editor and the Board of Directors. As the agent of the Board of Directors, the editor of Prothom Alo is in charge of the general operations of the online daily (ProthomAlo, n.d.). He determines the publication of all news stories and advertisements. The chief executive officer (CEO) acts as a liaison between the newspaper's administration and the board of directors. In accordance with the Board's expectation that the team establish and implement various policies and strategies to achieve the organization's primary objective (ProthomAlo, n.d.).

Departments and Divisions. The office department and press department execute all the activities of www.prothomalo.com (ProthomAlo, n.d.). Additionally, the office department is divided into two sections: news and general. There are three divisions within the news section: the editorial division, the news division, and the feature division. These three divisions are directed by three deputy editors who report directly to the editor of the daily newspaper (ProthomAlo, n.d.). Notable is the fact that www.prothomalo.com first introduced the role of Deputy Editor in Bangladesh. The administrative manager oversees four divisions within the general section: administration, advertising, accounts, and circulation (ProthomAlo, n.d.). Lastly, the general manager oversees the press department with the assistance of a press manager and press supervisor. In addition to the main office, there is a branch office in Chittagong that is administered similarly to the main office (ProthomAlo, n.d.).

Work Force. www.prothomalo.com is offering its employees a very cordial working environment with a high opportunity to build up their career (ProthomAlo, n.d.).

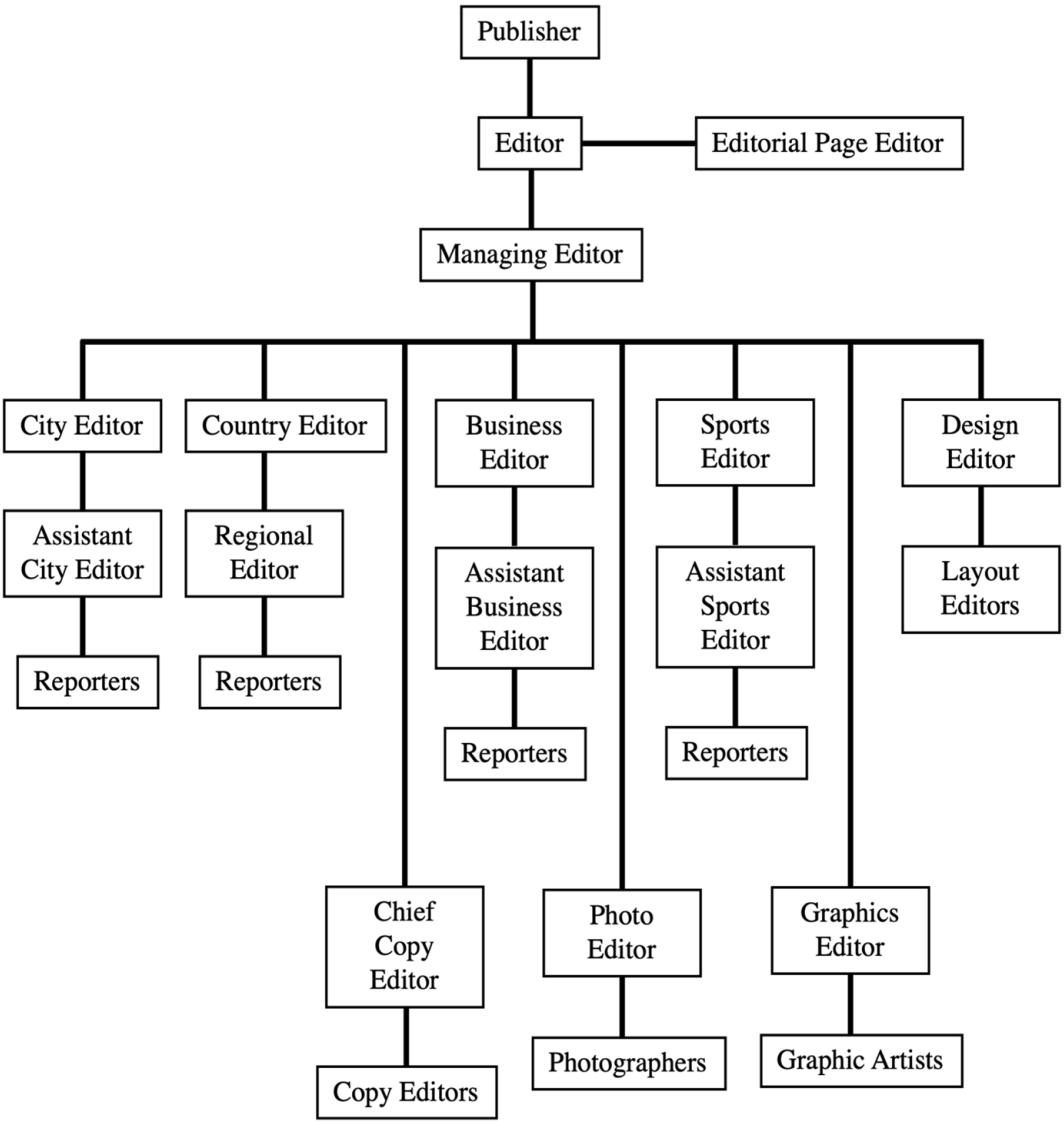

Figure-1: Organogram of www.prothomalo.com
Source: Prothom Alo

Objectives of the Study

The rapid growth of online media in Bangladesh has raised a lot of questions. The growth and expansion of the online media industry is very recent, and it is intimately correlated with the politics of the nation's ruling party (Khan, 2013). Media and communication studies must conduct a critical analysis of the full ownership-building process in such a setting (Khan, 2013). In order to shed some light on the mechanics and dynamics of online media ownership, this study examines the features of online media ownership. This study intends to investigate how the country's trend toward market liberalization shapes the structure, content, and process of news production among online news portals. For this research project, the researcher has addressed the following research questions:

RQ1: What motivated the owner of www.prothomalo.com to invest in this sector?

RQ2: What corporate relationships exist between the owners and advertising firms?

RQ3: What are the categories of news content and, how are they presented on www.prothomalo.com?

RQ4: What are the cited sources of news on www.prothomalo.com?

Literature Review

Like other social phenomena, there is a dearth of academic literature on online journalism, especially the ownership of online news portals in developing countries like Bangladesh. In the context of the developed world, there are numerous studies and debates on online journalism and its impact on society, especially from the perspective of administrative research. In their research, Khan and Shnaider (2021) conducted an analysis of the fundamental characteristics of contemporary online news media in Bangladesh and described the trends in their development. As an illustration, they described the new genres, techniques, and applications of the two most popular online news platforms: The Daily Star online and bdnews24.com. Khan (2013) looked into the ownership of private television in Bangladesh. The investigation uncovers a vicious circle of executive-legislative-media power nexus that exploits private televisions for misdeeds, power abuse, corruption, and malpractices by their owners.

Rahman (2009) critically examined how the unprecedented expansion of the television industry in Bangladesh became possible over the past decade and how the increasingly market-liberalization trend of this country constitutes the structure, content, and process of news production among the TV channels. He argued that a power-exercise web between the government, corporations, media owners, and newsmakers is radically dividing the most popular mass media in Bangladesh and transforming it into a market-oriented class media. Bhayroo (2008) studied the ownership of online media content from the perspective of the public sphere's variety of news sources. His research explores the diversity of news online by examining the ownership of news sources. The project analyzes the homepages of News Corporation's www.FOXNews.com and Yahoo! Inc.'s www.news.yahoo.com using a qualitative case study technique and basic quantitative approaches. The results demonstrate that News Corporation and Yahoo! Inc.'s overarching corporate commercial imperatives direct the production, aggregation, and dissemination of news information on the homepages of www.FOXNews.com and www.news.yahoo.com. Karlidag and Bulut (2016) explored how the direct or indirect control policies of the Turkish political government towards the media, besides the ownership relations of the media, affect the news-making process.

Theoretical Framework

The critical political economy of communication and media is widely recognized as a highly influential branch of critical theory. The critical political economy of communication and media is a prominent school of critical thought. It promotes media democratization in a capitalistic system in which only a few people control and dominate the media canvas in a society (Nabi, 2021). The scientific study of the political economy of communication, according to McChesney, has two key components. To begin, it investigates the nature of the link between media and communication technologies on the one hand and the greater social structure of society on the other. In other words, it looks into how media and communication systems, as well as the content they include, reinforce, challenge, or alter existing social and economic ties. It does it with a particular interest in how economic factors affect politics and interpersonal relationships. The political economy of communication, on the other hand, looks at how ownership, funding sources (such as advertising), and governmental regulations influence media behavior and content. This field of study focuses on structural components and the labor process in the production, distribution, and consumption of communication (McChesney, 2000).

At the confluence of ideology, hegemony, and culture, there is a contested space where a dominant class struggles to hold onto its position of authority, or, as Peers & Smythe (1982) put it, "where a dominant class must continuously manufacture public opinion in order to maintain its control of the political-economic system." Dahlgren (1995) underlined the importance of comprehending online as a whole as an enterprise,

regardless of whether it is private or public. The ownership, control, and regulation of online media all have to do with its political economy, which in turn is integrated into the larger political economy of society, according to his argument regarding the political economy of the study of the online media sector. This in turn also reflects the modern world's increasingly globalized nature of commercial ties (Dahlgren, 1995). Ferdous & Khatun (2020) assert that research should be done on Bangladeshi online media ownership. Strong political figures and businessmen seek the media for a variety of reasons. They have complete control over all facets of Bangladeshi society because they are the owners of an online media outlet. The owners are strengthened and given more authority as a result of this trend as they pursue their corporate, political, and individual objectives. This is partly due to the owners having a combination of indirect and direct backing from the ruling party.

Mosco (2009) suggests three processes for a political economy of communication: commoditization, spatialization, and structuration. The process of transforming products valued for their utility into commercial products valued for the value they may bring in trade is known as commodification. Spatialization is the process of overcoming geographical space limitations through the use of mass media and communication technologies, among other things. Finally, structuration is the process of forming social ties, particularly those based on socioeconomic class, gender, and race. This study uses structuration as the theoretical framework to examine how online media in Bangladesh has affected the country's media landscape. What are the power dynamics between the ruling political parties and the owners of online media? How it has influenced Bangladeshi society in terms of political, socio-cultural, and power dynamics.

Methodology and Sampling

The qualitative approach is used in this research. This research is based on the political economy of communication theory. This study is exclusively focused on utilizing qualitative data from primary sources in order to comprehend the ownership pattern of online news media, as well as the problems and opportunities associated with operating within the dynamic media ecosystem. A collection of semi-structured, in-depth interviews were undertaken with various experts working in the fields of journalism and mass media. For the in-depth interviews, the interviewees were first communicated by email, and if they agreed to the interview, their interview was taken face-to-face at the daily Prothom Alo office. The timeframe for interviews was between January 2023 and April 2023.

Respondent	Position	Age	Gender
1	Reporter	27	Man
2	Sub-Editor	35	Woman
3	Manager	47	Man
4	Editor	54	Man
5	Editor	49	Man
6	Manager	44	Man
7	Reporter	34	Woman
8	Sub-Editor	27	Woman
9	Manager	48	Man
10	Reporter	31	Woman

11	Manager	46	Man
12	Sub-Editor	29	Woman
13	Reporter	33	Man
14	Editor	48	Man
15	Editor	46	Woman
16	Sub-Editor	34	Woman

Table 1: Descriptions of the Interview Participants
Source: own work.

The eligibility criteria for the interview were publishers and the professionals who work for the news production of www.prothomalo.com (e.g., editors, sub-editors, managers, reporters, etc.) for at least five years. The total number of interviewees was sixteen (16), with four each from the publishers, editors, managers, and reporters. There were no requirements on the characteristics of the interviewees (e.g., age, gender, educational level, etc.). The ages of the interviewed journalists ranged from 27 to 54. Of the sixteen journalists interviewed, nine were men and seven were women. In order to protect confidentiality and anonymity, the exact titles of editors and managers are not mentioned. The collected data have been analyzed using a thematic approach. For the interviews, there was a list of questions. The researcher transcribed the interviews exactly as they were spoken, without making any alterations, prior to conducting any required revisions and assessing the transcriptions. The researcher refrained from utilizing any particular software tool for the purpose of data analysis. The process of transcription facilitated the identification and categorization of a diverse range of themes and subthemes. For the research, Idaho State University's Institutional Review Board (IRB) approval was obtained, and each participant gave their consent by signing the form before they sat for the interview. To guarantee anonymity and privacy, no identifying information such as names, phone numbers, residential addresses, or emails was collected.

Data Analysis

This section analyzes the data gained from the in-depth interviews. The researcher followed the procedural guidelines of thematic analysis, as recommended by Braun and Clarke (2006), to identify relevant topics for the current research inquiries. To gain an initial thorough understanding of the data, the researcher conducted multiple readings of the interview transcriptions and recorded overarching themes. Following that, the procedure of open coding was initiated in order to identify initial clusters within the dataset. Open coding, according to Speno and Halliwell (2021), is an iterative process in which thematic categories are consistently refined, merged, and expanded. In the process of categorizing the succeeding data segments, either new categories were created or existing ones were assigned. Following this, the researcher undertook a procedure of reexamining the textual fragments contained within each thematic category in order to determine their consistency and create a unified and cohesive collection of data. In the end, a comprehensive evaluation was conducted on the transcripts to determine which passages best exemplified each theme and subtheme.

Main Theme	Sub Theme	Sample of code text
Ownership		Corporate owned media
Interference in News		Direct interference in news selection

Pressure Groups	Politicians	Political parties, especially the ruling party, have impacts and influences on the media
	Business Organizations	Elite businesspeople and industrialists have an effect on the media house
News Sources	Primary Sources	Well-trained journalists and editors
	News Agencies	World renowned media organizations act as news sources
Advertisement	Corporate	Main source of income. That is why it has a huge impact on www.prothomalo.com
News Production	Increase in Viewers	Fulfillment of reader demand and covering all the possible aspects of news, easier navigation system
	News Sharing	Due to the credibility of news, Prothom Alo as a brand
Market Orientation		Use of modern technologies; update website

Table 2: Coding Results Based on Interview
Source: own work.

Ownership. www.prothomalo.com is the online section of the popular daily newspaper Prothom Alo. All 16 interviewees (100%) covered under this study said that it is a corporate-owned media, and the owners are Transcom Group Limited.

Interference on News. Most of our interviewees said that the owners, Transcom Group Limited, have direct interference in news selection. Only 4 (20%) interviewees told the researcher that Transcom Group Limited has no direct interference in news selection, production, or any other direct impact regarding news. However, 12 (80%) interviewees noted that there are representatives of the owners who are involved in the production of news.

Pressure Groups. There is political and corporate interference in the media. According to our 7 (44%) interviewees, the first is direct interference in the operations of media outlets, either by politicians and business elites requesting editors or others involved in the production of news to alter or halt a story or by replacing journalists critical of a particular political party or policy with ones more favorable to those in power. However, 9 (56%) interviewees noted that there are influencers like high authorities (editors, board of directors) within the media who work as pressure groups and interfere with the production of news. Interviewee-12 added that he has more than 10–15 news deleted from the web portal due to instructions from high authorities.

News Sources. Prothom Alo uses both primary and secondary news sources. It also uses both national and international news organizations as its sources. Sources must be credible to become news sources, according to all of our interviewees. Interviewee-5 added that credibility is the most important thing for www.prothomalo.com. Prothom Alo comprises well-trained journalists and editors. World-renowned media organizations act as news sources for www.prothomalo.com.

Advertisement. Each and every interviewee informed the researcher that advertisement is the main source of income. That is why it has a huge impact on www.prothomalo.com. Interviewee-3 mentioned that elite businesspeople and industrialists have an effect on the media, as advertisement is the main source of income. Interviewee-7 noted that since Prothom Alo is the second most circulated newspaper in Bangladesh, that is

why it has huge demand in the advertising sector. Interviewee-9 said that a great part of newspaper and magazine advertising is that readers are actively looking to search for deals and coupons. Placing an advertisement in a newspaper provides the advantage of knowing that the audience is much more likely to notice it because they will read that paper or magazine.

News Production. According to the interviewees at www.prothomalo.com, the fulfillment of readers' demands and covering all the possible aspects of news faster than any other media with full credibility and neutrality, along with easier navigation systems, are the reasons for the increase in the number of viewers and share of news on social media platforms. According to interviewee-6, 10, and 11, Prothom Alo is a brand in the Bangladeshi media system. That is why they always want to keep their benchmark and raise the bar as high as possible.

Market Orientation. According to all the interviewees, market-oriented news production is currently the way to go. Interviewee-14 elaborated that www.prothomalo.com always anticipates the needs of their readers and tries to make their plans around them. They know that most of the readers do not like slow and complicated navigation systems. Hence, they always use modern technologies and update their website.

Findings

This section will discuss the findings of qualitative analysis that explored the political, socio-cultural, corporate, and technological factors of www.prothomalo.com.

Political Factors. For political news, www.prothomalo.com mostly tries to take a neutral standpoint, according to some interviews for this study. They are not biased toward any political party; rather, they try to practice objective journalism. They also have an opinion section where people can express their thoughts. They also try to take the comments of a specialist while covering news in order to understand the balance of the news. They are also careful regarding some controversial acts in Bangladesh, like the digital security act, defamation act, special powers act, blasphemy law, internet regulation law, and media regulation law, to name a few. However, there is political interference in the media, according to most other interviews for this study. According to the results of the interview, politicians use their power either by requesting editors or others involved in the production of news to alter or halt a story or by replacing journalists critical of a particular political party or policy with ones more favorable to those in power.

Strategic Factors. The mission of www.prothomalo.com is to prolong market leadership and protect the business interests of the newspaper. Prothom Alo's product strategy is to offer independent, unbiased, nonpartisan, protecting social values, non-communal, and modern outlook to the consumers (readers) for the betterment of the whole society. The critical success factors of Prothom Alo are honest journalism, teamwork, freedom in decision-making, social interaction and involvement, and strong financial support (investment). The main differentiators of www.prothomalo.com from its competitors are the quality of the news presentation, professionalism, and journalistic approach. It believes that the volume of revenue depends on the competitive market position of the newspaper. So, it focuses on increasing the volume of circulation as part of its strategy to generate revenue.

Socio-Cultural Factors. Over the years, Prothom Alo has been working on shaping the lifestyles of Bangladeshi people, especially for the young generation and kids. Naksha, Swapno Niye, and Adhuna are weekly supplements that publish articles about lifestyle. This includes wealth, buying habits, education level, family size and structure, and population density.

Corporate Factors. For an online media, advertising is much more profitable because there is no limited space on the website. Being the most popular online news portal in

Bangladesh, www.prothomalo.com enjoys huge demand to show advertisements for a variety of businesses and industries. When www.prothomalo.com selects a news story, they tend to consider how many views and shares this news will generate. The number of advertisements will increase if the news generates more views. For example, according to one of the editors of www.prothomalo.com, news related to environmental issues doesn't generate many views or shares. On the other hand, entertainment and sports news do generate plenty of views. So, they consider these issues while uploading news. According to the interviews for this study, there is corporate interference in the media. Just like politicians, business organizations have direct interference in the operations of media outlets, either by requesting editors or others involved in the production of news to alter or halt a story or by replacing journalists critical of a business organization or policy with ones more favorable to those in power. According to one of the interviewees, he has had more than 10 to 15 news stories deleted from the web portal due to instructions from high authorities. So, most of the time, www.prothomalo.com doesn't publish the negative news about the advertisers. Here is the quote from the reporter: "When one of my news items was taken out of the newspaper by corporate and political pressure, I was quite disappointed. I've experienced that more than ten to fifteen times since then. This is blatantly dishonest journalism and a betrayal of the public's confidence. I pleaded with the newspaper's management to go back on this choice and respect the values of free speech for journalists. However, they told me that high authorities and business people are involved."

Technological Factors. Technological factors include production techniques, information and communication resources, production, logistics, marketing, and e-commerce technologies. These affect how www.prothomalo.com operates, sells its products, interacts with, and gathers intelligence on customers, suppliers, and competitors. www.prothomalo.com always uses the latest technology, an easier navigation system, eye-catching colors, and constantly updates their website as well as their navigation process. These factors keep them a step ahead compared to their competitors.

Discussion

Regarding the first research question, the reason for investing in online media is because it pays in different ways. It is a strong tool for party politics. It gives the owners new power and increases their status quo in society, as well as making profit in both direct (profitable business) and indirect (protecting and enhancing other businesses) ways. The categories that came up as the reasons for investment in the online media sector after data analysis are: politics, power, profit, prestige, and indirect gain.

Politics. Politics is one of the main reasons for investing in online media in the country. All the channels in Bangladesh are somehow inclined to the political ideology of the ruling parties (both past and present ones). It is very difficult to start a quality online media without the blessing of the ruling party. On the contrary, the ruling party wants to get media support from the media owners for its political propaganda. Since these online media were allowed primarily to support the ruling party's politics, So, from the very beginning, they tried to give media support to the ruling party. There is a tendency among the owners to use his or her online media channel for his or her political interest or for the party's interest where he or she belongs.

Media Power. 'Media Power' came as another category for investment in the online media sector. Online media channels are one of the most sophisticated tools for power practice in today's information age in Bangladesh. Its ownership gives it power and makes close contact with the ruling elites. The owners enjoy social and political power in comparison with other business communities in the country. All the interviewees covered in this study said that there is a common trend among people about online media owners. They are afraid to write or investigate anything about the owners. The reason is

very simple. If anybody tries to write against the owners or try to investigate anything, then the cameras will follow the journalist or investigator to dig out something negative about them, and it will be given on air to destroy their image in society.

Profit. Profit has come up as another category for investment in the online media sector in Bangladesh. Investing in online media is a profitable business in the long run. On one hand, online media brings more money. On the other hand, online media itself is a safe business and also protects owners' other businesses.

Prestige. Prestige is another category for investment in online media that came up from data analysis. Ownership of media outlets is a symbol of status in present-day Bangladeshi society. Online media confers more prestige on its owners. Today's Bangladesh media world is largely dominated by online media owners, and most of the prominent online media have a good connection with the government and its high officials. According to Prothom Alo's chief news editor: "The organization's success in the online media sector has earned it unparalleled prestige. The name of Prothom Alo itself became a symbol of prestige. To work at Prothom Alo or to be a part of Prothom Alo is a matter of great prestige in Bangladesh."

Socioeconomic Factor. The socioeconomic factor is a major category for investing in online media in Bangladesh, as it came into the data analysis. In today's Bangladesh, being the owner of an online media adds societal prestige and power to the owner's life. It has been noticed that the business communities of the country, from traders to industrialists, want to have a media outlet, especially an online media channel. Another reason for investing in the online media sector is that it protects the investor and acts as a shield for different purposes. Data analysis shows that many people, from businesspeople to former bureaucrats, are involved with online media channels. Most channels are directly backed by the business conglomerates of the country.

Indirect Gain. Investing in online media pays the owners in many ways. Apparently, it seems that some channels cannot make any direct profit, but it helps the owners to have other indirect gains. The online media help the owners protect and enhance their businesses and other interests. It gives the owners face value. Being the owners of online media channels, they can easily influence administration and have easy access to the ministers and bureaucrats.

Regarding the second research question, in reality, the idea of media relations has a significant impact and influences the media's coverage to some extent. Media outlets that rely on advertising sales are included in the economics of advertising. Numerous forms of advertising fund the production of content and lower the cost at which it is made available (or free). For instance, advertising covers around 75% of the cost of www.prothomalo.com. Online media, broadcast radio, and TV all rely solely on advertisements. News, music, and entertainment are provided for free to the public, while sponsors gain exposure. Without the money generated by advertising, popular forms of media would either be prohibitively expensive for readers or viewers or would go out of business. Advertising generates demand, which fuels economic growth. Table-2 discusses the percentage of total advertising revenue at www.prothomalo.com and their sources of advertising.

Sources of Advertising	% of total Advertising Revenue (June 2022)
Advertising Agency	58%
Office (Direct)	18.5%
Zonal Office (Chittagong)	2.5%
Private advertising (Direct)	16%
Government Advertising	3%

District Correspondents	0.5%
Advertising Booth (Classified)	1.5%
Total	**100%**

Table 3: Contribution of Different Sources of Advertising Revenue
Source: Prothom Alo

Another significant element that has recently been closely watched is corporate coverage. Many businesses now understand how crucial it is to keep track of news stories that not only mention their firm but also the industry as a whole. This helps to identify areas of audience interest that are followed up on by the media vehicles, resulting in a general awareness of the importance given to the industry and the percentage of coverage that the company is given. Media outlets typically choose a corporate story based on news that appeals to their audience. The choice is also reasonably influenced by entertainment factors. Trend-based stories are also given preference in the selection process. Most people prefer media releases with a clear, concise narrative, well-referenced background information, and relevant details and numbers.

Regarding the third research question about the categories of news content and their presentation on www.prothomalo.com. Media products can be attributed to a particular genre. Here, the term "genre" indicates a stable type of publication with substantive and formal features.

News Stream. The news stream is the most prevalent genre among online news providers and online adaptations of print newspapers. These deliver the latest news updates to readers. News is primarily used for informational purposes and includes current information about domestic and international events. Using the "inverted pyramid" structure, the news is presented in a concise statement that emphasizes the most important elements. The aim of journalists in this genre is to quickly transmit information to their audience. The lead is the first paragraph of the news and contains the most relevant information. Headings and initial paragraphs are placed on the main page of the www.prothomalo.com website to draw the reader's attention. Most readers are confined to reading the lead; only if the reading has piqued the reader's interest will he or she become acquainted with the news's details.

Web Package. One of the most well-known forms of internet journalism that covers a multifaceted event that occurs right in the presence of a journalist is the web package. In addition to text-based narratives, the web packages of www.prothomalo.com furnish the reader with audios, videos, images, and visuals that complete the picture of the events.

Interview. Interviews hold significant value and are widely disseminated through print and online news outlets. Interviews are among the most widely discussed genres in contemporary news media. The websites of Bangladeshi newspapers frequently feature interview sections. This typically consists of interviews with notable figures in the media, politics, science, economics, or sports. Notably, analytical interviews appear most frequently on news portals that also have a traditional printed counterpart. One illustration of this can be seen in the "Interviews" section of the website www.prothomalo.com/opinion/interview, which is accessible to users. Presently, online media possess the capability to disseminate interviews in various formats, including video and audio in addition to text.

Opinion. Opinion is another type of online news in Bangladesh. Since quite some time, it has been frequently used in regional print media and has also become well-known in online news portals. An instance of this can be seen on the website www.prothomalo.com/opinion, which features a distinct section labeled "Opinion" to which users have access. Opinion writers are widely recognized authorities in a variety of fields. In addition to

expressing their viewpoint, opinion, or concept, they analyze current social, political, cultural, technological, and sports circumstances or issues that have an effect on society.

Photo Story. A photo story, which is a group of pictures about a certain topic, is an interesting example of this type of web news today. A photo story is usually shown online as a slide show that follows the normal framework of a photo story and shows the order of events. With the slide show menu, users can see photos in a wider format or even in high quality when the screen is full. A photo story is one of the most popular types of online news right now. It's impossible for online media to be complete without this. There is a place on every news website where pictures are posted as "photos of the day" or in photo galleries.

Video. Today, video is regarded as the dominant media format on web platforms. Publishers of media were finding that GIFs and other graphics were crucial for improving the effectiveness of online media posts. It is now a requirement for journalists to compile and disseminate photographs and videos in their written pieces.

Infographics. These days, people like to read one piece of content that quickly gives them all the important facts. Because of this, one of the main trends on current news media websites is the use of infographics. Web tools incorporate a variety of statistics, data, and graphic information in addition to text and photo-video assets to aid readers in understanding complicated ideas rapidly. This includes charts, graphs, or maps with standalone figures, quotes, etc. These infographics convey messages faster than text alone, demonstrate the trend, and organize more information.

Regarding the final research question, the first column of Table-3 lists the cited news source. The second column contains the percentage of total sources, and the third column lists all the respective nations of those cited sources. From this table, it is clear that the 10 cited sources on www.prothomalo.com are very well-known news organizations. Bangladesh Sangbad Sangstha is Bangladesh's national news agency. They are the main source of online news when it comes from a news agency. United News of Bangladesh is another national news agency that www.prothomalo.com uses as its source. The Associated Press, The Guardian, Reuters, The New York Times, The Daily Mail, The Times of India, and Bild are basically used as news sources when it comes to international news. Hindustan Times is their main source of news regarding India, and Dawn is their main source of news for Pakistan. Apart from these, www.prothomalo.com uses various other news sources like The Sydney Morning Herald, Daily Telegraph, Deccan Chronicle, etc. The reason for using these news sources, according to www.prothomalo.com, is because they are well-known, credible news agencies that match their interests.

Cited Source	Percentage	Country
Bangladesh Sangbad Sangstha	42.1%	Bangladesh
Associated Press	9.8%	United States
The Guardian	7.3%	United Kingdom
Reuters	6.5%	United Kingdom
United News of Bangladesh	5.6%	Bangladesh
Hindustan Times	5.1%	India
The New York Times	4.8%	United States
Daily Mail	4.2%	United Kingdom
The Times of India	3.7%	India
Bild	3.6%	Germany
Others	7.3%	

Table 4: Cited News Sources on www.prothomalo.com
Source: Prothom Alo

Recommendations

The researcher proposes following recommendations concerning the ownership and political economy of online news in Bangladesh. This study investigates the political economy and ownership of www.prothomalo.com. Other researchers must investigate the political economy and ownership of Bangladesh's other online, radio, and television media.

Researchers must investigate the political and economic determinants of online news ownership and the effects of ownership on news content and distribution. The significance of online news ownership in Bangladesh's democracy and media freedom must also be investigated.

Raising awareness of the political economy of online news ownership could aid in the promotion of media-liberating reforms. This would benefit the citizens of Bangladesh by granting them access to a greater variety of news and perspectives.

To ensure media freedom and their function as watchdogs, another suggestion is to refrain from favoritism when issuing licenses to online media. In addition, the governing body must ensure that all media seeking licenses comply with and uphold all rules and regulations and practice neutral, objective journalism.

Conclusion

Diverse news and entertainment companies distribute news as one of many branded products in the online media. These conglomerates dominate the online convergence of the film, radio, television, advertising, and information technology industries. The cultural sectors that create and disseminate media, entertainment, news, and information products are so firmly centered around these giants (Khan & Shnaider, 2021). The results of this research reveal that media corporations that are already dominant in the production, distribution, and ownership of traditional news content are also dominant in the production, aggregation, and distribution of online news content. Content distribution reveals the movement of news content among and between online news websites. The data analysis indicates that the commercial imperatives of www.prothomalo.com are geared toward maximizing financial revenues for the company. The advertising model is the primary ways used to generate revenues for the company. Advertisers on www.

prothomalo.com are provided with opportunities to target users of these Web news portals. The analysis of the cited sources of news revealed at least ten news sources. In other words, www.prothomalo.com receives news content from these media companies.

Research on this topic must continue in the near future so that we can identify the specific credibility issues plaguing online media and gain insight into how readers view and choose to consume digital material from both traditional and online news outlets. Therefore, we should begin our analysis of online media by addressing the ways in which it challenges fundamental beliefs about traditional media, society, and journalism.

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OLENA ZELENSKA'S ENGAGEMENT ON INSTAGRAM DURING THE FIRST YEAR OF THE AGGRESSION OF THE RUSSIAN FEDERATION AS A TOOL OF UKRAINIAN SOFT POWER. CASE STUDY

Milena Kindziuk[1]

Abstract

This study examines Olena Zelenska's media engagement during the first year of the war, with her Instagram profile as an example of building Ukrainian soft power. Analysing the thematic categories of Instagram posts used to build Ukrainian soft power, published by the First Lady of Ukraine on Instagram during the first year of Russian Federation's aggression against Ukraine, i.e., from February 24th, 2022 to February 24th, 2023. Methods: qualitative analysis of content, media discourse analysis method. The contents of Olena Zelenska's posts on her official Instagram profile during the first year of the war can be considered a tool for building Ukrainian soft power. Zelenska uses it to convey values such as freedom, truth, concern for the children and women caught in the war, but also by showcasing the highlights of the broadly defined Ukrainian culture and showing the state policy in the context of the war, but most importantly, to convey faith in Ukrainian victory. Zelenska uplifted her compatriots, brought them hope, while asking the leaders of other countries for aid. She did not enforce anything or give any orders (i.e., did not use hard power), but rather used encouragement and emotion, and lead by example, thus enticing others to share her values (soft power). The results of the study show how Instagram can become an important tool for building soft power by engaging important actors on state level.

Key words: Instagram, war, Zelenska, Ukraine, victory, culture

> Not the year of the war. The year of resilience (…). The year of Ukraine, which has forever changed history and continues to change the entire world. The year of our indestructibility.
>
> Olena Zelenska [@olenazelenska_official], February 24th, 2023

1 PhD, Institute of Media Education and Journalism, Cardinal Stefan Wyszyński University in Warsaw, e-mail: m.kindziuk@uksw.edu.pl, ORCID: 0000-0001-5435-2907

Introduction

By posting daily on her official Instagram profile from the very first day of Russian Federation's aggression on Ukraine (February 24th, 2022), the First Lady of Ukraine is "fighting on her own front line", as the Ukrainian journalist Natalia Moseichuk aptly put it (Makarczuk, 2022, p. 128). Zelenska used social media channels to reach Ukrainians both at home and abroad, as well as a broader international audience. Her official Instagram profile @olenazelenska_official is followed by 3.2 million people (for comparison, Volodymyr Zelensky's official profile has 17.1 million followers). Zelenska's followers are mainly Instagram users located in Ukraine. According to the study conducted by Democracy Reporting International, 25% of Ukrainians use Instagram (DRI, 2022, June 1st). The First Lady of Ukraine also has followers from outside Ukraine, not only among Ukrainian refugees and emigrants, but also from various international communities. The one place Zelenska was not able to reach with her message was Russia, since immediately after the outbreak of the war, Moscow banned Facebook and Instagram, and branded the local branch of Meta as "extremists" (DRI, 2022, June 1st).

When the war broke out, Olena Zelenska had already been a well-known public figure as the First Lady of Ukraine, an architect and a writer (Makarczuk, 2022, p. 10–22; Samuelson, 2022; Wilson, 2022). In December of 2018, she was even included on the list of 100 most influential Ukrainians by Focus magazine, taking 30th place (Wilson, 2022). Following her husband's victory in presidential elections, Zelenska engaged in social and community work, which included a legislative initiative to reform the catering system in Ukrainian schools, speaking at various events, such as the Ukrainian Women's Congress where she emphasized the role of women in the society and highlighted the inequalities faced by women in Ukraine; she also worked towards overcoming social barriers (Giannini, 2023). When Russia invaded Ukraine, she was able to use her public image and immediately increased her presence on Instagram where she posted updates, photos and videos. This allowed her to quickly and directly reach and engage broad audiences. Also, during the first stage of Russian aggression, Instagram was the only media activity channel available to her. She left Kyiv and went into hiding (together with her two underage children) away from her husband and the Presidential Palace (Zelenska [@olenazelenska_official], 2023, February 24th) in order to keep her family safe. Her Instagram activity has shown how social media can be used to impact the perception of an armed conflict (Zeitzoff, 2017). It was also the only way Zelenska could contribute to building Ukraine's soft power.

Before we proceed to the main subject of this study, the notion of soft power should be clarified. According to the definition provided by the creator of the concept, Joseph Nye, Jr. (2004), soft power is "the ability to affect others and obtain preferred outcomes by attraction and persuasion rather than coercion or payment. A country's soft power rests on its resources of culture, values and policies. Soft power is not weakness. It is a form of strength" (p. 25). The practical application of this approach is thus simply subtly making others want to pursue the same goal through their own choice, to mobilize others to collective action (Zeitzoff, 2017, pp. 5–8). This is achieved through three areas: principles, culture and policies. According to scholars, soft power can play a more important role in shaping a country's policies than hard power, the means of which are payments and sanctions, and the objectives are coercion and command (Gallarotti, 2011). Indeed, ever since the revolution in information and communication technology, the so-called *digital diplomacy* is playing an increasingly important role in diplomatic activities of numerous countries which use digital media as tools of their foreign policy (Adesina, 2017, pp. 2–7).

Let us now proceed to analysing Olena Zelenska's Instagram activity during the first year of Russian Federation's aggression on Ukraine used as a tool for building soft power.

Sources and methodology

The purpose of this study is to analyse the thematic categories of Instagram posts used to build Ukrainian soft power, published by the First Lady of Ukraine on Instagram during the first year of Russian Federation's aggression against Ukraine, i.e., from February 24th, 2022 to February 24th, 2023. The study is focused on that specific time frame, since Olena Zelenska's posts from that period form a cohesive message delivered on a frequent basis (with at least one post published daily).

This study was conducted as a case study. The source material was the collection of posts (488) published on Olena Zelenska's official Instagram profile during the first year of Russian Federation's war against Ukraine. From that collection, a more detailed analysis was performed on posts which contained at least one of the following key words (in any grammatical form): *war, Ukraine, victory, culture and freedom*, and which addressed those subjects. The inclusion criteria were met by 78 posts. The selected posts were thematically categorised and analysed in terms of building Ukrainian soft power.

The analysis focused on the contents of the posts (with one post being used as the research unit), disregarding the comments and graphical materials (the latter could be analysed as part of a separate study). The material was analysed using content analysis and media discourse analysis (Babbie, 2013, pp. 421–-76, Lisowska-Magdziarz, 2004, pp. 23–65; Pisarek, 1983, p. 23–59). The study was conducted as a qualitative analysis.

The purpose of the analysis is to answer the following research questions: are Olena Zelenska's messages posted to her official Instagram profile a tool for building Ukrainian soft power in order to change the course of the war and achieve victory over the Russian Federation? Is the First Lady of Ukraine developing soft power through 3 main channels of projecting it, i.e. 1) demonstrating principles; 2) presenting the culture; 3) showcasing the country's policies.

On the basis of the research questions, the following research hypotheses were formulated:

1. Olena Zelenska uses her official Instagram account to post messages which demonstrate principles important to Ukraine, first of all, the right to freedom.
2. Olena Zelenska uses her official Instagram account to post messages which highlight the values of Ukrainian culture.
3. Olena Zelenska uses her official Instagram account to post messages which showcase Ukraine's policies in the context of the war.

Study results. Verification of the research hypotheses

Although before February 24th, 2022, the First Lady of Ukraine claimed she did not like social media (Makarczuk, 2022, p. 126), the Russian aggression against her country changed her attitude and she realised social media could be used to inform the world of the atrocities committed by President Putin. Between February 24th, 2022 and February 24th, 2023, Zelenska published posts and videos on her official Instagram profile on a daily basis (one or two updates per day). The majority of her posts were written in Ukrainian, but she also published a small number of updates in other languages, including English and German.

The first post was published on her Instagram profile on the very first day of the war, with a picture of the Ukrainian flag.

The post read as follows:

"My dear people! Ukrainians. Today, I'm looking at all of you. I see you on television, in the streets and on the Internet. I see your posts and videos. And you know what? You're amazing. I'm proud to live in the same country as you (…) today, I will not panic or cry. I will be calm and confident. My children are looking up to me. I will be with them. I

will be with my husband. I will be with you. I love you. I love Ukraine." (Zelenska [@olenazelenska_official], 2023, February 24th).

It should be noted that the post was a very emotional one. Zelenska immediately recognised the potential role of social media and used them to talk to the nation. It was the only method of contact with the outside world available to her, as well as the only form of media activity. The First Lady was unable to give interviews or meet journalists (despite numerous requests she received) for security reasons – in order to keep herself and her children safe, she could not risk her place of residence being identified. Her first message was an informational one but it was also clearly aimed at uplifting the people's spirits. Since then, she posted updates daily, adding photographs and, later on, videos. Throughout the year, the First Lady's posts evolved, gaining length and providing more content. For instance, the post published on the first anniversary of the war, on February 24th, 2023, also talked about her charity foundation (Olena Zelenska Foundation):

"We have created this Foundation so that our friends from all over the world who want to help and support Ukraine could join us and provide humanitarian aid, to help us rebuild our hospitals… This year, we've learned that we can inspire the world." (Zelenska [@olenazelenska_official, 2023, February 24th).

She also posted a related video. As she emphasized later, through those activities she wanted to "counteract the Russian propaganda and the destruction of war" (Giannini, 2023).

The analysis of the First Lady of Ukraine's official Instagram profile shows that her account employs various different types of soft power. It has become an interactive information channel, with receivers commenting on her messages (the comments are not included in the scope of this analysis); Zelenska also published links to her Telegram channel which she started at the beginning of the war (Zelenska [@olenazelenska_official], 2022, March 3rd) and to her new Twitter account (*ibidem*, 2022, July 8th). The contents of her posts also served as an antidote to Russian war propaganda. Similar to President Zelensky, his wife used "independent methods in order to give the impression of direct communication with her fellow citizens and the world" (DRI, 2022, June 1st). Zelenska engaged in the same activities as other Ukrainian public figures, e.g., state officials and heads of administrative departments. Using social media in way similar to influencers, she conveyed important messages and improved morale" (DRI, 2022, June 1st). Therefore, we can assume that the First Lady of Ukraine posted information to her Instagram profile purposefully and that purposefulness became "managerial information" leading to "decisions and actions" (Michalski, Białas, Krawiec, 2021, p. 17). All those activities have contributed to building Ukraine's soft power.

We will now proceed to verifying the research hypotheses.

Hypothesis 1:Olena Zelenska uses her official Instagram account to post messages which demonstrate principles important to Ukraine, first of all, the right to freedom

"You just can't concede ... parts of your territory. It's like conceding a freedom" – Olena Zelenska said in an interview with Robin Roberts for *Good Morning America* (ABC News, 2022). "For us, this is a war for truth and human principles. For life itself" (Zelenska [@olenazelenska_official], 2022, December 6th). Those words are an accurate reflection of the First Lady of Ukraine's commitment to use the media to demonstrate her principles but most importantly, to highlight the right of a sovereign nation to freedom. As evident from the conducted analysis, during the first year of the war, this purpose was achieved by informational posts on the war crimes committed by Russian troops against the Ukrainian civilians. At the start of the war, Zelenska wrote:

"Tanks have crossed the borders of Ukraine, planes have entered our airspace, missile launchers have besieged our cities. Despite the best efforts of Kremlin-backed

propagandists who call it a »special operation« – in reality, it is a mass slaughter of Ukrainian civilians" (Zelenska [@olenazelenska_official], 2022, March 8th).

Almost a year later she emphasised: "Today we are all Dnipro. We are all the house torn by a Russian rocket. We are all the small family worlds destroyed in it" (*ibidem*, 2023, January 14th).

Some of the posts published by Zelenska are more detailed, e.g. reporting on the mass attack against the civilians taking shelter in the Drama Theatre in Mariupol and the bombardment of thousands of apartment blocks which "burned like candles" (ibidem, 2023, March 16th). The detail can also have the face of a child: "This is my appeal to all independent media around the world! Tell the world this horrible truth: Russian invaders are killing Ukrainian children" (*ibidem*, 2022, March 7th). The posts concerning the suffering of the youngest casualties of the world can be considered a separate subgroup of the analysed material. The key aspect of those posts are very specific images:

"Reading about children's casualties is the hardest. Reading about the 8-year-old Alissa who died in one of the streets of Okhtyrka, when her grandfather tried to shield her with his own body… About the 14-year-old Arseniy…" (Zelenska [@olenazelenska_official], 2022, March 8th).

In another post, Zelenska wrote about an 8-year-old from Mariupol who wrote in his diary:

"I have a wound on my back and ruptured skin. My sister has wounded head. My mom has lost flesh in her arm and has a hole in her head" (*ibidem*, 2022, March 16th).

The post on 15-year-old Masha Feshchenko from the Zaporizhzhia region who "lost her leg in enemy shelling" (*ibidem*, 2022, April 13th) follows a similar vein – with that post, Zelenska started highlighting the issue of handicapped casualties of war. She also published posts on the situation of children suffering from cancer:" War has taken away their chance at life. Because even if chemotherapy drugs are available, they may not be delivered on time when air raid sirens go off" (*ibidem*, 2023, February 13th). The common denominator of the posts was that they all focused on the suffering or death of a specific child. The posts always provided the name and age, and added photos of wounded or killed children. In the interview with *Le Monde*, the First Lady of Ukraine spoke of them as follows: "This is the voice of dead children. Every child is the universe" (Chemin, 2022). On her Instagram profile, she shared drastic photos taken in Vinnytsia where Putin's troops launched a rocket attack against civilian targets. In her post, Zelenska wrote:

"Instagram will hide this photo from you as *sensitive*. As if grief and atrocities could be erased by simply hiding them. But all who have humanity in them will see the child, the stroller, the mother… The Russian missile (…) Russia is a terrorist state" (Zelenska [@olenazelenska_official], 2023, July 15th).

This way of communication, based on emotion, is also a method of persuasion, a loud appeal for compassion and elementary justice, falling within the scope of building soft power. It made the message clearer and increased the chance for reaction, as evident from the number of likes of the posts, ranging from around 10 to 55 thousand, with some posts greatly exceeding those numbers. For instance, the post published on the Eastern Orthodox Christmas Eve (January 6th, 2023) was liked 266 thousand times, and the post on New Year's Eve (December 31st, 2022) gathered 1.9 million likes. The posts elicited such a massive response also due to their direct and evocative style, for instance the Christmas post citing the letter of a small boy named Anton:

"Father Christmas, bring our warriors weapons, clothes and food, and keep them warm. (…) Father Christmas, dad wanted to give me a new phone but he died. (…) Children should ask for toys and candy, for all those things all children in the world want. Instead, they're asking for her dad or brother to come home. And all of them ask Father Christmas for victory" (Zelenska [@olenazelenska_official], 2022, December 19th).

In a similar fashion, she reported on the rocket attack against the maternity hospital in Mariupol (*ibidem*, 2022, March 16th); she also posted a photo of the first baby born in the Kyiv metro. In her post she wrote: "Kids who are born in the shelters will live in a peaceful country that has successfully defended itself (*ibidem*, 2022, February 6th). It should be noted that the photo was immediately shared by international media, including BBC, *The Washington Post* and *The New York Times*, and baby products were added to humanitarian aid transports sent to Ukraine (Makarczuk, 2022, p. 124), which indicates that this form of communication resonated among international audiences (however, analysis of the effects of the appeals made by Zelenska on her Instagram account is outside the scope of this study).It should also be pointed out that the First Lady of Ukraine published a separate post on International Children's Day (Zelenska [@olenazelenska_official], 2022, June 1st).

The conducted analysis also made it possible to isolate posts concerning the role of women in the war. Zelenska raised the subject of persecuted women who, next to children, are the most vulnerable casualties of war, but who also took up arms to fight for Ukraine's victory. She posted to her Instagram profile the photos of Ukrainian female soldiers in uniforms, informing that 50 thousand Ukrainian women serve in the armed forces. "Before the war, I wrote that there are 2 million more Ukrainian women than men. This means that this war also has the face of a woman" (Zelenska [@olenazelenska_official], 2022, March 1st). She expressed admiration for her brave female compatriots: doctors and nurses serving on the front lines and also working as paramedics:

"Our resistance has the face of a woman. I admire and bow to you, my fellow Ukrainian women! To those who fight in the armed forces and serve in the national guard. To those who provide medical care, rescue and feed others. To the volunteers who can always find what they need. And to those who are still doing their daily work (…) so that life may go on and triumph" (Zelenska [@olenazelenska_official], 2022, March 1st).

She also reassured all Ukrainians: "You can already see the sun shining through the smokes of the shelling! Everything will be Spring, everything will be victory, everything will be Ukraine." Zelenska also thanked the Poles for welcoming with open arms the Ukrainian women fleeing from the war:

"We will always be grateful. We will never get tired of saying «thank you». Today, on the Polish National Independence Day, we want to thank all Poles who have become more than our neighbours – they are now our true allies, friends and family (Zelenska [@olenazelenska_official], 2022, November 11th).

Notably, the post was published on Polish National Independence Day on November 11th, 2022 and its well-considered and carefully worded contents are in fact an appeal to the world for freedom for Ukraine.

Concerning the topic of women in the war, on March 2nd, 2022, the First Lady of Ukraine published an interesting post to her Instagram profile: *Open Letter to the First Ladies of the World* In her post, she appealed to the first ladies from around the world to spread the word that "it is not a special military operation, but an all-out war", to tell the world "the truth about how the children of Ukraine live", to "encourage Russians to take to the streets" and to "support the armed forces and civilians". "Tell the world that this is not a war that is somewhere far away. This war is happening here and now" (Zelenska [@olenazelenska_official], 2022, March 2nd). She also asked them to tell the truth about the war "despite the Kremlin propaganda" (*ibidem*, 2022, March 16th). The first ones to respond to Zelenska's open letter were the First Ladies of Austria, Lithuania, Latvia, Poland, Canada and Israel, which she also mentioned in her Instagram posts.

Summing up, the dominant function of Olena Zelenska's Instagram posts is informative. She also publishes appeals to international media which serve as one of the stages of soft power (according to categories introduced by Robert Potocki), i.e. raising emotions (personalisation of tragedy).

Zelenska's activity in the form of Instagram posts described above has undoubtedly contributed to building Ukrainian soft power. The First Lady of Ukraine has demonstrated to her followers and other countries the common values and principles, and the sense of justice and duty which demand that those values and principles must be observed in real life. The analysis of Olena Zelenska's Instagram posts from the perspective of media studies confirms hypothesis 1.

Hypothesis 2: Olena Zelenska uses her official Instagram account to post messages which highlight the values of Ukrainian culture

As evident from the conducted studies, the First Lady of Ukraine builds her country's soft power through various cultural activities. Her official Instagram profile includes a number of subcategories of posts related to the Ukrainian language and literature, national holidays, the geographical context and the Ukrainian pop-culture.

As one of the Ukrainian journalists put it, the First Lady of Ukraine uses her Instagram profile not only to post updates on Russian war crimes, but also to "popularise the Ukrainian culture in museums around the world. She promotes our language and makes the world fall in love in the blue and yellow fashion" (Makarczuk, 2022, p. 18).

This approach, in line with the tools of soft power, is reflected even by the fact that Zelenska posts to her official Instagram profile in her native Ukrainian language rather than the globally understood English. By doing this, she clearly demonstrates her appreciation of the Ukrainian linguistic heritage, national identity and preserving tradition. Those activities align with what she has been doing before the war when she "introduced the Ukrainian language to audio-guides in world's best-known museums in Austria, Italy, Azerbaijan, Latvia, Turkey and Montenegro" (Olena Zelenska. Biography, 2022, February 23rd). The analysed posts also include, albeit not very frequently, references to Ukrainian literature:

"I have taken part in the vernissage of the Skorovoda's World exhibition commemorating the 300th anniversary of the birthday of the great Ukrainian thinker and writer, Hryhorii Skovoroda. He was a philosopher and poet who taught the people how to truly live their lives" (*ibidem*, 2022, December 3rd).

The First Lady of Ukraine also used the soft power tools by promoting Ukrainian culture, as evident from her posts referring to specific projects:

'Ukraine. *Out of Blackout* is the title of the project on the 1000 years of history of Ukrainian art. It should highlight the Ukrainian culture and its relations to Europe (…) The entire culture of Ukraine is now our exit from the blackout. We may not have electric power, but our culture gives us light. In return, we must protect our heritage against the aggressors" (Zelenska [@olenazelenska_official], 2022, December 13th)

and to national traditions: "May 19th is the Embroidery (*Vyshyvanka*) Day. Ukrainians have been celebrating it for years, but the war has given it a new, poignant aspect" (*ibidem*, 2022, May 19th).

During the analysed period, Zelenska emphasised the value of the national culture in building patriotism. She would do that by adding text to videos posted to her Instagram profile. For instance, under the video on Ukrainian refugees (titled "I will return"), she wrote:

"The Ukrainian refugees in Poland announce that they will return to their country once the war is over (…) because there is no place like home. I will return. These words are uttered by every Ukrainian who has been forced to flee from their home. I will return to school, to my favourite teacup in the kitchen, to my chestnuts, to my relatives" (*ibidem*, 2022, May 22nd).

During the first year of the war, Zelenska made sure her Instagram followers and readers did not forget the beauty of their homeland. She wrote about it to the first ladies

of other states: "You would not recognise Ukraine today – bustling cities have now been turned into mass graves. And we, the survivors, have grown decades older overnight, because every day we bury our children and mourn our parents" (*ibidem*, 2022, March 17th). She recalled the beauty of Ukraine just before the war and the meeting of the first ladies which took place in Kyiv in August of 2022.

This analysis should also include the themes related indirectly to pop-culture and fashion, which Zelenska also addressed in her Instagram posts during the period in question. In the fifth month of the war, the First Lady of Ukraine posted an updated informing that she had been interviewed by the Ukrainian edition of Vogue magazine (Zelenska @olenazelenska_official], 2022, July 26th). She posted the magazine cover with her photo and outlined the goals of her communication activities: "The First Lady is always heard. The President's wife has the opportunity to talk to those in power. The doors of officials are always open to the First Lady" (Zelenska [@olenazelenska_official], 2022, July 26th).

She explained that "being on the cover of *Vogue* is a great honour and the dream of many successful and influential people around the world" but also added: "The one thing I wish for them is that they don't have to appear on the cover because their country is at war." This was her response to the comments which questioned whether posing for a photo shoot during the war was acceptable. Her critics panned the cover as "unfeminine, too masculine" (Carbonaro, 2022). It should be noted that in response to the criticism, the *#sitlikeagirl* movement emerged with Ukrainians showing support to their First Lady. It should also be pointed out that the contents of Zelenska's post do not indicate that she is interested in growing her personal popularity, trying to win new followers by entering the pop-culture setting, or being cited by the largest global media outlets. The pop cultural themes were also present in the Instagram posts in which Zelenska informed about the interviews she gave to worldwide media: the French *Le Monde* (Zelenska [@olenazelenska_official], 2022, June 25th), the Swiss daily *Les Temps* (*ibidem*, 2022, July 2nd), *Time* magazine (*ibidem*, 2022, July 7th), the Italian *Corriere della Sera* (*ibidem*, 2022, July 16th), the Spanish *El Pais* (*ibidem*, 2022, December 6th) and the *Financial Times* (*ibidem*, 2022, December 6th). Each update on those media activities was accompanied by the cover photos of the First Lady and gained large number likes, e.g. the post with the cover of *The Times* was liked by 38.9 thousand users). Each post also had a link to the interview. It should be emphasised that in her interviews, Zelenska never focused on promoting herself or pretend to be a celebrity; all of her Instagram communications have a clear primary objective of building Ukrainian soft power in the context of the war. She would also try to lift the nation's spirits:

"Today is the first day of Spring. Remember how we would all greet each other on that day before the war? (This horrible sentence again). But the sun is already shining through the smokes of the shelling! Everything will be Spring, everything will be victory, everything will be Ukraine! And eventually we will win. Unity is our weapon. Unity in our love for Ukraine. Slava Ukraini" (Zelenska [@olenazelenska_official], 2022, March 8th).

Summing up, during the first year of the war, Olena Zelenska published posts related to broadly defined Ukrainian culture, thus contributing to building her country's soft power. This conclusion confirms hypothesis 2.

Hypothesis 3: Olena Zelenska uses her official Instagram account to post messages which showcase Ukraine's policies in the context of the war

This segment of the study addresses the dominant functions of the analysed posts, including appeals and debunking Russian disinformation, and determines the target receivers (mothers of Russian soldiers, foreign mass media). Olena Zelenska's official Instagram profile includes a subgroup of posts showcasing Ukraine's policies in response to Russian aggression and the war. The First Lady of Ukraine appealed for aid for Ukraine

in many ways, for instance by publishing an open letter in several languages (English, German, Spanish, Russian and Ukrainian) to mobilise the West to take action. "I'm begging you, do not get used to war!" (Instagram, March 27th, 2022).

She asked the leaders of various countries to provide medical care to civilians, using evocative imaging and rhetorical questions: "Is it easy to inject insulin in a basement? Or take out asthma medications under fire? Not to mention the cancer patients whose chemotherapy has been postponed" (Zelenska [@olenazelenska_official], 2022, March 8th, 2022).

She also appealed to the Western countries: "Tell the world the truth about how the Ukrainian children live today" (ibidem, 2022, March 2nd); she also informed that Russia was concealing their true losses and asked Russian mothers to protest against sending their sons to war against Ukraine. She requested the West to: "Tell the world that this is not a war that is somewhere far away. This war is happening here and now. In Europe, near the EU border. Ukraine is holding against the force that might invade your peaceful cities tomorrow" (*ibidem*, 2022, March 2nd).

In the very first days of the war, Zelenska was asking for closing the airspace over Ukraine: "I'm asking for a no-flight zone over Ukraine, so that Russian airplanes don't kill our children. All we need is for you to close the sky! Take off your white gloves already" (*ibidem*, 2022, March 8th).

Her messages were aligned with the appeals made by President Zelensky who at the time made the same requests of the leaders of the West and referred directly to his wife's words; this influenced the attitudes of Ukrainians who took action, e.g. signed petitions for a no-fly-zone to be established. Zelenska also requested humanitarian corridors (*ibidem*, 2022, March 8th). In the same vein, she asked the foreign media outlets to "keep reporting what's happening (…). Keep telling the truth. In the information war waged against us by the Russian Federation, every account is important" (*ibidem*, 2022, March 8th).

The First Lady's Instagram profile also included posts in which she warned against nuclear war: "If we don't stop Putin who is threatening nuclear war, no place will be safe in our world" (*ibidem*, 2022, March 8th).

The analysis of the contents of Olena Zelenska's post also revealed reports on public appearances of the First Lady, including what appears to have been the most prestigious one, before the United States Congress where she said:

"(…) on behalf of those who are still alive and well, and those who wait for their families to come back from the front. I'm asking for something, now I would never want to ask. I'm asking for weapons, weapons that would not be used to wage a war on somebody's else's land, but to protect one's home in the right to wake up alive in that home (…)" (Zelenska [@olenazelenska_official], 2022, July 20th).

As Zelenska started to travel abroad more and make more public appearances, she would inform about it on her Instagram profile, for instance she posted reports on her appearances at the World Economic Forum in Davos (*ibidem*, 2023, January 17th), at the conference of ambassadors of Ukraine (*ibidem*, 2023, December 23rd), on her meeting with the French Minister of Culture (*ibidem*, 2022, December 13th) and the Prime Minister of Portugal, Mr Antonio Costo (*ibidem*, 2022, December 3rd).

The efforts to build Ukrainian soft power can be found not only in the posts mentioned above, but also in the updates on the First Lady of Ukraine's meetings with political figures, such as the president of the European Commission, Ms Ursula von der Leyen in Kyiv (*ibidem*, 2023, February 2nd), the First Lady of France (*ibidem*, 2022, December 12th), King Charles III (*ibidem*, 2022, November 30th), Ecumenical Patriarch Bartholomew (*ibidem*, 2022, November 2nd), as well as President Biden and the First Lady of the United States (*ibidem*, 2022, July 19th). Zelenska also reported her video call with the First Lady of Poland, Ms Agata Kornhauser-Duda: "Thank you, Poland! What you're doing

for us is much more than just aid. With friends like you, we're sure to win!" (*Ibidem*, 2022, May 13th). Zelenska's Instagram posts confirm that she maintained regular contacts with the wives of global leaders; the purpose of those contacts was clear: to change the course of the war and ensure the victory of Ukraine. This is a part of Ukrainian war strategy, since soft power is key to peace (Nye, Jr., 2004, p. 32).

It should be noted that the contents of Zelenska's Instagram posts as part of the "power of attraction" and an element of strategic communication (Nye Jr., 2004, p. 35) complements her husband's policy. This can also be seen in posts which are seemingly private, for instance the one published on President Zelensky's birthday which in fact directly relates to the war situation: "You're often asking me how my husband has changed over the last year. And I always answer the same: »He hasn't. He's still the same man. The same man I met when we were both 17. «" (Zelenska [@olenazelenska], 2023, May 25th).

Olena Zelenska's Instagram profile also includes a small number of posts informing of the joint activities of the President and the First Lady of Ukraine, e.g. attending the funeral of Ukraine's first president, Leonid Kravchuk (*ibidem*, 2022, May 17th). The purpose of those posts is also to highlight the state policy and to uphold morale of the war-weary Ukrainian people.

In conclusion, hypothesis 3 can also be considered confirmed. This is further corroborated by President Zelensky himself who on the first anniversary of the war wrote the following words to his wife: "My dear, I want to thank you for who you are in my life. For being here and now. For believing in Ukraine and in victory. For making me stronger. For all our years, hours and minutes, and once again, for this year. For how you have represented Ukraine" (Zelensky [@zelenskiy_official], 2023, February 6th).

Olena Zelenska's activities, amplified through social media and aligned by the informational policy of her husband, the President of Ukraine, have undoubtedly made her an important factor in Ukrainian public diplomacy.

Conclusions

The results of the analysis confirm the contribution of the Office of the First Lady of Ukraine to developing the national and international informational policy using Ukrainian soft power.

Each post published by Zelenska during the study period had a similar tone, full of faith in Ukraine's victory. The First Lady of Ukraine's Instagram profile has "gone to war", thus becoming a new media phenomenon. Furthermore, it has become an active participant of the armed conflict. Olena Zelenska used Instagram as a tool to influence the public opinion. The results of the qualitative analysis have confirmed both the overall research hypothesis and all detailed hypotheses. The contents of Olena Zelenska's posts on her official Instagram profile during the first year of the war can be considered a tool for building Ukrainian soft power. Hypothesis 1 is confirmed by the fact that Olena Zelenska's Instagram profile conveys messages of freedom, truth and concern for the women and children caught in the war. Hypothesis 2 is confirmed by the fact that Olena Zelenska's Instagram profile shows the highlights of the broadly defined Ukrainian culture. Hypothesis 3 is confirmed by the fact that Olena Zelenska's Instagram profile showcases the policies of Ukraine in the context of the war, serving in particular the purpose of Ukrainian victory.

In conclusion, Olena Zelenska has invested in her Instagram profile as a tool for building Ukrainian soft power while abstaining from using it for personal promotion. Her communications have had a clear purpose and objective of bringing peace back to her country. Zelenska uplifted her compatriots, brought them hope, while asking the leaders of other countries for aid. Her posts included persuasion characteristic for building soft

power. She did not enforce anything or give any orders, but rather used encouragement and emotion, and lead by example, thus enticing others to share her values and principles. At the same time, words (and pictures) were elements of a carefully planned strategy (which is a prerequisite for building soft power) and ultimately focused on achieving a single goal: the victory of Ukraine. In the hands of Olena Zelenska, soft power has thus proven to be an efficient tool (as it should be according to the definition of the concept).

This study certainly does not exhaust the subject. It might serve as an introduction to quantitative and qualitative analysis of the contents of Olena Zelenska's Instagram posts during the first year of the war, not only in the context of building and using soft power. Equally valuable would be an analysis of the audio-visual materials, i.e. photos and videos. A separate study would be required to analyse the correlation between Olena Zelenska's posts with the posts published by her husband on his official Instagram profile.

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