

Proceedings of the 9th European Conference on Social Media

**A Virtual Conference hosted by
Pedagogical University of Krakow
Poland**

12-13 May 2022



**Edited by
Dr Iwona Lupa-Wójcik and
Dr Marta Czyżewska**

Proceedings of the

**9th European Conference on
Social Media**

ECSM 2022

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Hosted By**

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ECSM Preface

These proceedings represent the work of contributors to the 9th European Conference on Social Media (ECSM 2022), hosted by Pedagogical University of Krakow, Poland on 12-13 May 2022. The Conference Chair is Dr Iwona Lupa-Wójcik and Programme Chair is Dr Marta Czyżewska, both from Pedagogical University of Krakow, Poland.

ECSM is now a well-established event on the academic research calendar and now in its 9th year the key aim remains the opportunity for participants to share ideas and meet the people who hold them. The conference was due to be held at Pedagogical University of Krakow, Poland but due to the global Covid-19 pandemic it was moved online to be held as a virtual event. The scope of papers will ensure an interesting two days. The subjects covered illustrate the wide range of topics that fall into this important and ever-growing area of research.

The opening keynote presentation is given by Dr Iwona Leonowicz-Bukała, University of Information Technology and Management in Rzeszow, Poland on the topic of *Social Media Today: Platforming Visibility, Recognition and Independence*. On the second day, Anna Miotk, from University of Warsaw, Poland will give a talk on the subject: *Does the Company's Presence on Social Media Platforms Still Strengthen Brand Image?*.

With an initial submission of 103 abstracts, after the double blind, peer review process there are 30 Academic research papers, 4 PhD research papers, 1 Masters Research papers and 3 work-in-progress papers published in these Conference Proceedings. These papers represent research from Austria, Canada, Estonia, Finland, Germany, Hungary, Ireland, Netherlands, New Zealand, Nigeria, Northern Cyprus, Poland, Portugal, Russia, Slovakia, Slovenia, South Africa, Spain, Sweden, UK, USA, and Vietnam.

We hope you enjoy the conference.

Dr Iwona Lupa-Wójcik

Pedagogical University of Krakow
Poland
May 2022

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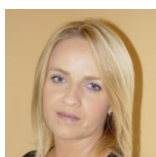
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Biographies

Conference and Programme Chairs



Dr Iwona Lupa-Wójcik, is Assistant Professor at Department of Entrepreneurship and Social Innovations, Institute of Law and Economics, Pedagogical University of Cracow. She gained her Doctor of economic sciences in the discipline of management sciences, with a doctoral thesis entitled „Marketing potential of social media”. Iwona has also been involved with writing three popular science books on social media. She has written several dozen scientific articles on social media as well as implementing many research and practical projects related to social media. Over the years she has been the beneficiary of numerous scholarships and been the main performer of scientific grants dedicated to social media. Iwona is an active participant in numerous nationwide and international conferences devoted to management, marketing and social media. She has run a business for many years related to, among others, social media services for business clients. She is an entrepreneurship trainer, salesman, marketing and business strategy specialist.



Dr Marta Czyżewska is Assistant Professor at Department of Entrepreneurship and Social Innovations, Institute of Law and Economics, Pedagogical University of Cracow. She has 22 years of experience as a trainer, lecturer and researcher, who provides training in entrepreneurship, social entrepreneurship, accounting and finance. Marta’s research is focused on entrepreneurship, social entrepreneurship, innovativeness financing and startups development. She is an advisor and consultant for many companies, specialising in helping startups to apply for EU funds, business modelling and planning as well as business process audits. Marta works with different target groups: students, companies' employees, unemployed and entrepreneurs. She is the author of a book on “Startups, innovation and risk” (in Polish language) and many scientific articles on entrepreneurship. Formerly head of the Centre for Innovation and Entrepreneurship at University of Information Technology and Management and the Manager of the seed capital fund “InnoFund”. She also currently owns her own training company called Training, Research & Development Marta Czyżewska.

Keynote Speakers



Dr Iwona Leonowicz-Bukała is a Social media expert, an Assistant Professor in the Faculty of Media and Social Communication at the University of Information Technology and Management in Rzeszow, Poland. Her current research interests focus on the issues of the contemporary digital media sphere – mediatization and digitalization of life, especially within the field of social media, and the problems of migration, gender, chronic illness management and higher education. A member of the international research team [Covid G.A.P.](#) PI in the project [Covid Gendered Academic Productivity – Polish Perspective](#). A Deputy Editor-in-chief of the journal „Social Communication. Online Journal” and a Deputy Head of The Committee of Research Ethics at UITM. An individual tutor at the UITM’s School of Leaders and the programme ‘Masters of Didactics’. ORCID: 0000-0003-3164-1209



Dr Anna Miotk is an assistant professor at the Department of Social Communication and Public Relations, Faculty of Journalism, Information and Bibliology at University of Warsaw. Her main research areas are the internet (especially social media), relations between the internet and society, and media influence. Since 2007, she has been cooperating with universities as an external lecturer, providing lectures and workshops in part-time and postgraduate studies. She has been working i.a. for SWPS University, Jagiellonian University, SGH Warsaw School of Economics, Kozminski University. She also has practical work

experience in media research and business communication. Since 2014, she has been working at Polish Internet Research as the communication director. She is also a business trainer, her competences are confirmed by the certificate of the House of Skills Trainers School. She provides training in the field of marketing and PR. Author of books, book chapters and articles in scientific and industry media, and a blog.

Mini Track Chairs



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Nuran Öze is Assoc. Prof. Dr., Acting Dean of Faculty of Communication, Head of Institute of Graduate Studies and Research, Chair of Department of Visual Communication Design in Arkin University of Creative Arts and Design (ARUCAD), Northern Cyprus. She is especially interested in culture, communication, gender, PR and specifically with social media. In recent years she has researched social media usage patterns and its effect on society, social media addiction, identity construction on social media. She is an author and co-author of several articles and book chapters on the above mentioned research areas.



Dr Joanna Rosak-Szyrocka, is a Lecturer at Częstochowa University of Technology in Poland, the Vice President of the Qualitas Foundation and a member of the Polish ISO 9000 Forum Club. Joanna has author/co-authored 221 scientific publications in prestigious journals, chapters in monographs and conference materials as well as co-authoring 20 scientific monographs. She has been a participant of the Erasmus + international exchange, during which she conducted a series of international lectures in England, Slovenia, Slovakia and Italy.



Justyna Żywiołek is a doctor of engineering at the Faculty of Management of the Częstochowa University of Technology. She deals with the management of information and knowledge, and their security. Justyna is also a personal data protection inspector and an auditor of the ISO 27000 standard. She is interested in the use of Big Data, Internet of Things for security management systems. She is guest editor of many international magazines. Justyna is the co-author of over 150 publications, including articles published in peer-reviewed journals, book chapters, conference materials, and research reports.

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Milla Alaraatikka is a researcher at the Finnish National Defence University Department of Leadership and Military Pedagogy. Alaraatikka's main focus area is communication studies in which she received her master's degree. In addition, she has studied municipal and regional management and political science.

Ana Azurmendi, PH.D. Full Professor of Media Law, since 1991. Associate Dean Research, School of Communication. University of Navarra (Spain). Current research: Hate speech in social media (2020-2023). Member of the Commission on the Project of Reform of Basque Broadcasting (2016), Commission on the Right of Reply, Mexican Senate (2014).

Jenna Barry (BA, HDip, PgD, MA) Research aims to support postgraduate student engagement, decreasing isolation and increasing connection, communication, and collaboration using virtual communities of practice at the Technological University of the Shannon. She is the current VP for Postgraduate Affairs for the Union of Students in Ireland and sits on several national educational advisory groups. jenna.barry@tus.ie

Darya Bazarkina is a leading researcher at the Department of European Integration Research, Institute of Europe, Russian Academy of Sciences and a professor at the Department of the International Security, Russian Presidential Academy of National Economy and Public Administration. Darya is an author of more than 90 publications on communication aspects of the counter-terrorism.

Samantha Bietsch is currently a Professor in the School of Business at American Public University System in Charles Town, WV. She has an MBA in finance and a DBA in marketing. Prior to entering into higher education, Dr. Bietsch held numerous roles in the financial services industry. Her research interests include social media marketing, communications, and economics.

Gabriela Ciesielka, studied engineering before realizing her true interest lays in human studies. In 2020 she decided to start a new and signed up for a Psychology major at the Pedagogical University in Krakow. Interested in academic field, since year one she engaged in research. Privately interested in technological innovations and board games.

José L. Diego is an expert-evaluator for the European Commission within 3 different research programmes: Horizon2020, DG HOME and the Radicalisation Awareness Network. He is Head of Project Management in the Valencia Local Police, where since 2005 he has managed 30 EU projects. He holds Degrees in Law, Criminology and a Master in Human Resources Management."

Charmaine du Plessis is a professor of marketing communication at the University of South Africa (Unisa), South Africa. Her main research area is brand communication with a focus on content marketing. She has published widely on the topic and presented at numerous international conferences.

Emma Duester is a lecturer at RMIT Vietnam and principal investigator on a 2-year research documenting the current state of digitization of the cultural sector in Vietnam. Emma received a PhD in Media and Communications from Goldsmiths, University of London, in 2017. She is author of 'The Politics of Migration and Mobility in the Art World'.

Thomas Eberle is a leader of several research units at the Friedrich-Alexander University Erlangen-Nürnberg (Germany) and an overall head of the "Classroom under Sails" project. His doctoral thesis analyzed media use of adolescents and his habilitation was focused on experiential learning outdoors.

Tiit Elenurm is the entrepreneurship professor at the Estonian Business School, business angel and mentor for start-up entrepreneurs. Ph. D. in 1980 for the dissertation “Management of the Process of Implementation of New Organizational Structures”. Author of more than 130 research publications. Research interests include knowledge management, innovative entrepreneurship and social media for networking.

Rubén Fernández is a Police Officer and Project Manager in Valencia Local Police. He began his career as Law Enforcement Officer in Valencia Local Police in 2005, and since then he has participated in 7 H2020 projects, currently managing 4 of them regarding young cyber criminality and enhanced wearables for First Responders in disaster scenarios.

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Netnography of Social Media Addresses on COVID-19

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Abstract: Healthcare professionals' harness social media to encourage responsible behaviour during the COVID-19 pandemic. As internet users often struggle assessing the veracity of the information in these addresses, acoustic characteristics of the presenters' speech may play a significant role in their persuasiveness impact. Using a netnographic approach, we studied YouTubers' reactions to explore the persuasiveness attributes of COVID-19 related speeches included in YouTube videos within a South Africa context. The persuasiveness index was computed from the view count, likes and dislikes of 314 speech segments from YouTube interviews related to COVID-19. Standard acoustic features – Mel frequency cepstral coefficients - of the interviewees' voice were extracted through speech processing. Recurrent neural networks were optimized and evaluated the strength of these acoustic features to classify and predict the persuasiveness index. The cepstral feature set yielded a balanced accuracy of 86.8% and F1 score of 85.0%. These preliminary results exhibit the potential of the vocal cepstrum as predictor of persuasiveness in healthcare addresses on responsible behaviour during the COVID-19 pandemic. The results imply that quantitative acoustic analysis of a presenter's voice, independent from text, can explain the impact of social media addresses.

Keywords: COVID-19, Public address, Persuasiveness, YouTube interviews, Speech Analytics, Deep Machine Learning

1. Introduction

Public addresses have the potential to promote behaviour which may limit the spread of COVID-19, such as wearing masks, keeping social distance and washing hands (Kollamparambil and Oyenubi, 2021). Social media are important channels to exploit this potential and to encourage these behavioural changes on a large scale, as digital space has become a focal point where communities access and interact with information and communication (Park et al., 2014). Furthermore, social media offers practical methods to study these healthcare-related addresses and to assess their effectiveness on large populations (Fenton and Procter, 2019). Social network analysis (SNA) is an important component of netnography (internet ethnography), where communities can be probed (Kozinets, 2015). Ampofo (2011) describes netnography as studying online communities and utilising their publicly available information to identify their needs and desires. Moreover, this research method can provide online data and deeper insights into consumers' opinions, motives, and concerns (Orgad, 2009; Kozinets, 2010). while also enabling comprehensive and ethical access to online community members and an insight into relevant consumer opinions and attitudes (Kozinets, 2017). In comparison to participant-driven research, this method can provide access to communities as large as nations (Fenton and Procter, 2019).

As a research method, netnography is primarily employed in research related to marketing (Kozinets, 2015). Karpasitis et al. (2019) also used netnography to study the engagement of Social Media users with online video advertisements posted on Youtube. Beyond marketing and advertising, however, some attention has also been given to the use of social media for social causes and human betterment (Kanter and Fine, 2010). In the past decades more national and international public addresses, for social causes have been uploaded on social media. Promoting responsible behaviour in the time of the pandemic can be regarded as one of these causes. In the past two years of the COVID-19 pandemic, a prolific number of addresses strive to alert and persuade people to adopt responsible and safe behavioural measures. Yet, both unfamiliarity and controversies exist in the scientific and medical communication available online dealing with COVID-19 prevention measures. This pertains to even the elementary recommendations for safe behaviour, such as wearing masks, washing hands and social distancing.

As in marketing of products/services, the persuasiveness in social media addresses on social causes, is greatly governed by the attributes of the message delivery. The studied community rarely possesses the means to

ascertain the veracity of the message content. Thus, a community's reactions on "likes" and "dislikes" often reflects opinions on the manner the message was conveyed or the person who conveyed it. The providers of these addresses and their delivery can therefore benefit from a quantitative evaluation of the non-verbal attributes of their message's delivery.

In this study we took a test-case of a South African Youtube community, aiming to quantify the non-verbal attributes of persuasive addresses on COVID-19 safe-behavioural measures. Preliminarily we focused on the acoustic attributes of the delivery, namely the vocal features of the delivering person. The acoustic attributes are easier to extract compared to visual attributes which vary significantly between addresses. Some addresses portray images and video clips whereas others focused the camera on the speaker, some addresses display only a speaker's face, while other portray a whole body, and more. Moreover, voice-only analytics can be transferred unto multiple delivery channels, where no visual attributes exist, such as audio podcasts.

Most netnographic studies employ qualitative analysis, and where quantitative analysis is pursued, mainly manual coding schemes are utilised (Fenton and Procter, 2019). The digital space where the netnographic research takes place, however, opens a vista of opportunities to employ digital processing tools, such as artificial intelligence, to expedite and improve the analysis.

Our study harnessed speech processing and machine learning tools to quantitatively analyse and evaluate voice properties of public addresses on COVID-19. Our aim was to quantify a persuasiveness measure for public addresses on COVID-19 and to use it for the assessment of the persuasiveness attributes in the addresses. Although persuasiveness attributes can be multi-modal, i.e. visual, verbal and acoustic properties, (Nojavanasghari et al., 2016) our preliminary study focuses on the acoustic properties. We harnessed signal processing to quantify these properties and machine learning to evaluate their contribution to the persuasiveness measure. The analysed interviews are derived from the South African based news outlet eNCA's YouTube channel. Thus, the persuasiveness index is assumed to capture the reactions of a majority South African based demographic. South Africa has a social media user base of 25 million people (Kemp, 2021) with 73.5% of users aged between 18-44 with a roughly even split between male and female users (Kemp, 2021).

2. Methods

As mentioned earlier, the netnographic research approach of selecting publicly available online videos and analysing their content characteristics and their impact to viewer's responses was also used successfully by other authors in the past. This makes this research method the most appropriate way to undertake this study. The following sections explain how processes such as speech data collection, persuasiveness measure, speech processing and machine learning were used alongside this research approach.

2.1 Speech Data Collection

To reduce variability between types of addresses and social media platform, a YouTube channel of a popular news channel in South Africa, eNCA, was selected. This choice also confined possible variability due to the language and accent differences in South African English. This simplifies the preliminary analysis sought in our study.

The data included 38 interview videos of reputable South African interviewees on non-pharmaceutical COVID-19 behaviours in line with those provided by the World Health Organisation (WHO) (Organization, 2020). The interviews were sourced from the eNCA YouTube channel, upon permission of YouTube's data extraction policy (Acker and Kreisberg, 2020). A ratio of 9:10 for women to men interviewees ensured equal gender representation. A screenshot of an interview is portrayed in figure 1.



Figure 1: An example screenshot of an interview video from the eNCA YouTube channel

2.2 Netnographic Persuasiveness Measure

$$L = a + \frac{(b-a)(X - X_{min})}{X_{max} - X_{min}} \quad (1)$$

where $X = \frac{views-likes}{dislikes}$ and a and b are the normalisation limits set to -1 and 1, respectively.

The labels(L) were then binarized to provide two classification categories: persuasive and non-persuasive, using a threshold of $m \pm \Sigma$, where m is the median of the dataset, which reduces class imbalance, and Σ , set to 0.05 to compensate for the right-skewed data distribution.

2.3 Speech processing

Speaker diarisation was performed to separate the interviewees speech segments from the interviewers'. Thereafter, the segments were clipped to 30s sequences to ensure uniform lengths. Segments shorter than 30s were discarded. This segmentation was expedient for the signal processing algorithms employed later. The segmentation created more data sequences and therefore provided augmentation to increase the data size. The audio sequences were pre-processed and their features were extracted using standard emotive speech processing for machine learning (Eyben, 2016). A low-pass filter, with a 17 kHz cutoff frequency was applied to limit the analysis to a frequency range audible to the adult human ear (Monson and Caravello, 2019). Noise removal was performed by auto-spectral subtraction with a voice preset. A hamming window was used to split the clips into 30ms frames with 50% overlap.

2.4 Feature Extraction

The features extracted were Mel Frequency Cepstral Coefficients (MFCC), which are widely used in numerous speech processing tasks. Specifically, MFCC were successful features for speaker traits recognition and in emotion recognition from speech. This feature set is based on models of the human hearing system, is robust to noise and is relatively consistent across genders (Venkataramanan and Rajamohan, 2019). The first 13 MFCC together with their first and second derivatives were extracted. Each audio clip, thus, had a feature set of 39 features with each feature standardized to have a zero mean and a standard deviation of 1 to assist with the learning rates of the machine learning models.

2.5 Machine learning

The main challenge for deep machine learning was the smallness of our dataset. Our machine learning methods therefore put emphasis on over-fitting reduction. These overfitting reduction strategies include L2 regularisation, drop out and early stoppage with a validation patience of 5. The dataset was split into a training, validation and test set, in ratios of 12:5:3, respectively. A recurrent neural network (RNN) model, commonly used for speech analytics, was designed to predict the persuasiveness measures based on the audio feature set. The model architecture was determined by a Bayesian optimization strategy. The models' validation was performed every 50 iterations using a holdout method. The investigated model employs a cross entropy loss function and ADAM optimizer, with a momentum of 0.9 (Nojavanasghari et al., 2016, Ravanelli et al., 2018). This

optimal model was re-run 3 times with different seed values, for 30 iterations of the Bayesian optimization. Thereafter, the best performing seed value was evaluated over 5 randomly assigned runs to generate a statistical spread of model performance to account for the different data divisions in the small dataset.

Balanced accuracy - to mitigate class imbalance bias, and F1 scores – to identify false positive and negative predictions, were used to evaluate the model performance (Thanaraj et al., 2021). The validation loss was added to the performance metrics to evaluate the over-fitting effect. The metrics of the best performing seeded model, as well as the mean performance metrics for the 5 randomly split video models were considered in the analysis.

3. Results

The data collection yielded a dataset of audio clips as summarized in Table 1.

Table 1: Dataset content

Number of clips in the dataset			
	Male speakers	Female speakers	Total
Persuasive	104	33	137
Non-persuasive	71	106	177
Total	175	139	314

The set of persuasiveness labels, L , computed on the set of clips had a median m of 0.775. This value was used to binarize the labels.

The architecture of the RNN which achieved the highest validation accuracy and minimal validation loss among the 5-fold models is depicted in figure 2.

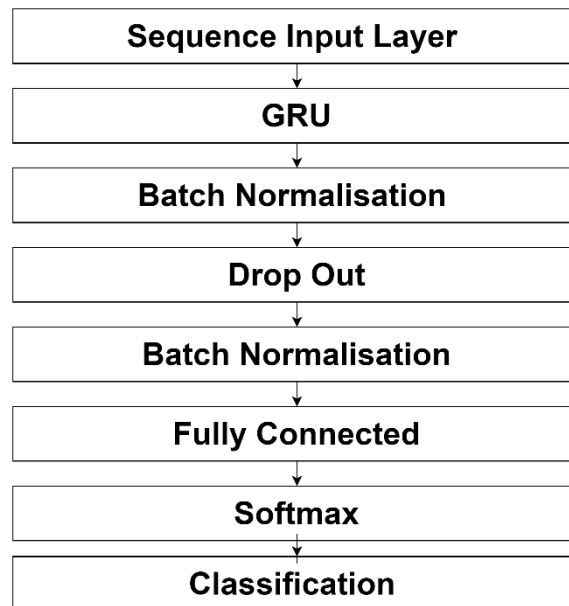


Figure 2: The model architecture of the best performing RNN

The hyperparameters of the best performing RNN model are listed in Table 2.

Table 2: Hyperparameters of the best performing RNN

Initial Learning Rate	Hidden Units	Drop Out	Epochs	Batch	L2 Regularization
0.0908	5	0.5518	271	34	0.0114

Table 3 illustrates the performance metrics, for the best performing model and for the ensemble of the 5 models generated in the 5-fold validation procedure.

Table 3: Persuasiveness prediction performance metrics

	balanced accuracy (%)	F1 score (%)	validation loss (%)
Best Model (Same seed)	86.8	85.0	27.4
5 best models [mean±SD] random split	79.1±4.3	76.0±5.6	52.8±13.0

4. Discussion and conclusions

A long-standing research debate strives to assess the balance between cons and pros of social media. Quantifying the persuasiveness characteristics of messages delivered on social media and their effect on populations can assist in the analysis of this debate.

Our study investigated a South African based YouTube community through their reactions (in the form of “like” and “dislike”) to interview content to develop a persuasiveness index for public addresses on COVID-19. This preliminary study is the first investigating COVID-19 addresses persuasiveness through netnography. Previous netnographic studies were mostly concerned with persuasiveness in marketing applications. Moreover, many other studies employed an explicit ground-truth persuasiveness score, by recruiting participants, focus groups or “Mechanical Turk” methods. Yet, our study quantitatively analysed the speakers’ attributes that contribute to this persuasiveness index, using speech processing and machine learning. The performance outperformed previous works which used comparable computational analysis, i.e. Park, S., et al. (2014) who achieved a mean accuracy of 66% at predicting persuasion using acoustic features (Park et al., 2014). Our best model yielded a balanced accuracy of 86.8%, and an F1 score of 85.0%. The results convey that over-fitting was successfully reduced, as reflected in a validation loss of 27.4% in the single test case analysis. The results imply that the cepstral set contains robust features for persuasiveness prediction and demonstrates the promise of utilising RNN in persuasiveness analysis. The optimization strategy yielded a best performing model architecture consisting of GRU, L2 regularisation and dropout layers. These components were previously indicated to outperform other RNN models in small audio datasets (Shewalkar et al., 2019). The batch normalization in this model was similarly indicated previously as improving system performance through gradient stabilization (Ravanelli et al., 2018).

Two assumptions in our study should be noted. The first is that the like-to-dislike index defined in the study is a reliable measure for persuasiveness. A scale of “like-to-dislike” was used in traditional studies that used recruited subjects who rated persuasive speech (Edwards and Von Hippel, 1995) and in more recent studies where this scale was used for social software persuasion (Broekens and Brinkman, 2009). The second assumption is that the single modal of acoustic properties of speech is sufficient to capture persuasiveness in the addresses on COVID-19, although the YouTubers’ who watched these addresses were exposed to the textual content of speech as well as to visual attributes of the speaker. The textual content is a fundamental component in speech. Persuasion and emotion recognition studies noted, however, the major importance and sometimes dominance of the acoustic over the textual cues (Chuang and Wu, 2004). Moreover, in many cases social media users cannot ascertain the veracity of the textual content in these addresses. Specifically, many YouTubers are not familiar with and could not understand the scientific and medical messages pertaining to COVID-19. This causes a lack of trust in the content of such addresses (van Dijck and Alinejad, 2020, Malecki et al., 2021). Improving the voice attributes of the speakers has a potential to enhance the trust of social media users in these addresses.

Our study focused on a South African news network YouTube channel and monitored South African YouTubers’ and speakers’ reactions to explore the persuasiveness attributes of COVID-19 related speeches included in YouTube videos within a South Africa context. The development of a persuasiveness index for public addresses on COVID-19 was this study’s main objective and it is considered accomplished. To this end, our study’s contribution to the field is twofold. Firstly, the optimization strategy and the methods used for data collection and analysis support previous literature which also demonstrate the benefits of stylizing RNN in persuasiveness analysis. Moreover, our preliminary results exhibit the potential of the vocal cepstrum as predictor of persuasiveness in healthcare addresses on responsible behaviour during the COVID-19 pandemic while also implying that quantitative acoustic analysis of a presenter’s voice, independent from text, can explain the impact of social media addresses. This could act as a motivation for the development of larger future studies in this field,, with international data, that would be able to examine the generalization of the methods and results proposed in this study to other ethnicities and populations. Further, the study focused on addresses on COVID-

19 safe behaviour, a natural research content in the time of the pandemic. The study could be extended, however, to examine other social causes that affect our lives and other social media addresses to these causes.

To conclude, although preliminary, our study offers additional insight into the mechanisms behind online persuasion, within the important context of behaviour change during the COVID-19 pandemic.

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If you are late, you are Beyond help: Disinformation and Authorities in Social Media

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Abstract: Fast paced, seemingly vast and ever-growing social media is a challenging environment for public authorities to communicate optimally. One challenge is malicious disinformation, which is intentionally disseminated to deceive and cause harm to citizens and authorities. It is known that exceptional circumstances create opportunities for malicious actors to negatively influence democratic societies. Disinformation is often designed to cause uncertainty towards information that public authorities offer and to decrease the overall trust in public authorities. The aim of disinformation is often to cause polarisation in society and to weaken national security. Furthermore, in a crisis, it is essential that authorities are able to deliver official information quickly, clearly and accurately to citizens. Communication between authorities and citizens in time-sensitive situations is typically online. One challenge to public authorities is how they can mitigate and repair the effects of disinformation and information influencing in complex and time-sensitive circumstances. In this article, our aim is to describe the challenges that public authorities face when communicating in social media spaces where disinformation is present. The empirical data, including 16 government official interviews, was collected in September 2021. The main theme of the interviews was related to how situational awareness about disinformation is formed in their organisations. Our research questions focus on how public authorities detect and counter disinformation in social media and what kind of problems and pressures they have when communicating in such environments. This study follows a qualitative design and the data was analysed using inductive content analysis. This study is part of larger project related to counterforces and the detection of disinformation. The results will provide a broader understanding of how different types of public authorities, from health to security organisations, and from agencies to ministries, communicate in complex environments such as social media.

Keywords: social media, disinformation, public authorities, communications, national security

1. Introduction

Social media has offered an affordable, fast and global network not only to socialise, but also to distribute and consume information. Social media has profoundly changed the way individuals and organisations communicate, co-create and exchange information, creating new pressures and challenges for public authorities to communicate with citizens. However, not everyone on social media has good intentions. One of the challenges societies face today is disinformation, which is understood as an intentionally created, disseminated, and presented false or misleading information which has malicious objectives (European Commission, 2018; Freelon and Wells, 2020). Information always has a meaning, because without it, it would not be informative and thus information. Furthermore, this informativeness depends on context and time (Karlova and Lee, 2011.) Disinformation can also be informative by implying or revealing some information, and what distinguishes it from information is that disinformation is intentionally false or misleading depending on context and time.

Especially during the COVID-19 pandemic it has become clear that efficient communication from public authorities is essential to prepare for, prevent, adjust and manage crises (Kim and Kreps, 2020). The spread of disinformation may harm and disturb public authorities and their communication, since disinformation is generally used to weaken democratic regimes by attempting to polarise views and reduce trust towards state actors, which will eventually damage national security (Slugocki and Sowa, 2021). Furthermore, in open liberal democracies the spread of disinformation may challenge the traditional authoritative and hierarchical information flow from authorities to public audiences (Bennet and Livingston, 2018). Indeed, public institutions have an important communicative function to provide information, collect public opinions for decision making and facilitate public discussion (Canel and Sanders, 2013). The communication work of public authorities ensures that democratic regimes have well informed citizens who are capable of making carefully weighted decisions. Therefore, it is necessary that public authorities have the capability to communicate effectively with citizens regardless of the presence of malicious disinformation.

However, there is very little literature on how public authorities detect and counter disinformation on social media. Instead, research mostly focuses on detecting false news from an individual's perspective or using AI methods for detection (eg. Sepúlveda-Torres et al., 2021; Bontridder and Pouillet, 2021; Wolverton and Stevens, 2020). There are some toolkits and guidelines that have been developed to educate and help public institutions to recognise and respond to disinformation. One example is the British RESIST model that helps communication experts prevent the spread of mis- and disinformation and reduce its impact on audiences by using six simple steps (GCS, 2021). These toolkits are not based on academic theory and there is little research on how they are used in practice. It seems that liberal democracies are only beginning to establish concepts on and understand the different actors and their motivations concerning disinformation. It is safe to say that more profound understanding is needed to find solutions to combat the phenomenon (Iosifidis and Nicoli, 2021).

Some advocates of social media argue that it has the potential to increase government transparency, direct communication and citizen engagement, therefore enhancing democratic practices (Criado, Sandoval-Almazan and Gil-Garcia, 2013). From this normative perspective it seems that public authorities should utilise social media to connect with individuals, and there is evidence of increasing expectations for them to participate in ongoing conversations on social media (Small, 2012). In addition, the more satisfied people are with the government's communication on social media, the more confidence and trust they have in the government (Kim, Park and Rho, 2015; Mansoor, 2021). Therefore, active social media interaction with the society by public authorities creates opportunities to positively impact democratic practices.

Governments and public authorities interact with the public using three different standpoints: representation (information pushing), engagement (two-way conversation) or networking (multi-sided conversation) (Mergel, 2013). However, research has demonstrated that public authorities use social media mainly as a channel to distribute and push information, not to interact with audiences (Silva et al, 2019; McInnes and Hornmoen, 2018). Despite the quick reach to audiences that social media offers, public authorities and institutions have had many communication problems during the COVID-19 pandemic (Sun, 2021), which symbolises un-identified problems and challenges regarding public authorities' efficient social media usage. Previous literature suggests that social media has not yet become institutionalised in public authorities' communication work, which explains why most of its potential remains untouched. Referring to the views of Criado and Villodre (2021), the adoption of social media is a process, and several actors can act as a barrier which prevents efficient social media adoption in public institutions. These barriers include organisational culture, absence of resources for maintenance, security, lack of governance framework, accessibility, privacy, legal terms, lack of economic benefits and control over suppliers and files observation.

In this article, we study the challenges that Finnish public authorities face in social media communication where disinformation is inevitably present, and how they detect and counter disinformation. In Finland the trust towards public authorities is very high (OECD, 2021). This creates interesting conditions to study disinformation, since it generally aims to weaken the trust towards public authorities. The aim of this descriptive qualitative analysis is to explore how Finnish public organisations experience challenges and what methods they use regarding detecting and countering disinformation on social media. The results may be used to discuss if the methods used by the authorities appear proper and sufficient, or if there is need for more effective approaches to combat disinformation from the public authorities' perspective. We argue, that to combat the phenomenon effectively, Finnish public authorities need more detailed, commonly shared frameworks and guidelines on how to respond interactively to disinformation in social media.

2. Data and method

The empirical data was collected during September 2021 using semi-structured interviews. The interviews contained 21 questions under 2 themes which were related to disinformation situational awareness. These themes were "Disinformation as a phenomenon from an organisational point of view" and "Current situation and procedures" which contained questions such as "What do you consider as disinformation?" and "Has there been any disinformation cases in your organisation and how did you handle it?".

Interviewees represented several administrative fields including national security, ministries, law, and emergency and rescue services. Invitation letters were sent to organisations in coordinative positions in their administrative fields. Research was conducted using the ethical principles published by The Finnish Advisory Board on Research Integrity (TENK, 2012). Furthermore, the organisations could decide themselves who would

be the best person or persons to represent them in the interview. In total 16 interviews were conducted. The majority of interviews were conducted online. The average length of interviews was 50 minutes.

Inductive content analysis was used to analyse the data. It is a beneficial approach to research themes where there is little existing research, since analysis is mostly data-driven. Inductive content analysis includes open coding, creating categories and abstraction of the data collected (Elo & Kyngäs, 2008). As for the basis of analysis, the text was coded using the qualitative data software Atlas.ti 9 (Atlas.ti, GmbH, Berlin Germany). Firstly, the data was organised by highlighting the parts where the participants talked about social media communication and disinformation. In total, there were 168 specific instances. Secondly, the data was coded, focusing on challenges, difficulties and ways to detect and counter disinformation. A code was typically an utterance, such as a statement, an opinion or an explanation, and there were 71 codes in total, which were further categorised into 13 groups. These 13 code groups formed the 8 final result themes. The open coding process and categorisation of the data was carried out by 2 researchers to ensure the quality of the conclusions based on the data.

3. Results

8 partly limited themes were identified from the content analysis describing the types of challenges and pressures that public authorities face when communicating in a complex environment such as social media where disinformation is present, and how they detect and counter disinformation. Categories are presented in alphabetical order. Identified categories were co-operation and networks, communication practices, disinformation, emotions, trust and reputation, information, interaction, resources and uncertainty. Table 1 is a summary of the main results.

Table 1: Summary of the main results

	<i>Challenges</i>	<i>Detecting and countering disinformation</i>
<i>Co-operations and networks</i>	working with external parties	co-learning, networking
<i>Communication practices</i>	how much disinformation should be detected, how to detect without validating disinformation	passive reacting, indirect correction, active-, transparent-, and well-timed communication
<i>Disinformation</i>	vastness of social media networks, unnecessary information requests, social media logic	media monitoring, media literacy of citizens
<i>Emotions, trust and reputation</i>	hard but important issue, distant authorities, trust, authorities' trustworthy status exploitation	strategic narratives, focusing on customer service, employees' activity
<i>Information</i>	ensuring information quality slows communication, beliefs are hard to correct	ensuring information quality, actively communicating new information, being present in social media spaces
<i>Interaction</i>	authorities' status changes, neutrality, interaction is seen as hard to execute	social media guidelines
<i>Resources</i>	time distribution, work task management, the role of communication work	focus on everyday matters, planning communication in advance, reassessment of resources
<i>Uncertainty</i>	always present, the role of communication	disinformation is important, but no clear procedures to tackle it

3.1 Co-operations and networks

Organisations described that working with external parties, sometimes including other public authorities, is often challenging because they don't necessarily fully understand the role and limitations different public authorities face. This can manifest, for example, in misunderstandings in communication or communication demands that authorities can't satisfy. However, in the interviews, organisations also talked about the importance of co-operation and networks: "So that we all would be on the same line, that we are speaking about the same thing and then could do something about it together". They pointed out that more profound co-operation would help public authorities to learn faster, stay on the track with different trends regarding disinformation and ensure that everyone understands the core of the issue. In addition, a few organisations clearly stated that they felt like outsiders in ongoing co-operation and that may be the reason why disinformation does not appear in their day-to day activities.

3.2 Communication practices

The majority of organisations reported that they intentionally decide not to react to disinformative messages especially in their social media channels, whereas some were more active. Passive reacting was justified by reluctance to give any attention to disinformation and by fears that reacting to disinformative content would legitimise it: *“So then it [disinformation] would have reached its goal. So, we don’t want - we think how we could do it [counter disinformation] without validating these kinds of crazy claims to be a real problem.”* Despite the prevalence of passive reacting, almost all organisations agreed that important things still needed to be corrected and content which would gain a lot of unnecessary attention should be addressed. Few organisations said that they tend to indirectly correct and note the themes in which disinformation is spreading in their other communication channels.

Active, transparent and well-timed communication repeatedly came up in the interviews as the best way to counter and react to disinformation. Active communication in the interviews was described as *“being present”*, quickly reacting to important things and considering when, how and where to communicate or publish information so that there is always enough communication to prevent information vacuums from appearing. Transparency translated to an ability to communicate about uncertain things or lack of information especially when something unexpected happens. However, a variety of concerns were expressed about the practice of transparency. Organisations felt that demands of transparency were increasing but that there is still only little experience on how to communicate uncertain or controversial things. In addition, many constitutional and legal practices cause delays for communication and prevent fast reactions when it comes to communicating with the public. This causes problems, since a few organisations said that being on time is crucial for communication to be effective.

3.3 Disinformation

Organisations reported that there is disinformation present in their social media channels. During the COVID-19 pandemic, the amount of disinformation has been growing, while the need for effective communication has also been increasing. The majority of organisations admitted that they could only react to a small amount of the disinformation. The challenge presented was that the organisations did not know whether they needed to detect disinformation in the first place and if so, how much: *“It is hard to detect disinformation and how much you should do it, how much you should correct it, how much you should pay attention to it, these are a bit of a grey area.”* These uncertainties were reportedly due to the enormous amount of information in social media and internet.

One challenge some organisations highlighted was the vastness of social media networks; organisations can never be sure about all of the places and connections where their content is shared and commented. The platform economy caused frustration because the informative content that organisations usually produced is not as interesting for the algorithms as emotionally catching disinformation, and thus organisations had limited ways to influence social media platforms. One interesting phenomenon some organisations described was unnecessary information requests, which could flood organisations’ feedback channels and emails. Almost all organisations practiced media monitoring as a way to detect disinformation and some of them talked about the importance of the citizens’ media literacy.

3.4 Emotions, trust and reputation

Emotions recurred through the interviews as an important perspective to disinformation: *“I have noticed that people don’t always recognise, some strongly technical expert doesn’t understand these kinds of concepts like feelings of security”*. If emotions are not considered when communicating, the risk is that the public authority will remain distant, which increases potential vulnerability for disinformation. Some organisations tried to reduce the risk by investing in customer service where people’s worries and concerns were actively responded to. To prevent emotion-based challenges, a few organisations discussed strategic communication and creating strong narratives about themselves. These strategies and narratives planned in advance can then be used as a basis of communication during crises.

Trust was a particular emotion that came up in the interviews. Organisations described that regular disinformative gossiping, lies and garbled claims spreading about them had a lot of potential to be damaging and that this kind of communicative behaviour is hard to prevent or detect. Organisations put a lot of trust in their employees’ loyalty and willingness to contact management about suspicious social media activity regarding their organisation: *“I have to say, that in our organisation, there are very conscious people - - so luckily our own*

employees contact us and ask that hey, should we do something about this and I have noticed these kinds of things [in social media]." This willingness to contact management was seen as a factor which builds the reputation of the organisation. At the same time, the organisations admitted that controlling their employees is not possible nor desirable. One problem which some organisations mentioned was that their trustworthy status was taken advantage of by imitating their visual or written communication styles and symbols.

3.5 Information

The organisations highlighted the importance of fact-based information. fact-based information as a self-evident fact for public organisations. This need to refer to quality information and facts could sometimes also pose a challenge, since it can delay efficient communication: *"While we verify the information, the clock is ticking. I mean that when we verify information, then our communication and answers get delayed, because we can't put out any unsure or un-verified information"*. Public authorities can't make exceptions in the trustworthiness of its information, but it is possible to communicate that some information is missing or that there is simply none. The organisations thought that keeping their information base up to date and communicating actively about new information is a good way to prevent disinformation altogether. The organisations admitted that if they don't offer information, someone else with possible malicious intentions will. If there is no information, some organisations thought that simply being there and being present can prevent possible rumours spreading. However, the challenge is that beliefs can't be corrected simply via correct information.

Several organisations mentioned allocated information spreading, where you aim to offer information for some particular groups or about carefully chosen themes. Even if an organisation does not react to disinformation, showing how and where to find quality information remains important: *"Public authorities need to be present in social media. We can't just sit in the ivory tower and think that they will come to us and to good information. We have to go there in some way."* However, the challenge addressed was that the information would probably still not find those individuals who need it the most or are targeted by disinformation.

3.6 Interaction

Some organisations described that public discourse, and the language used, has become harsher and more aggressive. In addition, they recognised that public authorities' status is not as stable as it has been and there is more criticism towards experts than before: *"Even if you are an expert, in an expert organisation, very quickly you get questioned and, maybe in a way, it can be ignorance, feistiness, but also unscrupulously challenging authorities and questioning them."* For public organisations this harsher discussion climate is a challenge; it's expected that they remain neutral and respective, and organisations generally don't want or can't share strong opinions. Some of the organisations have constructed guidelines for social media interaction, but the problem is that they are not considered mandatory.

The majority of organisations felt that engaging in conversations or being interactive in social media is very challenging. Organisations do not want to participate in conversations which are heavily based on sharing opinions, especially if there is disinformation included. Responding to different claims or opinions was considered mainly as unnecessary and it was seen to only stretch the conversation. Furthermore, interaction was seen as difficult because some actors want to have a discussion only about marginal or one-sided perspectives. At the same time, organisations point out that problems arise if people who, for example, genuinely believe in disinformation are not treated as valid discussants as they can easily feel left-out and even radicalise.

3.7 Resources

For many of the organisations, one of the main factors hindering efficient social media usage, and the detection and countering of disinformation was the lack of resources, especially time. For example, communication is considered to be an important part of public authorities' responsibilities, but they cannot communicate with the public at all times: *"It's how it is allocated, how much of someone's employment can be communication, because in other hand communication is essential and important and everyone [in the organisation] needs to do it, but not everyone [in the organisation] can communicate all the time because you have to do the work, other tasks than communication"*. Communication therefore is seen as taking time from other work tasks and the problem is often that countering disinformation, or the need to communicate, does not occur during office hours. Hence, the challenge for many organisations is what kind of a role should communication have in the daily work within the organisation.

In addition, social media is a relatively new element to public authorities and its meaning is not yet comprehensive. The intangible benefits from social media communication could present problems in terms of the adoption of communication strategies by authorities. The lack of resources causes communication practices which are mostly reactive, and where the focus is on everyday matters. In multiple interviews, the organisations described that during the pandemic they have come to understand the importance of communication and have begun to prepare in advance and reassesses the resources available.

3.8 Uncertainty

Uncertainty is always present when making decisions about communication, and the organisations expressed this in multiple ways. A few organisations concluded that the different types of communication styles that different authorities have can certainly cause some uncertainty in public audiences. There is plenty of uncertainty considering the amount of communication that public authorities should be doing, how large part of everyday tasks it should be, and what should be communicated and what should not. In addition, the current ever-growing, seemingly fast and complex social media environment itself causes uncertainty in myriad ways, and no one can foresee clearly what problems new technologies will bring: *"If you think about the communication world at the moment, where fast reactions are expected and if your reaction is delayed, then you are beyond help, the conversation has then moved elsewhere. Of course, it is challenging for public authorities. How should they be engaged in the fast communication sphere?"*.

There is plenty of uncertainty on how disinformation should be handled, how much organisations should be aware of it, and how harmful disinformation can actually be. By a majority of the organisations, disinformation was seen as an important and a potentially harmful problem, but only a few had actually made clear procedures to tackle it.

4. Discussion

The aim of this study was to study public authorities' communication challenges, and ways to detect and counter disinformation, on social media. The analysis revealed that the authorities face a diverse set of challenges on social media and that systematic approaches to detecting and countering disinformation are not commonly practiced.

Uncertainty is one of the main challenges presented in the results: many of the interviewees shared the feeling of uncertainty towards dealing with disinformative content and environments. This uncertainty breaks down into smaller challenges like deciding the importance of detecting disinformation, deciding resource allocation and how to detect disinformation without validating it. Uncertainty may partly come from the lack of shared understanding about how serious of a problem disinformation is in social media and how organisations should deal with it. There is no clear government coordinated frameworks or obligatory guidelines forming this kind of understanding about disinformation, which is one of the barriers Criado and Villodre (2021) identified. In this context, it seems that the lack of shared understanding acts as a barrier to efficient usage of social media when detecting and countering disinformation.

Engaging in discussions and being interactive was seen as challenging in the interviews especially when disinformation was present. This is interesting, since one of the main ways to detect and counter disinformation that public authorities described was active, transparent, and well-timed communication alongside passive reacting. It seems that this active and well-timed communication mainly means information pushing like distributing information actively (Mergel, 2013). The results point out that transparency is seen one of the best ways to counter disinformation but at the same time it's considered difficult to execute.

If authorities don't utilise the interactive features of social media in everyday communication, they probably don't use it when disinformation is present. However, there are citizens who genuinely believe in disinformation and may seek out interaction with public authorities. Bypassing them may be problematic since it can increase the distance between public authorities and citizens. In countering disinformation, it is essential that public authorities' communication with citizens includes interactive dimensions. To conclude, more detailed, top-down and shared guidelines and frameworks are needed especially considering interactive communication and transparency when detecting and countering disinformation.

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“Smart” Psychological Operations in Social Media: Security Challenges in China and Germany

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Abstract: Artificial intelligence (AI) is actively being incorporated into the communication process, as AI rapidly spreads and becomes cheaper for companies and other actors to use. AI has traditionally been used to run social media. It is used in the various platforms’ algorithms, bots and deepfake technology, as well as for the purpose of monitoring content and targeting instruments. However, a variety of actors are now increasingly using AI technology, at times with malicious intent. For example, terrorist organizations use bots on social networks to spread their propaganda and recruit new fighters. The rise of crimes involving AI is growing at a rapid pace. The impact of this type of crime is extremely negative – mass protests which demand the restriction of the use of technology, the involvement of manipulated persons in criminal groups, the destruction of the reputation of victims of “smart” slander (sometimes leading to threats to their life and health), etc. Combating these phenomena is a task which falls to security agencies, but also civil society institutions, the academic community, legislators, politicians, and the business community, since the complex nature of the threat requires complex solutions involving the participation of all interested parties. This paper aims to find answers to the following research questions: 1) what are the current threats to the psychological security of society caused by the malicious use of AI on social networks? 2) how do malicious (primarily non-state) actors carry out psychological operations through AI on social networks? 3) what impacts (behavioral, political, etc.) do such operations have on society? 4) how can the psychological security of society be protected using existing approaches as well as innovative ones? The answer to this last question is inextricably linked to the possibilities offered by international cooperation. This paper examines the experiences of Germany and China, two leaders in the field of AI which happen to have different socio-political systems and approaches to a number of international issues. The paper concludes that by increasing international cooperation, it is possible to counter psychological operations through AI more effectively and thereby protect society’s interests.

Keywords: malicious use of artificial intelligence, psychological operations, social media, Germany, China

1. Introduction

As artificial intelligence (AI) technologies spread, become cheaper, and are further incorporated into the mechanisms of social media, there are a greater number of cases of malicious use of AI (MUIAI), which damage the psychological security (PS) of society. Social media have become a favorable environment for asymmetric warfare, in which even actors without mass support from citizens (for example, far-right movements) can set or change the agenda in their interests, while terrorist organizations use social media algorithms for propaganda, recruitment, and fundraising (Stalinsky and Sosnow, 2020). Malicious actors, taking advantage of the widespread use of AI, the growth of international tension, and social and economic crises, which increase the emotional perception of information by the audience, are able to conduct full-scale influence operations. In the long term, this risks serious consequences, from the total distrust of citizens to any incoming information to the destabilization of democratic institutions and the coming to power of far-right circles.

The authors, based on the definition of PSYOPs (psychological operations) as “activities designed to convey selected information and indications to a foreign audience” that “aim to influence emotions, motives, ways of thinking and ultimately the behavior of foreign governments, organizations, groups and individuals” (Miljkovic and Pesic, 2019, pp. 1081–1082), view PSYOPs primarily as a sequence of planned actions to lower the PS of a society and further the economic or political interests of the PSYOP initiator. The basis of the research methodology is a system analysis that allows assessing the relationship between economic, political, technological, and social growth factors of MUIAI in PSYOPs on social media, as well as the possibility of counteracting them. Scenario analysis was partly used, which allows identifying promising threats in the area under study. The analysis made it possible to compare the experiences of Germany and China to formulate recommendations in the field of international cooperation in countering “smart” PSYOPs on social media.

An important part of the theoretical basis of the research is the three-level classification of PS threats caused by MUIAI, proposed by Evgeny Pashentsev (Bazarkina and Pashentsev, 2020). The first level involves discrediting the AI itself (even without using it) or an opponent using a negative image of AI in the infosphere. The second level is associated with causing physical harm or financial damage to a person or infrastructure through AI (which inevitably causes negative emotions, anxiety, and panic, even though the main goal of such MUIAI is not to influence public consciousness). The third level of MUIAI threat is directly related to tasks of distorting the perception of information by the audience to influence its actions.

This study draws on several groups of primary and secondary sources. The most significant groups of primary sources are legislative acts, official publications of governments and international organizations, and media materials. The bulk of the secondary sources were monographs, articles, and analytical reports on MUIAI as a threat to PS, and general works on the problems of PS and PSYOPs and on the activity of and responses to aggressive economic and political actors.

2. The current threats to the PS of society caused by the MUIAI on social media

The present paper studies the actions of two types of actors who carry out PSYOPs: aggressive *political* actors, such as terrorists and extremists, seeking to influence the political agenda; and *criminals* looking for profit, who use AI in social networks for malicious purposes. Both types of actors disseminate the “persuasive... information (messages), half-truths, ‘misleading information’ and misinformation, rumors and fake news that are distributed through the media, diplomatic channels [in the case of political PSYOPs] or the ‘face-to-face’ method” (Miljkovic and Pesic, 2019, p. 1084). Propaganda information “aim[s] at those psychological factors (perception, motivation, doubt, fear, stress – to psychologically shock, etc.) that, in different situations, have a decisive influence on people’s behavior” (ibid). Already existing social media and mobile application tools can be widely used to disseminate such information.

When considering social networks as targets and spaces of PSYOPs, and often as their tools, it is important to keep in mind the ability of social networks to cause addiction, connected not least with targeting in the selection of content offered to the user. In 2018, some 2.6 percent of German youths aged between 12 and 17 were addicted to social media apps like WhatsApp, Instagram, and Snapchat, according to a representative study by German health insurance firm DAK (Goebel, 2018). In the PRC, where social media addiction is even more manifest (in particular, due to the greater number of young people), the government is adopting restrictions on the amount of time young people spend on social media and online games (Conklin, 2021). Under these conditions and against the backdrop of COVID-19, the threats of PSYOPs are likely to increase as the stress of the pandemic drives social media addiction (Zhao and Zhou, 2021). Malicious actors can, by their actions, both aggravate and create addiction in new users.

One of the most widely acknowledged social media threats to PS can be the malicious use of AI-based social bots, which are used to massively and rapidly spread spam, propaganda, rumors, or conspiracy theories (Gensing, 2020a). Since 2015, the so-called “Islamic State” (IS) has created thousands of Twitter bots for propaganda, fundraising, and recruitment, “as well as jamming activist communication on the platform, silencing their opponents on Twitter” (Stalinsky and Sosnow, 2020). In crises, PSYOPs using social bots can lead to particularly dire consequences, since the audience evaluates incoming information more emotionally and less critically, and leadership structures can make rash decisions.

“Deepfakes” can be distributed on social networks as part of disinformation campaigns to blackmail the “victim” for profit, with pornographic deepfakes leading among such products (Ajder et al., 2019). In a narrow sense, the process of creating deepfakes means adding one digital image or video on top of another in such a way that the added appears to be part of the original. However, without rejecting the differences in specific technologies, it is possible to use the term in a broader sense, combining it with a set of existing and future technologies for constructing pseudo-reality (Pashentsev, 2020, p. 101). These technologies are based on the ability of AI to create or modify images, video, sound, and text.

3. *Modi operandi* of the malicious actors in the AI-based PSYOPs on social networks

In the countries studied, there are varying degrees of threat from the malicious use of bots and deepfakes. The PS threats of the first and third levels appear in Germany. At the first level is the exploitation of AI by the right-wing political party “Alternative for Germany” (AfD) to attract attention during the elections: the AfD announced

that it would include social bots in its election campaign strategy (Gensing, 2020a), which caused outrage across German society. Third-level threats include the PSYOPs conducted in the country, combining the use of fake accounts on social media by real people and the support of their publications by bots. Thus, during the federal election campaign of 2017, activists of the far-right movement “Reconquista Germanica” (RG) on Twitter managed to make certain hashtags, such as #reconquista and #nichtmeinekanzlerin, viral. On Discord, RG indicated supporters whose profiles should be attacked with hate speech comments. Just before the election, a growing number of AfD-supporting bot activities were discovered (Gensing, 2022). Deepfakes are recognized in the country as a possible threat to democracy, but their most famous use is in the case of fraud. In 2019, an executive in a United Kingdom-based energy company received a phone call from his boss in Germany instructing him to wire €200,000 to a Hungarian supplier within the hour. The call was a deepfake audio that “had imitated the boss’s voice, tonality, punctuation, and even the German accent” (Rashid, 2021), which can be regarded as a second-level threat.

In China, the most famous examples of MUAI in social networks are cases of teaching chatbots anti-Chinese sentiments (presumably by ordinary users, which does not fully allow these cases to be attributed to “smart” PSYOPs), as well as first-level threats – PSYOPs that create the image of the PRC as a state that uses AI for repressive purposes (Bazarkina and Pashentsev, 2020). The third-level threat in China is the rapid spread of deepfakes, which are most often used to create pornographic content. Such content, sold through peer-to-peer networks, has attracted the attention of Chinese law enforcement not only as an illegal trade but also as a possible tool for destroying reputation (De Seta, 2021), which subsequently led to the adoption of tough legislative measures.

While conducting PSYOPs in social media, malicious non-state actors generally rely on the relevant social media’s (and the Internet search engines in general) “benign” AI algorithms failures – in particular, their inability to identify hate speech in local or rare languages and, consequently, to moderate social media efficiently due to lack of data for machine learning (Heise, 2019). Systems making decisions about content further target promotion through the combination of users’ interests and content popularity. There are also regular failures in tracking elements of extremist and terrorist propaganda in sounds, symbols, and censored scriptures, the meanings of which only become clear in the correct context (Weimann and Masri, 2020) due to both the sophistication of the type of tracking and to constant media communication context modifications. This approach is attractive and beneficial for malicious actors since it does not require special skills or programs and is thus cost-effective and time-saving, despite the need for creativity to “mitigate” radical rhetoric to conceal it from moderating algorithms.

This feature is exploited by different types of malicious actors, both by individual terrorists such as the 2019 shooter who relied on Twitch algorithms to widely spread the broadcast of his attack in the Halle synagogue (Jee, 2019) and by coherent groups promoting a destructive agenda, such as “Battle of the Nibelungs” using Facebook search and recommender algorithms to promote merchandise and martial art events, the latter to groom fighters for political struggle (Associated Press, 2021a); the Querdenken movement, which used Facebook to spread false information on COVID-19 vaccination and hatred to police (Associated Press, 2021b); and IS members from the Uighur minority, who produced a video in 2017 proclaiming their aggressive plans toward China and promoted it in the Chinese Internet sector (Al Jazeera, 2017).

The efficiency of the described “AI-exploitative” tactics is based on an approach that sees social media as both targets and spaces. As targets, they are exploited for entrenching radical ideas and messages into “normal” content, which becomes linked with destructive content. As spaces, social media are defined by the resources they potentially contain for malicious actors (such as people and financial support) and by fixed technical characteristics (AI algorithms) that give room to the described type of operations.

From 2016 to 2019, the transformation of social media algorithms and approaches to destructive content occurred as a reaction both to breakthroughs in AI development and the IS movement and hate crimes (Macdonald et al., 2019). These transformations require stricter rules of moderation and the usage of benign AI to prevent disruptive content from emerging and spreading. This would lead to more sophisticated operations being needed to spread disruptive content and the perfection of content promotion to circumvent moderation algorithms, as well as making the content itself more appealing and less detectable by detection systems. The given tactics of PSYOPs can include creating illusions of uncoordinated activities in social media based on fake people and automated text generation AI instruments, the generation of large amounts of radical content

through the instruments of deepfakes and automated text generation, and the use of big data analytical systems to define the existing bottlenecks in social media algorithms. Their combination, in turn, is defined by the scale of a malicious actor and thus its ability to obtain sophisticated technologies, by the tactical goals of the regarded actor, by the media space, and by its target audience. Although there are no particular proven cases of deepfakes produced by terrorist groups (Semaan, 2020), the growing affordability of AI technologies as well as big data-state cooperation to fix existing algorithms flaws, limiting options for their simple exploitation, raises the probability that malicious actors will shift to new tactics based on fake content generation. These tendencies are common in the cyberspaces of both Western and non-Western regimes – in particular, we track cases of the “exploitative” malicious use of AI in two states with strikingly different regimes (Germany and China).

4. Behavioral and political impacts of the AI-based PSYOPs on social media

The impact that AI PSYOPs have on social media can be seen both in society’s attitudes toward AI adoption and in policy decisions that respond to such PSYOPs. How the real experience of using AI and its coverage in the media (including by creating fear of total surveillance) affects the mood of citizens is indicated by the results of a survey of around 8,000 people in China, India, Germany, the United Kingdom, and the United States, published in January 2022 (Tagesschau, 2022). Only half of the respondents in Germany believe that new technologies can make the world better, and about a third see AI as a threat, particularly those technologies that monitor citizens’ daily lives. In China, there is somewhat greater enthusiasm for AI, with only 26% of those surveyed saying it could pose a threat. Only 46% of Germans (against almost 100% in China) consider themselves and their country well prepared for the technological age. It is advisable to correlate the dynamics of such sentiments with the information background created around AI to avoid PS threats of the first level. We can assume an indirect impact on the mood of citizens from terrorist practices and crimes using AI technologies.

The short-term political outcomes of real AI malicious use cases are connected with an intensive securitization of media communications both in the context of content and in the context of technical issues. The former aspect implies imposing new social media restrictions based on security considerations defined not only by the dominant state discourse but also the level of AI development. For instance, Germany securitized the right of vulnerable social groups to dignity through NetzDG while China has focused on the general challenges to territorial integrity and PS (Blanchard, 2015). The extensive securitization in the context of countering radical actors and their propaganda catalyzes inter-actors (for example, the KISTRA project, which pulls resources of leading German universities and Bundeskriminalamt [RWTH Aachen University, 2021] to provide technical, ethical, and legal AI-based solutions for hate crimes problem in the cyberspace [TU Berlin, 2022]) and international cooperation (for instance, China’s cooperation within the iBRICS and CyberBRICS platforms [CyberBRICS, 2019]). In the R&D area, prospects are linked with the development and promotion of more perfect and sophisticated “benign” AI software (for example, Hikvision and Cloud Walk, used by China to prevent terrorists intermingling with crowds [Kaushik, 2021]). In the long term, this can lead to raising the efficiency of countering radical propaganda through combining normative state-developed decisions and business-developed best practices. Transnational (state-companies and state-experts) and international (interstate) cooperation, in turn, can give an impetus for a global AI ethics in the context of countering terrorism.

Nonetheless, in the medium-term, the prospect of political conflicts around human rights to privacy and open information access, as well as on state-business relations, are likely to increase. These conflicts can have both domestic and international dimensions, creating political polarization inside the state and “security blocking foreign policy”, which would be an obstacle to forming universal AI usage rules. The cases giving the opportunities to extrapolate this trend to the near future include the critical international reaction to Chinese laws that stipulated measures on tightening Internet security management, the inspection of dangerous materials, the prevention of terrorism financing, and border controls (Refworld, 2016; BBC News, 2015) as well as German protests in reaction to the stricter regulation of social media (in particular, the requirement to remove abusive material within 24 hours or face €50m fines; Scally, 2017). Mediatization of the described conflicts can give an impetus to more aggressive radical propaganda that would rely on “returning Internet freedom” discourses. An additional threat is the “arms race” between “benign” AI (e.g., systems of moderation, tracking, and prevention that target disruptive and artificially generated content, as well as more sophisticated detectors of coordinated social harm activities) and ‘malicious’ AI. This threat is closer to the technical outcomes of the MUAI intensification but is bound to be catalyzed by states’ normative initiatives.

The short-term behavioral outcomes of these PSYOPs are beneficial for radical movements – PSYOPs promote radical ideas and allow raising financial support through advanced crowdfunding linked with existing social media algorithms (Associated Press, 2021a) by normalizing and integrating radical content integrated through linking it by, for example, sounds and hashtags that push AI-based recommender systems to promote it. In the short term, this simplifies terrorist recruitment and propaganda (Vacca, 2021), the latter becoming possible due to content individualization by algorithms. Furthermore, the complexity of malicious operations and countering them is fruitful ground for undermining public trust in social media as well as government authorities and their ability to confront the terrorist threat. Nonetheless, the long-term prospects are ambiguous for radical groups in all the dimensions described due to the technical development of AI moderation, a rapid backlash to radical content and ideas from the moderate social groups, and the limits of radical propaganda due to the strong correlation between receptivity to propaganda and the economic situation among recruited (Cibra, 2018). These socio-behavioral and socio-economic particularities constrain the destructive influence of radical MUA.

5. Ways to protect the PS of society: existing approaches and innovations

Countermeasures against “smart” PSYOPs on social media are taken both in the “human” (legislative, political, and educational), and technical dimensions. Such measures can also be complex, representing well-coordinated counter-PSYOPs aimed at counteracting criminal manipulations. Thus, proposals for the use of social bots are useful, such as online services that allow military personnel and law enforcement officers to control virtual personalities that can interact on social media “to counter violent extremist and enemy propaganda” (Paganini, 2013). Of course, in situations of international tension, such technologies could be used by states against each other, but terrorism remains a common threat that creates the need for international cooperation.

In China, attempts are being made to use citizens’ addiction to social media (and the AI built into them) for positive purposes; technology companies are developing online training programs, using people’s desire to receive the encouragement of subscribers (“likes”) to complete tasks and pass checkpoints (Liu, 2018). It seems, however, that such practices risk abuse of the addictions of ordinary users by business entities. The measures taken by the Chinese government to limit the time spent by children and adolescents on social networks and online games can be aimed at minimizing them. Both in China and EU countries, including Germany, the removal of malicious content has been established, usually carried out by the administrators of social networks themselves at the request of law enforcement officers. In particular, this work is carried out in the EU in accordance with the Code of Practice on Disinformation, signed by major online platforms. When discussing technical measures to identify and remove content in Germany, proposals have been made to start countering PSYOPs with the help of AI on social networks, choosing as a starting point the content of the messaging, not the technology with which it was created (Gensing, 2020b), to overcome imperfections of bot identification tools. China has become an innovator in AI regulation, including in technologies such as deepfakes (国家互联网信息办公室 文化和旅游部 国家广播电视总局, 2019). In 2019, China announced new rules governing video and audio content on the Internet, including a ban on the publication and distribution of “fake news” created using AI and virtual reality. Any use of technologies like deepfakes should be clearly marked and clearly visible to Internet users, and failure to comply with these rules can be considered a criminal offense (Pashentsev and Bazarkina, 2022). Significantly, it is not the technology that is prohibited, but deliberate misleading an audience with it.

The element most vulnerable to PSYOPs through AI in the information and cybersecurity system remains the human, making relevant the education of citizens not only in the technical sphere but also in the political or psychological sphere. In particular, it is important to familiarize the audience with the goals of criminals, including terrorist organizations; the political forces that manipulate public consciousness; and the tactics and techniques used by both criminals who seek only profit and politically motivated actors. The cooperation of political institutions and cross-border security structures in the accumulation of expertise and the development of political and legislative solutions remains a relevant policy measure at the international level. This can be done, for example, by Interpol and the Centre for AI and Robotics at the UN Interregional Crime and Justice Research Institute (UNICRI and Interpol, 2019, p. 5). Today more than ever, civil society structures should be involved in such an exchange. It is also necessary to develop international scientific cooperation in both technical and social sciences, including interdisciplinary research projects aimed at countering high-tech terrorism.

6. Conclusion

The analysis shows that in both countries under study, MUIAI threats of the first (discrediting AI itself or someone with the help of its negative image) or third (using AI directly in PSYOPs) levels are predominantly manifested. There is reason to believe that these threats will increase in the near future due to a number of factors:

- The growing dependence of the audience on social media against the background of the pandemic;
- International tension that impedes the development of effective international norms for regulating AI and mechanisms to combat MUIAI, as well as creates conditions for the growth of social instability, which strengthens aggressive political and criminal actors;
- The level of technology development in which MUIAI PSYOPs actors are ahead of structures that oppose MUIAI (for example, due to insufficient data for training AI monitoring in the languages of countries where AI is not so highly developed).

The latter trend may change, but effective countermeasures are needed to accelerate this process, possible only based on international cooperation in the field of combating PS threats caused by MUIAI. In this context, it is necessary to further study the transformation of the phenomenon of crime, including terrorism, during the “fourth industrial revolution”; the socio-psychological, economic, and political conditions in which AI is developed; and the psychological mechanisms that aggressive actors use to incorporate MUIAI in their PSYOPs.

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Using Social Media for Government Communications: A Closer look at this Popular Communication Outlet and its use in the Local Government Sector

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Abstract: Social media can be a marketer's dream with the ability to engage, collect research and communicate information quickly and to a large number of people. This is likely why so many businesses have jumped on board enjoying this communication outlet after seeing its popularity from a socializing aspect. In recent years, we have found this mode of communication to begin gaining popularity in the government sector. Many politicians are using this platform to communicate, gain popularity and even gauge consumer response. This paper takes an in depth look at government communications and political use of social media focusing on a local government level. This paper explores some of the apprehensions with utilizing this platform and strategies to mitigate problems. Finally, this paper also looks at how to implement a social media policy for local governments who don't currently employ a strategy.

Keywords: Social media, Local Government, Strategy, Marketing

1. Background

Much like the other 69% of Americans you are likely on the social media platform Facebook. (Lardieri,2019) This can be a great outlet for socializing with peers, accessing information, keeping in touch and of course communicating. After social media first had its reign as a great place for socializing the outlet took off a bit in other directions. Businesses began using the platform to engage, collect research and spread information. Not too long after businesses began employing this outlet, we began seeing politicians using this form of communication. Unlike the success in the socializing world and in the business world the political use of this tool has been a bit more controversial. While some politicians are employing this outlet, other government agencies are hesitant to employ this outlet still maintaining that social media has no place in the political world. Some even recommending that anyone involved in politics stay off of social media altogether. This paper explores the many benefits that can come from using social media in a governmental capacity focusing on local government. Furthermore, it explores some areas of concern with using social media in government, and finally will focus on how to properly implement a social media plan.

Social media became a big part of the political scene during the 2016 United States presidential election There were many pros to hearing directly from candidates on their platforms. It provided an additional outlet to become educated. It encouraged many to share, retweet and comment on relevant topics. It furthered discussion on many pertinent topics, helped candidates gain popularity and really made politics a household conversation. This radical change in politics as we know it was also met with many challenges. "Social media provided government parties and their candidates with public platforms to share their opinions online, directly connect with supporters and have audiences discuss political issues – however, for the first time in U.S. elections, social media also played a major role in targeting specific groups of voters with tailored advertising and fake news in order to disrupt public support for leading political candidates; confusing and destabilizing their groups of supporters and drowning legitimate discussions by automated bot postings ." (Clement, 2019)

Varying and opposite opinions were regularly shared and debated. Untrue facts from unreliable sources were shared. Many people were under the opinion that social media entering into politics was dividing the nation. Unfortunately, this opinion has caused some people to feel that social media has no place in politics forgetting the many benefits that this platform can provide when implemented correctly.

Looking at this topic on smaller scale, local government can use this platform and capitalize on the many advantages that engaging with the public can bring. At a rudimentary level, utilizing popular social media platforms can provide one more platform to communicate information to the public. These can be simple things such as upcoming road work or a water boil advisory. As social media has gained popularity many local governments have found out there are many things, they can do on this platform beside routine announcements that they are making in other places. "Today, citizens expect social media accounts to be less formal and bi-

directional tools that they can use to contact local governments with questions and inquiries, provide feedback, and take part in critical and formative dialogue. This expectation is motivating many communities to use social media in more innovative and engaging ways.” (Civicplus,2019)

This level of engagement that can occur if social media is used correctly can be one of the best ways to collect information from constituents. So, while this platform does make for a great place to make additional announcements the ability to engage, collect feedback and connect with the community is something that is not easily done via other outlets. One area that many government offices and businesses struggle with in social media is failing to plan. Social media just like every other area of the organization should have formal plan, policy, person or persons in charge of it, metrics and expectations.

There should be specific guidelines as to what the expectation should be. The engagement aspect will vary depending on the size of the municipality. Larger municipalities with multiple social media experts may set an expectation much higher than a smaller municipality with one employee handling social media.

2. Literature Review

Local governments exist to represent constituents at a local level. Their job is to ensure they are hearing the constituent’s concerns, providing solutions, keeping constituents informed and doing this all in a transparent fashion. With this said, it is important that the local government is responding to changing consumer trends and expectations. "By some accounts two out of every three adults gets their news from social media," added Ruhil. "Almost everyone is on Twitter or Instagram or Facebook. So why would any entity use some other means of disseminating information, of connecting its people, maybe even gathering information?" (Suciu, 2019) Understanding how many people are accessing information can be an important first step in getting local governments to communicate with their constituents in the best fashion. Businesses have broken the stigma that social media is just for socializing, but it is important that governments do the same.

One of the many benefits that constituents can enjoy from a local government participating in social media is access to current events and upcoming community happenings. There are also many benefits from the governmental standpoint. “Local governments can if they don’t already send out information about breaking events from road closures to emergency information.”. (Suciu, 2019) The ability to inform constituents of the breaking events, like these, can help emergency responders work in a less interrupted fashion, can best mitigate traffic concerns and can lead for and overall more seamless practice for dealing with emergency situations. Social media can in fact be one of the best ways to communicate this type of breaking information, due to its immediacy.

One area focused on heavily in a business capacity is the importance of engagement. This can also be important from a governmental standpoint, as well. Voicing concerns, giving feedback and getting necessary information to pertinent question are all just the tip of the iceberg for benefits from the consumer standpoint. From a governmental standpoint, the engagement is also very important. As previously mentioned, local government exists to represent constituents at a local level. What better way to connect and understand concerns than using social media to gather feedback? As many businesses have realized, this level of connection can not only gather feedback, but is cost efficient.

Another area of benefit can come from participation. It is often noted that the younger generations are not as “involved” as some of their older counterparts. Could this possibly be a negative consequence of using antiquated communication practice? Using modern technology for communication may help to get more people involved of all ages.

Looking through the Facebook account of the city of Los Angeles, it’s easy to see how this benefits their community. They have posted changing laws, police information, community events, and allows consumers to engage and comment on various topics. While many local governments like New York City and Los Angeles embrace this avenue for connecting with their constituents. Other communities are still hesitant to employ this communication strategy.

This next section will explore some of the concerns that local governments may have and various strategies to mitigate these concerns.

There are endless examples of social media being able to bridge a gap in communication for local government officials. "After a deadly mudslide wiped out telephone poles, Snohomish County, Wash., used Facebook to connect a devastated community to vital resources. TikTok helps the city of Minneapolis raise awareness about the 2020 Census in a friendly, compelling way. In Maryland, teens and young adults provide marketing feedback on school safety materials via Instagram Stories. (Hsiung, 2020).

Although there have been many success stories as noted above, many municipalities are still hesitant to take the plunge. Governments and their officials must be taken seriously. Social media costs money. Who will monitor the account? These are some of the many reasons why local governments are hesitant to employ this platform. So, is it worth it to begin a social media strategy? Hsiung argues, "Even with all its nuances and intricacies, social media fundamentally facilitates government transparency."

From a professional standpoint, it is important to note that social media is not the casual communication platform for friends to keep in touch as it once was designed to be. Social media has a relevant and important place in the business world. It has become a respected platform for communication from celebrities, government officials and businesses around the world. "Residents of our communities have been introduced to, and have come to appreciate, how social media can elevate their connectivity to their local governments." (Hsiung, 2020)

Something else to remember, is that all governments do not have to employ a very large social media strategy like major cities do. The larger the government, the more resources they have and the more employees they have. Smaller municipalities may not be able to or need to provide as extravagant of plan to achieve similar goals. All governments have constituents, so these can be a way to engage with them. "Local politicians should also look to social media as a way to connect with the local constituents. Just as local government officials may pound the pavement and press the flesh, they should take to Twitter and Facebook as a way to build recognition with voters." (Sucio, 2019)

3. Mitigating concerns

Anyone who has spent time on social media knows a certain level of caution needs to be employed when posting using this communication outlet. The immediacy of delivery sometimes means that that posts are less proofread, researched or thought-out when compared to other media outlets. Once these are posted, they can be shared, retweeted and screenshot. So even with the ability to edit a post, it does not give the writer or entity the ability to truly erase what was said.

There are many cautionary tails of what "not to do" when it comes to social media posting. This includes on a personal level, business level and governmental level. One concern with writing of any kind is with the absence of tone, it is not always easy to best understand humour. One light-hearted joke, could really cause community damage. One misspelled word could make people feel that their local government is less competent. One wrong fact, could make local government seem less truthful. With the many benefits of social media, we need to also understand that small missteps can be very damaging to the reputation of the local government.

Before any government begins with an implementation strategy, a proper social media policy should be in place. This should address some of the concerns above. This policy includes who oversees the social media page. It is advisable to limit how many people oversee this page. This allows for additional control and consistency in use. The social media writer should be well versed in the importance of privacy laws as well as well as an understanding of what can and cannot be shared/posted on the governmental page. They should also be advised and coached on ensuring they talk with the correct department for accurate information. They should not be attempting to advise constituents in areas that are not their expertise.

While humour and personal style may be permissible, it is important to write in a manner that is concise and can be understood. This includes omitting personal opinion, avoiding generalizations and not using slang. Not only is avoiding slang important, it is also important to proofread, and fact check everything. This is coming from the local government and should be trusting source.

Another area of concern is consumer engagement. While this is one of the biggest benefits for a social media page there needs to be ground rules for both community members and the local government. First off, it's

important to decide if the governmental agency is going to allow posts from the community on the page or if they are going to only allow comments on original posts. While either strategy can be beneficial, allowing public posts will require careful monitoring to ensure appropriate content is only being shared. If the government entity cannot provide this level of monitoring it is advisable to not allow. This is a time where it is important to understand the level of commitment and resource that they have to offer their social media policy.

Appropriate response time to engagement should be communicated to the public. Major cities with large social media presence may be able to provide rather quick feedback. For smaller communities this “round the clock” interaction is likely not possible. The communication and feedback timeline should be communicated. For constituent that required faster turnaround time should be contact information and hours of operation so they can communicate in another fashion.

Employee consequences for misuse of social media should also be communicated. While it is the hopes of anyone engaging in this type of communication that their employees are a good reflection of the company, there does need to be ground rules and consequences for any employee who has the ability to communicate via social media on behalf of the government entity.

It’s important to understand that while social media may seem like a casual way to communicate, it needs to be treated similarly to all other areas of operations. This is a direct reflection of the agency and it should be understood that any communication using this platform should not be taken lightly. Following these suggestions can help to mitigate a lot of the concern around government agencies engaging in social media.

4. Implementing a social media policy for local government

The following areas should be included when implementing a social media policy in local government. It is encouraged to start the use of social media after a formal plan is written deciding how and when the social media should be utilized, who will be running the social media and also what the expectations for the platform(s) being used will be. The following should be discussed in detail in the policy:

Information: Start by using this platform to post any information that you are already communicating with the public and share it on this platform as well. This includes information such as bulky item day, changes to the municipality, and upcoming events. Anything that you are communicating on other platforms should be communicated via social media as well. This should be fairly easy to do as this information is likely already typed up and proofread. So, this is an easy first areas to start with.

Time sensitive information: This type of information is often tricky for local governments who do not employ social media. The use of flyers and mailers do not provide a great outlet for time sensitive information. Therefore, this information is often communicated by other local entities and it is not always communicated correctly. Once a social media policy is written, the local government should expect to add some time sensitive information to the page. This can include road closures, accidents, warnings and last-minute changes such as cancelations due to weather.

Departmental efforts can easily be included in the social media efforts. If other departments such as the recreation or the police department have pages, information from these pages should be regularly shared. In the event that they do not have their own pages pertinent upcoming events should be shared and promoted on the governmental page. “The more your citizens, businesses and visitors know about what your government is doing, the more likely they are to take part—whether that’s in town halls and council meetings, fundraisers, or other municipal events.”(5 social media strategies for Gov engagement, n.d.)

Upcoming meetings, itineraries for the meetings and a follow up with minutes should be posted on the page. This should be done in a consistent fashion. For example, the itinerary is posted 48 hours prior to all scheduled meetings and the minutes are shared with the public within 48 hours after the meeting. This can help keep consumers engaged, informed and also assist with transparency.

Engagement protocol must be identified and communicated. What are the goals and expectations for engagement? For example, what type of response time can the public expect to receive. It is important to be realistic in this depending on staffing for this department. If response time is going to be 24+ hours, it is perfectly

acceptable to have to be communicated on the social media page. This will ensure the public knows what to expect. "Tracking conversion and engagement allows you to analyze the success of your efforts and reevaluate if needed. Setting clear goals helps to ensure that your marketing strategy stays on track." (Mohajer, 2020)

Tips on pertinent topics should be shared on an ongoing basis. This should be information that may not be fully understood by the public, or information that makes the community a better place. Examples, of what can be recycled or what cannot be recycled are topics that may prove worthwhile to the public. This area would also include any type of seasonal information such as expectations on snow removal.

Collecting information via surveys. This platform can provide the entity a platform to collect information directly from the constituents. This can help gauge interest in specific activities and collect information about unmet needs. It should be communicated with the public that information collected off social media will only be used to help guide the local officials.

Avoid engaging heavily with upset constituents in a public forum. These constituents should be referred to the appropriate department head for a private conversation. It is also important to avoid answering specific questions that may be outside the social media writer's expertise. Again, referring the individual to the appropriate department head would be the recommended course of action.

5. Conclusion

Social media has proven to be successful in many different areas of the business and social world, but many government officials are still hesitant to employ a strategy. The benefits can certainly be transferred over to local government officials if handled properly. Like all other areas of government social media needs to have a plan, policy and designated moderator. The social media writer should be careful never to speak outside their area of expertise and clearly communicate the engagement expectations for the public. It is important to remember that a government agency does not need to go from having no policy to having a very active profile. It is encouraged to treat this platform just like any other new business practice. Start small by getting your feet wet. This trial period can really be advantageous in understanding the level of commitment needed, the right person to do the job, and some problem-solving strategies for issues that may come up. It may even be advisable to create a timeline in your social media plan to best implement in appropriate steps. Overall, if properly planned and monitored, social media can be a great addition to the local government sector's tool belt. It can benefit both constituents and the local government. This paper serves to better identify the pros of utilizing this method, and tips for getting social media efforts started for local governments.

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A Taxonomy for Higher Education Institutions to Tell Micro-Stories with Content Marketing

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Abstract: The study explored a relatively new area, namely telling micro-stories with content marketing in the context of higher education institutions (HEIs). Although long-form content remains popular, the concept of creating concise content for social media while focusing on what matters to the target audience has gained traction. The study focused on HEIs because they operate in a multifaceted environment where they must maintain a high level of authenticity with current and prospective students. Additionally, many HEIs face increased competition from education service providers operating in various sectors and a reduction in public funding. Although HEIs have embraced digital marketing, effective marketing on social media requires some careful planning. HEIs need to connect and communicate with them emotionally to resonate with the target audience, using micro-stories. To date, no study has examined which micro-stories HEIs can tell as part of their social media content marketing efforts to capture the attention of their target audience in a cluttered online environment. To take a fresh look at this phenomenon, the social media posts of five HEIs involved in content marketing were analysed and triangulated across four social media networking sites, following a grounded theory approach. The findings indicate that to connect with current and prospective students, HEIs tell micro-stories in an online brand community that are authentic, depicted as a visual experience and meet the long-term needs of the target audience. The proposed taxonomy can stimulate further academic debate and future studies.

Keywords: content marketing, grounded theory, higher education institutions, micro-stories, micro-storytelling, social media

1. Introduction

This study examines a relatively new area, micro-storytelling on social media, which has emerged because of the need for the art of brand storytelling to evolve from lengthy to more concise narratives to keep up with technology trends (Sellas, 2015). Brand storytelling is a widely adopted brand communication technique that employs imbued brand experiences to represent historical events that shape the brand. In addition, brand storytelling illustrates the brand's origins and purposes through its website and social networking sites to portray its life story through different storylines (Kao, 2019). In this regard, Pereira (2019) argues that in order to resonate with consumers, compelling brand storytelling requires an understanding of the customer journey, the brand's identity and the market or context in which the brand and the customer exist side by side.

Pereira's (2019) argument is specifically essential because consumers want immediate gratification and constant connectivity in the digital era has made it increasingly difficult for marketers to maintain the attention of the consumers on social media (Duquette, 2018; Duffy, 2019). For example, a 2015 Microsoft study revealed that the human attention span had dropped to eight seconds, which constitutes a decrease of nearly 25% in just a few years (Microsoft Canada, 2015). Although long-form stories are still prevalent, the idea of creating concise stories on social media while focusing on what is essential to connect with the target audience has become more widespread (Jaaiin, 2020). For this reason, the study adopted Emerson's (1976) Social Exchange Theory, which puts forward that one must have a vested interest in the relationship to participate in social behaviour. Both sides should feel obligated to increase social media engagement for mutual rewards. In the context of this study, the interactive social environment could become the reward based on a sense of community established by higher education institutions (HEIs) on different social media platforms (Botha, 2021).

HEIs are the focus of this study because they function in a complex environment where they must ensure a high standard of authenticity with current and prospective students, parents, funders, former students, organisations and other stakeholders to meet and maintain enrolment targets. Also, many HEIs face increasing competition from education service providers functioning in various sectors and a reduction in public funding (Pucciarelli & Kaplan, 2016; Camilleri, 2020). In this regard, they struggle with tight budgets, the dwindling influence of traditional media and a lack of resources to conduct proper market research, among other things (Hawkins & Frohoff, 2019). To augment traditional marketing efforts, many HEIs currently have a presence on social media to communicate with their target audience because of stakeholders' ways of absorbing information, what resonates with them and where they can find information on furthering studies have shifted. Besides being used for teaching and learning, social media is also used by HEIs to create brand awareness, inform stakeholders

about new research programmes, policy changes, upcoming events, vacancies, recruitment, interaction with alumni, and communicate institutional news (Chugh, nd).

However, although HEIs have adopted digital marketing, it necessitates more than merely joining social media networking sites such as Instagram, Facebook or Twitter; posting regularly or having a website to become effective on social media. HEIs need to connect and communicate with the target audience emotionally to actively resonate with them (see Walter & Gioglio, 2018).

Through content marketing, HEIs can illustrate what sets their brand apart from the competition. They tell appealing micro-stories on social media in easily accessible formats such as skimmable short text, hashtags, short videos and images to capture the target audience's attention in a cluttered online environment. A micro-story forms part of micro-content on social media and typically includes quick spurts of short-formed content, memes, visuals and bite-sized content that performs well on social media (Bosomworth, 2014; Sellas, 2015). However, many HEIs still mistake flooding social media with posts devoid of meaningful coherence (Cohen, 2021), but telling micro-stories can be of assistance.

Consequently, the study answers the following research question:

What micro-stories can higher education institutions tell on social media, using content marketing, to emotionally connect with their target audience?

To date, no academic study has examined what micro-stories HEIs can tell as part of their content marketing efforts to connect with their target audience. To attend to this shortcoming in the literature, the social media posts of five HEIs across four social media networking sites were analysed, following a grounded theory approach. In doing so, a taxonomy was proposed concerning what micro-stories HEIs can tell on social media as part of a well-planned content strategy for more consumer engagement.

First, some background to content marketing and HEIs is provided before discussing telling micro-stories on social media. After that, the research method and process are explained, followed by the findings, discussion and conclusion.

2. Content marketing and higher education institutions

Although content marketing is more recognised today than 11 years ago when Rowley (2008) published the first scholarly paper on the topic, there are still diverse scholarly views on what content marketing in the extant literature entails (Beard et al., 2021). Content marketing is a digital marketing strategy to create and distribute various forms of online content, for example, social media posts, videos, visuals, blogs, and white papers. This online content is not explicitly promotional of a brand but is intended to generate interest in their products or services and pull consumers to the brand. Social media plays a vital role in content marketing in that social media networking sites assist brands in connecting with consumers with their online content (Du Plessis, 2017; Taiminen & Ranaweera, 2019). While there are still diverse views, the fundamentals of content marketing, namely to create brand awareness and increase brand engagement and conversion, are relatively consistent across countries (Beard et al., 2021). Tracking the history of content marketing, Beard et al. (2021) found that it is currently a component of a much larger organisational concept and initiative referred to as content strategy, as put forward by Clark's (2016) work. For example, staff at the marketing, web design, corporate communication and public relations departments integrate organisational content across different channels with an approved content strategy (Clark, 2016). Patel (2021) also emphasises that content marketing is the "what and how", and the content strategy is the "why" of using content for marketing purposes. By using a content strategy as part of content marketing, a brand can connect and engage with consumers on social media platforms, which can be enhanced with the ability to create engaging content (Ku, 2021).

Like other organisations, marketing for HEIs has also become heavily reliant on content. Colleges and universities use content in various ways to communicate with their audiences, acquire and grow leads and drive new student enrolment (Stobierski, 2020). In this regard, staff at HEIs create and share content on social media to improve their brand awareness and create a trusting relationship (Carvalho et al., 2010). Content creation, among others, could also entail obtaining information through impromptu polls, encouraging conversations and sharing insightful posts aimed at improving interactions with online users interested in furthering their studies (Camilleri,

2020). However, Wayman (2015) warns about brands merely “pushing out” content to consumers on social media instead of pulling consumers to social media content based on their interest in the topic for more consumer engagement. This study adopts Hollebeek et al.’s (2014, p. 154) definition of consumer engagement as, “a consumer’s positively valenced brand-related cognitive, emotional and behavioral activity during or related to focal consumer/brand interactions.”

3. Telling micro-stories on social media

While brand storytelling is widely documented in the extant academic literature, telling micro-stories on social media in the context of HEIs needs exploration. Also, the literature on telling micro-stories on social media is still scant. Nevertheless, the idea of telling micro-stories on social media is not new, as six years ago, Wayman (2015) pointed out that brands should treat each social media post as a well-planned micro-story for an online brand community. She made this observation because, in her view, the social media posts of many brands lacked quality. According to seminal scholars Muniz and O’Guinn (2001, p. 412), a brand community is a “specialised, non-geographically bound community based on a structured set of social relations among admirers of a brand”. Although members are more heterogenous and more prominent, a brand community can also be established on social media where brand storytelling is more interactive and visual (Habibi et al., 2014).

Micro-stories are short-form content and can be read by consumers within seconds or minutes and have become an essential part of a content marketing strategy (Medicks-Weckler, 2020). The use of short-form content has several advantages, one of which is that it appeals to the shorter attention span of consumers of the modern digital era (Duffy, 2019). In addition, this kind of content is more cost-effective and easier to produce (Sukhraj, 2020). Already in 2014, Hardy (2014) highlighted that storytelling must become a critical component of the marketing strategy of HEIs since academic content will not be enough. This is because a higher education brand exists in “the head and mind” of prospective consumers and the content must draw attention to the uniqueness of the College or university. Therefore, it is argued in this paper that micro-stories could assist HEIs in producing more cost-effective and engaging content on social media as part of a well-planned content marketing strategy that attends to more consumer interactions.

The idea of using micro-stories to increase brand engagement was further advanced by Nichols (2018) at the CommerceNext Conference in New York, United States of America (USA). She pointed out that micro-storytelling is compelling because it does not rely on a single significant idea but instead on a collection of smaller ideas that may extend the brand's overall message. Rather than pursuing a restrictive, inconsistent focus on only one topic or theme, the micro-storytelling approach allows social media posts to feed into a broad range of topics with more frequent stories. She referred to the cosmetic brand Estee Lauder, which has used micro-stories with great success to strengthen consumer relationships (Nichols, 2018).

Currently, there is no academic research on what micro-stories HEIs can tell which will be clarified and advanced by adopting a grounded theory approach.

4. Research method

An interpretivist worldview was adopted to propose a taxonomy for what micro-stories HEIs can tell on social media. In this regard, researcher interference was not beneficial, as is frequently the case with interviews or surveys, since a more naturalistic approach was needed. Naturalistic inquiry is a method for comprehending the social environment. The researcher collected, reported on and interpreted the thoughts, feelings and behaviours of specific individuals and groups in their social and cultural contexts (Armstrong, 2012).

Because it was essential to gain a new perspective on the phenomenon, a Straussian grounded theory approach was used to analyse the social media content of five HEIs triangulated across four social media channels: Facebook, Twitter, LinkedIn and Instagram. The datasets for this study spanned 1 August 2020 to 1 August 2021 to allow for enough data. As a naturalistic and inductive methodology for theory building, seminal literature reports and grounded theory helped the researcher develop a theoretical account of general concepts while asynchronously integrating them into empirical observations or data (Glaser & Strauss, 2017). According to Ramenyi (2014), induction is a method of inference that, when combined with grounded theory, proposes an association or pattern between widely divergent sets of data or evidence without prior awareness of everything that could be learned about the specific situation and scope of the datasets.

4.1 Sample method and size

Five higher education institutions were purposefully selected because they were featured in marketing blogs for their outstanding content marketing efforts. To propose the taxonomy, it was essential to understand what micro-stories are told on social media that connect with current and prospective students. Owing to the difficulty in determining the amount of data required for a grounded theory study, theoretical saturation principles were followed. In this regard five cases provided enough data for no new ideas to become evident (O'Reilly & Parker, 2013). After cleaning the data, removing duplicates and combining data files, 20 028 tweets on Twitter, 1 755 LinkedIn posts, 1 620 Instagram posts and 1 266 Facebook posts were analysed with the NVivo Plus data analysis software.

4.2 Data processing

The research protocol put forward by Ramyeni (2014) was followed. The data was processed with the aid of NVivo software and complemented with manual searches (Hutchisona et al., 2010). The research question and the data context were the primary driving forces for which data to use (Ramyeni, 2014; Glaser & Strauss, 2017). As the data processing progressed, each piece of information was reviewed, compared and contrasted with other pieces of information (De Poy & Gitlin, 2016).

Through the continuous comparison process, commonalities and dissimilarities between information categories became apparent and an inductive theory explaining observations could eventually be developed. Thus, the questions in this study dealt with by grounded theory do not pertain to specific domains but rather to the structure of the researcher's intended organisation of the findings (De Poy & Gitlin, 2016).

4.3 Data analysis

A process of iterative coding was followed during three phases, beginning with the creation of open codes (inductive), grouping and relating them through axial coding, and finally by process of selective coding (Ramyeni, 2014; Simmons, 2019).

As part of a grounded theory approach, suppositions were developed inductively from a corpus of data through a process of constant comparisons. The micro-stories of higher education institutions (HEIs) were collected and grouped into representative concepts through open, axial and selective coding, writing theoretical memos and constant comparisons with other incidents in the data. This was done until data saturation was reached and no new concepts became evident (O'Reilly & Parker, 2013). Therefore, representation and the consistency of concepts were achieved through theoretical sampling and a vigorous and continuous coding process (Simmons, 2019).

The trustworthiness of the results was enhanced through data triangulation by obtaining data from various sources such four social networking sites to acquire a thorough comprehension of the phenomena of what micro-stories HEIs can tell. In addition, the entire process was also documented with memo writing as part of the grounded theory approach (Ramenyi, 2014).

5. Findings

After theoretical sampling, the conversations reflected the main ideas for further analysis. It was possible to build a theoretical explanation of the concepts, for example, the circumstances that led to these concepts, how they were expressed through micro-stories, the consequences that resulted from them and any dissimilarities as discussed below. A taxonomy grouped per three elements is now proposed to conceptualise what micro-stories HEIs can tell to connect emotionally with the target audience, which can be part of a well-crafted content strategy (see also Figure 1).

5.1 Element 1: Ensuring authenticity with real-life experiences

Ensuring authenticity with real-life experiences is an essential aspect of the micro-stories of HEIs. Being genuine is appealing and makes an education brand more unique to stand out from the competition (Hardy, 2014). In particular, the micro-stories of HEIs reflect the type of experiences students can expect in different locations on campus while being in class, when registered for different qualifications, or when participating in sport and/or other campus activities. The micro-stories thus focus on genuine personal accounts of all aspects of being a student at the HEIs by prominently featuring members of their communities.

Some examples included, as one current student shared, “this is an enormous opportunity that I thought was far-fetched but is now a reality!” In addition, the stories also focused on first-year student experiences. Current students and alumni shared their involvement in short-form stories through images, text and videos. For example, former students “share[d] how the college experience changed their perspectives,” while current students reflected “about their first days on campus during #college orientation” or “on starting their college career during a pandemic”. Some students were also placed in the spotlight to share their experiences with a specific field of study, for example, “Student Spotlight ’21: Studying science and conducting research inspired [name omitted] to achieve his full potential.”

The candidness of these micro-stories connects the target audience with real people whose stories they can relate to and trust about what is possible at the HEI (Hardy, 2014). The uniqueness of the HEI is also emphasised by providing a snapshot of the kinds of student experiences that can be expected. In addition, the key student experiences that were highlighted could facilitate a mutually beneficial relationship by developing positive connections as part of the online community (Jaaiin, 2020; Botha, 2021).

5.2 Element 2: Showing the target audience not only telling them

HEIs also allow the target audience to create a mental image of the quality and impact of their anticipated journey at institutions, strengthening consumer relationships (Nichols, 2018) instead of focusing on only information (Cohen, 2021). This is done by visually showcasing their world-class academic research, student facilities, and campus scenes with colourful images and short video clips during different seasons and semesters. These visuals were shared in addition to student testimonials about the impact their qualifications had on their lives. These compelling visuals and testimonials allowed the target audience to visually participate in what the HEI brand had to offer and encouraged interactions. Therefore, the HEIs identified and leveraged their existing strengths on different social media networking sites as part of their online community.

For example, one student testified: “now I can create my own fashion designs, take photographs of them, launch marketing campaigns for every collection, and improve the brand image by establishing a good relationship with our stakeholders based on effective communication, relevant content, and powerful communication tools.” Also, one HEI shared “find out more about the amazing research that our staff and students have been working on this year”; and “here's a thread of what you can expect and enjoy from your alumni team.”

By showing and not only telling with micro-stories, the target audience becomes more active participants to visualise how success can be achieved. In doing so, the target audience can be drawn to the idea of studying at the HEI by creating a mental image of the journey ahead and by inferring ideas about studying there.

Therefore, rather than releasing information about the HEI, a dynamic picture of the road ahead is painted so that prospective students and their parents/caregivers can envision themselves taking the next step because of becoming emotionally connected (Pansari & Kumar, 2017).

5.3 Element 3: Connecting the target audience to outcomes

Telling micro-stories that connect the target audience to desired outcomes by meeting their needs allowed them to consider the bigger picture by reminding them why they want to study (Hardy, 2014). Most students register to study at an HEI to become successful in life (Ahmad et al., 2016), and telling and showing resonating micro-stories about the outcomes of their studies and opportunities along the way may elicit strong emotions in their minds (see Hardy, 2014).

In this regard, HEIs told micro-stories about skills that are in demand, job and scholarship opportunities and available internships. For example, HEIs shared micro-stories to encourage the target audience: “set you on the right path when it comes to your upcoming internship & job opportunities” and “take advantage of increasing opportunities in a rapidly-changing job market.” HEIs also shared stories from students, showcasing their certificates after completing or starting specialisation courses and explaining their in-demand skills. HEIs furthermore focused on alumni “to help find and build authentic relationships that can result in more interviews” and having “essential and career skills.” Students who received scholarships also shared stories of gratitude and encouragement: “College is the first step of the rest of my adult life, so I'm so glad that I get to start it on a great note. Thank you so much.”

By focusing on the results and potential opportunities, the interest of prospective students may be attracted because of highlighting the possibilities of studying at the HEI (Stobierski, 2020).

The proposed taxonomy of what micro-stories HEIs can tell on social media as part of a well-planned content strategy is illustrated in Figure 1 below.

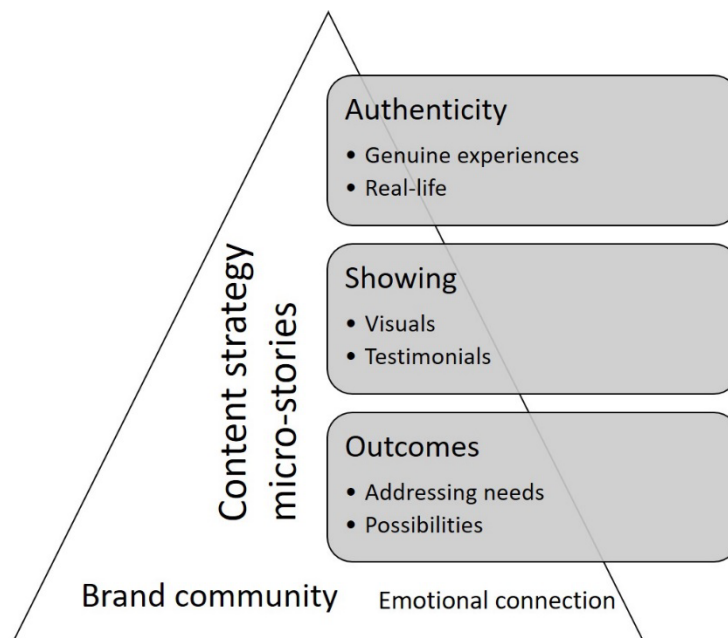


Figure 1: A taxonomy of what micro-stories HEIs can tell on social media to connect with the target audience

6. Discussion

The research question was answered by proposing three elements as part of a taxonomy that highlights what micro-stories HEIs can tell on social media to connect emotionally with their target audience.

The study showed that HEIs tell micro-stories using content marketing to ensure authenticity with real-life experiences, help the target audience to become active participants in their anticipated journey at the HEI (by visually showing not telling) and by connecting the target audience to the outcomes of their intended studies as part of an online community on different social networking sites. In doing so, the HEIs could appeal to consumers with shorter content (Sukhraj, 2020), highlight their institution's unique qualities, and visually engage the target audience (Hardy, 2014). In this regard, HEIs' micro-stories conveyed genuine experiences, allowed the target audience to picture themselves taking the next step and focused on what was essential to the target audience. The micro-stories demonstrated a degree of congruence (Cohen, 2021) and comprised a collection of smaller ideas that extended the brand message of HEIs (Nichols, 2018). Micro-stories resulted in more insightful social media posts to enhance interactions with users interested in higher education (Camilleri, 2020). It was interesting to note that it was essential for HEIs to provide information and take the target audience on a visual journey to what they will be experiencing when pursuing various degree programmes.

The study has theoretical and practical implications. In terms of its theoretical contribution, the study added to the body of content marketing knowledge with a specific focus on telling micro-stories on social media within the context of HEIs. The proposed taxonomy can also stimulate some academic debate and direct future research on the topic. Practically, the study's findings can serve as a heuristic to marketing professionals at HEIs on how to connect with a complex target audience on social media using content marketing by producing more relevant and resonating content.

7. Conclusion

In conclusion, micro-stories that convey genuine experiences allow the target audience to imagine themselves acting by focusing on important outcomes when furthering studies, resulting in more attention-grabbing social media posts to extend the brand messages of HEIs. By allowing meaningful shorter stories within a more

prominent brand narrative as part of an online community, the elements in the proposed taxonomy could serve as a starting point for HEIs to plan their micro stories for more engagement. The results also provide the basis for future research on telling micro-stories on social media with content marketing in the context of HEIs, for example, delimitating the type of engagement that micro-stories enhance while consumers' perspectives should also be studied. Some limitations of the study are that only five HEIs were included in the study and that the followers of their social media accounts did not provide any inputs. Although the results can only be generalised to the sample in the study, they are nevertheless valuable for both scholars and practitioners involved in marketing at HEIs.

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How Non-profit Art Spaces in Hanoi, Vietnam, used Facebook to Communicate, Exhibit and Promote Art and Culture During the Closure of Physical Spaces

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Abstract: The Covid-19 Pandemic has changed the nature and importance of arts communication, exhibition and promotion via social media. However, moving fully online has highlighted global inequalities in digital inclusion and access, with inherent biases towards content from the West and larger cultural institutions with sufficient technical, human and financial resources in order to survive through the Covid-19 Pandemic. This paper investigates how non-profit art spaces in Hanoi, Vietnam, developed their use of Facebook for effective communication, exhibition and promotion of Vietnamese art and culture during the first closure of physical premises. With the shift of all work online due to Covid-19 Pandemic social distancing measures, Facebook provided non-profit art spaces with a viable digital solution at a time of increased pressure to connect with the audience. Facebook provided a way to overcome challenges faced by non-profit art spaces with lack of financial, human and technical resources, by providing a free and widely accessible social media platform. The current study draws upon a digital ethnography of Facebook posts over 2 months and 50 semi-structured interviews with cultural professionals in Hanoi. The findings highlight changes in the use of Facebook, the digital strategies that were created for working fully online, and how art spaces maintained connection with the audience during the closure of physical premises between March and April 2020. This study identifies changes in social media usage patterns in three main ways: 1) the introduction of using Facebook for digital exhibition and holding live events, 2) changes in type of promotional content, and 3) changes in communication style with the introduction of an effective rhetoric of care. Together, the findings highlight changes in the nature and importance of arts communication, exhibition and promotion via social media in the cultural sector due the Covid-19 Pandemic. Developments over this time could help provide a sustainable solution to overcome challenges faced in the cultural sector in Vietnam and overcome global inequalities in access and inclusion online.

Keywords: cultural sector, Facebook, social media, Covid-19 Pandemic, non-profit art spaces

1. Introduction

Globally, the nature and importance of arts communication, exhibition and promotion via social media in the cultural sector has changed due to the Covid-19 pandemic. Digital technologies have been utilized in order to create virtual exhibitions and online tours alongside high-quality digitization of art collections. However, the route to digital transition is not the same in a developing country like Vietnam. This shows a need to understand what is happening in Vietnam, a country that faces challenges in digital transition and digital inequalities in access and inclusion. The issue here has to do with power over access and representation on art and culture on a global scale. For instance, institutions such as the Louvre Museum or the Victoria & Albert Museum can digitally display and make their collections accessible using the latest digital technologies and employ skilled staff dedicated to this role, due to the availability of technical resources, human resources and funding. This is in contrast to the issues with financial, technical and human resources experienced in Vietnam. This can impede or slow down the digitization process and, hence, further increase the digitization divide. As Chaumont (2020) argues, “preserving becomes the privilege of the hegemony; where more technological-advanced countries get to define, choose and provide cultural material for the rest of the world.”

This paper investigates how non-profit art spaces in Hanoi, Vietnam, used Facebook to communicate, exhibit and promote art and culture during the first full closure of physical art spaces due to the Covid-19 Pandemic. With the shift of all work, events, and audiences online, Facebook provided these non-profit art spaces with a viable digital solution at a time of increased pressure to connect with audiences, by providing a free and widely accessible social media platform. The use of social media has become a popular choice amongst non-profit art spaces as the main digital platform for work, as it can help overcome challenges they face with lack of financial, human and technical resources. These challenges are most acutely faced by non-profits in Hanoi (in comparison to the commercial galleries or state museums) and, moreover, this has become more acute during the Covid-19 Pandemic with increased pressure to find sources of funding and ways to maintain connection with the audience. Hence, this was a time when non-profits were forced to become more innovative and strategic in their use of social media to connect with the audience and promote themselves in order to survive.

These art spaces' Facebook posts were couched in an altruistic, therapeutic rhetoric of care, in order to foster trust and maintain engagement with audiences. The messages included emotive appeals to 'stay safe' and 'stay together as a community' as well as encouraging the audience to use artwork as a tool 'to console' and 'for the health of the community'. The language used related to 'pandemic rhetoric' used by governments and healthcare sector (Offerdal et al. 2021; Mangiò et al. 2021; Ivic 2020). This relates to the affordances of social media for the recontextualization of content (Wodak and Reisigl 2009; Muwafaq, Sumarlam and Kristina 2018), particularly in relation to the Covid-19 Pandemic. Broadly speaking, the use of social media in the arts has increased over the past decade (Janner et al. 2012; Turrini et al. 2011; Magdalena and Sundjaja 2019), with platforms taking on a participatory nature and allowing for co-creation. While a lot of research looks at this from the visitor perspective (Magdalena and Sundjaja 2019; Janner et al. 2012; Turrini et al. 2011; Magdalena and Sundjaja 2019), there is less from the perspective of the art spaces. Yet, this perspective is especially important at a time when art spaces are being forced to adapt to new regulations and ways of working and, subsequently, must find effective ways of communicating with the audience and creating experiences digitally.

The current study draws upon a digital ethnography of Facebook posts conducted over 2 months between March and April 2020 and 50 semi-structured interviews carried out with cultural professionals in Hanoi between May 2020 and May 2021. This methodology was used to address the question: How did non-profit art spaces maintain connection with their audiences during the first full closure and first full transition to online work? This paper identifies 3 main changes in social media usage patterns: 1) the introduction of using Facebook for digital exhibition and holding live events, which has transformed their Facebook pages into a community center and experiential 'living' space; 2) changes in type of promotional content, including promotion using artwork, promotion of the art space using self-taken diary-like photographs, and community promotion in order to showcase the work of artists and other art spaces in the art community across Hanoi as well as more promotion of international events and work opportunities; 3) changes in communication style, which became more intimate and caring, with the introduction of an effective rhetoric of care to gain trust and maintain connection with the audience through the closure. These developments in the use of Facebook, which came about at the start of the closure of physical spaces in Hanoi, have led to new parameters of trust, care and levels of intimacy, emotion, and disclosure with the audience. It has also changed the way art is published, displayed and exhibited to audiences as well as changing the nature of promotion. As a result, Facebook has also acquired new functions, becoming a community center and a provider of cultural experiences.

2. Challenges for Non-Profits in the Cultural Sector in Vietnam

Non-profit art spaces in Hanoi face challenges in their work with lack of human, technical and financial resources, which hinder the pace and quality of digital transition. These challenges prevent them from being able to fully harness the opportunities of the latest digital technologies, apps and software for the exhibition and dissemination of art. Furthermore, non-profits do not receive state funding for digitization projects, for the development of digital platforms, for training, or for employment of specialist digital staff. As Participant 16 from Gianh says, 'there are only two of us here so things cannot be done as quickly as we'd like.' Instead, they must rely on securing funding for each project through international councils in Vietnam, such as Goethe Institute or British Council. However, as Participant 18 from Cá says, 'the amount of funding from international councils has been reducing as Vietnam develops.' As Participant 2 from Phò Dày says, 'challenges include the need for infrastructure for digitization. It's a high tech field that needs skill and budget.' Participant 11 from Thai Binh says 'the challenge is with human resources'. Due to this, they rely more on social media as it is free and they choose Facebook because it is the most popular platform in Vietnam among the general public.

It is also important to examine the work of non-profit art spaces as they operate with strong arts-centred beliefs and their work is about providing social good, educating the public, and providing recognition of and raising the value of the art community. However, there are external pressures with sourcing funding and sponsors. This means some non-profits have to act more like a business on social media and it is under this work environment that they convey their messages to their audiences online (Lee 2005; Yue 2021).

These challenges have become more acute during the Covid-19 Pandemic, as non-profit art spaces fall outside of government relief funds. Government staff and state institutions in the cultural sector in Hanoi have been supported financially and kept in a job throughout the Covid-19 Pandemic. Conversely, independent organizations have not had such support, as they fall outside of the remit for help by being non-profit organizations. As Minh (2020) reports, 'the government has passed a VND62 trillion (\$2.6 billion) financial

support package for poor people and businesses affected by the Covid-19 pandemic. The package, approved by Prime Minister Nguyen Xuan Phuc, targets six categories of individuals and businesses.’ However, non-profit art spaces do not fall within any of the six categories. As Yue (2021) argues, ‘amidst the Covid-19 pandemic, nonprofits’ available resources and budgets are stretched even thinner[...]and it becomes crucial for nonprofits to create virtual communication that is engaging and effective.’ Hence, non-profits have been leading in the creation of engaging and effective content online. Furthermore, they have made developments and transitions themselves, independent of government support, as grassroots projects or as individual projects with funding from international councils.

3. The Affordances of Social Media Platforms for Arts Communication, Exhibition and Promotion during the Covid-19 Pandemic

Globally, the use and importance of social media platforms has changed with work in the cultural sector due to the Covid-19 Pandemic. The affordances of social media for arts communication, exhibition, and promotion, which has been felt particularly during the Covid-19 Pandemic, is fourfold:

Firstly, the affordance of social media for providing a sense of community (Gere 2012; Sadiku et al. 2017) is relevant for the time during the Covid-19 Pandemic, as audiences have required the feeling of community and togetherness. This links to Gere (2012) who discusses how digitality has replaced the sense of community that has been lost in society. Gere (2012: 2) discusses how the digital provides a pseudo-sense of touch, arguing that new technologies ‘invoke tropes of touch’. This has been especially important during the Covid-19 Pandemic, as social media platforms have become spaces for immersive experiences that have been helpful in order to overcome the lack of ‘touch’ and in-person community events at this time.

Secondly, art spaces now use social media platforms to provide content and experiences in order to facilitate community connectivity and participation. As Gere (2012: 1) argues, social media platforms allow ‘connectivity, collaboration, communication, community and participation’ (Gere 2012: 1). Consequently, social media platforms are now dynamic and experiential ‘living’ spaces, used for the display of art collections and holding events. This is what Miles (2018) terms ‘digital staging’, whereby a mixture of text, image, promotion and events actually enhances art content, by providing an interactive, active experience for the audience. Miles (2018) argues this ‘brings the audience closer to the process and intensifies their experience of it.’

Thirdly, social media platforms allow for the combination of different mediums and types of content, which means content can assume new meaning or can be applied to new contexts. This also relates to the use of rhetoric in communication on social media (Nortio, Niska and Renvik 2021; Sparby 2017; Wahlstrom and Tornberg 2020), whereby certain messages and language were applied purposefully for a certain reason, for a certain affect, or to align with a particular context. This can be seen in the ways that non-profit art spaces in Hanoi displayed art collections, shared episodic narratives of their daily lives through photographs, and recontextualized artworks and event announcements in relation to Covid-19 Pandemic updates. As Wodak and Reisigl (2009) argue, content can be recontextualized away from its prior context on social media and, as Muwafiq, Sumarlam and Kristina (2018) argue, this recontextualization can result in content acquiring new meaning.

Fourthly, social media platforms provide a conducive space for promotional communication. As Hausmann and Poellmann (2013) argue, social media platforms can spread information and broadcast messages effectively and efficiently and, in particular, Facebook ‘allows for fast reactions, exchange of short messages and dialogue with target groups can happen quickly and easily.’ Arts marketing on social media is also becoming increasingly popular amongst cultural institutions as a way to engage audiences (Wiid and Mora-Avila 2017). In addition, Stanoeva (2019: 1) argues ‘social media is a very good way to engage and inform audiences in their activities and events via advertising, PR and promotions.’

4. Method

4.1 Methodology

A digital ethnography was conducted on 7 non-profit art spaces’ Facebook pages prior to and during the first closure of physical art spaces in Hanoi. This was conducted over 2 months between 27 February and 27 April 2020. This time period was chosen purposefully to include the period just before and during the closure in Hanoi. This allowed an observation of the changes in communication, types of content, and use of Facebook.

The methodology also included 50 semi-structured interviews with cultural professionals working in Hanoi. Interview participants were initially recruited based on the researcher's links with industry partners in the cultural sector. Snowball sampling was used in order to recruit further interview participants. The interviews were carried out between May 2020 and May 2021. 7 of the interviewees were the co-founders or curators working at the non-profit art spaces included in the digital ethnography sample. The other 43 interviewees included curators, museum directors, museum communications directors, university and art school directors, auction house directors, visual artists and commercial gallery directors. Respondents were asked about how they changed their way of working after closure, their new digital work practices, event organization online, and changes in their way of using Facebook. It was important to include a wider range of sectors in interviews in order to understand the developments in digitization and work practices online across the cultural sector in Hanoi, inclusive of different sub-sectors, including commercial galleries, art auction houses, state museums, as this allowed an understanding of the differences in work practices online, state funding and its impact on use of digital platforms. Informed consent was gained prior to interviews and ethical approval was granted for the research project. Each participant's institution and name has been de-identified to reduce any employer/employee risk. They have been given a participant number and the institution has been given a pseudonym in the Results Section.

4.2 Sample Population and Digital Platform

7 independent, non-profit art spaces were selected as the sample for the digital ethnography. All 7 operated out of physical premises in Hanoi prior to the lockdown. This was an important criterion as it meant that all work practices moved online. These art spaces were chosen using purposive sampling, providing a particular segment of the cultural sector in Hanoi.

Facebook was chosen as the social media platform for analysis because it is the most commonly used social media platform for work in the cultural sector in Hanoi and is the most commonly used social media platform amongst the general public in Vietnam. Facebook is the most popular social media platform in Vietnam for the general public and work in the cultural sector. While this means there is a large potential audience, especially the young Vietnamese audience, many interviewees say it is not professional enough. The tension is they feel they have to be on Facebook and feel they have to share everything. As of January 2021, there are 68.72 million internet users in Vietnam. Internet penetration is 70.3%. 91.7% of internet users in Vietnam use Facebook. 98.8% access Facebook via smartphones (Datareportal 2021). The selection sample of Facebook posts represents only a portion of all the posts during this time period. As Banaji and Buckingham (2013: 15) argue, 'the Internet is a decentralized medium, and it is impossible to gain a comprehensive picture of everything that is available online, much less construct a representative sample of it'. Hogan (2018) argues that it is not possible to see everything that is posted on Facebook, which provides limitations for researchers and research carried out on Facebook. Furthermore, 'social media sites use friendship connections to power key functionality for users, such as the organization of a newsfeed', meaning that users never see everything. As Hogan (2018) argues, APIs close off access to certain data and 'work as technological gatekeepers' to data, posts, and info, as Facebook 'sorts and filters these posts'.

4.3 Data Collection and Analysis

Data collection of Facebook posts was collected once each week and data analysis was conducted in May 2020. The study collected each individual post on the 7 art spaces' Facebook walls (n=117) just prior to and during the first closure in Hanoi, from 27 February to 27 April 2020. Each Facebook post acted as one unit of analysis. All posts from this period, which were visible at the time of access for the researcher, were analysed. The study also included each individual post from the 7 art spaces between 27 February and 10 March (n=32) just prior to closure and between 11 March and 27 April (n=85) during the closure of physical spaces. The posts were coded manually due to the relatively small sample size.

5. Results

The respondents said that the closure of their physical premises and full transition online had an impact on the following 5 aspects in relation to their use of and perceived function of Facebook for work:

(1) Respondents said there were advancements in their skills and understanding on how to use Facebook for communicating with their audiences, for sharing artworks and art collections, and for holding events.

'we used the closure to exploit the advantage of online media platforms like Facebook.' (Participant 5 from Ba Thin).

'we used Facebook during closure to develop and expand an information system, image and online exhibition project on Facebook.' (Participant 7 from Bac Giang).

'previously, Nho Que carried out several similar activities, but they had not reached the thorough and synchronized stage.' (Participant 3 from Nho Que).

(2) Respondents said they had time to trial new types of content on Facebook, with the introduction of art projects designed specifically-for-Facebook and existing artworks or art collections published directly to and then exhibited on Facebook.

'we trialed online workshops.' (Participant 11 from Thai Binh).

'we trialed artist videos, where we asked artists to video themselves in their studio or at home with their artwork.' (Participant 6 from Luc Nam).

'we took Covid-19 lockdown as an opportunity to promote more digital content, like selling e-books instead of traditional books, livestreaming events, and art talks via Facebook.' (Participant 46 from Thu Kay).

(3) Respondents said that learnt how to promote artwork, events and their art space. They also said they learnt how to tailor content to the art community and general public as well as to include promotion of themselves, other art spaces across Hanoi, and about international events. During closure, they had time to consider more about their external image and how they should promote themselves in order to best engage the audience.

'Before we are indifferent, we do not care[...]Now we have to be creative about how to survive better. So, we are forced to upload more stuff[...]We are no longer indifferent[...]Suddenly now we believe that this is needed so that people know more about us.' (Participant 21 from Hai Dung).

(4) Respondents mentioned the new purpose and importance of Facebook for maintaining connection by sharing messages of hope.

'we continued to maintain connection with the audience by promoting a dynamic and creative spirit throughout organizing art events, like workshops and talks in the form of online, to help spread positive energy in the time of instability.' (Participant 12 from Thao).

(5) Respondents said this time has allowed them to diversify the function of Facebook. Prior to closure, respondents say it was used for news and announcements. Conversely, respondents said they are now using Facebook as an experiential space for the exhibition of art collections and cultural experiences.

'we try to make the digital space a real experiential space, with uploading more art and doing virtual exhibitions, tours, with the same feeling as with the event in person, take part and ask questions.' (Participant 20 from Ben Hai).

'our digital platforms have developed and now can become exhibition spaces.' (Participant 7 from Bac Giang).

The findings from the digital ethnography also demonstrate changes in communication, exhibition, and promotion of art and culture on FB during the closure in comparison to prior to the closure. This is visible when comparing the types of posts prior to and during the closure. Prior to the closure, there were 4 main types of posts (with associated content) on Facebook across the 7 art spaces:

1. Visual: photographs or videos of exhibitions and events that took place in the physical art spaces, accompanied by a short text.
2. News: sharing links to news and media articles about the art space's activities.

3. User-generated content: quotations from the audience about the art space's events.
4. Announcements: announcements of event openings.

During closure, there were 4 types of posts (with associated content):

1. Emotional and Inspirational: artworks alongside text that conveyed messages of hope, togetherness and connection.
2. Informative: artworks alongside messages about Covid-19 Pandemic updates or social distancing measures and announcements their closure.
3. Experience: exhibition of artworks and holding events like livestreaming workshops or artist videos.
4. Self-promotion: photographs of the art space alongside messages to share messages of hope and togetherness. Also, this included photographs to 'throwbacks' of past events, which were re-posted in order to share messages of hope that such group events will happen again.
5. External event promotion: information about international virtual events for the general public and work opportunities for the professional art community.

6. Conclusion

The findings show there have been changes in the use and importance of Facebook for arts communication, exhibition and promotion during the closure. This paper has identified 3 main changes in social media usage patterns: 1) the introduction of using Facebook for digital exhibition and holding live events, which has transformed their Facebook pages into a community center and experiential 'living' space; 2) changes in type of promotional content, including promotion using artwork, promotion of the art space using self-taken diary-like photographs, and community promotion in order to showcase the work of artists and other art spaces in the art community across Hanoi as well as more promotion of international events and work opportunities; 3) changes in communication style, which became more intimate and caring, with the introduction of an effective rhetoric of care to gain trust and maintain connection with the audience through the closure, which was visible in the messages alongside artworks, photographs of the art space, promotion or links to their own and external events.

The Facebook posts across all 7 art spaces shared some key stylistic features during closure. This can be seen with artworks positioned alongside information updates regarding the Covid-19 pandemic and closures of the art spaces, artworks with messages in line with community values to 'stay together' or 'get through this together', and artworks positioned alongside accompanying text to console and inspire the audience. There was also a sense of care for the professional art community and general public through their promotion, with announcing events or calls for work abroad for professional artists, promoting previous events to create emotion and feeling of togetherness, and providing audiences with links to international resources for virtual museum tours or film archives. This shows there have been changes across the sector and a marked change due to the full transition online. There were posts directed to the general audience and professional art community as well as more links to international events or links to work opportunities for artists. There was an increase in the amount of art content and art projects made specifically for and published directly on Facebook, responding to artists' needs for work as well as the general audiences' needs for experiences and events.

There was an introduction of more types of promotional content and a closer synergy between art and promotional content, reinforced by the way all posts applied a rhetoric of care. This time allowed cultural professionals to know how to promote their events, how to promote artwork, and how to promote their art space in a 'caring' way. There was also an increased amount of international event promotion, with Facebook pages becoming community centers for further information, work opportunities or events across Hanoi and internationally.

The function of Facebook changed for the art spaces, art community and audience at this time. For the art spaces, it has changed in terms of what kind of and how content was disseminated. Facebook transitioned from solely a place used for sharing news, announcements, and promotion to a space for providing experiences and information on Covid-19 updates or work opportunities. This has transformed these Facebook pages into hybrid spaces, with the inclusion of different types of content, and an active space for experiencing content, events and exhibitions as well as providing active dialogue and exchange between the art space, the professional art community, and the audience. This provides new ways of presenting and displaying and experiencing art. Furthermore, the work that has been done during closure has diversified the function of Facebook into a more

professional platform and a viable option for digital experience and communication in the future within the cultural sector.

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Applying Social Media for Studying Challenges of COVID-19 for Students

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Abstract: This conference paper contributes to understanding opportunities to use social media for identifying priorities and challenges of students from different countries in online and face-to-face learning and networking activities during the COVID-19 pandemic. The COVID-19 crisis has resulted in more intensive online learning and hybrid learning applications in higher education. When there is a shift from a teacher-controlled class environment to a more learner-controlled social media, the role of the educator becomes more of a facilitator. The main research question in this paper is: How social media activities facilitated by instructors can support international learner-driven online networking and knowledge sharing during the COVID-19 pandemic? Our action research aim was to reveal learning preferences and networking challenges that students do not usually share in a class environment. Despite critics of Facebook and the increasing popularity of alternative social media among young people, Facebook groups offer tools for discourse between different age cohorts and conduct polls to assess alternative educational tools and COVID-19 administrative restrictions that influence student mobility and socialisation. To study the challenges of COVID-19 for students in online learning and in physical interaction, we applied netnography methods in combination with interventions by educators to study students' preferences in the Facebook group Challenges in online learning – COVID-19. Among the most popular Facebook polls for students were questions about group work and exam arrangements during the pandemic and *work from anywhere* practice implications, cross-border mobility regulations during the COVID-19 pandemic and reasons why some students do not participate in web conferences using their computer cameras. Students shared the view that flexible online *work from anywhere* solutions will be for many organisations among trends that will remain after the COVID-19 crisis is over. Some students, both from Europe and developing countries, believed that this trend would improve job opportunities for the workforce living in low-cost countries. Facebook group enabled international knowledge sharing, where both students and educators could share their views on many issues that influence the rapidly changing online learning and networking environment.

Keywords: social media, knowledge co-creation, COVID-19, networking, Facebook group

1. Introduction

The Covid-19 crisis has resulted in more intensive use of online learning and hybrid learning in higher education. Studying the learning experience of students reveal the role of online learning technologies (Ellis and Bliuc, 2019). Educators face the challenge to engage students in self-regulated learning (Russell et al, 2019). That is even more topical in the situation, where face-to-face classroom activities are restricted during the pandemic and students face cross-border mobility and socialising restrictions. When adopting educational technologies, a poor reflection of students' cultural and cognitive differences limit learning (Akinrinola et al, 2020). Some researchers see online learning as a panacea in the time of the COVID-19 crisis (Dhawan, 2020) but there is evidence of a lack of socialisation as the result of rapid transforming face-to-face learning to e-learning (Piyatamrong et al, 2020, Simamora et al, 2020). Universities also face conceptual and technical challenges of hybrid classrooms, where during the COVID-19 pandemic, some students participated in classes conducted at the campus, and some were involved online (Triyason et al, 2020). Nugent et al (2019) explain the importance of discussing with students their emotions around learning and how emotions can be regulated to achieve learning goals. Online learning and networking are related to connectivism (Goldie, 2016; Jung, 2019). Ability to see connections between fields, ideas, concepts and people is a crucial result of connectivist learning activities.

Understanding choices and decision-making is itself a learning process (Korkmaz and Toraman, 2020). Educators at universities can engage students to express their views on social media to explain essential learning, networking, health policy and individual behaviour choices during the pandemic. The role of social media in education has been discussed already several years ago (Kiser, 2013). The role of student-generated social media data and content has been studied for university branding and student recruitment purposes (Bolat and O'Sullivan, 2017). However, there is a research gap in studying the social media cooperation of educators and learners to reflect on the COVID-19 crisis. This paper contributes to understanding how students and university trainers from different countries can be involved in knowledge co-creation in social media. We reflect this process by analysing content creation in a Facebook group from March 2020 until December 2022. The aim of this reflection is to answer the research question: How social media activities facilitated by instructors can support international learner-driven online networking and knowledge sharing during the COVID-19 pandemic?

2. Literature review

Some researchers point out that emotional engagement in social media as multitasking during active learning in the classroom may reduce learners' cognitive processing capacity, causing poor academic performance (Demirbilek and Talan, 2018). However, Thompson (2017) encouraged using digital tools such as social media in line with the flipped classroom approach to making the learning process more interactive. Social media can support international collaborative learning as an enabler of learner-driven online networking and knowledge sharing. Learner-driven learning is a broader process than studying a course and is influenced by the socialisation opportunities of learners. Song et al (2017) explain how social networking sites can facilitate informal learning both inside and outside a classroom. Sobaih et al (2020) treat social media use as a response to COVID-19 in higher education for sustaining formal academic communication in developing countries. These researchers report that students perceived social media groups as more interactive, easy to use and more valuable than such online learning platforms as Google Classroom and Zoom. Online social media helps overcome space and time zone barriers between countries, enabling global online networking between learners representing different cultures. COVID-19 crisis has facilitated both initiatives to create a better virtual environment for university-driven online and hybrid learning (Kurbakova, Volkova and Kurbakov, 2020) and online student-driven informal information sharing. Dania and Griffin (2021) use the term "collaborative learning communities" when studying social media and related collaboration solutions in the classroom. Social media can also give input to collaborative hybrid learning.

Benson and Filippaios (2015) explain the role of collaborative competencies in professional social networking that can be developed in higher education. Collaborative learning experiences allow more delegation of decision-making to students that can use various knowledge sources. It is focused on socialising students into new communities, cultures and the in wider World (Veldman and Kostons, 2019) and on knowledge co-creation (Vuopala et al, 2018). International collaborative learning assumes the involvement of students representing different nationalities and societies. Sula and Elenurm (2018) have studied how students use networking opportunities for cross-border learning. Young students rely equally on online and offline networking ties, but they often do not have a clear vision of using both weak and strong ties in their networks at different stages of their self-development. Online and offline collaboration ties are mutually complementary, and collaborative university education can create synergy between these ties. Yang and Lin (2014) explained that Facebook offers members social, hedonistic and epistemic values, but users with different aims of joining and belonging to such social media supported networks also draw different benefits from it. When there is a shift from a teacher-controlled environment to a more learner-controlled environment, the role of the educator becomes more of a facilitator (Ali, 2020). Active involvement of students in social media, where both educators and students create online content, is one option to practice the facilitating role of educators.

Van Laar et al (2018) treated online networking skills as an assumption for digitalisation. They recommended developing these skills in several directions: creating communication channels for cooperation, choosing the right goals and intensity of communication, creating own online profile, training in self-expression and critical thinking, information management, creativity and problem-solving. The digital citizenship framework is a departure point for understanding the implications of social media for trust and mutual contributions to collaborative learning (Kim and Choi, 2018). In the COVID-19 context, digital citizenship is essential for understanding the differences between fake news and meaningful truthful news, especially to overcome unreasonable fear during a global pandemic (Candel, 2020). A digital citizen should discuss and assess alternatives in social media collaboratively, even in a crisis situation. Social media communities contribute to social change (Yannopoulou et al, 2019). Comparing different opinions on social media without aggressive reactions is a way to promote pluralism and offer ideas for change. DeSimone and Buzza (2013) have explained the role of pedagogy in developing critical thinking skills. Using social media to create situations, where students have to choose in polls between several views and action principles is a way to contribute to critical thinking.

3. Methodology

Netnography consists of a broad-based study of social interaction and online experience from a human perspective (Morais et al, 2020). Netnography has been widely used in marketing research that seeks to analyse social media content to reveal habits, preferences and meanings, structures and social behaviours and needs of users. However, it also develops solutions to problems of contemporary society through the analysis of social media (Kozinets, 2018). In recent years, this method has been used to analyse social media content in the academic environment, including Facebook posts of academic libraries (Al-Daihani and Abrahams, 2018) and

high academic achievers (Hudin et al, 2020). Pedagogical content created by teachers in a Facebook group representing several disciplines has also been studied using netnography (Liljekvist et al, 2020). To study the challenges of COVID-19 for students in online learning and physical movement and interaction, we applied netnography methods in combination with interventions by educators to engage students in social media for discussing these challenges. The role of educators in our research was not limited to observing a Facebook community. Educators also initiated discussions about online learning challenges and created polls for group members. The focus was on knowledge co-creation that involved students, educators and experts interested in discussing new trends in online learning and the challenges of their application during the COVID-19 crisis.

At the beginning of the COVID-19 pandemic, on 25th March 2020, the Facebook group *Challenges in Online Learning – COVID19* was created. This group aims to bring together the international community of learners and teachers to discuss the challenges of learning and teaching online during the COVID-19 pandemic. Facebook group discussions have been mainly focused on e-learning tools, online networking practices and problems, COVID-19 spread and related administrative measures and the behaviour of people in physical space during this pandemic. During eight months of the first pandemic year until December 2020, the number of group members increased to 456. At the end of December 2021, this Facebook group had 570 members. Each month some new members join the group, and some leave. Students have been encouraged to join the group during our courses in Estonia, Finland and France, and the share of these students is about 60% of the Facebook group members. Erasmus+ exchange students from Western Europe and students from some African and Asian countries have also been active in this group. Educators from Estonia, Albania, other South European countries, and India have shared their views about online learning. Potential members are asked to accept research-based group rules, namely posting evidence-based messages, questions, and reflections to understand challenges and solutions in online learning and networking during the COVID-19 pandemic. Polls and posts in the group had four main topic areas: online networking practices, online learning process and tools, administrative measures, and people's behaviour in the physical space during the COVID-19 crisis.

When joining the group, they see that the primary research focus of the group is to understand how coronavirus and measures to limit its spread influence face-to-face (in physical space) and online communication, learning and networking practices in different cultures. Students from several countries participating in different business and management courses were encouraged to find the most topical posts and related polls in this Facebook group and express their opinions about the group's issues. Thematic analysis of students' comments and their answers to polls that were created in the Facebook group was focused on three questions:

1. What issues in online learning and networking do students consider important to discuss?
2. What are the differences in their opinions related to online learning and networking choices in the context of COVID-19 restrictions that were reflected in Facebook polls?
3. How can activities in this Facebook group contribute to courses on management, entrepreneurship and international business?

4. Online learning, networking and physical interaction challenges for students

Netnographic analysis had three steps. At first, we identified which Facebook polls were the most popular for members of this Facebook group. After that, the popularity of alternatives that these polls presented was identified. Finally, the thematic analysis of posts and comments on these posts was conducted, and connections between polls and posts were analysed.

Students participating in different business and management courses were encouraged to find the most topical posts and related polls in this Facebook group and express their opinions about the group's issues. Among 48 polls that were created by educators and by some students in the Facebook group until December 2021, the most popular were the polls that are related both to the learning process, to *work from anywhere* practices and also to the changing administrative rules of cross-border mobility and self-isolation needs during the pandemic (table 1).

Students supported the application of quizzes for online exams and were less positive about combining quizzes with online oral exams or applying team-based exam projects in online learning. Seventy-three students commented on their answers to this poll. Later class discussions indicated that many students were unprepared for online teamwork challenges and considered this a problematic way to prove their lessons learnt during the pandemic.

Table 1: Most popular Facebook polls 2020 March -2021 December

The essence of the poll and its creation date	Number of voters	Preferred alternatives
What is the best way to assess learning results during the COVID-19 pandemic? (25.10.20)	197	Online quizzes -130 votes
Is 14-day self-isolation needed for persons arriving from countries where infection per 100 000 people is higher than 16? (04.09.20)	170	Yes – 147 votes
What type of self-isolation for persons arriving from European countries, where infection per 100 000 people is higher than 25? (27.09.21)	147	If the test on arrival is negative, then 7 days limited self-isolation – 101 votes
Which are the best online breakout room tools?	137	Zoom -51 votes, MS Teams – 41 votes; BigBlueButton – 35 votes
What are <i>work from anywhere</i> future prospects?	130	This trend stays after the pandemic – 81 votes
Why do students often not use their camera during online conferences?	123	They feel less tense not showing their face - 83 votes
Why do students prefer WhatsApp for online networking?	116	WhatsApp works well in mobile phones - 58 votes; It is handy for receiving an instant response – 31 votes

Poll results demonstrate that students see face-to-face networking and cross-border mobility as relevant to their self-development. Learning for young people is a broader social process than studying university courses, and self-isolation can lead to stress. However, students generally accepted COVID-19 restrictions imposed by authorities even if these restrictions limited their mobility and student life. During the first year of the COVID-19 pandemic, students were generally satisfied with the 14-day self-isolation regulation for cross-border mobility that can be shortened by giving two negative COVID-19 tests. At the same time, many students expressed support for administrative measures for disbanding self-organised events such as the European Rainbow Gathering during the pandemic. During the second wave of COVID-19, students living in Central and Western European countries that had applied strict measures to restrict the spread of infection even supported fines. Students from Estonia and Nordic countries preferred voluntary wearing masks supported by social control and not monitored by police. As governments in the European Unions had relaxed cross-border mobility restrictions in 2021, students supported more relaxed self-isolation rules and criticised more strict entrance rules of Australia and the USA in their comments.

The majority of students shared the view that flexible *work from anywhere* solutions will be for many organisations among these future trends that will remain after the COVID-19 crisis is over. However, students did not have the same opinions about the economic and social implications of this trend. Some students pointed out that it will increase income differences between manual and knowledge workers; others stressed that technology would take over many obligations and jobs would be lost. Some students from Europe and more from African and Asian developing countries believed that this trend would improve job opportunities for the workforce living in low-cost countries. During class discussions, students agreed that work from anywhere is a trend that will increase the role of online learning communities in organisations.

Students were generally more positive about their Zoom conference experience compared to Microsoft Teams online meetings. However, some students pointed out in their comments that MS Teams integrates online meetings better with sharing documents and with other cooperation tools. An interesting exchange of posts and comments resulted from the poll about possible reasons why some students do not participate in web conferences with their computer cameras. Among the reasons for not showing their face during online learning sessions, 67% of students voted for the poll answer option added by a student from an African country “They feel less tense not showing their face”. Some mainly European students voted for the answer, “They are doing multitasking and actually not participating 100% in class discussions”. Two students pointed out that if all students do not use a camera during an online conference, also those using their camera when presenting are more stressed. Some French and Finnish students, however, pointed out in their comments that video use is essential for online networking. They stressed that leaving the comfort zone in online communication for future careers is essential.

Students were less active in answering and commenting on these polls that were not directly related to their own social isolation or international mobility but were asked to explain differences in infection rates in countries

with low- and high vaccination levels. At the same time, no anti-vaccination opinions were expressed in this Facebook group, as it has often happened on social media in recent years. Before summer 2020, trainers shared several posts about specific sources and tools for online learning in this Facebook group and received comments from other professionals acting in this field. However, it was easier to engage students to comment on polls than on informative posts, where alternatives for voting were not presented. Later more polls were used to initiate comments for discussion.

5. Contributions of the Facebook group to collaborative learning at universities

Learning outcomes of courses on management, entrepreneurship and international business are linked to teamwork and networking skills. COVID-29 crisis has focused the development of these skills even more than before on online collaboration. Student contributions to the Facebook group served as an input for collaborative learning during management and entrepreneurship courses when discussing the online learning tools and how to use social media for knowledge sharing and business networking. This input enabled reflective discussions, where students had the opportunity to share their thoughts about the changing online learning and social media landscape. Lockdowns and restrictions on face-to-face socialisation have been a challenge, especially for the young generation. Educators have to understand the social learning implications of these challenges that restrict face-to-face contact of young people and their international mobility. University faculty can act as initiators in developing social media communities, where students can internationally share their views about learning and networking during the COVID-19 crisis. Students' priorities and content creation in such online communities also give input for research on opportunities to develop further synergy between university education and self-directed knowledge acquisition in social media.

Comparing Facebook online poll results and related comments by students during follow-up classroom and online discussions allows educators to understand students' different mindsets influenced by their national culture, earlier social media user and work experience, now expressed in Facebook posts and poll votes. Such classroom discussion enabled us to use social media examples to explain the importance of diversity and respecting different viewpoints in the international collaborative learning process.

Discussions also demonstrated interconnections and differences between social media and e-learning in Moodle, MS Teams, Blackboard or Canvas as collaborative learning modes. Facebook group enabled more emotional self-expression compared to these learning environments. Students had more opportunities to post on issues that were important for them than in a usual e-learning course. At the same time, the Facebook timeline resulted in students focusing on more recent discussion issues. Further efforts are needed to get more students to create their own polls, to propose new ways to use social media for business networking, and discuss future trends in the new normality after the COVID-19 pandemic.

6. Conclusions

COVID-19 crisis has complicated established academic practices in many disciplines but at the same time created new incentives for higher education to integrate different online learning and social media tools to initiate student-friendly collaborative learning spaces, where students from different universities and countries can compare their learning experiences. We agree with Rapanta et al (2020) that experience with different online learning tools will increase the readiness of both teachers and students for the post-digital era, where organisations are implementing disruptive technologies using mobile, cloud and artificial intelligence applications. Social media users need to set their priorities of self-expression, knowledge acquisition and networking and choose these online communities that match their socialisation and self-development needs. University educators should not see the social media involvement of young people as an activity competing with their academic learning. They should combine social media use and e-learning by offering students examples of social media applications for learning and research. The paper contributes to the literature on collaborative learning by explaining practical opportunities to use social media in the COVID-19 crisis context for blended learning. Netnography, in combination with action learning, has demonstrated how social media activities facilitated by instructors support international learner-driven online networking and knowledge sharing during the COVID-19 pandemic.

Limitations of the present research are related to educators' active role in promoting the Facebook group among students. Educators' roles were not limited to observation in line with the passive ethnographic research that has adapted classical content analysis principles to online texts. Educators actively introduced polls to facilitate

learning in the Facebook group, where students made their choices. However, students were more active content creators and commentators than in traditional sociological surveys, where respondents usually cannot develop survey questionnaires that they have to fill in. Further research is needed to collect data for statistical analysis in a more representative sample of different countries to reveal and compare specific online learning challenges influenced by cultural differences and students' social media and work experiences.

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Online Hate Speech: User Perception and Experience Between Law and Ethics

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Abstract: ‘Governance’ of online hate speech (OHS) has become a buzzword in social media research and practice. Inputs from a plethora of stakeholders, international organisations, platforms, governments, and NGOs are discussed by academics, (social) media executives and lawmakers around the globe. In these discussions, the opinions of users remain underexplored, and data on their experiences and perceptions is scarce. The present paper focuses on five case studies of model OHS postings in the context of the Austrian OHS governance system. For these case studies, 157 respondents assessed in an online survey whether a posting should be deleted according to their own ethical standards, whether they believed that this posting was currently punishable under Austrian criminal law, and whether it should be punishable. Furthermore, respondents indicated how they deal with OHS in their daily lives when confronted with it on digital platforms. Using social sciences, human rights, and criminal law approaches, we found that OHS-awareness among our respondent group was high and that there is a preference for state regulation, i.e., punishability under national criminal law, and for the deletion of OHS postings. Simultaneously, readiness for counter-speech and reporting of postings for deletion remains relatively low. Thus, OHS postings are hardly ever answered directly or forwarded to specialised organisations and/or the police. If OHS postings are reported, it is mostly done via the channels of the respective platform.

Keywords: freedom of expression, incitement to hatred, criminal law, user perception, online survey

1. Introduction

Online hate speech (OHS) is a virulent social problem that has been challenging democratic discourses in the past years. The storming of the US Capitol in January 2021 is the most prominent high-level case of online disinformation and OHS leading to real-life consequences. As well, by the end of 2021, anti-vaccination propaganda and hate speech against medical staff have gained momentum (Gleicher et al, 2021).

Due to the great relevance of the topic, it is unsurprising that OHS research has been intensifying in recent years. Many studies deal with the question of how OHS can be evaluated from a communication studies or media studies perspective and/or discuss technical conditions of social media and societal changes related to OHS (e.g. Pörksen, 2018; Sponholz, 2018; Zannettou et al, 2020). Other studies address the content of OHS, its impact on those affected as well as coping strategies (e.g. Anderson et al, 2014; Brodnig, 2016; Lumsden and Morgan, 2017). When it comes to the regulation of OHS, which is the focus of this paper, a lot has been written lately about platforms’ and states’ duties to regulate and counter OHS effectively (e.g. Brown, 2020; Davidson et al, 2017; Waseem and Hovy, 2016). But a central aspect, namely users’ opinions on OHS and its regulation, remains under-researched. Especially in the German-speaking area, there are only a few studies on this topic, e.g. Geschke et al (2019) that explore how users perceive state- and platform-made norms on OHS and their implementation.

To contribute to this debate using empirical data, we conducted an online survey (November/December 2020, 157 respondents, Austria) to gather the opinions and experiences of users with OHS based on five OHS model postings. In this paper, we interpret and contextualize their responses based on legal (criminal and human rights law) and sociological approaches. First, we provide the theoretical backdrop. Second, we present our empirical research design. Third, we analyse how respondents assessed our model postings legally and ethically. This includes respondents’ willingness to take action against these postings. Fourth, we present cross-case analyses and conclusions.

2. Considerations on ‘hate’, the law, and the user

2.1 Human rights and online hate

In human rights law, the discussion on the management/moderation of OHS is generally framed around freedom of expression and its boundaries. While there is no authoritative definition of ‘hate speech’, the term is widely used as an umbrella term. Lately, the United Nations Strategy and Plan of Action on Hate Speech (United Nations, 2020: 8) offers the following definition of ‘hate speech’: “Any kind of communication in speech, writing or behaviour, that attacks or uses pejorative or discriminatory language with reference to a person or a group on the basis of who they are, in other words, based on their religion, ethnicity, nationality, race, colour, descent, gender or other identity factor. This is often rooted in, and generates, intolerance and hatred, and in certain contexts can be demeaning and divisive.”

This Action Plan builds on a plethora of international and regional human rights documents that stipulate state duties to take action against hate speech. For example, Art. 4 (a) ICERD explicitly imposes state duty to prohibit expression that promotes racial hatred, hereby setting boundaries to the freedom of expression to protect the rights of targets/target groups of hate speech. These state obligations apply substantively online and offline. The fulfilment thereof, however, can be procedurally challenging in internationalized online environments (Brown, 2020). Given the lack of immediate state governance, users are confronted mainly with media providers’ business ethics, their terms of service and the latter’s implementation. To illustrate this fact, we provide the example of Austrian hate speech and platform governance.

2.2 Austria: criminal law fulfils positive obligations

In human rights law, states enjoy a certain leeway, a so-called margin of appreciation, in deciding how to combat hate speech, allowing them to take into account their historical backgrounds as well as legal traditions. For example, denial of the Shoah is outlawed in many EU member states by a variety of norms. In spite of the EU’s harmonization efforts (Council Framework Decision 2008/913/JHA, 2008), these norms still differ from state to state – and beyond EU borders, there is even less uniformity. Austria has decided within its margin of appreciation that there are public interests – especially the prevention of a reinvigorated National Socialist movement – justifying the exclusion of these expressions from legal protection, and their prosecution. Postings and comments on social media that fulfil the criteria of these provisions hence lead to law enforcement action just like expressions in the ‘analogue’ world.

While some argue that social media platforms could be treated as accessories to hate speech crimes in cases of non-deletion of OHS (e.g. Austrian Ministry of Justice, 2016), social media platforms have not (yet) been held criminally liable this way. Contrarily, platforms have profited from OHS, legal and illegal forms alike, as it produces high interaction numbers raising platforms’ ad revenue. Social media companies’ algorithms have even learned to accelerate the spread of OHS (Zanettou et al, 2020). At the same time, ethical considerations built into terms of service have been meandering between recognition for the problematics of OHS and overstressing US-American freedom of speech doctrine (Kang and Isaac, 2019).

Human rights considerations are more and more included in community standards (e.g. Facebook, 2021a). A strong, strictly legal duty of platforms to moderate according to international human rights law, however, has not emerged yet. While community standards ban hate speech, they lack efficacy until now.

2.3 Laws, platform rules, ethics and the user

Given these shortcomings, states have tried to enhance platform accountability by other means. Since 2021, for example, the Austrian Communication Platforms Act (CPA, BGBl. I Nr. 151/2020), links the moderation practices of large private social media networks to national hate speech provisions. If platforms fail to provide effective reporting tools and transparency reports on their moderation, they might face harsh financial penalties. Austrian national law may hence be able to exert immediate effects on the practices of social media platforms (e.g. Facebook, 2021b). As well, the law may provide for new avenues of cooperation between law enforcement and social media. In the past, investigations against original posters of OHS have been hampered by their non-cooperation and hesitance to provide national authorities with user data needed to trace OHS suspects under national criminal law (Haider and Millner, 2021).

Only lately, platforms have moved towards more comprehensive implementation of due process in their OHS rules by the establishment of court-like entities, e.g., Facebook’s/Instagram’s/Meta’s Oversight Board (2021).

The corporation herein sought to supplement business ethics with legal considerations based on global freedom of expression standards. This work is ongoing. At the same time, and seemingly contrarily, Facebook is challenging the Austrian Communication Platforms Act. The company's motion is currently pending review by the Austrian Administrative Court of Appeal. In this lawsuit, the law's compliance with the EU E-Commerce-Directive (2000/31/EC, 2000) will have to be assessed. Whatever the outcome of the case may be, platforms are not going to be able to hold off extended moderation duties forever. US lawmakers are considering reforms of platform responsibility (Cole et al, 2021), and the EU is preparing new legislation momentarily that is expected to harmonize platform duties in Europe (Digital Services Act, 2020). Amending policies and rethinking business ethics now would help platforms anticipate these new legal developments. More immediate reasons to do so exist: Users affected by OHS report, inter alia, disengagement from societal debates, psychological trauma and even physical effects (e.g. GREVIO, 2021: §12).

In the following, we present our empirical research of user experiences with OHS on social media platforms. We include their views on the applicable laws, their ethical considerations on freedom of expression vis-a-vis OHS and their opinions on reporting mechanisms offered by platforms.

3. Research design

In November and December 2020, we conducted an online survey to gather the public's perceptions of and experiences with OHS. The survey focused on five main topics: definition of OHS, platforms and contents, affected persons and coping strategies, OHS perpetrators, and counter-speech strategies. In this paper, we focus on the evaluation of five model cases that resemble real OHS postings sourced from the data of an Austrian OHS reporting app offered by the Antidiscrimination Office Styria. In the selection of cases, we tried to integrate different OHS target groups, contents, and degrees of intensity. In this context, we were guided by previous empirical results on OHS (e.g. Geschke et al, 2019) and by legal considerations. Respondents were asked to assess the postings with regards to their (perceived) illegality and their (ethical) worthiness of remaining online. We provided 11 items on a 5-point rating scale as well as the opportunity to enter further information in an open response field. The original questionnaire was published in German, the official language in our survey area. All questionnaire responses described below were translated by the authors.

Our purposive sampling strategy focused on two groups of people: 1) young people, as they are particularly frequent users of social media and more likely to be exposed to OHS (Gadringer et al, 2021) and 2) members/employees of organisations dealing with OHS in their work practice. The sample hence mainly includes persons frequently confronted with social media and/or OHS in possession of expert knowledge. Our sample comprises 157 persons. About half of them are between 20 and 29 years old (46%), 5% are younger than 20, 37% are between 30 and 49, and 12% older than 50. Almost 30% are students, almost 20% work in the educational and social sector, 13% as (office) employees and 6% in STEM professions outside the education sector. More than half of the respondents identified as female (59%), 37% as male, and 4% as other genders.

As the complexity of OHS requires an open-explorative and interdisciplinary research approach, the analysis of the five model cases includes social science and legal evaluations. Our social sciences analysis included usual statistical descriptive ratios such as arithmetic mean or standard deviation, but also the clustering of open-ended questions according to frequency. Our legal analysis is based largely on Austrian criminal law doctrine, accompanied by human rights law considerations. Each case is analysed individually before essential similarities and differences are worked out in a cross-case analysis.

4. Case studies

In this chapter, we describe and discuss the main characteristics of our five model cases. We assess these cases based on Austrian criminal law and compare this analysis with the responses to our questionnaire. Table 1 gives an overview of the ratings of the 11 items per case (5=complete agreement; 1=complete disagreement). The items can be clustered into three content groups: a) online hate speech vs. expression of opinion (items 1-2), b) evaluation of posting according to punishability (items 3-4), c) responses/strategies (items 5-11).

Table 1: Overview of case studies evaluations, complete model postings below

When I see this posting publicly on social media...	case 1 virgins	case 2 scum	case 3 cunt	case 4 refugees	case 5 siblings
... I perceive it as online hate speech.	M=4.30 SD=0.35	M=4.76 SD=0.41	M=4.82 SD=0.41	M=3.55 SD=0.27	M=4.32 SD=0.35
... it's a normal expression of opinion for me.	M=1.31 SD=0.40	M=1.17 SD=0.42	M=1.21 SD=0.41	M=2.24 SD=0.29	M=1.42 SD=0.38
... I think it's punishable.	M=2.69 SD=0.27	M=4.08 SD=0.33	M=3.69 SD=0.28	M=2.01 SD=0.31	M=2.41 SD=0.28
... I think it should be punishable.	M=3.29 SD=0.26	M=4.38 SD=0.36	M=4.24 SD=0.34	M=2.44 SD=0.27	M=2.97 SD=0.26
... I think it should be deleted.	M=4.26 SD=0.34	M=4.82 SD=0.39	M=4.83 SD=0.41	M=3.42 SD=0.26	M=4.17 SD=0.33
... I do nothing.	M=2.99 SD=0.26	M=2.21 SD=0.30	M=2.24 SD=0.29	M=2.87 SD=0.26	M=2.77 SD=0.31
... I report it to the social platform.	M=3.29 SD=0.26	M=3.92 SD=0.31	M=3.88 SD=0.30	M=2.37 SD=0.28	M=2.92 SD=0.26
... I report it via NGO app.	M=2.17 SD=0.34	M=2.57 SD=0.31	M=2.43 SD=0.31	M=1.76 SD=0.38	M=1.99 SD=0.35
... I report it to the police.	M=1.37 SD=0.40	M=2.01 SD=0.32	M=1.66 SD=0.36	M=1.32 SD=0.41	M=1.36 SD=0.16
... I answer it publicly.	M=2.03 SD=0.31	M=2.42 SD=0.28	M=2.49 SD=0.28	M=2.40 SD=0.28	M=2.09 SD=0.31
... I answer in a private message.	M=1.53 SD=0.37	M=1.59 SD=0.37	M=1.62 SD=0.36	M=1.63 SD=0.36	M=1.40 SD=0.39

4.1 '72 virgins'

You see a picture of a (Muslim) man and a flock of sheep with the caption: "72 virgins just for you; ElitePartner Academics & Singles with standards; Syria edition."

4.1.1 The law

This publication fulfils the requirements for punishability as incitement to hatred (§ 283 (1) no. 1, second case Austrian Criminal Code – ACC). The posting at hand must be assessed in its entirety: Content-wise, the published picture must be treated as an integral part of the publication. The picture and its caption are directed against men of Muslim faith, a protected group (criterion: religion) under § 283 ACC (Plöchl 2020: § 283 no. 8). The posting appeals to the recipients' feelings, instigates hatred against persons of Muslim faith and can evoke a strong feeling of antipathy by attributing a tendency towards sodomy to Muslim men. The pseudo-humorous context of the posting expresses additional contempt against the target group of the posting (Plöchl 2020: § 283 no. 19).

4.1.2 The data

This model case is clearly perceived as hate speech: 83% of the respondents completely or somewhat agree that this posting constitutes OHS and only 3% completely or somewhat agree that this is a normal expression of opinion. Regarding punishability, this model case has an intermediate position in our case sample: 35% of the respondents (rather) agree that this posting is punishable, 55% (rather) agree that this posting should be punishable. This case prompted high ratings related to rather passive responses/strategies. 79% of the respondents (rather) agree that this posting should be deleted, 46% (rather) think that they would do nothing if

they saw it online. If respondents were to take action themselves, they would most likely report the posting to the platform.

4.2 ‘Parasite scum’

Please rate the following posting. Comment on an article about religious holidays/festivities: “This parasite scum vanished 6-million-fold through chimneys without a trace.”

4.2.1 The law

This posting does not explicitly name a group attribute (“*This parasite scum [...]*”). It is still deducible from the context – religious festivities in the original posting – that it is directed against persons based on their religion. Without this context, a target group could not be determined. The terminology used within the posting against an identifiable, protected group of the population, is per se sufficient to fulfil the requirements of § 283 (1) no. 2 ACC. The statement constitutes verbal abuse infringing upon human dignity. This interpretation can be based on a general linguistic understanding. The term ‘scum’ is an intentional, disparaging designation of a part of an entirety (here: society as a whole) which is considered as inferior. The term ‘parasite’ signifies a lifeform which lives at the expense of another and was already used in National-Socialist propaganda in a stigmatising fashion against Jews* and other minorities (Musolff, 2011). By considering the posting as a whole, the semantic content of the incriminated expression becomes specifically obvious as a ridiculing trivialisation of the murder of Jews*. This constitutes not only a pejorative degradation, but also a statement that is able to induce feelings of hatred against persons based on their religion within the scope of § 283 (1) no. 1 second case ACC (see OGH 23.5.2018, 15 Os 33/18v = EvBl 2018/143).

4.2.2 The data

This case has a very high OHS rating: 95% of the respondents (rather) agree that this posting is OHS and only 3% (rather) agree that this is a normal expression of opinion. This case also has the highest punishment ratings: 78% of the respondents (rather) think this posting is already punishable, 85% think the posting should (rather) be punishable. This case has the highest ratings related to active responses/strategies. Many respondents would (rather) report the posting to the platform (73%), to the reporting app (34%) and to the police (18%). Furthermore, 33% of the respondents would (rather) answer to this posting publicly, 94% think it should be deleted. Only 23% of the respondents would (rather) do nothing.

4.3 ‘Dirty cunt’

Comment to a female user: “Dirty cunt, you sleazy wench. Yikes, you hate-consumed cunt.”

4.3.1 The law

This posting fulfils the requirements of criminal defamation and insult under §§ 111, 115 ACC. As required by § 111 ACC, a user is accused of possessing a despicable characteristic/disposition as being “hateful” in a manner perceivable for third parties. This accusation is able to reduce the target’s reputation and esteem she enjoys among her fellow human beings (Tipold 2016: § 111 no. 4). The term “sleazy wench” may not be punishable as an accusation of dishonourable conduct or of conduct against common decency, however, it signifies contempt against the targeted person. In the context of another abusive word used in the posting, namely “dirty cunt”, “sleazy wench” further serves to humiliate a female person (Rami 2021: § 115 no. 8). The posting must be assessed in its entirety. By the cited misogynistic expressions, a female user is assailed based on her gender. The underlying goal of the posting is to articulate disdain against this user as required by § 115 ACC. The gender-based insults used in the posting are hence punishable under §§ 111, 115 ACC, however, they do not reach the threshold of incitement to hatred (against women) under § 283 ACC (Tipold 2016: § 115 no. 3).

Lately, international organisations, such as the Council of Europe and its independent expert body GREVIO, have been paying closer attention to gender-based violence and OHS. In its first general recommendation on the Istanbul Convention, GREVIO noted (2021: 19): “Sexist behaviour such as sexist hate speech, which often constitutes a first step in the process towards physical violence, may also escalate to or incite overtly offensive and threatening acts, including sexual abuse or violence or rape, thus falling within the remit of Article 40 of the Istanbul Convention.” Article 40 stipulates state duties to combat sexual harassment – accordingly, further regulatory action in this area may be warranted, especially given the rising numbers of women* being targeted by OHS. Without such reform, it would be desirable for courts’ interpretations of § 283 in cases of hate speech against women* to take this fact into account.

4.3.2 The data

This case has a very high OHS rating: 96% of the respondents (rather) agree that this posting is OHS and only 4% of the respondents (rather) agree that this is a normal expression of opinion. This case also has the second highest punishability ratings: 67% of the respondents (rather) think this posting is already punishable, 82% of the respondents stated the posting should (rather) be punishable. This case has high ratings related to active responses/strategies. Many respondents would (rather) report the posting to the platform (72%) or to the reporting app (31%), 35% of the respondents would (rather) answer to this posting publicly. Besides, 97% of the respondents think the posting should be deleted and only 25% would (rather) do nothing.

4.4 'Male refugees'

Comment on an article dealing with questions about refugee movements: "But one may still say that the many young men are more violent than families!?"

4.4.1 The law

The cited posting addresses the societal group of refugees and other displaced persons and reproduces the prejudice that the flight of predominantly male persons had led to rising numbers in "foreign crime". The posting aims to instil fear and to reinforce antipathy against refugees. By claiming to ask a problematic question, the poster tries to trivialize the content and insinuates that this statement is at the margins of freedom of expression. If the contextualisation of criminality and origin/gender is intended to instil hostile sentiments against protected groups, § 283 (1) no. 1 second case ACC could be fulfilled. In the case at hand, however, the posting is not formulated sufficiently to deduce a tendentious incitement to hatred and contempt. Aversion, rejection, or contempt are not uttered to the extent legally required by § 283 ACC (Plöchl 2020: § 283 no. 19).

4.4.2 The data

This case has by far the lowest OHS ratings: 63 % of the respondents (rather) perceived this posting as OHS, 23% as a normal expression of opinion. This case also has the lowest punishment ratings: 13% of the respondents (rather) agree that this posting is punishable, 25% of the respondents (rather) agree that this posting should be punishable. This case has rather high ratings related to passive responses/strategies. 38% of the respondents would (rather) do nothing if they see the posting online, only 27% would report it to the platform. Interestingly, however, this posting has the highest value in terms of the respondents' response behaviour: 36% of the respondents would (rather) answer publicly to that posting.

4.5 'Siblings'

Comment on people with a migration history: "With most people from your area, the parents are also siblings!"

4.5.1 The law

The poster obviously intends to incentivise negative attitudes towards persons based on their origins and probably also their religion. Recipients could deduce from this statement that incest is common among persons with migration histories. A context between origin, and possibly also religion, and consanguinity is subtly alleged. The narrative that marriage between relatives is common in families with migration histories is commonly used by right-wing groups (Hödl, 2010; Deutscher Bundestag, 2018). These groups do not contribute to discussions on the historical roots of marriage within families or criticise such practices, but exclusively use this narrative for purposes of propaganda (Müller, 2012). This interpretation may show the underlying motivation of the poster, however, the statement per se is not sufficiently formulated to warrant for punishability under § 283 ACC (incitement to hatred) or any other provision of Austrian criminal law.

4.5.2 The data

This model case is clearly perceived as OHS: 85% of the respondents stated that they completely or somewhat agreed that this is OHS and 7% of the respondents completely or somewhat agreed that this is a normal expression of opinion. This case has the second lowest punishment ratings: 25% of the respondents (rather) agree that this posting is punishable, 41% of the respondents (rather) agree that this posting should be punishable. This case has rather high ratings related to passive responses/strategies. 36% of the respondents would (rather) do nothing if they see the posting online, 46% would report it to the platform and 20% would report it to the reporting app.

4.6 Cross-case analysis

Our cross-case comparison shows that, except for case 4 ‘male refugees’, all cases were predominantly perceived as OHS and not as ‘normal’ expression. It is noticeable that OHS against women* or anti-Semitic content were more likely to be perceived as OHS than attacks against people with a refugee, Muslim or Syrian background. This also affects the issues of punishability and deletion of postings: The perceived necessity of OHS regulation and removal is higher in case 2 ‘parasite scum’ and case 3 ‘dirty cunt’ than in all other cases of the sample. Case 4 ‘male refugees’ and case 5 ‘siblings’ are, in contrast, not punishable under Austrian criminal law but respondents expressed a strong (ethical) desire for these content pieces to be removed. Interestingly, the punishable case 1 ‘virgins’ only displays marginally higher ratings in perceived and preferred punishability than the (unpunishable) cases 4 and 5. From these considerations, it seems possible to derive initial indications that topics that are closer to oneself are more likely to be perceived as OHS than topics that are more distant from one’s own reality of life. Most probably due to Austrian history, there is more awareness of and sensibility towards anti-Semitism than towards discrimination against Muslims to give just one example. Discrimination based on ethnicity or religion, in contrast to gender and political opinion, was hardly ever mentioned as a basis of respondents’ own experiences with online discrimination. This hints towards target-group dependence of OHS perception among users. It would be beneficial to conduct further research into the dependency of receptions of target groups in societies at large vis-à-vis users’ readiness to label content as illegal hate speech.

Furthermore, it is interesting to see who should regulate OHS from the user’s point of view. Respondents seem to perceive that Austrian criminal law lacks rigour, as punishability ratings under the – perceived – current criminal law regime are overall lower than those of *preferred* punishability. This can be interpreted as a desire for (more) state intervention in the regulation of OHS. Geschke et al (2019) have shown a similar desire for state intervention in their representative study on OHS in Germany: 75% of respondents (N=7,349) agreed with the demand that the state should consistently enforce existing laws against insults, hate speech and defamation on the internet. Community-driven responses to OHS, i.e., counter-speech and reporting, remain at low levels in all cases. In the few instances in which a posting is reported, it is more likely to be reported to the platform itself and not to the local hate speech reporting app offered by the Antidiscrimination Office Styria or the police. Thus, in addition to the state, platforms themselves are perceived as responsible for the regulation of OHS or helpful in the fight against OHS. In general, it can also be stated that more active strategies are applied when postings are strongly perceived as OHS, as shown by the analysis of case 2 ‘parasite scum’ and case 3 ‘dirty cunt’. We can hence conclude for our sample that counter-speech happens – if at all – rather after, instead of before the escalation of OHS into illegality. This is also shown by the recommendations for deleting postings: Except for case 4 ‘male refugees’, respondents show an overall tendency towards endorsing deletion of postings regardless of how they are perceived under criminal law. Thus, it is considered better to make content invisible than to become active and influence the discourse itself. This shows the idea of counter-speech as a mechanism against OHS lacks support among our respondents. The self-regulation of OHS among users, as in the *marketplace of ideas*, is not likely under such circumstances as also Knauder and Romanin (2021) indicated.

5. Conclusions, recommendations and outlook

Legally and ethically, we conclude that OHS will not be held at bay by states, platforms, or users alone, but by an interplay of these actors. Their different scopes of action can mutually reinforce each other. States can refine national norms and their application, platforms can reform their standards and reinforce moderation practices, and users can contribute with counter-speech, moderation, and, where applicable, by reporting to platforms, NGOs, and the police. We have shown that some of these responses are considered to be more effective than others by users.

Given the complexity of human expression – e.g., a multitude of languages, humour, sarcasm, and irony – especially the detection of emerging and grey area forms of OHS will need flexible, participatory models of governance. Societal climates can support or hinder the detection of OHS and illegality even among expert respondent groups, as we have shown above. Large-scale, integrated, and multi-/interdisciplinary studies on the interrelation of societal discourse and surges in OHS, as well as on the legal and ethical views of internet users, are hence needed. Conducting such studies will require transparency of platforms regarding their moderation practices. At the same time, by engaging professionals in the field as well as the public at large, media competence could be raised – and the perceived need for stricter hate speech laws, as well as expenditure in law enforcement lowered in the future. Human-rights-based, high-quality and human moderation by platforms will be key therein, as well as the participation of targets of OHS/advocacy groups to detect emerging surges in

OHS. Ethics, human rights law, expert knowledge from NGOs as well as state officials and, finally, user participation by means of low-threshold tools could help, in their interplay, to realise less hate-driven social media for all – an endeavour that has become even more important during COVID-19.

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The Contribution of SNS to Social Capital in Times of Restricted Physical Contact

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Abstract: Social capital is the collection of social assets and resources that provide value to an individual and on which they can rely in times of need. Social networking sites (SNS) have contributed significantly to the development of social capital. A common classification of social capital is into bridging, bonding and maintained social capital. Often social capital is built and maintained in the online and offline environments together but each environment can foster social capital separately. With the constraints on physical contact and interactivity brought about by Covid-19-related restrictions, the assumption is that there would be greater reliance on SNS to develop and maintain social capital. This research examined whether, in an environment of ongoing restricted physical social contact, the use of SNS contributes positively to the establishment and development of social capital; and whether the use of different SNS exert different influences on the establishment and development of social capital. SNS use was assessed in terms of frequency and intensity of use; and social capital was assessed in terms of bridging, bonding and maintained social capital. Three SNS (Facebook, Instagram and WhatsApp) were studied. A cross-sectional survey of 282 New Zealand residents was used to gather the data, and regression analyses were conducted to analyse the data. Findings indicated that frequency and intensity of use were key contributors to social capital, contributing mostly towards bridging social capital and the least towards bonding social capital. Additionally, intense and frequent use of Instagram contributed most towards bridging and maintained social capital, whereas intense and frequent use of WhatsApp contributed most towards bonding social capital. The research contributes to the theoretical understanding of the role of SNS, particularly with regard to the building and maintenance of social capital but also against a background of restricted physical social contact. It is furthermore of benefit to managers who have - and can - embraced the use of SNS to build and maintain team cultures, especially in terms of Covid-19-related contact restrictions.

Keywords: Social capital, bridging social capital, bonding social capital, maintained social capital, social networking sites, Facebook, Instagram, WhatsApp

1. Introduction

Social capital is a well-researched phenomenon which describes the resources, values and meanings individuals accumulate via social relationships (Coleman, 1988). Individuals use of SNS to establish, build and maintain their interpersonal relationships and by extension, their social capital (Ellison et al., 2007). SNS facilitate the maintenance of connections with strong relationships, such as close friends and relatives - classed as bonding social capital (Williams, 2019); and with weaker relationships, such as acquaintances - classed as bridging social capital (Chen and Li, 2017). Further, SNS enable individuals to stay connected with a social relationship once physically disconnecting from it offline - maintained social capital (Ellison et al., 2007). Increased frequency and intensity of SNS use are positively associated with different forms of social capital (Phua et al., 2017).

The positive association found between the use of SNS and social capital was established under conditions where individuals had access to their online and offline face-to-face social relationships simultaneously. In 2020, the COVID-19 pandemic gave rise to a new social environment consisting of physical distancing and stay-at-home laws to avoid the spread of the virus.

This raised the question of whether the positive association between SNS use and social capital holds up in an environment which relies mainly on online interactions. This research attempts to address that question. The purpose is to investigate the effect of frequency and intensity of SNS use on social capital in an environment where physical face-to-face interactions are limited or restricted. Additionally, this research aims to determine if the relationship between SNS use and social capital is dependent on the SNS an individual uses. Thus, the two research questions are:

RQ1: Does intensity and frequency of SNS use have a positive effect on an individual's social capital in environments of limited face-to-face contact?

RQ2: Do different SNS have different impacts on the relationship between intensity and frequency of SNS use and social capital?

2. Literature review and hypotheses development

SNS are internet-based platforms that allow individuals to present themselves, articulate their social networks, and establish or maintain social relationships and connections (Ellison et al., 2007), through features such as uploading content, liking, commenting, messages, and items shared on newsfeeds (Burke et al., 2010). SNS can be described as a supplement to establish and maintain offline relationships (Wellman et al., 2001).

Due to the different nature, features and functions of SNS platforms, the social benefits and outcomes obtained from using them will vary (Tiwari et al., 2019). Consequently, SNS have differential implications for social capital depending on how intensely or frequently users engage with them (Phua et al., 2017).

Coleman (1988) defines social capital as the resources, values and meanings gained via social relationships. Such resources include “emotional support”, “exposure to diverse ideas”, and “access to non-redundant information” (Ellison et al., 2011, p873). A positive relationship has been found between SNS use and an individual’s ability to establish, build and maintain their interpersonal relationships and by extension, social capital (Ellison et al., 2007). An individual’s frequency of SNS use (Kim and Kim, 2017) and intensity of use are positively associated with their social capital (Phua et al., 2017).

Putnam (2000) identified two forms of social capital: bonding and bridging. Bonding social capital consists of strong interpersonal ties and relationships between individuals with similar backgrounds and interests. There is a high density of ties between members and these individuals engage in regular interaction (Williams, 2006). The benefits of bonding social capital relationships are greater levels of trust, practical and emotional support, and access to rare resources (Chen and Li, 2017). Bridging social capital describes the benefits derived from casual acquaintances and relations, such that these are weak ties that can provide access to novel perspectives and new information (Putnam, 2000). Ellison et al., (2007) introduced a third form of social capital, maintained social capital, as “the ability to maintain valuable connections as one’s progress through life changes” (p1148). This form applies especially when strong bonding social capital is transformed through the physical disconnection of the participants in a social relationship, and how much individuals believe they can rely on former relationships and ties (Aharony, 2015).

Ellison et al. (2007) found a strong positive association between intensity of SNS use and all three types of social capital, with bridging social capital manifesting the strongest relationship (Ellison et al., 2007). Similarly, Phua et al., (2017) indicated that more intense usage of SNS led to individuals exhibiting increased bridging and bonding social capital. Ellison et al., (2007) also concluded that intensity of SNS use predicted higher levels of maintained social capital. Furthermore, the more frequently individuals use SNS, the more bridging and bonding social capital they accumulate (Liu et al., 2013). Frequency of SNS use can also lead to increased maintained social capital (Ellison et al., 2007).

However, these associations were manifested in times when individuals had access to their offline and online relationships simultaneously. This present study argues that this association will continue in environments of limited physical face-to-face contact because SNS are one of few tools individuals can use to gain social capital benefits from interpersonal relationships when physical face-to-face contact is limited.

H1: Intensity of SNS use will have a positive effect on (a) bonding social capital, (b) bridging social capital, and (c) maintained social capital in environments of limited face-to-face contact.

H2: Frequency of SNS use will have a positive effect on (a) bonding social capital, (b) bridging social capital, and (c) maintained social capital in environments of limited face-to-face contact.

In the 1st quarter of 2020 when the first social restrictions were implemented in New Zealand (which is where this research was conducted), Instagram, Facebook and WhatsApp were the three most commonly used SNS by New Zealanders (Statista, 2021).

Facebook is a social networking platform which permits users to create visible profiles with features that facilitate interactions via “friends list, the wall, pokes, statuses, events, photos, video, messages, chat, groups and likes” (Nadkarnia and Hofmann, 2012, p2). A strong positive association has been found between Facebook usage and intensity of use across all three forms of social capital with bridging social capital indicating the strongest relationship (Ellison et al., 2007). Phua et al., (2017) found Facebook users showed moderate to high

levels of bonding social capital and Ellison et al. (2007) concluded that Facebook intensity of use predicted higher levels of maintained social capital because users used it to stay in contact with individuals they had moved away from.

Instagram is a photo and video capturing and sharing app which allows users to capture and share content with others through its features (Hu et al, 2014). As with Facebook, those that create an Instagram account have their own personal profile in which others can become 'followers', and every account has a newsfeed of those who they 'follow'. Phua et al., (2017) found that Instagram users obtained higher levels of bridging social capital compared to Facebook users. This was probably due to Instagram users being more likely to follow and interact with others they did not know personally thus heightening the maintenance of weak ties (Jin and Phua, 2014). Similarly, Shane-Simpson et al., (2018) reported bridging social capital was more accessible on a public platform such as Instagram. Conversely, Phua et al., (2017) reported lower levels of bonding social capital in Instagram users.

WhatsApp Messenger is a communication application that allows users to send instant messages, photos, video, voice messages and make voice calls over an internet connection. WhatsApp is a closed platform as communication and interactions take place between users who they usually choose and know personally offline (Aharony, 2015). Aharony (2015) found that time spent on WhatsApp did not correlate with bridging social capital. These findings are consistent with those of Bano et al. (2019) who did, however, reveal a positive relationship with their maintained social capital. WhatsApp is well-suited for developing social capital at the individual level since it strengthens long-term connections in various social relationships and is supported by a significant positive association between bonding social capital and WhatsApp usage (Bano et al, 2019).

Given that different SNS address different needs and provide different benefits to users, we argue, firstly, that users of SNS that facilitate a larger social network whereby users communicate with larger audiences with whom users do not necessarily have close offline interactions, will probably rely increasingly on weak ties and thus bridging social capital (Jin and Phua, 2014; Shane-Simpson et al., 2018). Secondly, the nature of SNS that allow individuals to reach many connections online rather than one individual, explains why some SNS may not derive high levels of bonding social capital (Phua et al, 2017). Contrastingly, those SNS which are more private in nature with communication between selected users only are likely to result in higher levels of bonding social capital (Aharony, 2015). Lastly, use of SNS that allow individuals to connect and stay in contact with established relationships that had become physically distant, will likely result in increased levels of maintained social capital (Ellison et al., 2007).

H3: There will be a difference between the effect of frequency and intensity of use on (a) bonding social capital, (b) bridging social capital, and (c) maintained social capital depending on the platform used, in environments of limited face-to-face contact.

3. Research methodology

This study adopted a positivist research philosophy with a deductive approach.

A quantitative cross-sectional survey design was employed (Hair et al. 2019) and an online questionnaire was created on Qualtrics. At the start of the questionnaire participants were instructed to select only one of three SNS (Facebook, Instagram or WhatsApp) that they had used most regularly during periods of COVID-19 lockdown. Participants were then directed to the relevant SNS survey.

A link to the Qualtrics survey was posted on the lead author's personal Facebook page with a recruitment message regarding the survey purpose, anonymity and confidentiality. Snowball sampling was additionally used. Screening questions were administered at the start of the survey. These questions ensured the participants were over the age of 18, individuals who had been residing in New Zealand since the beginning of 2020, and had used at least one of the three SNS being studied.

Measures for each factor were based on existing valid and reliable measures. Ellison et al's (2007) Intensity of Facebook Use scale, Bonding Social Capital Scale, Bridging Social Capital Scale, and maintained social capital measure, plus Rosen et al's (2013) frequency of use measure were all drawn upon and adapted where necessary. The items were all rated on a five-point Likert scale.

4. Results

4.1 Descriptive statistics

The survey yielded 305 responses - 23 incomplete surveys were removed, resulting in a final response number of 282 participants ($N=282$). The sample consisted of 60 males (21.3%), 214 females (75.9%), and 7 individuals (2.5%) who identified as other. The age bracket of 18-24 accounted for 29.4% of participants, with the vast majority (75.9%) falling between 18-64. Amongst the participants, 70.2% were New Zealand European, the rest were Asian, Māori, and Pacific islanders. The most frequently used SNS was Facebook ($n=143$), followed by Instagram ($n=94$), and lastly WhatsApp ($n=45$).

Internal reliability of the scales measuring each construct was assessed. Cronbach's alpha of each was over 0.7, one item having been removed from each of the intensity of use and frequency of use scales. Standard linear regression was performed to test the hypotheses. Assumptions of normality, linearity and homoscedasticity of residuals requirements were tested and proved correct (Hair et al, 2019).

4.2 Hypotheses testing

To test H1 and H2 (see Table 1), results showed that, in combination, SNS intensity (H1a) and SNS frequency (H2a) of use accounted for 10% of the variance in bonding social capital ($R^2 = .100$, adjusted $R^2 = .094$, $F(2, 179) = 15.582$, $p < .001$), and that each significantly predicted bonding social capital ($\beta = 0.14$, $p = .041$; $\beta = 0.22$, $p = .002$), thus supporting H1a and H2a.

In combination, SNS intensity (H1b) and SNS frequency (H2b) of use accounted for 36% of the variance in bridging social capital ($R^2 = .360$, adjusted $R^2 = .356$, $F(2, 179) = 78.501$, $p < .001$). Each of them significantly predicted bridging social capital ($\beta = 0.44$, $p < .001$; $\beta = 0.23$, $p < .001$), thereby supporting H1b and H2b.

Results also showed that, in combination, SNS intensity (H1c) and SNS frequency (H2c) of use accounted for 20.0% of the variance in maintained social capital, ($R^2 = .200$, adjusted $R^2 = .194$, $F(2, 179) = 34.874$, $p < .001$), and that each significantly predicted maintained social capital ($\beta = 0.17$, $p = .007$; $\beta = 0.33$, $p < .001$), thus supporting H1c and H2c.

Table 1: Comparison of intensity and frequency of use on social capital

Type of Social Capital	Comparative effect between intensity and frequency of use
Bonding	Frequency exerted a stronger influence
Bridging	Intensity exerted a stronger influence
Maintained	Frequency exerted a stronger influence

To test H3a, that there would be a difference between the effect of SNS intensity and SNS frequency of use on bonding social capital relative to the SNS used, results showed that, in combination, Facebook intensity and frequency of use accounted for a non-significant 28.0% of the variance in bonding social capital, ($R^2 = .280$, adjusted $R^2 = .014$, $F(2, 140) = 1.980$, $p = .142$). In combination Instagram intensity and frequency of use accounted for 11.9% of the variance in bonding social capital, ($R^2 = .119$, adjusted $R^2 = .099$, $F(2, 90) = 6.067$, $p < .05$). Further, in combination WhatsApp intensity and frequency of use accounted for 31.7% of the variance in bonding social capital, ($R^2 = .11$, adjusted $R^2 = .284$, $F(2, 42) = 9.735$, $p < .001$). (See Figure 1.)

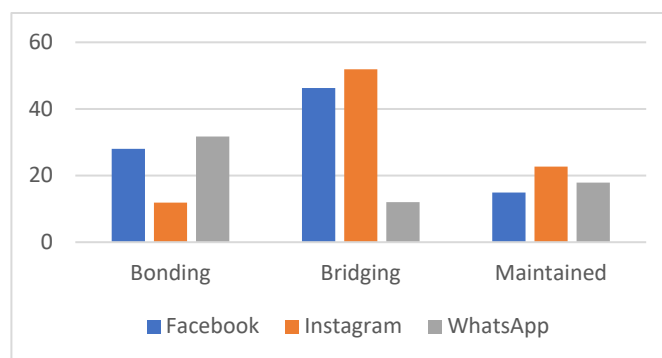


Figure 1: Combined impact of intensity and frequency of use per SNS

To test H3b, that there would be a difference between the effect of SNS intensity and SNS frequency of use on bridging social capital relative to the SNS used, results showed that, in combination, Facebook intensity and frequency of use accounted for 46.3% of the variance in bridging social capital, ($R^2 = .463$, adjusted $R^2 = .455$, $F(2, 140) = 60.352$, $p < .001$). In combination Instagram intensity and frequency of use accounted for 51.9% of the variance in bridging social capital, ($R^2 = .519$, adjusted $R^2 = .508$, $F(2, 90) = 48.588$, $p < .001$). In combination WhatsApp intensity and frequency of use accounted for 12% of the variance in bridging social capital, ($R^2 = .123$, adjusted $R^2 = .082$, $F(2, 42) = 2.954$, $p < .001$).

To test H3c, that there would be a difference between the effect of SNS intensity and SNS frequency of use on maintained social capital relative to the SNS used, results showed that, in combination, Facebook intensity and frequency of use accounted for 14.9% of the variance in maintained social capital ($R^2 = .149$, adjusted $R^2 = .137$, $F(2, 140) = 12.242$, $p < .001$). In combination, Instagram intensity and frequency of use accounted for 22.7% of the variance in maintained social capital, ($R^2 = .227$, adjusted $R^2 = .209$, $F(2, 90) = 13.181$, $p < .001$). In combination, WhatsApp intensity and frequency of use accounted for 17.9% of the variance in maintained social capital, ($R^2 = .179$, adjusted $R^2 = .140$, $F(2, 42) = 4.581$, $p < .05$).

5. Discussion

The first objective of this study was to determine whether SNS intensity and frequency of use contributed positively to different types of social capital in environments of limited physical face-to-face. The findings revealed significant associations between intensity and frequency of SNS use, and bonding, bridging, and maintained social capital. These findings align with previous studies which indicate that intense and frequent use of SNS is significantly related to bonding, bridging and maintained social capital when SNS is used simultaneously to support ones' offline relationships (Phua et al., 2017).

In combination, SNS intensity and frequency of use predicted bridging social capital more strongly than bonding or maintained social capital, accounting for 36% of the variance in bridging social capital. The majority of prior research strongly suggests that intensity and/or frequency of SNS use positively contribute to individuals' bridging social capital (Kim and Kim, 2017; Chen and Lee, 2017, Phua et al., 2017). This may be because SNS are one of the few tools in limited face-to-face environments that allow for individuals to access an extensive range of social networks.

In combination, SNS intensity and frequency of use predicted bonding social capital least out of all three social capitals. Whilst there is still a positive relationship, SNS intensity and frequency of use accounted for only 10% of the variance in bonding social capital. This current result supports Ellison et al., (2007), Burke et al., (2011), and Ahn (2012), and suggests that the situation may not influence the association between SNS use and bonding social capital. Rather, these findings indicate that even when individuals rely on SNS for social communication during physical face-to-face restrictions, this is not particularly to nurture bonding relationships.

In combination, SNS intensity and frequency of use predicted maintained social capital more than that of bonding social capital but less than that of bridging social capital. Whilst this result is consistent with the findings of Ellison et al., (2007), it is contrary to the results of Liu et al., (2013). This latter finding may be attributable to the difference in situations. The limited face-to-face contact of the present study may warrant individuals relying more on SNS to maintain their interpersonal social relationships with those they cannot contact physically.

The difference between the impact of the intensity and frequency of SNS use on the three types of social capital indicated that, in predicting both bonding and maintained social capital, frequency of SNS use accounted for more variance than intensity of SNS use. However, in predicting bridging social capital, intensity of SNS use accounted for more than twice the variance of frequency of SNS use. Bonding and maintained social capital are typically associated with already established offline social relationships or connections (Putman, 2000; Ellison et al., 2007). Bridging social capital is associated with weaker ties, and larger networks of acquaintances whereby individuals may personally get to know one another (Putman, 2000). The results of this study indicate that in situations of limited face-to-face contact, more frequent SNS use, is more useful for building or maintaining social capital in already established relationships (bonding and maintained social capital).

The second objective of this study was to investigate whether the SNS used would influence the effects of the intensity and frequency of SNS use on the different types of social capital.

WhatsApp appeared to be the most effective platform for creating bonding social capital. Instagram was the least effective. This indicates that the different SNS influence the extent to which the frequency and intensity of use contribute to bonding social capital. These results are consistent with several previous studies (Aharony, 2016; Phua et al., 2017) indicating that Instagram users are more likely to interact with users they do not know in real life. Conversely, WhatsApp, being a closed platform, means users are more likely to communicate with those already established social relationships that can offer emotional comfort, guidance and trust (Bano et al., 2019). In environments of limited face-to-face contact, individuals still need to reap the benefits of their bonding relationships that they are unable to achieve face-to-face. By intensely and frequently using closed, more private SNS such as WhatsApp, individuals can leverage off the SNS to contribute to their bonding social capital. Findings regarding Facebook intensity and frequency of use were non-significant so this study cannot draw conclusions on Facebook usage and bonding social capital.

Instagram was the most effective SNS in creating bridging social capital. Facebook was the second-most effective, and WhatsApp the least. This finding is consistent with Phua et al., (2017) and Paige et al., (2017) who found that Instagram predicted higher levels of bridging social capital relative to other SNS. Instagram being the strongest contributor to bridging social capital may be because individuals use open platforms to 'follow' other users who they do not have real-life social relationships with. Thus, Instagram users' extensive network of weak relationships contributes to stronger bridging social capital compared to more closed SNS platforms, such as WhatsApp, where individuals normally have or add 'contacts' of people they already know offline.

In facilitating the formation of maintained social capital, Instagram also appeared to be the most effective with WhatsApp being second-most effective and Facebook the least. The literature is scarce regarding the formation of social capital across a range of different SNS. The findings of this study indicate that individuals may find Instagram an easier platform to maintain their previously inhabited social relationships.

6. Implications, limitations and future research

First, this present research contributes to the literature by indicating that even in environments of limited face-to-face contact, SNS use can be leveraged for beneficial social capital outcomes. Specifically, intense and frequent SNS use in environments of limited face-to-face contact contributes the most to bridging social capital, followed by maintained social capital, and contributes the least to bonding social capital.

Second, this study makes theoretical contributions to extant literature on social capital development and maintenance among SNS users by investigating how bonding, bridging and maintained social capital differs across intense and frequent users of the three most frequently used SNS in New Zealand: Facebook, Instagram, and WhatsApp. Notably, WhatsApp usage contributes the most to bonding social capital, and Instagram usage contributes the most to bridging and maintained social capital.

The positive association between SNS use and social capital proposes practical implications for organization managers in how to assist employees to build and maintain social capital in environments of limited or restricted face-to-face contact. Managers could leverage the positive association between SNS use and social capital in order to contribute to the social well-being of employees.

This research warrants mentions of its limitations which offers suggestions for future research. First, this study implemented an online self-reported. As a result of using self-reported instead of direct measures, participants may have misreported information. Future studies could record respondents actual SNS usage, in order to improve measurement validity and generalizability of the findings.

Second, this study only examined users use of three SNS: Facebook, Instagram and WhatsApp. Due to different types of SNS being characterized by different features and tools, the findings on these three SNS cannot be generalized to other SNS. Future research could investigate other SNS such as Twitter, Snapchat and LinkedIn.

Third, due to this study being grounded in a New Zealand context these findings cannot be generalized to other countries. Future studies should investigate the SNS and social capital relationship in other countries.

Fourth, the sample was skewed in terms of gender composition, in particular. Future research should ensure a better balanced sample in order to examine the influence of gender.

7. Conclusion

This study aimed to investigate the effect of frequent and intense SNS use on social capital in an environment where physical face-to-face interactions are limited or restricted. The results indicate that, in environments of limited face-to-face contact, intensity and frequency of SNS use are key contributors of social capital, contributing the most towards bridging social capital and least towards bonding social capital. Additionally, in environments of limited face-to-face contact, intense and frequent use of Instagram contributes the most towards bridging and maintained social capital, whereas intense and frequency use of WhatsApp contributes the most towards bonding social capital. In conclusion this research indicates that even when face-to-face interactions are limited or restricted, SNS is still a sufficient form of communication in an online form to help individuals contribute to their social capital with their different inter-personal relationships.

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Beauty Influencers on the Short Video Platform Kwai: The Postfeminist Media Culture in Rural China

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Abstract: This study explores the postfeminist media culture in rural China. Existing studies mainly focus on subjects of young and single female professionals who work and live in metropolitan areas in China. The cultural symbols and the socioeconomic structure pertaining to urban localities hence become a context for Chinese postfeminism. Responding to a call for opening the postfeminism concept for intersectional and transnational interrogation, this study draws attention to how social media platforms and the state-supported E-commerce industry are complicating the gendered live experiences in rural China. As China's second-generation social media, the short video platform Kwai (TikTok-like platform) attracts an initial user base from smaller cities and rural areas. Many housewives become beauty influencers on this platform where they film makeup transformation videos and sell beauty products. This digital ethnographic study examines the multimodal discursive features of these videos and explores the influencers' business model. The findings reveal that the influencer culture manifests postfeminist sensibilities featured with a discourse of duality. Self-fashioning and economic independence are expressed as a remedy for and vigilance towards the failed patriarchal marriage. Rural women are suggested to both adhere to traditional family values and maintain autonomy. The influencers' business model provides a seeming solution to such a double requirement. Followers are encouraged to join the influencers' entrepreneur project, however, the multi-level marketing model behind this project only benefits the already established influencers.

Keywords: postfeminism, rurality, Chinese social media, short video platform, Kwai, E-commerce

1. Introduction

This study investigates the postfeminist media culture manifested in the performance and business strategy of rural beauty influencers in China. As China's second-generation social media, the short video platform Kwai (a TikTok-like platform) attracts an initial user base from smaller cities and rural areas. Many housewives become beauty influencers on Kwai by filming makeup transformation videos and selling beauty products. They promote a consumerist lifestyle and an image of the economically independent woman, demonstrating a rhetoric affiliation with the globalized postfeminist discourses. Existing studies on China's postfeminist culture mainly focus on subjects of young and single female professionals who work and live in China's metropolises (Chen, 2002; Liao, 2019; Thornham and Feng, 2010; Yang, 2020). The professional identities lift these young women out of the traditional culture and physically embed them in urban localities where consumer culture and aspiration prevail.

This study attends to a new technological and economic development: social media platforms and the state-supported E-commerce in China are tapping into the consumer market in rural areas. Spenders from lower economic strata are envisioned as the growth engine for the domestic economy. This calls attention to the heterogeneity of postfeminist subjects and the intersectionality of gender norms. The study hence explores how postfeminism, circulated by the globalized media and consumer culture, inflects in rural China. It examines the rural beauty influencer culture by contextualizing it against China's domestic social media ecology, urban-rural disparity and gender norms.

The study adopts digital ethnography (Varis & Hou, 2020) as an approach to gain an in-depth and holistic view of the cultural landscape of rural beauty influencers on Kwai. The collected data, including videos, images and texts are then processed through digital discourse analysis (Johns, Chik and Hafner, 2015) which helps to identify the local meanings and intricacy of postfeminist sensibilities. The study contributes to opening the postfeminism concept for intersectional and transnational interrogation. It also provides evidence to a wider discussion of the digital transformation of China.

The following literature review further situates this study in the research fields of social media and postfeminist cultures in China. The methodology section explains how the ethnographic fieldwork was conducted and data analyzed. The result section firstly reports how rurality is visually represented in influencers' videos, then identifies the postfeminist sensibilities and the business model. The last section draws conclusions and discusses the relevance of the study.

2. Literature review

2.1 Influencer and social media cultures in China

Influencers are highly visible social media figures, who due to their ability to attract attention from a large follower base and their personalized content production, can help brands and advertisers to spread commercial messages (Abidin, 2018). Studies on Chinese micro-celebrity and influencer cultures have reminded us of the critical roles played by the E-commerce industry (Guan, 2020), the domestic platform ecology and the state's governance (Zhang and de Seta, 2019; Craig, Lin and Cunningham, 2021). Li (2019) attends to the gendered design of mobile applications. Targeting female users, many video apps provide camera filters enhancing users' physical look. Although focusing on different platforms, these studies stress the importance of Kwai's market positioning and technical features in China's social media ecology when analyzing the rural beauty influencer culture.

Micro-celebrities on Kwai are theorized as "unlikely creators" (Lin & de Kloet, 2019). Their content represents the vernacular aesthetics and creativity that are neither extraordinary nor spectacular. They would not have been able to produce highly visible cultural content due to the assumed vulgar taste and crude skills in the eyes of the mainstream culture in China. Indeed, Kwai firstly received much stigmatization from the mainstream media. Journalistic articles selectively report the most bizarre video content such as eating a light bulb or swallowing a golden fish (Liu, 2019). Kwai's stigmatized label signals a regime of representation in China's cultural landscape underlined by the entrenched urban-rural discrepancy. Rural middle school students identify with the micro-celebrity figures of "the social men" (*shehui ren*), who have "ample social experience, and could use brute force to solve problems and establish himself as a tough guy among his peers" (Li, Tan and Yang, 2019, p. 1508). By defying school and identifying with this alternative value, students are coming to terms with the broken promise of the upward socioeconomic mobility provided by formal education.

The abovementioned studies lay a foundation for the understanding on the cultural production of rurality on Kwai. To explicate rural beauty influencers' performance and business strategy, it is also important to mention the series of state-initiated efforts to informatize the countryside and how these efforts are manifested in Kwai's technical design and business model. In 2019, the Chinese Party of Communism Central Committee and the State Council issued the "Digital Countryside Strategic Development Plan". Among the many tasks including digitalizing agricultural production, infrastructure and public services, the internet is also applied as a commercial platform where agricultural products can be sold to cities and farmers become small entrepreneurs. Social media platforms like Kwai then become a locale for this state-supported E-commerce. Kwai adopts a social commerce model: purchasing happens in the context of social interaction. The strong online shopping and livestreaming functions distinguish China's domestic short video platforms like Kwai and Douyin from its overseas version TikTok (Kaye, Chen and Zeng, 2020).

2.2 The postfeminist media culture in China

Postfeminism suggests that "equality is achieved and feminism is no longer needed" (McRobbie, 2004, p.255). "The remaining difference between men and women should be understood as a result of the free exercise of individual choice" (Stuart and Donaghue, 2011, p.98). Postfeminist discourse takes critiques of feminism into consideration and engages with them actively. Sexist media messages are expressed ironically, implying the knowingness of feminist discussions (Gill, 2007). Women are portrayed as capable subjects for their opportunities and achievements in fields of education and employment (McRobbie, 2004). Fashion and beauty practices also contribute to the discourse of postfeminism in media. "The promise of women's liberation and freedom of self-choice are overwhelmingly packaged within the crushingly cruel beauty images that western women are judged against and incited to emulate" (Stuart and Donaghue, 2011, p.99). Consequently, beauty practices which prioritize prevailing ideas of femininity are naturalized as an unproblematic expression of the autonomous, self-regulating and self-choosing feminine subject (Stuart and Donaghue, 2011, p.117). The need for beauty and fashion is expressed in a makeover paradigm. It teaches women that their lives are lacking in certain aspects, thus needing to be transformed with modified consumption habits (Gill, 2007)

As a type of cultural sensibility, postfeminism evolves quickly in the media landscape and gets a stronger hold on more aspects of life (Gill, 2017). Not only the body needs to be monitored and transformed, one's psychological world shall also adapt to a new mode: to be positive, confident and resilient. In other words, postfeminism not only mutes the voices questioning the structural inequality of genders at the social level, but also disavows women's possibility to express insecurity, neediness, anger, and complaint (Gill, 2017). In recent

years, more scholars have examined postfeminist culture from intersectional and transnational perspectives. As a type of culture that is supported by globalized consumerist culture and media system, one expects to see postfeminist subjects beyond the assumed white, western, middle-class, heterosexual young women (Dosekun, 2015; Butler, 2016).

Scholars have theorized insightfully the temporal orders of postfeminist culture in China. Namely, how to explicate the relationship between the current consumerist and neoliberal discourses of feminism with the existing feminist moments in modern China? In Thornham and Feng's (2010) study on Chinese fashion magazines, female images embrace a passive and conventional femininity with much less trouble. This relatively easy acceptance of conventional femininity can be understood in association with China's gender politics after the socioeconomic reforms in the 1980s. The ideal image of women in contemporary China has been re-feminized since the economic reforms (Johansson, 2001). Yang (2020) elucidates this relationship between the reclaim of femininity and its later consumerist appropriation well in her study on contemporary chick literature in China. She terms the current postfeminist culture as "consumerist pseudo-feminism", which centers around subjects of middle-class women shaped by values and practices of consumption in the neoliberal economy. This feminist sensibility can be traced back to the "Women's Studies Movement" led by urban female elites in the 1990s. Yang argues that this consumption-based pseudo-feminism, resembling postfeminism, appeared in China before the arrival of the Western form of liberal feminism.

Taking insights from Yang's sophisticated theorization, this study further complicates this temporal order by focusing on rural women as postfeminist subjects. While liberal feminism referring to "the corpus of theories and practices critiquing asymmetrical power relations between genders" (Yang, 2020, p. 7) was introduced to female intellectuals and cadres in the 1990s, one can ask to what extent such values became salient in China's rural life experiences. Moreover, the state-led feminism did not criticize the hierarchy of masculinity and femininity. Neither did it dismantle the power relationship in the suture of biological sex with social gender. As the state's collectivist intervention retreated from the private sphere, the thousand-year-old patriarchy soon returned. In Yang's (1999) comments, the state-led feminism failed to bring lasting gender culture and psychology to the society. Studies of rural women's use of digital media confirm that the persistent patriarchal values still prescribe women's duties and codes of conduct. Digital media use reinforces these inequalities instead of challenging them (Wallis, 2015, 2018; Wang and Sandner, 2019).

3. Methodology

This study adopted a digital ethnographic approach. It served to explore the rural beauty influencer culture as locally situated experiences which involve the engagement with specific social contexts, platforms and semiotization (Varis and Hou, 2020). The data collection method was observation and it lasted for one month. To collect data systematically, the researcher created a new Kwai account in September 2021 and searched with the keywords "makeup counterstrike" and "makeup transformation". The search results led to a large number of makeup videos. Starting from this point, the data collection relied on the algorithmic curation of Kwai to recommend similar videos. Like TikTok trends, Kwai also has a mimetic design which encourages users to apply the background sound of an existing video to film new ones. This gives rise to an imitation public (Zulli & Zulli, 2020) and cultural tropes that to be iterated with creativity. Therefore, the data collection paid particular attention to the iteration of content, namely the similar subjects, plots, time and space in the videos. This helped to delineate the shape of transformation beauty videos as a genre and enhance the cultural representativeness of data collection.

The fieldwork site was hence not a pre-defined virtual location, but a result of construction following the ethnographer's observation for the major cultural tropes of the rural beauty influencer culture. In particular, upon every video, the researcher subscribed to the influencer, yielding an initial corpus of 50 influencers. This corpus was then narrowed down to 10 influencers who cooperate with the same beauty brand "Shezi". Focusing on one brand helped to provide a holistic knowledge of the business model of these influencers. Then the researcher watched all the recent 20 videos and the recent livestream recordings from these 10 influencers. Again, the observation attended to the patterns recurring in videos. Data were captured by taking screenshots and downloading videos to local drive protected with passwords. This amounted to 12 downloaded videos with transcribed voice-overs and 42 screenshots.

Digital discourse analysis (Johns, Chik and Hafner, 2015) was applied to the collected data. The analysis focused on the four dimensions of discourse: text, context, action and interaction, power and ideology. For the texture of these videos, the analysis attended to the use of visual cues, namely physical objects, settings and the presentation of bodies. The textuality was also relevant to the sequence of transformation scenes in the videos. As to the texture of the platform, the analysis attended to how the application directed the flow of usage. The context dimension considered both Kwai's position in China's social media ecology and the local context of the stories in the videos. Action and interaction considered how the video dialogues, often between a wife and husband, were constructed and how the influencers addressed followers. For power and ideology, the postfeminist cultural sensibilities identified from existing research were applied as sensitizing concepts to analyze the videos.

4. Results

4.1 The visual representation of rurality

The first noticeable feature of these videos is the visual representation of rurality. Figure 1 shows the starting scene of a video. It features a woman, played by influencer Tianyi, standing in the kitchen cutting vegetables. The bright and contrastive colors of her blouse are often associated with the rural aesthetics in China. For her appearance, she lost a few teeth. This starting scene produces a rural female body by using several indexical visual cues. Her outfit shows a vulgar taste; she is occupied with domestic labor and she cannot afford to see a dentist. The physical setting and objects convey a rural identity to audiences.



Figure 1: The visual representation of a rural woman's body **Figure 2:** The visual representation of the rural space

Figure 2 is the starting scene from one of Xinran's videos, illustrating how the rural space is produced. A woman is standing in a messy yard and holding a basin of corn, which seems to be just cropped. The agricultural labor and the physical space function as the visual cues to index rurality. Like Figure 1, this woman also wears a plain hairstyle and old-fashioned clothes. It is found from more of Xinran's videos that she puts tapes on her eyelids before the transformation, making her look more aged. Other influencers also darken their skin color or draw lines of wrinkles on the forehead.

Figure 1 and 2 illustrate the starting scenes of the makeup transformation videos. The woman is from the countryside. She lacks physical attractiveness and is tied to heavy domestic or agricultural labor. It needs to be addressed that Tianyi and Xinran are not pretending to be a rural woman, instead, they are accentuating the rural identity markers. In other words, they contextualize their performance to audiences who are familiar with the rural culture in China. The ends of the videos show a drastically different person. In Figure 3 and 4, both Tianyi and Xinran are transformed to a glamorous look. They wear sexy outfits and luxurious jewelry, with hair styled. Importantly, the makeup makes their skins smoother, brighter and faces well defined. Of course, beyond makeup, Kwai's video filter helps the influencers to get flawless skin, wide eyes and a sharper jawline, a gendered design of application suggested by Li (2019). These features appeal to the dominant definition of physical attractiveness of Chinese women.

The physical contexts also change. They are lifted out from the domestic and agricultural spaces to an “empty space” by standing in front of a filming backdrop. In Tianyi’s video, the background is decorated delicately with lights and curtains. However, the space becomes empty because it is no more socially defined. One cannot know who this elegant lady is, where she stands and what she is doing.

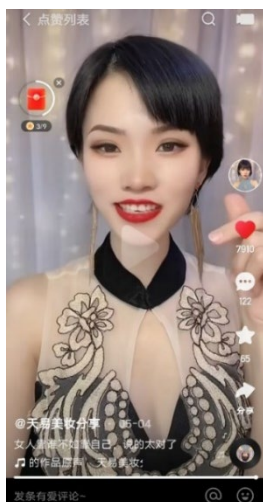


Figure 3: The transformed image of Tianyi

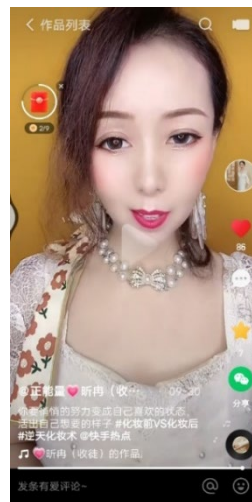


Figure 4: The transformed image of Xinran

4.2 The postfeminist sensibilities and the discursive ambiguity

The last section shows that the beauty influencers are portraying a story of makeover, a prominent element in postfeminist media culture. Now the analysis delves into the reasons why these women in the stories decide to transform their appearances. After browsing all the 72 makeover transformation videos from Tianyi, several major themes are identified. These include: a woman needs to attend a social event of her husband’s network. She is despised by her husband for the messy and aged appearance. A woman needs to participate in her child’s school activity, but the child feels embarrassed about such a scruffy and sloppy mother. A woman will visit or be visited by her judgmental mother-in-law who shows contempt on the wife only for her rural identity. A woman is a bride in her wedding dress, but no one recognizes her because of the ugly look. A woman gets a divorce from her husband or the husband had an affair. In very few cases, a woman goes to work, but most of the work-related stories feature the woman as a flight attendant.

These plots accentuate a rural housewife identity and a theme of “crisis in patriarchal and patrilineal marriage”. The woman in the videos is economically dependent on the husband and devotes her life to domestic labor. This can be seen from the social activities she attends, which all connect to the husband’s social network or the child’s education. The woman is married to the husband’s family, explaining why she is under the scrutinization of the mother-in-law. When the woman indeed appears as an individual in the job market, she is a flight attendant, whose work is often associated with femininity instead of professionalism in China’s popular discourses. However, in these transformation videos, the woman’s attitude towards traditional marriage life is ambiguous. The analysis now attends to the problem definitions and the recommendations for solutions in these stories.

In Extract 1, the wife blames the burden and economic situation of the family. She poses a structural problem where the husband plays a particular role. The crisis in the video is perceived as an outcome of a rural woman’s underprivileged structural position in the patriarchal and patrilineal family structure. This outcome is conveyed as unavoidable. A woman’s physical attractiveness will deteriorate, because she must take care of the family members, thus being other-oriented. However, money can improve the situation. The friend’s wife keeps the attractive look, because that friend earns enough money to treat his wife well. The division of labor in this patriarchal marriage is not to be challenged, but can be compensated with the husband’s economic power. Once the man is not playing the economic role well, there is an appeal to a woman’s economic independence and individualism. But the value of these two feminist tropes is ambiguous.

It is this ambiguity that defines the particularity of the postfeminism culture in rural China. Firstly, in Extract 1, economic independence and individualism are presented as a debatable alternative which defies traditional values (“does not care about family”). A woman is forced to choose from either family or career and bear the

respective stigmatization and consequences for whichever she chooses. Independence is also the secondary choice when the husband cannot play his gendered social role. Secondly, the benefit of economic independence and individualism is solely footed on physical attractiveness. Such ambiguity is further illustrated in Extract 2.

Extract 1

Husband: A friend of mine and his wife are going to visit me. Go quickly to get some grocery.

Wife: Yes.

Husband: When they arrive, just tell them that you are the house servant hired by me.

Wife: Why?

Husband: My friend's wife is very beautiful, but look at you!

Wife: I now look like this, but it is all because of you. Ok, let me do my makeup first and go buy grocery.

Another scene, the woman begins to apply makeup

Wife: You always mention that other's wife is gorgeous, but why don't you reflect on how much the husband is investing on his wife? But how much you invest on me? I have to be calculating even about family expenditure because of your meager income. I take care of the children and parents. Now I've lost my good looks and you return me with despise. If a woman does not care about her family, and be economic independent, she will be beautiful wherever she goes.

Wife: It's the easy job of applying makeup. Let me wear an elegant makeup today and I won't lose your face...

This script comes from the video shown in figure 1 from Tianyi. While preparing for dinner, the woman asks for money from her husband as family expenditure. However, the husband is not only reluctant but also raises an ironic question. Without giving the money, he scorns her wife for economic dependence and challenges her confidence. The wife's later argument indeed illustrates an element of postfeminism. She considers herself belonging to the new generation of women in China, to whom economic independence is capable. In other words, gender equality has been somewhat achieved. However, the wife then explains the reason for her dependence. She confirms that in a marriage, a woman seeks protection and care. A woman is not going to take care of a man's spending.

This confessional talk reconfirms the traditional values in patriarchal marriage. The video ends with an ambiguous suggestion to women audiences: women should strive for independence, which is manifested in both economy (bank cards) and mobility (cars). The ambiguity arises again: if women are seeking protection and care from men, what is the need for independence? One of the interpretations in Extract 2 is "risk management". While the ideal situation is that a traditional marriage works out, but in many cases, there are problems, such as an irresponsible and inconsiderate man. In this case, although a woman can long for a traditional role, she should also be able to manage the risk.

Both Extract 1 and 2 show a discourse of duality. The discourse reinforces the traditional patriarchal gender orders and suggests women to be independent. The other-oriented, caring, and nurturing motherhood is not given up, upon which, physical attractiveness is demanded. The value of economic independence and individualism is ambiguous, which becomes the instrument of remedy and risk management. A vigilant and reflective neoliberal subject also shines through. It is the woman who needs to repair the problems in a marriage and to maintain risk consciousness and be resilient. Moreover, the phrase economic independence is introduced as a slogan, with unresolved tension and an undefined plan. Visually, whenever economic independence is portrayed as being achieved in the final transformed scene, what is really achieved is a glamorous look. The visual and vocal modes work in combination to sneakily conflate the two concepts: being economically independent equals physical attractiveness. The woman is empowered by beauty and fashion symbolically,

resonating with the empty context of the transformed scenes. This leads to the further analysis of rural beauty influencers' business model.

Extract 2

Wife: we are running out of milk powder for the baby. The water, electricity and property management bills are also due. Can you transfer some money to my bank card?

Husband: I will transfer the money after dinner. But let me firstly ask you a question: if one day we sperate, can you still make a living?

Wife: Make no mistake, women now are different from the old days.

Husband: How?

Wife: Because we all know to be economically independent and make a living by ourselves. We spend the money earned by ourselves. Now we don't have to depend on men.

Husband: ah, are you so confident?

Wife: Of course! Actually, women marry men for a sense of reliance and safety. She looks for a man who can care her, spoil her, love her and protect her. If a man cannot achieve these, what is the use of him? Is she looking for a man to raise? So as women, we should achieve: phones are charged, cars are tanked, bank cards with money saved. If you think I'm correct, please hit the heart button for me!

4.3 Female entrepreneurship and influencers' business model

Figure 5 is the starting scene of a transformation video from Tianyi. The video features a housewife whose husband requires a divorce. On the bottom of the screen, there is a yellow shopping cart button. It is a purchase link directing users to the product Tianyi is using in this video and further her Kwai micro-shop. Figure 6 is the makeup application process. Tianyi is applying a BB cream by squeezing it directly onto her face, which also serves to demonstrate this product in front of audiences.



Figure 5: The shopping cart button in the video camera



Figure 6: Displaying the product in front of the camera

Selling products is not the only revenue stream for beauty influencers on Kwai. Xinran's full screen name is "Positive Energy (heart emoji) Xinran (Recruiting Apprentice)". The parenthesis announces that she is recruiting apprentices. This apprenticeship is not only about learning makeup skills, but also the skills to start an influencer career, namely business tutoring. In Xinran's account description, she provides different services including influencer multi-channel network, makeup and filming tutorial, body slimming.

Both Xinran and Tianyi work with the same brand Shezi. The company is a cosmetic and food supplements producer whose major sale channel is social media platforms. Starting as a micro-commerce brand, Shezi recruits individual selling agents who promote and sell products on their own social media accounts. To be an agent, one needs to bulk purchase a large amount of products. The agents can also profit by recruiting sub-level agents. This shows a multi-level marketing model of the brand. In the case of Xinran and other influencers, the apprentices they recruit are the potential sub-level agents.

This agent recruiting and business tutoring revenue model explains the ambiguous meanings of economic independence in influencers' transformation videos. The scripted performance stresses the importance of women's income and attracts audiences to join the influencers' business. In this case, the makeup transformation videos construct postfeminist culture from two levels. For one, they call upon women to conduct self-fashioning practices as a solution to the crisis in the patriarchal family relationship. For another, they promote female entrepreneurship which is restricted in the business of fashion and beauty. This model also explains the recurring plot of a husband's low income in the transformation videos. Several influencers in the sample are mothers of two children with the influencer career being a side job. Having extra income from the wife beyond the husband's salary is promoted as both a solution for the poor family and for the self-esteem of the housewife.

5. Discussions and conclusions

This study explores the postfeminist media culture in rural China manifested in the beauty influencers' videos and business model on Kwai. An ethnographic investigation reveals that the influencers advance a makeover paradigm for audiences. The scripted videos depict rural housewives as taking a disadvantaged position in patriarchal and patrilineal marriage. Her physical unattractiveness is both a result and symbolism of such a position. Beauty and fashion routines are applied by the woman to help herself out. The glamorous look at the end of the makeover scene functions to empower the woman symbolically and signals her economic independence. The calling for female economic independence functions to inspire audiences to join the influencer business, where influencer trainees are recruited as agents for the cosmetic company.

The study identifies several particularities of the postfeminist media culture in rural China. Firstly, the acceptance of the traditional patriarchal values is not a knowing and assumed self-choice in comparison to Western postfeminism culture. Similar to the findings from previous studies, the essentialist gendered roles are embraced without questioning. The videos construct a taken-for-granted passive role in the patriarchal script. This finding illustrates the particular temporal order of China's postfeminist culture, in which the liberal feminist ideas do not have a strong presence in rural culture. This explains why economic independence and self-fashioning are discursively constructed as a remedy and rescue for the failure of the traditional marriage and gender relationship.

To summarize, if the urban postfeminist culture in China takes account of China's feminist discourses, its rural manifestation still conducts a dialogue with patriarchy. One may ask to what extent this cultural sensibility is "post"-feminist. Still, the remedy and rescue that provided by the videos subscribe to consumerist culture and a neoliberal mentality. The promise of women's liberation and freedom of self-choice are overwhelmingly manifested in the field of beauty consumption. The rural housewives also need to be resilient psychologically so as to manage the crisis in marriage life. The beauty enterprise recommended by the influencers again limits women's public profile to the region of fashion and beauty. Importantly, its multi-level marketing model benefits only the established influencers. The promise for economic independence is thus difficult to realize.

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Community Management on Facebook: How to Solve Problems with Negative Reactions and Comments from Groundswell?

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Abstract: Social networks, by their very nature, have not only given people from around the world the opportunity to connect but also have allowed for a collective and global exchange of views and thoughts among all users. Such an exchange of views has a significant impact even on commercial players - on brands, for which presence and communication on social networks have become second nature. Through the functionality of individual social networking sites, users are given a wide range of opportunities to express their views on brands quickly and flexibly. Such a groundswell impact may be both positive and negative, but a negative effect poses a real and serious threat. Today the space of social networks is undoubtedly fuller of negative emotions than ever before. In communication, users blur the boundaries of what is acceptable, they prefer criticism in communication, and some thrive on creating and spreading hatred. This kind of behavior and user communication threatens brands on social networks. One negative remark leveled at the brand, and a negative post not resolved with its author, could trigger an avalanche of criticism, and have a devastating impact on the brand. Criticism that indirectly affected the brand may soon spread to all social network users in the country and around the world. The topic can also go beyond social networking websites and reach other mass media. For this reason, it is crucial that brands not only know how to communicate proactively in a social network environment but also know how to respond reactively to negative comments, criticism, and hate. The purpose of this article is to develop easy-to-use and generalized communicative approaches and rules, that are useful not only on Facebook and should make it easy for the brands to manage negative reactions of the audience and communication crisis. Brands that acquire a suitable and quick way to respond to such situations can thus be skillfully able to maintain a good reputation, build a brand and equally important, increase their competitiveness in the market.

Keywords: community management, social media, groundswell, Facebook

1. Introduction

It is an almost unquestionable truth to say that consumers are becoming pivotal authors of brand stories by sharing brand experiences via social media, linking consumers and brands (de Vries and Carlson, 2014). Perceived sociability is recognized as an important characteristic of social media brand communities for consumers as it increases their sense of social presence (Carlson et al., 2018) which makes customers believe that they are cared for, valued and helped by the brand and other customers in the online brand community (Hu, et al., 2016). For this reason, there is a logical need for many brands to actively work and care about the communities they bring together around them in the social networking environment. It is vital to keep in mind that customer care relates not only to the current customers but also to the potential ones, who right now consider whether to buy a specific item or not to buy. Customer care on social networks falls within the competence of community management, which means the maintenance and building of a better online customer experience.

A community manager is responsible for the relations with the community – fans, customers, public. The community manager answers comments and messages on social networks, joins groups where he acts on behalf of the brand. The key here, the community manager communicates directly with people and represents the brand, the authority, or a group. Sometimes the brand faces negative comments and discussions on social networks, which should be treated appropriately.

This paper aims to design introductory and common communication methods and rules, which might help to react correctly to negative feedback of the public on social media and might even help brands to overcome communication crises. Those who implement the correct communication approach when receiving negative feedback as soon as possible might keep the brand's good name, build the brand and, finally, increase competitive advantage on the market. The present article focuses primarily on communication practices in the environment of the Facebook social network on the territory of Slovakia, but aims to conceive approaches and

rules whose application will be generalizable, and therefore without the limitation of a specific platform or geographical area.

2. Social media overview

As we mentioned above, the article focuses primarily on Slovakia and the Facebook social networking site. However, for a better insight into the issue, in addition to local statistics, we also present a global view of the current state of social networking sites. Based on statistics from 2021, the internet connection penetration rate in society has reached almost 60%. From the social media perspective, more than 4.2 billion people were active on social media at the start of the year. Considering the general population number, we are talking about the representation of almost 54% of the population. During the year, the global number of Internet users increased by 7,3 %. The number of social media users increased even more by 13,2 %, which accounts for 500 million new and active social media users. The average time spent on the Internet amounts to 7 hours per day, and social media users spend on average 2 hours 25 minutes on social media. After television, the Internet is the second social media in terms of the time spent. Google is ranked as the #1 most visited website on the Internet, followed by two social media platforms – YouTube and Facebook. What for the most popular social media platforms as per the time-spent per month: Facebook ranks first with an average of 19.5 hours spent per month, followed by WhatsApp with 19.4 hours, the third place belongs to TikTok with 13.3 hours, and finally Instagram with its users spending 10.3 hours using the platform. Among the video-sharing social media, YouTube, no doubt, occupies first place with a monthly average of 23.2 hours per user. Slovak local online environment, social media, and networks usage can be described as follows: there are 4.6 million Internet users in Slovakia, which constitutes 85% Internet penetration. If compared with the previous year, we witness a 2.4% increase, equating to 111 thousand new users. Among the most-visited webpages, Google stands at the top of the list, followed by social media platform Facebook, news website Aktuality, and video-sharing social media YouTube. However, as per some statistics – Similar web is one of the examples – YouTube gets third place if we look at the number of web location visits. As per Alex, YouTube even occupies second place. The number of active social media users in Slovakia reached the point of 4.03 million, which means that 74% of Slovaks actively use social media. With that, the year-by-year growth reached 10.7 %, or 390 thousand new users (Kemp, 2021). Consequently, we discuss the social network in question, Facebook, in more detail, given that it is the largest and most used social network locally. We also take a deeper look at the Instagram social network for the reason that it can be considered as the second most used social network locally, which belongs to the same owner as Facebook, i.e. Meta, and the communication practices that the present paper aims to conceive should be fully applicable to the social network Instagram as well.

2.1 Facebook

As of January 2021, Facebook had 2.7 million users in Slovakia, according to available statistics. The number reveals a potential amount of people influenced by the advertisement activities on the social media platform.

Considering the obligatory registration, we may believe that the above number corresponds directly to the number of active users. A 57.2% penetration rate of Facebook is observed in the Slovak population over 13 years of age. In January 2021, quarter-to-quarter growth in the number of users reached a 3.8% increase, equating to 100 thousand new users. According to all the above-mentioned facts, Facebook is the most popular social media platform worldwide, not just in Slovakia. This social media platform was founded in 2004 at Harvard and initially intended for the students' needs (Kemp, 2021). Later in 2006, the platform became available to a wider audience, meaning that not only university students could use it. And from that very moment, its popularity picked up so intensely that, within the next two years, Facebook had its first 100 million active users (Murár, 2018). This social media has a wide-scale use. Through Facebook, we can build personal relationships, communicate, and share multimedia content. From a marketing and business point of view, it is a unique tool that helps communicate with existing and potential customers using advertisement campaigns or direct organic interaction with the public. Facebook's functions and usage scale develop all the time. Having developed through various stages, this platform deserves to be called a trendsetter. It has multiple features – from group creation, idea or content sharing to a full-scale information media, communication channel where you can chat, call, make video calls, use it as a marketplace for single users, companies, or brands. The sale and purchase of items in social media and networks are currently undergoing dynamic developments (Madleňák, 2020). Retailers, IT and software companies, healthcare, factories, and educational organizations are the most represented on Facebook (Group of authors, 2014). It is crucial for all commercial entities using this social media platform to understand the importance of the connected community in relation to the possibility of a groundswell and the subsequent impact it can have on those businesses. Due to the multi-functionality of the social media platform, there is

room for a groundswell to exist. Groundswell may occur in groups, comments under posts, or as a result of responses under posts in feeds, reviews, or when sharing multimedia content.

2.2 Instagram

Instagram is another platform present on the local market where groundswell may be present. In the light of available statistics and the specifics of this social media platform, Instagram is the second most spread social media platform that, in terms of features, is very close to Facebook, for example, by the obligatory registration to have full-content access. In Slovakia, Instagram has over 1.4 million users, equating to 29.6% population penetration if we consider the Slovak population over 13 years old. In January 2021, quarter-to-quarter growth stood at 7.7%, equating to 100 thousand new users (Kemp, 2021). In comparison with Facebook, we witness a more dynamic change in the number of new users. Instagram was created in 2010 when it was available for iOS systems from Apple. Two years later, in 2012 has launched another version that worked well even on Androids developed by Google. If going further into comparison, Instagram functionality is somewhat less wide-ranging. Instagram is a significantly more visually based platform. It is a visual mass media that enables the creation, edition, distribution, and sharing of audio-visual static – as photography, or dynamic content, for example, video content. Instagram's visual focus explains its popularity among businesses. The brands are selling items that can be presented in an attractive way using all the visual tools as the main idea of Instagram is the demonstration, not communication. Instagram is owned by Facebook, which is why the platform experiences constant development of its features, but at the same time, it maintains its very nature and visual character. In terms of future potential for groundswell, Instagram has multiple functionalities. You cannot leave sentimental emojis as a reaction on the posts, only 'I like it'. However, you can leave your comments under the posts. Instagram Stories is one of the most significant features. It supports groundswell even more by using stickers or vote buttons, where users can leave their comments, answer quizzes, or send their questions directly to the commercial profile owners.

3. The importance of community management on social media

A sudden loss of reputation on social media can become the worst nightmare for every business. Facebook and Instagram are full of critiques from customers, who sometimes unreasonably and even maliciously blame the brands.

In the world of modern words, such people are called *haters*, from the English verb *to hate*. In no case, however, the company needs to stay silent when it receives constructive or not constructive feedback. Macko (2020) believes that *'if you let the hatred go unnoticed, it might later build up and create a communication crisis'*.

For such cases, companies and brands should have a ready-to-use communication crisis manual and an employee responsible for social media communication issues. Community management here is a way of maintaining and building relations with the followers in the online environment. In practice, we refer to management, answering, and coping with conversations in comments and direct messages. The community manager always steps in when a communication crisis unfolds under a random Facebook post with a few negative comments. As we all know, a regular customer will share his negative experience with at least twice bigger group of people as he would do in case of a positive purchase experience. That is why community management activities are essential.

The fundamental aspect that every company and every community manager should keep in mind is that the brand by itself does not have an ego. The company should not be influenced by emotions because, by nature, it is only a brand. It cannot be insulted or be arrogant and unpleasant in reaction to critiques. Under all circumstances, the brand should maintain a professional approach, have reasonable arguments, and keep polite communication. In such cases, the person's ego (owner, social media manager, community manager, employee) may result in an issue (Macko, 2020).

4. Coping with negative comments on social media

As we have already pointed out, among all social media advantages, there is one risk factor that might impact a brand's name and reputation. One of the social media principles is freedom in content, idea, and view sharing (Martovič, 2020). This fact creates premises for brands to come across positive and negative comments from social media users. According to the White House Of Consumer Affairs (2019), dissatisfied customer tells twice as many people about their negative experience than happy customers do about their positive experience. Based

on this, the brand might come across negative feedback on social media more often. The Groundswell effect is typical for social media and can arise from a negative context. Its repercussions for the brands might be devastating and far-reaching. We would argue that all brands try to avoid this situation. As social media allow not just one-way information sharing but offer interactive both-way communication (Murár, 2019), brands should know how to act and react to negative-user comments. The paper aims to design a common strategy that would help the brands to cope with negative feedback and comments from social media users to save reputation. The strategy consists of four steps, and each of the steps we would pay detailed attention to:

- Identification of the user type,
- Situational analysis,
- Stepping into the conversation,
- Closure of the discussion.

4.1 Identification of the user type

In case of receiving a negative comment, the brand should, first of all, define the user type. According to Macko (2020), there are five of them. They include the silent majority, the wider public, brand ambassadors, haters, and Internet trolls. The classification may be completed based on two following variables - the interest in the brand and active or passive discussion status. For better illustrations, we include user classification in table 1.

Table 1: Social media user classification

	Active in the discussion	Passive in the discussion
Interested in the brand	Ambassador, hater	Silent majority
Not interested in the brand	Troll	Wider public

Source: Ponyhouse.sk, 2019

The silent majority is the most numerous group of social media users. Such users know the brand or even use it, do not take part in the discussions but follow the comments and debates between other users. Later, based on their point of view, they may take a stand on ambassadors' or haters' side. The other passive group is represented by the wider public not interested in the brand. Such users can yet come across the discussion, see the reaction and answers from the brand, and that experience may influence their future decision on whether to buy a particular item. It is significant to mention that even if both groups – the silent majority and the wider public – are passive in the discussion, the communication leaves an impression on the users. In the discussions and comments, the brand can have an open confrontation with participating-in-discussion users, haters, brand ambassadors, or Internet trolls. Ambassadors and haters are two opposites of the user types, who willingly step into discussions, use the brand, or show their interest. The ambassadors, however, are on the side of the brand, they like it, stand for the brand, and defend the brand before haters. Haters could be a potential source of critique and negative comments, they might know the brand, have their own, in most cases negative, experience with the brand, and see no obstacles in sharing their thought and opinions in the discussion. Or they even do not like the brand itself and want to spread their hatred. The other active group of users is called Internet trolls. Unlike ambassadors and haters, they do not use the brand, do not even have an interest in the brand, and might not even know the brand. Trolls are users who share irrelevant and disruptive content intending to demolish the discussion and provoke others to negative comments and reactions (Dammann, 2019). They don't want to share their opinion but rather commence a negative, to challenge all the work done by the brand.

The biggest challenge before stepping into the discussion and replying to a negative comment is a differentiation between the comments of a hater and an Internet troll. Here we need to focus on the details and carefully work out our answers. The first marker that might help you make the right decision is focusing on the level of reality in the comment. Hater, familiar with the brand, refers to a non-imaginary issue. On the other side, a troll is not interested in the issue and whether it is realistic enough. Once we come across negative comments with a not existing or an absurd issue, most likely we face Internet troll. The next marker can be the communication style. Trolls mostly use sarcasm while haters ask passive-aggressive questions. Of course, sometimes it is hard to distinguish between hater and troll but try analyzing the situation and classifying the user, as this determines our way of handling the discussion.

4.2 Situational analysis

After the user class identification, we should proceed to situational analysis that we have slightly discussed while looking at the user types on social media. In this step, we should focus on the content side of the shared comment. The brand should evaluate what is present in the comment, whether it is a real issue from the hater

who has a negative experience with the brand, or it is an unfounded comment from a hater who does not like the brand, or a non-existing issue and an empty disruptive comment from the troll who is trying to commence a debate. Do not forget that the hater might have a real negative experience from the past, and from that moment, his issue is credible, and the answer to his comment should be credible. Moreover, a hater who does not like the brand can point out an existing problem with no intention of receiving a problem-solving comment. He might not even want a solution, it might not change his point of view, but the issue persists. Troll, however, writes about fake problems. Based on this, we may have three scenarios: truth is on the brand's side, a negative comment is invalid, truth is on the user's side, and negative comment is valid, or neither is correct, and no one knows where the truth is. To decide, we should set aside our ego and evaluate the comment realistically and critically.

4.3 Stepping into the conversation

Here comes the most crucial part: stepping into the conversation and reacting to critiques. We should not forget several significant points. First, stick to the communication manual to have all the answers consistent from a voice tone perspective. Secondly, as we have already noted, the brand does not have its ego, which is why it cannot be influenced by emotions, insulted, be aggressive, or attack the critics. On the other hand, social media humanize the brand, give it a human face, as while using social media, an abstract brand can interact with its customers. And equally to people, the brands can be wrong. The most crucial thing is to understand that the negative comment is witnessed by all five user types, who are waiting for the brand's reaction. The brand does not answer one particular person who leaves the comment, but all the parties interested. The brand's intention should focus on changing the hater into a satisfied customer using an answer that suits everyone.

After situational analysis, the brand is ready to react. The ideal scenario is when the truth is on the side of the brand, and negative comment is not valid. In this situation, it should be enough to show the truth adequately. There is no need for explicit explanations that the user is wrong and what he is saying is not true not to create a sense of humiliation in front of the public. It is good to provide an easy answer or an argument. Moreover, a very nice technique is to use a sense of humor, targeting it, of course, away from the user. This strategy could show the public that the brand does not have hard feelings but healthy confidence and a positive attitude.

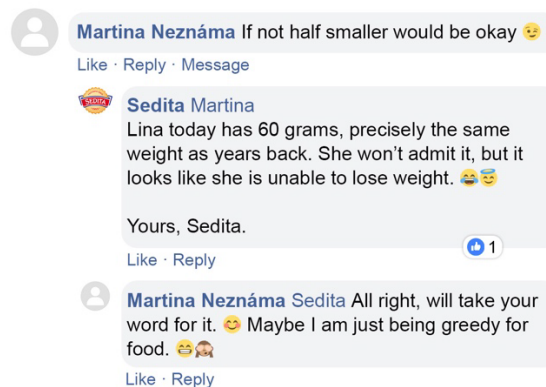


Figure 1: Explanation blended with humor

Source: Facebook.com, 2022

The opposite comes when the brand comprehends its fault and admits that the truth is on the side of the user. It is essential then to accept the mistake because, as we have pointed out earlier, behind the brand stand people, people can make mistakes, the brand can make mistakes as well. In this case, the reply should be very straightforward, should contain the words of empathy and understanding, and along with that, the solution to the problem. In addition, thank the user for letting you know about an issue. Another important rule, the brand should react as soon as possible. If you need more time to review internally, it is crucial not to let the user wait for too long. Ensure him that you are working on the request, and you will notify him once you have an answer. It is unacceptable to respond in a neutral tone, though. Do not let the users feel your uninterest in the issue resolution. A well-known case that shows how far the escalation can go is the communication of the commercial chain Billa, who towards all unsatisfied customers used a cliché-answer meaning 'We are investigating the issue

now.¹ But users saw no results of such communication. The hate went further and further, leaked from the Internet environment, and was caught by mass media. One comment on social media in combination with not-handled community management presents a serious threat to brands' reputation.

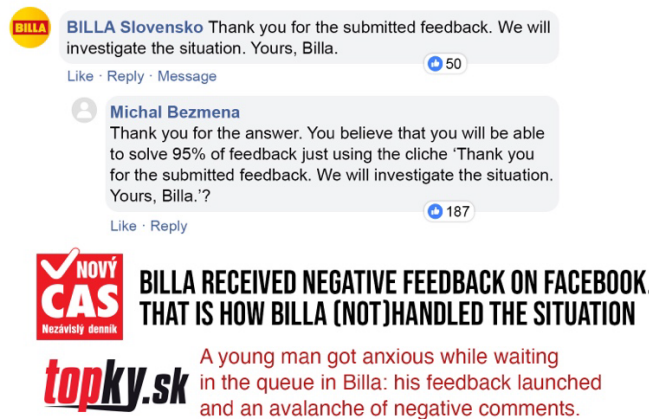


Figure 2: Answering using 'cliché'

Source: personal source, 2022

The very last situation type is less common. Here we talk about the case when the truth is on nobody's side or when it is partly on the user's or brand's side, and it is hard to prove. Such situations occur during complex discussions that tackle world topics and are not limited to the brand. As an example, we may mention global warming because of which a hater may accuse the brand, which he believes increases carbon footprint during the manufacturing process. The truth can be relative - both the user and the brand could be right. The brand may argue that it occupies the very last position on the list, but the user may answer that notwithstanding the volume, emissions are harmful, and the brand does not take enough effort to get better, etc. In every case, we are dealing with the war of words in which each side tries to offer more intricate arguments and win the war, which may result in endless discussion. Due to that reason, it is good to end the conversation as soon as possible using a neutral tone of voice and ideally win the war of words. As an example, let us demonstrate the conversation of the Slovak producer of sweets frequently blamed for the use of palm oil. Previous experience has shown endless conversations with customers as each comment from the brand was followed with a new one from the customers. However, in a subsequent reply, besides using the most powerful arguments, the community manager has added a 'conversation closing phrase', which led to the closure of the discussion.

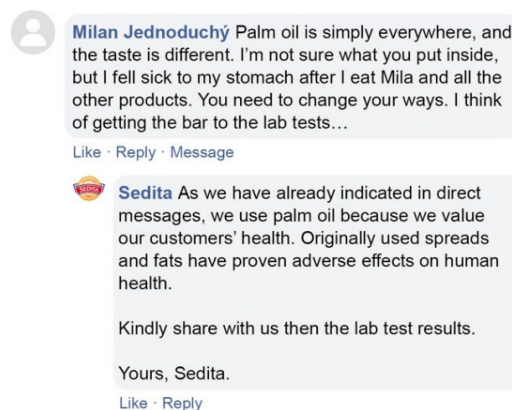


Figure 3: Argumentation with the discussion closure

Source: Facebook.com, 2022

4.4 Closure of the discussion

The last step of the negative comment approach is still tied to the engagement into the discussion in a certain way and to the response itself. We believe that the closure of the dialogue is still a meaningful part of the answer,

which is why we have made out of this step a stand-alone part. In an ideal scenario, the brand should close the dialogue leaving an impression that everything was sorted out, not to leave space for further criticism. It is nice to think about what the user, excluding troll users, wants to achieve by the complaint. Most likely, it can be a sense of satisfaction from the promise of getting things to work better or from simple admission of the mistake made by the brand. We need to plan on how to satisfy the customer and, at the same time, end the discussion using the answer that suits everyone – the user, the brand, the interested parties. In many cases, it is enough to thank for the expressed complaint, especially when the complaint is reasonable. By doing that, the brand shows that it can accept critiques and values the feedback. In addition, the brand should refrain from asking additional questions in the reply as this may appear to be counterproductive, leading to further criticism and revealing errors. The time-proven technique is to add a fictional closure of the debate in the very last sentence of your comment to make it the last thing the user reads. It can be some gratitude for the trust to date, expression of the belief that the user would stay with the brand notwithstanding all the aforesaid issues. The time-proven technique is to add a fictional closure of the debate in the very last sentence of your comment to make it the last thing the user reads. It can be some gratitude for the trust to date, expression of the belief that the user would stay with the brand notwithstanding all the aforesaid issues. If we are not dealing with current customers, we can express a positive thought and wish them all the best. The effort to end the discussion may go through all the debates starting from thanks at the beginning to the choice of the strongest argument at the very end of the conversation. As an example, consider the Absolut campaign, which featured a dark-skinned Slovak lady as the brand's spokesperson. Due to a relatively large amount of hate, the feedback to the campaign became viral.

The brand, however, confronted all the comments exquisitely well, stood up a stable position, used thoughtful arguments, and did insult no one. Of course, the brand did not write the words of gratitude for the racism, but in most cases, the brand expressed the argument and demonstrated that, in case the user changes his mind, he is more than welcome to be a customer. With that, the conversation was over, the conflict was solved. The user had nothing to add.



Figure 4: Closure of the discussion

Source: Facebook.com, 2022

The extreme situation, when the proposed technique is pointless, or you simply need to break certain rules, may happen. The indisputable rule says, 'that no comment should be left unanswered, including the praiseful as well as the critical one. The complaint, however, may be written by a troll. Such a comment won't make sense and may not have been noticed or supported by the public. In that case, do not reply, do not feed the troll. By answering pointless comments, you open useless conversations leading to nowhere. At the same time, never give up the dialogue once it is already running. That is valid even if it seems to the brand that all the arguments were exhausted, the discussion had fictitious closure, or it goes in circles and leads nowhere. The last may occur when no one is right or when you deal with trolls or haters who are not interested in your answers but rather in the discussion and spread of hatred. One more rule: do not delete the comments. In the first place, the deleted comment may still emerge on someone's screenshots or in the browser search done by some skillful IT users. There can be nothing worse than the complaint resurfacing in short order showing how the brand avoided confrontation and criticism from followers. And this would validate the legitimacy of the critiques even more. In case the comment incorporates unacceptable phrases such as swearing, expressions of racism, religion, or something similar, it is alright to delete it because, in this case, the brand has a legitimate reason. For such matters, it is good to have a developed communication manual or even the discussion rules to use whenever the arguments and guidance are required.

5. Conclusion

Negative comments and critiques represent a genuine part of the Internet environment. Unlike positive remarks, negative feedback and its management in negative connotation are challenging for every brand. Some brands

still are unaware of how to manage negative feedback and criticism. Fear of critiques may have a destructive and far-reaching effect on the brand. That is why it is important to spread knowledge in this doubtful field. Once the company has a strictly defined strategy, brand identity, communication style, and a manual on how to cope with communication crises, it can overcome the majority of unwelcome cases in a social media environment with a minimum negative effect on its reputation. Having a communication manual should be driven primarily by the understanding that negative comments are visible to all five types of users. And everybody is waiting on how the brand will respond. The brand does not answer only to those who write the feedback but to everyone, in other words, to the majority of users. The answers may represent a brand's power but, at the same time, can show weakness and lead to unintentional risks.

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Communicating Eco-Friendly Products on the Social Network Facebook and Groundswell Management

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Abstract: The paper deals with the marketing communication of eco-friendly products on the social network Facebook. It provides an overview of the specifics of marketing communication of eco-friendly products and also tackles the need to raise awareness of eco-innovation. Based on the literature and analyses review the paper provides an overview of the current state of this issue emphasizing the importance of social networks in promoting and communicating eco-friendly products. The paper focuses on key aspects of marketing communication of eco-innovations and eco-friendly products, as well as the use of social networks in marketing communication. The paper also addresses the phenomenon of the groundswell – a social trend widespread on social media which affects marketing communication. Moreover, the paper presents the views of various authors on this phenomenon and also outlines research on the topic emphasizing its individual aspects, in particular the impact the groundswell has on the eco-friendly products marketing communication and its fundamental attributes.

Keywords: Eco-friendly products. Groundswell. Marketing communication. Social networks.

1. Introduction

Given the environmental degradation, ecological issues and eco-innovation have become the topics of the utmost importance, especially since the 1960s. This gave rise to the concept of social marketing (later a holistic concept) – a branch of marketing which focuses on the environmental aspect of business.

The concept of socially responsible business is currently widespread in various areas of business, including wholesale and retail. Supermarkets with their ever-increasing market share are thus directly involved in the consumption of their goods and thus bear responsibility for the environmental impact of increasing consumption.

As Čábyová and Krajčovič (2020) state, in terms of building a competitive advantage, it is important not only to implement these activities, but also to communicate them in a suitable way to the public.

The increased environmental awareness among customers had been one of the key drivers for the companies to produce green products (Ottman et al., 2006). However, as Rahbar and Wahid (2011) emphasize, sales of green products have not grown as expected, although consumers' awareness has increased over the years.

Marketing communication of eco-innovations and activities of socially responsible behavior has its specifics. According to Grib and Záušková (2017), we can look at the issue from two standpoints. The first standpoint is all about communicating eco-innovations and thus increasing awareness and improving the image of the company. The second standpoint targets ecological solutions and their use in marketing of socially responsible business activities of the company.

The use of social media for marketing eco-friendly products is a significant step towards building awareness of such products, as well as an opportunity to promote their direct sales. As emphasized by Baverstam and Larsson (2009) being 'green' or 'eco' conveys the image of an eco-efficient brand which is very important for any company seeking to build brand equity.

Krajčovič (2021a) claims that in the field of eco-innovation, the use of social media and social networks is equally important. Given the importance of innovation and the need for green solutions, these concepts have proven essential particularly when it comes to raising awareness of eco-friendly products, green services, as well as other green options available to customers.

The use of social media for marketing communication depends on the level of social penetration and the average daily social media usage. In 2021 there were 4.55 billion active social media users, which means 57.6% of the

global population. Annual change in the number of global social media users is + 409 million (Digital Report, 2021).

In Slovakia there were an estimated 4.13 million social networking users in 2021. This figure is projected to increase to 4.41 million social media users in 2026.

2. The groundswell phenomenon and its impact on raising awareness of eco-innovation

The development of information technologies, higher availability of the Internet and the sharp increase in social media users have caused a significant change in consumer as well as media behavior. Several authors (Sutter, 2010; Westerman, Spence, van der Heide, 2014; Krajčovič, 2021b) point to the trend of using social media as the main source of information.

The use of social media to obtain various information instead of using official sources is known as the groundswell phenomenon. Li and Bernoff (2011) define the groundswell as a social trend in which people use technologies to get the things they need from each other, rather than from traditional institutions. In this regard, technologies mean social networks, blogs, applications or other tools that allow us to obtain the necessary information or share it.

The use of social media to obtain and search for information is not a modern phenomenon. More than 10 years ago, Pepitone (2010) said that newer communication technologies have increased the possibilities for how people can send and receive information. Social media are one such technology that has seen increased usage as an information source. According to Westerman et al. (2014), social media is increasingly used as an information source, including information on risks and crises. Sutter (2010) points out that social media are being used to seek information about serious topics, such as circulating up-to-the minute information about cholera outbreaks in Haiti and identifying clean water sources during this outbreak.

The groundswell phenomenon is a natural consequence of the three forces - people, technology and the economy. According to Li and Bernoff (2011), the human desire for communication, new interactive technologies and the online economy have created a new era in which the crowd can actively participate in the development of the company.

3. Aims and methodology

The aim of the paper is to examine the way the three largest food retailers in Slovakia use the social network Facebook and to compare resulting parameters. Moreover, the way the companies in question use Facebook to promote eco-friendly products through marketing communication strategies will also be examined.

The paper analyzed the way the three biggest food retailers in Slovakia communicate on Facebook, in particular KAUF LAND Slovenská republika v.o.s., LIDL Slovenská republika, v.o.s. and TESCO STORES SR, a.s.

As part of the analysis, the official profile pages of these companies on the social network Facebook were examined and compared. The emphasize was placed on the following parameters: number of followers, number of posts, number of interactions, number of comments, number of shares and total number of responses over a period of one year, from 1 January 2021 to 31 December 2021. Data were obtained using of the CrowdTangle analytical tool and subsequently processed and evaluated by the author of the paper.

As part of the analysis of marketing communication of eco-friendly products, the number of sponsored posts on the social network Facebook over the specified period was also analyzed. The data was obtained directly from the publicly available profile pages of individual companies on the social network Facebook using the Ad Library tool.

4. Discussion

The results showed that the largest number of followers on the social network Facebook was recorded for the company LIDL (515,571), followed by KAUF LAND (287,709) and TESCO (204,293). The number of followers varies considerably, especially for LIDL, which is the leader in the number of followers compared to other hypermarkets. However, in neither case did we record a significant drop in followers. The overview of the number of followers over the specific period is shown in Figure 1.

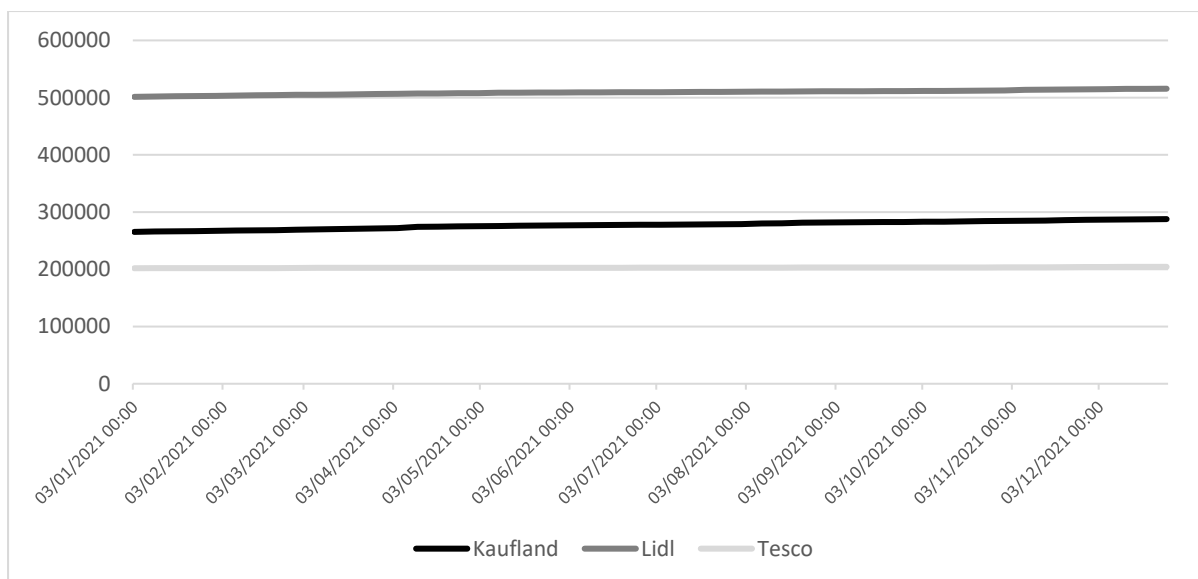


Figure 1: The overview of the number of followers of LIDL, KAUF LAND and TESCO in 2021

Source: personal collection, 2022 (data: CrowdTangle®)

A similar trend could be observed in data for 2020. The number of followers and their growth is directly dependent on the economic results of individual companies. While LIDL achieved a profit of € 126,371,000 (Finstat, 2021) and recorded 500,944 followers in 2020, KAUF LAND achieved a profit of € 64,804,270 (Finstat, 2021) and recorded 264,895 followers in 2020. TESCO achieved a profit of € 49,026,000 in 2020 (Finstat, 2021) and recorded 201,746 followers. It could therefore be assumed that followers on social networks represent the customers and the growth in the number of followers is a manifestation of consumer behavior and their interest in buying the products sold by these companies. This fact is also confirmed by the rate of increase in profit and the growth in followers. The sales of LIDL Slovenská republika, v.o.s. in 2020 increased by 10% (Finstat, 2021), the number of followers increased by 6.26%. The sales of KAUF LAND Slovenská republika v.o.s. in 2020 increased by 8% (Finstat, 2021), the number of followers increased by 12.69%. The sales of TESCO STORES SR, a.s. in 2020 fell by 3% (Finstat, 2021) and although it recorded an increase in the number of followers, this is the lowest increase from among the analyzed companies (by 2.96%).

Although the individual data do not show a direct relationship and the dependence of these variables has not been examined, the data show a certain trend that requires further research.

The next section analyzed the number of posts, comments and shares on individual profiles, as well as the overall interactions. The results of the analysis are shown in Table 1.

The results showed that the largest number of posts was published by LIDL, both in 2020 and in 2021. It has also been found that LIDL recorded the highest values in the total number of interactions, comments, shares and reactions. The largest differences between the companies examined were recorded in terms of the total number of interactions and reactions.

The next section examined the structure of the posts, in particular whether the posts contained photos, links, video or text as well as interactions with individual types of posts.

Table 1: Number of posts, comments and shares on each profile, and overall interactions with social network users

post count	2020	2021
KAUFLAND	452	537
LIDL	563	758
TESCO	339	446
total interactions	2020	2021
KAUFLAND	434,656	457,061
LIDL	1,092,640	1,152,195
TESCO	89,596	45,377
comments	2020	2021
KAUFLAND	133,305	169,035
LIDL	306,689	385,836
TESCO	21,424	11,552
shares	2020	2021
KAUFLAND	56,075	42,109
LIDL	126,631	91,514
TESCO	9,934	6,217
total reactions	2020	2021
KAUFLAND	245,276	245,917
LIDL	659,320	674,845
TESCO	58,238	27,608

Source: personal collection, 2022 (data: CrowdTangle[®])

The results of the analysis show that photographs is the most frequently shared type of post (also with the highest average interaction rate). Posts that contain photos can thus be considered more successful than posts that do not contain photos. Success in this sense is expressed by the average number of interactions – i.e. likes, emoticons, comments, or shares.

More detailed results are shown in Tables 2a and 2b.

Table 2a: Structure of posts, the number of posts and the generated interaction for the period of 2021 - the analyzed companies

	Photos		Links		Text posts	
	Number	avg. Interaction rate	Number	avg. Interaction rate	Number	avg. Interaction rate
KAUFLAND	305	0.47%	3	0.01%	1	0.01%
LIDL	620	0.33%	13	0.06%	28	0.13%
TESCO	316	0.07%	36	0.01%	0	0

Source: personal collection, 2022 (data: CrowdTangle[®])

Table 2b: Structure of posts, the number of posts and the generated interaction for the period of 2021 - the analyzed companies

	FB Video		FB Live		YouTube Video	
	Number	avg. Interaction rate	Number	avg. Interaction rate	Number	avg. Interaction rate
KAUFLAND	209	0.08%	1	0.42%	18	0.17%
LIDL	95	0.18%	0	0	2	0.06%
TESCO	94	0.05%	0	0	0	0

Source: personal collection, 2022 (data: CrowdTangle[®])

In the next part, the promotion of eco-friendly products on the social network Facebook was analyzed. The attention was paid to sponsored posts. All three companies declare they are socially responsible business.

In the period from 1 January 2021 to 31 December 2021, KAUF LAND launched a total of 10 advertising campaigns on the social network Facebook, specifically in April, June, July, September and November. Of the total number of campaigns, 3 campaigns focused on eco-innovation, one of which was directly dedicated to eco-friendly products K-Take.

In the period from 1 January 2021 to 31 December 2021, LIDL launched a total of 4 advertising campaigns on the social network Facebook, none of which addressed eco-friendly products.

In the period from 1 January 2021 to 31 December 2021, TESCO launched a total of 18 campaigns on the social network Facebook. The campaigns included a total of 22 posts, all of which focused on socially responsible business activities, in particular food collection, reducing emissions from food waste and supporting CSR projects.

The largest number of sponsored posts regarding social responsibility was posted by TESCO. It should be noted, however, that TESCO uses the social network Facebook the least of the researched companies.

5. Conclusion

The results of the analysis showed that although all companies are actively promoting socially responsible business activities and all are active users of the social network Facebook, none of them have strong targeted marketing communication regarding eco-friendly products. Between 1 January and 31 December 2021, only one company, KAUF LAND, promoted the eco-friendly products via the social network Facebook. Given the overall extent and intensity of the use of this social network, the results of the analysis pointed to a huge potential (the audience) for the communication of eco-friendly products.

The authors' previous research also pointed out that companies are not systematic in their use of social networks and some even do not know how to use these efficiently.

The results of the research conducted on a sample of 300 businesses operating in the Slovak Republic, showed that almost half of companies (49.7%) communicate their socially responsible business activities to the public while active approach to the environmental protection was declared by more than 55% companies. An interesting finding, however, is that almost 65% of business entities that communicate socially responsible business activities to the public communicate about these activities only occasionally. Only 30% of companies communicate such messages regularly while the remaining companies were not able to assess the frequency. The results of the research also showed that businesses are unable to make full use of the potential of individual tools and limit communication almost exclusively to the introduction of new products or their promotion. It has been found that only 35% of companies systematically created and published content regarding their eco-friendly products and eco-innovations. 66% of companies researched stated that they share such content occasionally (Čábyová, Krajčovič, 2020).

The results of the analysis showed that although the companies analyzed use the social network Facebook to communicate with their target audience regularly, they do not communicate or promote eco-friendly products. Given the number of followers, there is a significant potential to reach the audience in this regard.

The positive impact of the promotion of eco-friendly products is also emphasized by Rahim et al. (2012), who argues that the promotion of the green products among youth through the celebrities would have a positive impact and would influence the propensity to use the green product.

Yadav and Pathak (2016) emphasize that consumers' attitude towards eco-friendly products played an important role in intention to purchase the green product. We assume that social networks are a suitable tool for building awareness of eco-friendly products the sale of which still does not reach the desired levels (eco-friendly products are seen as an alternative and not a main option). This is confirmed by another study (Mostafa, 2009) that pointed out that consumers having a positive attitude towards green products would form a positive opinion regarding the purchase of green products.

The importance of the use of social networks also lies in the groundswell, as outlined at the beginning of the paper. More and more people use social networks not only to share photos and communicate with friends, but also to search for information. Therefore, the communication and promotion of eco-friendly products on social networks can significantly help in obtaining information about these products directly from the source, i.e. the companies that offer / produce them. The consumer will thus receive direct information and answers to potential questions. The study by Bedard and Tolmie (2018) on the effect of social media usage and online

interpersonal influence on the intent to purchase the green product revealed a strong influence of social media on green product purchase intentions.

6. Limitations and scope for future research

The paper focused exclusively on the analysis of data regarding communication of selected companies on the social network Facebook. The paper did not examine the views of social network users on communication and eco-friendly products, as these will be subject of further research. The aim of this paper was to point out the potential of the social network Facebook in promoting and communicating eco-friendly products and its current underuse in the communication strategies of the three largest supermarkets in Slovakia.

The selected period (one year) could also be seen as a limitation. Further research could focus on longer period of time and compare data across individual years.

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Is TikTok a Public Sphere for Democracy in China? A Political Economy Approach

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Abstract: This study aims to investigate whether TikTok can be regarded as a new public sphere for democracy in the Chinese media context. Previous studies focused on the investigation of Weibo (a Chinese counterpart of Twitter) as a public sphere. However, Jia and Han (2020) argue that Weibo is not an online space for public discussion anymore but a platform for marketing and advertising. With the commercialization of social media, plenty of researchers paid attention to TikTok's commodification and its commercial implications, while research on the role of TikTok as a public sphere is still limited. By adopting theoretical frameworks from "public sphere" and "political economy", this study questions: 1) why users participate in public issues on TikTok? 2) how do citizens use TikTok to participate online? 3) does TikTok contribute to the creation of a public sphere? Empirical method, 20 semi-structured interviews around China, is utilized to understand citizens' views and participation behavior. This study argues that the reason why users participate in public issues on TikTok is entertainment. Users are attracted by the platform which offers creative and humorous videos to disseminate public information. Getting interested in its entertainment feature, users utilize TikTok to view public-related videos. According to respondents of interview, 18 out of 20 users indicate they seldom use the "search button" or "create button" on TikTok, rather, they merely browse videos there. In this sense, TikTok is not a public sphere because of lacking critical interactions. In contrast to Habermas's claim that social media is a "pseudo-public sphere" (Habermas, 1989), this study describes TikTok as a "limited public sphere" which do, to some extent, generate public discussions and debates about socio-political issues directly or indirectly. Nevertheless, the social impact of this sphere is restricted, that is, online public engagement is confined to liking, sharing, and short commenting lacking in critical discussions and is ineffective in transferring online political engagement to offline participation (Kim and Ellison, 2021). Thus, TikTok facilitates citizens' political engagement superficially and it is harder for that engagement to have any subversive impact on democracy.

Keywords: TikTok, public sphere, political economy, video users, participation

1. Introduction

Since July 2021, the ban of after-school tutoring in China has stimulated active political participation among citizens. They joined online discussions and created user-generated videos about the policy on TikTok, but shortly thereafter these discussions succumbed into chaotic interactions or even quarrels. It was not the first time that TikTok performed as an online space for public discussion. During this period, citizens cooperate actively on the platform expressing their ideas as comments, following the discussions in fan communities, and recording videos themselves to discuss the case. When navigating TikTok, users can search any type of videos and can participate in online discussion either in the "Comment" section or as real-time comments. This may herald a new era of civic participation on digital video platforms. With 800 million active users, the advent of TikTok has captured scholars' attention to investigate its implications in online entertainment and e-commerce (Zhang, 2021). Nevertheless, its role as an online space for political discussions remains understudied.

2. Literature review

2.1 Online civic participation in China

When referring to online civic participation, Weibo has been frequently discussed as an online sphere for public participation. Many scholars celebrate audience empowerment in political conversation enabled by social media platforms, while they have several limitations: 1) platform limitation: instead of examining civic participation on a wide range of platforms, they concentrate on Weibo to draw their conclusions of civil society (Wang, 2016; Min, 2016). Yet, Jia and Han (2020) argue that Weibo is not an online space for public discussion but a platform for marketing and advertising. 2) Spatial limitation: this is problematic because scholars who agree with audiences empowerment base their studies on the investigation in users who live in big cities such as Beijing, Shanghai, and Guangzhou (Wang, 2016; Cheek, T. et al. 2018), while others living in areas (such as three or four-tier cities and rural areas) are neglected. 3) temporal limitation: scholars pay attention to the interplay between civic participation and state manipulation under various historical and cultural contexts which influence the outcome of conclusions (Qiu, 2009; Shen and Breslin, 2010; Tai, 2006). In the video booming era when everyone is able to make their voice heard in a visualized way, the operations of the media industry have been transformed by "platformization" (Neiborg & Poell, 2018), a process of multifaceted transformation of globalized societies

(Poell et al., 2019). At this juncture, research to assess the public sphere is a necessity in this video-dominated media landscape. Thus, to fill these research gaps, this study pushes the discussion of public participation further to video streaming platform TikTok, aiming to investigate the role of TikTok in the construction of a public sphere, the accessibility of the platform to include the publics from all social statuses, and users' participation behavior on it.

In recent years, TikTok has been studied from various perspectives, while the investigation of political communication and political economy of the platform is far from adequate. Li Xu et al., (2019) have investigated the reasons why TikTok become popular. They argue that there are three major reasons for its popularity including diversified marketing strategies, advanced technological affordances, and the familiarity of the target consumers. Yet, all these analyses focused on marketing studies and the marketplace of the platform rather than users of TikTok. Zhu et al., (2019), drawing on information communication of official accounts on TikTok, discussed the communication situation of official health-related accounts, which are controlled by Provincial Health Committees in China on the platform. Utilizing the method of content analysis, they argued that streamers should adopt an easily understandable format combined with music and subtitles to attract users. Their study, providing in-depth insights into media content, also fails to investigate TikTok users. At this juncture, Zuo and Wang explored user behavior from a cultural studies perspective, arguing that users' participation is not only an expression of popular culture but also a reflection of users' self-expression and cultural identities. However, they did not combine users' participation with political economy and political communication. As an increasing number of official accounts publish videos regularly on TikTok with millions of users, there is a need to explore TikTok as a public sphere. Thus, this study deals with this research gap to investigate whether TikTok can be regarded as a public sphere.

2.2 TikTok as a Public sphere

Habermas's conception of a rational critical public sphere is utilized as the theoretical background to this article. For Habermas, the public has been conceptualized as "open-to-all" events and occasions rather than close and exclusive affairs. Following this idea, he characterizes some key elements of the public sphere including the formation of public opinion, accessibility to all citizens, freedom of expression and disinterested participation, and debate over public issues (Habermas, 1989, p136; 1989, p127). Nevertheless, these ideas have been criticized as an idealization of the bourgeois public sphere where rational discussion and uninterested consensus seem rather romantic (Fuchs, 2014). Along with the transformation of socio-cultural circumstances, from capitalism and liberal democracy to state manipulation and monopoly capitalism in the 19th century, Habermas declares a transition from the liberal public sphere to the media-dominated public sphere. He concedes that the pervasion of mass media reaches wide individuals and allows them to participate in online public discourse. Yet, he casts a pessimistic light on this mediated public sphere. Concerning institutionalization and commercialization, he suggests that manipulative corporate and institutional manipulation threaten the online public sphere to be an open, disinterested, and rational space.

This study takes Habermas's conception of the critical public sphere as a starting point. Following his concept of 'public', the Chinese conceptualization of 'public' 'citizens' and 'civil society discourse' were not formed until the transformations of social contexts at the beginning of the twenty-first century (Xu, 2014). China's involvement in the global market economy fosters media marketization as well as social stratification and problems (Sun et al, 2004). This facilitates the emergence of public opinions especially citizens' critiques on public issues. Existing literature constantly critiques whether it is suitable to use "public" and "public sphere" in the Chinese context with the argument that Habermas's bourgeois public sphere fails to fit the Chinese context where the bureaucratic framework is lacking (Rankin, 1993). Yet, they always end up their research with historical political analysis to compare the concept of the public sphere between China and western countries (Cheek, T. et al. 2018). However, instead of driving into comparative political studies, this article uses Habermas' public sphere as a manifestation to clarify TikTok as an intermediary platform for civic participation. Habermas concept of the public sphere, which describes the relationship between private interests of everyday life in civil society and the realm of state power, helps to manifest the idea of open intermediate arenas where interactions are made between the citizens and political actors (Rankin, 1993).

This study concentrates on the institutionalization of the public sphere. This is because the social context of the new public sphere in China is to some extent parallel with the socio-cultural context of the mediated public sphere in Europe. Commercialized corporates and government intervention penetrate into the online entertainment space, which stimulates citizens to declare freedom from state and market through political

participation (Xu, 2014). At this juncture, this study examines whether TikTok is an arena for the “public” where users can approach transparent and inclusive political issues and contribute to the country’s democracy. For Yuezhi Zhao (2007), the conceptualization of “public sphere” is a liberalist stance which merely involves the upper social class. But this view may be out-of-date. With the advent of the Internet, public discussion has changed from physical arenas to virtual spaces and the rise of new media enables individuals to access public information and make active participation (Xu, 2014; Yang, 2011; Ahmed & Jia, 2014). The new public sphere may be able to include wider and more diverse voices. Hence, this article will examine audience media using behavior to explore whether citizens can form public opinions, easily access information, participate online with disinterested personal interests, and form debate contributing to democracy.

3. Methodology

Interviews around China are utilized to understand audience motivations and participation behavior on TikTok, which can help to provide answers to how and why questions substantively (Weiss, 1994). Between August and November 2021, I conducted 20 semi-structured interviews with heavy TikTok users. Heavy users mean a group of people who use streaming for more than one hour and 7 days per week (Hagen, 2015; Bolderman, L. & Reijnders, S., 2021). Respondents were recruited through purposive sampling to be relevant to the study which focuses on the users’ behavior and their motivations to participate in these videos. Also, respondents from various parts of China (not only those living in big cities such as Beijing, Shanghai, and Hong Kong, but also in three-tier cities and rural areas in Heilongjia, Qinghai, Inner Mongolia, Ningxia, and Hubei etc.) have been invited in order to explore whether people from margined places can also join the public discussion online. 14 men and 6 women were participated between 19 and 35 years old.

I used open-ended questions in a semi-structured format to ensure the conversation flowed organically (Weiss, 1994; Brennen, 2013). Each interview lasted around 50 minutes and informal discussions were about 20 minutes. They were conducted through voice calls on Wechat because public issues are quite sensitive, and respondents would be more open to answering these questions if the atmosphere is a bit more private (Jamieson, 1997; Levis, 2017). At the beginning of the interview, icebreaker questions were designed to make a warm start and build intimacy between interviewer and respondents (Brennen, 2013). We started a conversation about participants’ professional background and their daily use of TikTok. Next, we discussed their motivations to watch and participation behavior in videos. Then, the interviews concluded with a discussion of challenges to express their ideas and join the public discussions on TikTok.

Our results were basically drawn from interviews and were further informed through transcripts analysis. I analyzed the data through four-step strategies “data preparation, data exploration, data reduction, and interpretation” (Hesse-Biber and Leavy, 2010). Along with the interview process, I initially coded the content in Nvivo for themes (Lindlof & Taylor, 2002). When noticing the theme began to repetitive with no categories emerging, a sufficient sample had been achieved and I began to recode the descriptive transcripts in themes to examine users’ viewing behavior and participation in TikTok.

4. Findings

Scholars have provided valuable suggestions to discuss the potential for new media platforms to political communication (Benkler, 2006; Fuchs, 2014), while a handful of them examine the relationship between the political economy of the platform to the concept of the public sphere (Garnham, 1992). Based on these theoretical investigations from western theocratists, this study tends to put emphasis on political economy and also consider political communication, as both of them help to determine whether TikTok is a public sphere or not (Fuchs, 2014). In line with dimensions of political economy and political communication, respondents’ answers covered three aspects including universal access, algorithms which is a part of the capital accumulation mechanism, and political content production.

4.1 Does user-friendly technological affordances mean universal accessibility?

The entertainment feature of video streaming enables a wide range of users to access information and give them an opportunity to express their ideas. When describing their motivations to use TikTok, 90 percent of users (n=18) indicated that they would like to access and gain information using TikTok due to its easy technological affordances. Xiaoqing, who live in a rural area in Qinghai province explained: *“TikTok is an ideal entertainment platform for me where I could access different kinds of videos whose interfaces are easy to use and grasp the*

ideas” It seems that the easy-to-use interface of TikTok makes it achieve universal accessibility to reaches a wide audience.

However, although people have equal opportunities to access public issues through videos, “universal accessibility” to online participation is hard to obtain through easy-to-use technological affordances. According to Habermas, universal accessibility or open-ness should also include universal freedom of speech, opinion, association and assembly other than merely the right to gain information (Habermas, 1989, p. 227). When asking respondents’ ways of online participation, their answers are in line with one of the limitations of the bourgeois public sphere that Habermas has discussed, that is, the limitation of freedom of public opinion. Respondents are less likely to express their opinions because it is associated with education background and material resources (Habermas, 1989). Respondents from less developed areas give a clear answer. Mengwei, from the Northeastern China, said: *“Although I am a deep viewer, I rarely comment on these serious videos. Sometimes I have an impulse to comment on those videos, but I lack confidence because I know TikTok is a platform filled with educational people who are master students or even doctoral students. Yet, I could also spend money to buy “liking” in order to increase popularity. However, I do not have money and I am not willing to spend money on the entertainment platform. It is even ridiculously to be serious on an entertainment platform, isn’t it?”* He lacks the confidence to participate and do not think he could make a difference because of lacking in education and material property. He knows the platform have paid service to popularize their ideas to make their voice heard. However, he does not have money to do that. In other words, material possessions limit his participation online. This is in pair with Habermas’ public sphere theory, which stresses the aspects of political economy in the conceptualization of the public sphere. Pointing out that one of the prerequisites to attend public sphere is the command of resources, he argues that “one could expect from economically dependent masses a contribution to the spontaneous formation of opinion and will only to the extent to which they had attained the equivalent of the social independence of private property owners” (Habermas, 1992, p. 432). In other words, the equal opportunity for users to participate online is based on their property and material base, which contradicts the universal equality to access (Habermas, 1989, p. 124). In this sense, Habermas argues that the new media platform is a pseudo-public sphere with immanent critiques.

However, although the public sphere has some limitations and critiques, TikTok, as a widely accessible platform with millions of followers, has facilitated the ordinary to speak for themselves. After all, it represents a *tendency* towards democracy by giving people a “microphone”. Xiaozhang from Shanxi province indicated: *“TikTok provides a platform to be seem. Everything is put under public supervision which is a great leap in the new media era. But I think Kaishou, another short video platform, does better than TikTok. Many people can express their opinion on it through videos although there exist some limitations”*. Admittedly, it has a long way to go but it starts to change people’s minds from ideological-injected mindless viewers to active participants. Brad also offered a similar indication: *“We should not deny video streaming platforms give ordinary people a chance to make expressions. I knew someone living in Xinjiang Province. The only way for them to access the outside world is video steaming platform. This is because these people have less education and even cannot read a whole literary text. The visualized form of short videos helps them gain information and easy-to-use affordances also help them to publish their stories. Although their potential audiences are limited, they are satisfied with sharing, especially sharing with strangers.”* In this sense, Kuaishou, instead of TikTok, does much better. In this sense, this study describes TikTok as a limited public sphere where participation is superficially confined in “Liking” or “yes or no, support or un-support” comments. But what is undeniable is its provision of an arena for people to speak out opinions even naïve and inconsequential. Rauchfleisch & Schäfer (2015, p150) propose that social media platforms “serve as outlets for critical opinions” although they are always under the strict censorship from the government institution. Thus, we should admit the degrees of public participation and expression of critical opinions are limited. In contrast to Yang (2011)’s conclusions that the Internet and new media platforms develop critical skills for citizens so that these communication appliances facilitate democracy, this study is against this rosy conclusion when spotting light on “others” living in small cities or rural areas with the argument that participation on TikTok is superficial rather than critical.

4.2 Algorithms mean success and failure

Algorithms make users maintain on TikTok. Users are exposed to whatever they like. Although the platform also recommends public news and public issue-related information to them sometimes, they are willing to have a look because most of videos meet their preferences. Some respondents said that the algorithm allows them to see whatever they like without effort. Xiaozhang revealed that: *“I seldom use “search” to look for information. I just watch recommended videos and the system can trace my “liking” to further recommend similar videos”*.

Algorithms use “sorting, filtering, and ranking” functions (Neumayer and Rossi, 2016, p. 4) to recommend users personalized content to maintain them on the platform and increase their engagement (Van Dijck and Poell, 2013). Many respondents (n=12) are satisfied with the personalized information provided by the platform. Yu indicated that: *“I like recommendations on TikTok because I can watch preferred type of information without spending time on searching. It is quite efficient”*. This means social media algorithms make the use of media much easier (Corettie and Picca, 2018),.

Yet, scholars have warned the detrimental effects of this algorithmic functions which create opinion echo-chambers and result in radicalization (Jast and Latzer, 2017). In line with them, respondent Dong observed this threat and mentioned that *“I like to watch TikTok because it recommends what I like. I acknowledge this algorithm poses a threat to my views and horizons because I would be confined in a small circle of what I like. However, it is a platform for entertainment you know, I merely use it for some time and do not take it seriously. So, it would be fine”*. Other than opinion echo-chambers, the recommendation mechanism also make users lazy like couch potatoes. 95% (n=19) heavy users who enjoy using TikTok have one thing in common: they rarely *search* for information but just *watch* information. In other words, they are always viewers with limited interactions rather than users who participate in the comment section and contribute to video publication. This means algorithms make people less likely to make interactions, let alone active participation in public-related issues. This means social affordances associated with algorithms also “entail negative consequences for social movement” (Coretti and Pica, 2018, p. 74).

Moreover, TikTok’s algorithm mechanisms set one of the limitations for people’s public participation, that is, the requirement for property in public participation. Media companies use algorithms in their capital accumulation mechanism, especially in information distribution through a “techno-commercial” process (Poell and Van Dijck, 2015, p. 529). The platform offers paid service for ordinary users to buy a wider exposure. So the number of potential audiences to reach depends on the amount of money for users to pay. But if users are not willing to pay for the service, algorithms will result in that users’ videos will soon be “covered” by other new videos and high-quality videos with sufficient “views” and “liking”. Respondent Brad offered a more detailed clarification on this phenomenon when talking about difficulties in expressing opinions: *“User-generated videos by ordinary people are difficult to reach a wider audience. TikTok is filled with influencers who are professional teams to make short videos or those who are supported by multichannel companies. These videos are of high quality than videos created by me. When I publish videos, I found that in the first hour I gained more exposure and more likes. After a period of time, my videos do not obtain sufficient liking to make further exposure and recommendation. They sink down in the TikTok’s information sea”*. This means algorithms threaten the visibility of ordinary users and the inclusiveness of the platform.

Therefore, as most users merely like or simply comment which has been mentioned above, algorithms prioritize influencers’ content over content created by ordinary users, which overwhelms ordinary’s voices and prevent them to be “users”. This is because user-generated videos from the bottom-up are impossible to obtain sufficient “liking” and number of “views” in time so that these videos would be squeezed out by new videos and influencers’ high-quality videos who gain large popularity and a great number of likes. Hence, this study argues that algorithms on TikTok impede public participation by turning audiences into just viewers rather than users who generated videos.

4.3 Public content production towards entertainment

Respondents thought highly of entertainment characteristics of political content, which arises their interests in public related issues. 75 percent (n=15) of respondents revealed that they like to watch public content produced on TikTok because of entertainment features. For example, Wei said: *“I watch entertainment videos to relax. Although sometimes I also watch videos about public issues such as political policies and education, they are quite different from serious news on television. These relaxed videos are easier to hook my attention than other serious television news”*. The respondent Wei mentioned that the major reason to watch videos is relaxation and entertainment.

These responses are in accordance with the media owner’s expectations. In order to attract young users to TikTok, official accounts make their videos humorous and understandable by using special effects. They add subtitles, emojis, and special effects to circulate serious topics (Zhang, 2021). These methods gain publishers a great number of audiences. However, these entertainment characteristics actually gain viewers rather than participants. 85 percent of respondents (n=17) merely view these videos but rarely make interactions. When

they seldom make comments, they are emotional and irregular. When asking the reasons, respondents Baoy provides clarity: “I regard it as an entertainment platform so I would think all the information is not serious. I will not associate videos with public participation because I think these two are separated on different platforms”. Public-related videos are to entertain people so it appears on TikTok, while public participation, more serious and formal, should be obtained on Weibo or subscriptions of Wechat. Jason, a postdoctoral student Xi, commute between Shenzhen and Hongkong, also said that: “I sometimes comment online but very rare. This is not because I do not have comments or critical ideas, but because I am busy with my work. I don’t have time to waste on online discussions on such an entertainment platform as they are of no use”. According to him, he has the prerequisite, education background and material base, to engage in public participation. However, spending time participating online seems a waste of time for him because of the entertainment.

Here emerges new tension between the platform expansion and audience participation: although TikTok adopts the entrainment feature to attract more audiences from different social strata, it fails to involve them in-depth into participate in public issues online. This tension is in line with Sullivan’s previous study on Weibo that it is an apolitical space where users and topics are highly entertaining (Sullivan, 2012, 2013), as respondents in this study mentioned that TikTok is a too entertaining and relaxed platform to be an arena for formal public issues. Putting TikTok in this position, audiences are less likely to involve in public videos, let alone to provide critical opinions for democracy. To put it simply, entertainment characteristic allows the platform a wider audience extension but restrict people’s deeper participation.

5. Conclusion and discussion

This study argues that easy-to-use affordances, algorithms and entertainment features attract users to engage in public-related videos on TikTok. According to the qualitative research method, the reasons why users participate on TikTok in public-related issues is that the user-friendly technological affordances and interfaces, which results in the universal accessibility of the platform. Another reason for user engagement with public issues is algorithms which trace users’ preferences and provide personalized video to users. Last but not least, entertainment feature attracts users to participate on TikTok, which expose users to humorous and entertained videos. For these reasons, users engage in public-related videos merely through “Liking” and simply “commenting”, while their expression of critical opinions towards public issue is still lacking. Thus, TikTok is not a real public sphere and it not contributes to the creation of public sphere. As users indicate they seldom search but frequently watch on the platform, algorithms encourage people to be viewers just to watch favorable videos rather than users or participants to make in-depth interactions and publish critical user-generated content. Additionally, public content production towards entertainment undermines the importance and seriousness of the information. This means the entertainment feature distracts users’ attention from serious information. In this sense, TikTok tends to be reducible to merely an entertainment tool.

Based on Habermas’ conceptualization of the “pseudo-public sphere” (Habermas, 1989), this study describes TikTok as a “limited public sphere” which do, to some extent, generate public discussions and debates about socio-political issues directly or indirectly (Lee, 2019). Nevertheless, the social impact of this sphere is restricted, that is, online public engagement is ostensible with liking, sharing, and short commenting without critical discussions. Thus, if TikTok wants to bring a profound impact on democracy to be a public sphere, there is still a long way to go.

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Social Networks Clothes Shopping and the Influence of Brand Image and Perceived Benefits on Purchase Intention

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Abstract: The research around social networks have become increasingly important in recent years because they are a powerful means of communication between different generations, especially the younger ones. Social networks are occupying a privileged place in the marketing and communication of brands, which has been reflected in the increase in sales in various sectors of activity. The present investigation aims to analyze how the relationship between Brand Image and Clothing Purchase Intention is mediated by the Consumers Perception benefits that this purchase provides them. The study used a quantitative methodology with questionnaire survey which had the participation of 947 subjects p in the study, aged between 18 and 55 years (M = 28.69, SD = 9.16), who during the period of confinement, caused by the pandemic situation, bought clothing through social networks. The results revealed that Brand Image has a significantly positive impact on Purchase Intention, but when Perceived Benefits enter in the model, the effect diminishes, although it remains positive and significant. It is verified that there is a partial mediation of the Perceived Benefits, which indicates that it has an indirect effect on consumers Purchase Intention. This research is important for marketing professionals to deepen their knowledge about Brand Image importance and the Perception of its Benefits has on consumers Purchase Intention, in order to develop Marketing and Advertising effective strategies to reach the target audience.

Keywords: Brand image, Purchase intention, Perceived benefits, Social networks, Clothing sector, Lockdown

1. Introduction

Currently, social networks are a powerful communication tool (Hyun, Thavisay and Lee, 2022; Zhang, Xu and Ye, 2022) among consumers of different generations (Zakaria, Salleh and Kozako, 2019; Bento, Martinez and Martinez, 2018), having been used to make online purchases (Muresan and Sinuraya, 2018). Given this reality, it makes sense to deepen the studies on Brand image and clothing Purchase intention (Kawaf and Istanbuluoglu, 2019).

This article includes a literature review divided into three subchapters that address the studies related to the three hypotheses presented. The second part of the study presents the quantitative study carried out.

2. Literature review

2.1 Brand image and Purchase intention

The concept of Brand image has been studied by academics and professionals and continues to be part of scientific studies due to its importance in the field of marketing and communication (Zhang, 2015), as a strong brand provides a series of benefits for companies and delivers managers with information on how and where brands add value (Keller and Brexendorf, 2019).

According to the American Marketing Association, in Kotler and Keller (2008, p. 258), a brand is a name, term, sign, symbol, design, or a combination thereof is intended to identify goods or services from one of the sellers or groups of sellers and differentiate from competitor goods or services.

Pramono et al. (2021), refer that is required to the company carry out a good and correct strategy in order to attract attention to consumers and not lose competitiveness with other businesspeople. For corporations, Brand

image is the perception given by consumers to the products or services offered. Brand image is the perception that consumers have of the valuation for the enterprise that persists in consumers' minds.

Several authors (*e.g.*, Işoraitė, 2018; Kalieva, 2015; Oriol and Rindell, 2014) define Brand image as a memorized consumer perception and it is considered as one of the most important intangible assets that have an impact on consumer perception. Martínez, Pérez and Del Bosque (2014) explain that the Brand image has functional and affective dimensions. The first measures tangible characteristics and the second deals with feelings and attitudes. Whenever a company increases its product portfolio, it is working to establish Brand image and recognition, increasing the potential number of customers aware of its Brand image (Kremer and Viot, 2012). Solihin (2021) suggests that Brand image is the key driver of brand equity, which refers to consumer's general perception and feeling about a brand and has an influence on consumer behavior.

Wydyanto and Ilhamalimy (2021) consider that a good or positive Brand image should have an added value impact on consumers, if a brand has a bad image, consumers are not interested in making a purchase. On the contrary, a positive brand image lasts for a long time, and this means that the image formed must be clear and have a brand advantage over other brands. The formation of a brand image is also influenced by consumer experience.

According to Kotler and Keller (2021) Brand image is the consumer's perception of a brand as a reflection of the associations that exist in the minds of consumers. Brand image is an association that appears in the minds of consumers when they remember a particular brand. These associations can simply appear in the form of thoughts and images associated with a brand. The authors reinforce that "a brand is a promise between the firm and the consumer. It is a means to set consumers' expectations and reduce their risk. In return for customer loyalty, the firm promises to reliably deliver a predictably positive experience and set of desirable benefits with its products and services. A brand may even be "predictably unpredictable" if that is what consumers expect, but the key is that it fulfills or exceeds customer expectations in satisfying their needs and wants" (p. 322). Consumers are more likely to make purchases if they have a positive image from the brand of that specific product.

Wydyanto and Ilhamalimy (2021) define purchasing decision as the selection of two or more alternative purchasing decision choices, which means that someone can make a decision, there must be several alternative choices.

Savitri et al. (2022) finds revealed that there is a positive and significant relationship between Brand Image and Purchase Intention. Their research points out that social media marketing has a positive effect on purchasing decisions, which means that if the use of social media marketing increases, purchasing decisions will also increase. In the same study the authors show that Brand image is able to mediate the relationship between social media marketing and purchasing decisions, which means that if Brand image increases, the relationship between social media marketing and purchasing decisions will also increase. Accordingly, the following hypothesis was put forward in this study about the influence of the brand on the clothing Purchase intention using social networks.

H₁: Brand image positively influences consumers Purchase intention through social networks.

2.2 Brand image and Perceived benefits

While brand benefits are the "personal value" (*i.e.*, what the consumer perceives the product attribute will do for them) that consumers associate to a brand, brand benefits can be classified into functional, experiential, and symbolic, that motivates the needs that drive consumption behaviour (Keller, 2013).

The symbolic image of the brand emphasizes the satisfaction of consumer needs (*e.g.*, social status symbol, promotion of self-esteem, role definition, group fit and self-identification). Thus, when such product associations symbolize associations with certain groups or individuals or derive a sense of superiority, self-esteem and high social status, the attitude towards such products becomes positive (Shah, Khan and Hameed, 2019).

Experiential brand benefits are based on the satisfaction of sensory needs (*i.e.*, what it feels like to use a product), satisfying consumers' internal desire to go after excitement and diversity and provides consumers with

positive feelings, such as feeling pleasant, comfortable, or amiable, and consumers' inner demand is satisfied, leading consumers' attitude towards the brand to be more positive (Kharajo and Kharajo, 2020).

According to Aaker and Moorman (2017) he argues that brand management implies maintaining good long-term strategies, staying connected to consumers and through functional benefits, among others. Positioning by benefits is when the brand is positioned through the value that can be added with the product or service.

Rosário, Carrillo and Lopes (2018) considers that a brand provides both functional and symbolic benefits to consumers. Functional benefits can be physically expressed by products and satisfy practical and immediate needs. Symbolic benefits, on the other hand, are intangible and obtained only when the person who receives them understands the meanings constructed by the person who provides them. These symbolic benefits satisfy the needs for self-expression and prestige, and are related to personal image and social identification.

Generally speaking, there are three different types of brand associations that can be present in the consumer's mind, namely: attributes, benefits and attitudes. These different types of brand associations form the brand image, which can vary according to its strength and uniqueness (Keller, 2013).

For the purposes of this study, the benefits of the brand are addressed. These denote the personal value and meaning that consumers attach to the attributes of the good or service, that is, what consumers think the good or service can do for them (Kotler & Keller, 2006). According to the same authors, the benefits can be divided into three categories: functional benefits, experiential benefits and symbolic benefits. The functional benefits generally correspond to the attributes related to the product, consisting of the most objective advantages of its consumption. Experiential benefits are product-related attributes that relate to how the consumer feels when using the good or service (Kharajo and Kharajo, 2020). These satisfy needs such as cognitive stimulation, sensory pleasure, and variety. Symbolic benefits correspond to attributes not related to the product, referring to the more superficial advantages of consumption, usually relating to the implicit needs for social approval or self-esteem (Yap, 2022). In this sense and after reviewing the literature, it is possible to affirm that the benefits perceived by the consumer are influenced by the Brand Image, with the second hypothesis being elaborated.

H₂: Perceived benefits are positively influenced by the Brand image.

2.3 Mediation of Perceived benefits in the relationship between Brand image and Purchase intention

Chen and Lee (2015), considers that Purchase intention is an important variable that measure potential action that consumer choose to be done. By understanding consumers' Purchase intention, it can help the companies to understand the market and adjust the offered product or services that enable them get more sales and earn profit. Kudeshia and Kumar (2017), refers that understanding consumers' Purchase intention can predict the customer's retention of a particular brand.

Nasidi, Hassan and Ahmad (2021) based on the results of hypothesis testing, it was found that there is a positive and significant relationship between Brand Image and Purchase Intention. There is a positive and significant relationship between Social Media Marketing (SCM) and Brand Image. There is a significant relationship between Social Media Marketing and Purchase Intention through Brand Image (Savitri et al., 2022). Although the literature review reflects some similar studies, it was not possible to find a study that analyzes exactly the same hypotheses as this investigation, reason why it was considered pertinent to formulate the following study hypothesis.

H₃: The relationship between Brand image and clothing Purchase intention through social networks is mediated by Perceived Benefits.

3. Methodology

The aim of this study was to analyze the impact of the Brand image on clothing Purchase intention and to understand how this relationship is mediated by the perception that consumers have about the benefits that this purchase provides them. The investigation was operationalized through a quantitative methodology, based on a hypothetical-deductive approach that aimed to analyze the relationship between the variables under study.

In the study 947 subjects participated who, during the period of confinement, bought clothing through social networks. Ages range from 18 to 55 years (M = 28.69, SD = 9.16) and 65.5% are female. Most of the respondents

(50.9%) have qualifications lower than a degree, 41.2% have a degree and 7.9% have a level of education higher than a degree. It was also possible to ascertain that more than half of the study participants (60.7%) have an average monthly income equal to or greater than €1501 (Table 1).

Table 1: Respondents' demographic profiles

	n	%
Gender		
Male	327	34.5
Female	620	65.5
Age group (M = 28.69, DP = 9.16)		
20 years old and below	195	20.6
Between 21 and 25 years old	217	22.9
Between 26 and 30 years old	230	24.3
Between 31 and 40 years old	196	20.7
41 years old and over	109	11.5
Education Level		
Basic school	32	3.4
Secondary school	368	38.9
Professional course	82	8.7
Bachelor's degree	390	41.2
Master's degree	68	7.2
PhD	7	0.7
Monthly net income of the household		
Lower than €500	47	5.0
Between €501 and €1000	147	15.5
Between €1001 and €1500	178	18.8
Between €1501 and €2000	230	24.3
Between €2001 and €2500	125	13.2
Higher than €2501	220	23.2

Note: M = Mean; SD = Standard deviation

3.1 Measures

The constructs were measured using three instruments. Brand image was evaluated through the four items developed by Villarejo Ramos (2002; *e.g.*, *Through advertising I can see if a brand has a good reputation*). To measure Purchase intention, the four questions developed by Duffett (2015; *e.g.*, *I plan to purchase products that are promoted on social network*) were used. The Perceived benefits, in turn, were measured by the four items created by Qureshi, Khan and Ahmad (2012; *e.g.*, *I think this product/service is very beneficial*). The answers to the items that comprise them were given using a Likert-type scale that ranges from 1 (Strongly disagree) to 7 (Strongly agree), depending on the degree of agreement of the participants with each of the statements. In order to characterize the sample, a set of sociodemographic questions (*e.g.*, gender, age) was also included.

3.2 Procedures

Items that assess Brand image, Perceived benefits, Purchase intention and questions regarding sociodemographic characterization were introduced in the Google Forms platform. The link was shared on the researchers' social networks (*e.g.*, Facebook, LinkedIn) and sent by email to their contact networks. All participants were aware of the research objectives and were informed that they could withdraw at any time if they wished to do so. It should be noted that all the guidelines of the General Regulation on Data Protection regarding the anonymity and confidentiality of responses were ensured. Subsequently, the data were processed using the statistical software IBM-SPSS and AMOS (version 28).

4. Results

The analysis began with the verification of the fit of the model to the sample under study. For this purpose, a path analysis was carried out to describe the existing relationships between the constructs involved in the investigation (Figure 1).

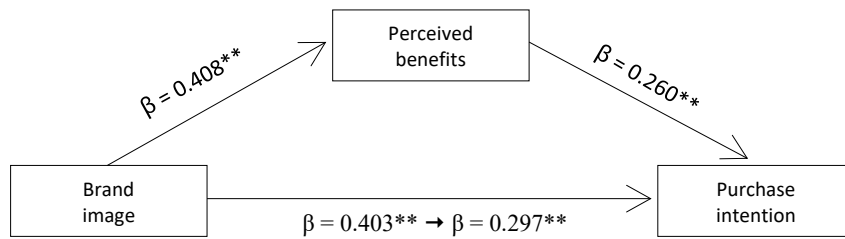


Figure 1: Mediation Model

The structural model was analyzed using the following indicators: the Chi-Square (χ^2), the Comparative Fit Index (CFI), Goodness of Fit Index (GFI), Root Mean Square Residual (RMSR), Root Mean Square Error of Approximation (RMSEA), Akaike Information Criterion (AIC) and the Expected Cross-Validation Index (ECVI). In the analysis of the values obtained, the cut-offs recommended by Hair et al. (2018) and it was found that the mediation model fits the sample data [$\chi^2_{(41)} = 8.576, p < 0.001, CFI = 0.979, GFI = 0.976, RMSR = 0.036, RMSEA = 0.053, LO90 = 0.048, HI = 0.058$].

Reliability was analyzed using Cronbach's alpha coefficient, whose results revealed adequate internal consistency for all constructs under study (Brand image: $\alpha = 0.75$; Purchase intention: $\alpha = 0.89$; Perceived benefits: $\alpha = 0.80$).

Data analysis revealed that Brand image positively influences the Purchase intention ($\beta = 0.403, t = 13.521, p < 0.001$) e os Perceived benefits ($\beta = 0.408, t = 13.749, p < 0.001$) which, in turn, also have a positive impact on consumers Purchase intention ($\beta = 0.381, t = 35.876, p < 0.001$). However, it was found that when the Perceived benefits enter the model with the status of mediating variable, the Brand image effect decreases from $\beta = 0.403, p < 0.001$ to $\beta = 0.297, p < 0.001$, despite remaining positive, a partial mediation occurs, whose indirect effect is significant ($p < 0.001$; Table 2).

Table 2: Mediation of Perceived benefits in the relationship between Brand image and Purchase intention

Predictor variables		Purchase intention (β)
Brand image		0.403**
	Adjusted R ²	0.161
	$F_{(1, 945)}$	182.809**
Brand image		0.297**
Perceived benefits		0.260**
	Adjusted R ²	0.217
	$F_{(2, 944)}$	131.868**

The results suggest that despite the Brand image having a significant weight in the Purchase intention, when consumers perceive that the benefits derived from the purchase of certain clothing are positive, the importance attributed to the Brand image decreases slightly.

In view of these results, it was considered relevant to determine whether there are significant differences in Purchase intention as a function of sociodemographic variables. After verifying the assumptions of normality and heteroscedasticity, parametric t-student and ANOVA tests were used, depending on the number of categories of independent variables. These tests make it possible to analyze how the average values are manifested as a function of the sociodemographic variables considered.

The results obtained reveal that the Purchase intention varies depending on the gender of the participantss [$t_{(945)} = - 2.334, p < 0.05$] with women having higher mean values ($M_{\text{Male}} = 4.42, SD_{\text{Male}} = 1.25; M_{\text{Female}} = 4.61, SD_{\text{Male}} = 1.18$).

In order to facilitate the reading of the data, the age was organized into five age groups as shown in Table 1. To homogenize the size of the groups, a similar procedure was carried out for the education level and to monthly net income of the household, having obtained the categories presented in the Table 3.

Table 3: Recoding of education level and monthly net income of the household

	N	%
Education level		
Secondary school / Professional course	482	50.9
Bachelor's degree / Master's or PHD's degree	465	49.1
Monthly net income of the household		
Lower than 1.500€	372	39.3
Between 1.501€ and 2.000€	230	24.3
Higher than 2.001€	345	36.4

It was also possible to verify that the Purchase intention only differs significantly as a function of age if a significance level of 10% is considered [$F_{(4, 942)} = 2.257, p = 0.061$]. It should be noted that the highest average values belong to the age group that ranges from 21 to 25 years old, as opposed to participants aged 20 and under who show less intention to buy clothing through social networks. These results may be due to the fact that most respondents who are part of the younger age group are still studying and do not have purchasing power.

Finally, it was found that the participants who earn a monthly net income of the household of less than €1500 are the ones who show a greater intention to buy clothing through social networks, although the differences are not statistically significant when compared to the other salary brackets [$F_{(2, 944)} = 1.017, p = 0.362$]. These conclusions may be due to the fact that participants who have a higher monthly net income of the household prefer to buy a more refined type of clothing, which is not always available through social networks.

5. Discussion

The present study aimed to analyse the relationship between Brand image and clothing Purchase intention through social networks and how it is mediated by the perception that consumers have about the benefits that this purchase provides them. According to Appel et al. (2020) social networks allow an easier reach and engagement with the brand's target audience and constitute a more effective way of influencing consumer behaviour in relation to their Purchase intention.

After analysing the data, it was found that the clothing Purchase intention through social networks is positively influenced by Brand image, which allowed us to validate the first hypothesis formulated. The results are similar to those found by Solihin (2021) according to which the Brand image is the factor that most influences consumer behaviour at the time of purchase. Kotler and Keller (2021) add that when consumers have a positive image about the brand, their purchase intention increases significantly. Wydyanto and Ilhamalimy (2021) go further and claim that the formation of a Brand image is also largely influenced by the range of products available, combined with consumers' familiarity with social networks.

It was also possible to verify that the Perceived benefits are positively influenced by the Brand image, which allowed us to confirm the second study hypothesis. These conclusions are consistent with those found by Jacobson, Gruzd and Hernández-García (2020) who demonstrate that Perceived benefits are also strongly influenced by customer engagement with the brand and the positive experiences that products provide and satisfy their needs. Following this idea, Kharajo and Kharajo (2020) state that Perceived benefits are based on the satisfaction of sensory needs and when these needs are satisfied, consumers develop a closer connection with the brand. According to Bhatti and Rahman (2020), consumers' perception of the benefits of purchasing a product/service from a particular brand is influenced by their needs and expectations, which in turn will influence their purchase intention.

The third hypothesis, which postulated that the relationship between the Brand image on clothing Purchase intention to social networks is mediated by the Perceived benefits was corroborated from the analysis carried out. However, it was found that there is a partial mediation, whose indirect effect is significant, because when the Perceived benefits enter the model with the status of mediator, the importance attributed to the Brand image decreases slightly. Despite the positive relationship that occurs between Brand image and Purchase intention (Savitri et al., 2022), the perception of benefits is positively influenced by utilitarian and hedonic motivations (Yap, 2022).

While utilitarian motivation is rational and oriented towards satisfying consumer needs (Zheng et al., 2019), hedonic motivation characterizes the emotional aspects that the acquisition of a product/service of a particular brand represents for the consumer (eg, social status, acceptance, prestige; Shah, Khan and Hameed, 2019). Both motivations have a positive impact on Purchase intention and are largely influenced by the way the brand is advertised on social networks (Lou & Yuan, 2019).

6. Conclusion

After analyzing the literature review and the quantitative study carried out, through the application of a questionnaire to a sample of 947 consumers, it was possible to conclude that Brand Image has a significant importance in Purchase Intention, but when consumers perceive that the benefits related to the purchase of clothing are positive, the value of Brand image decreases. So, it is essential to know and understand consumer behavior in relation to their Purchase Intention, so that brands can make more impactful decisions regarding their products/services and gain competitive advantage in the market. (Lim et al., 2017).

In a study in which a large majority of participants were women, it is possible to conclude that participants under the age of 20 manifest less intention to buy on social networks (probably because they are students with lower purchasing power). The group that expresses the greatest intention to buy clothing through social networks reveals a monthly net income of the household of less than €1500 and is in the 21-25 age group.

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The Impact of Music on the Effectiveness of Facebook ads

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Abstract: Facebook is the most popular social media platform in Poland. As a result, it is often used in advertising campaigns by various types of organizations. The effectiveness of these campaigns depends on many factors, including advertising creation. Video ads are dynamic and may contain music. Music in advertising can be aimed at audience attention, persuasion, user interest and sales. Music influences the emotions of the audience, and these are an important factor in making a purchase decision. It can also increase the rememberability of an ad. Its beat is important, as well as content matching. On the other hand, social media audiences may not play music in ads, which often happens when quickly browsing applications such as Facebook, especially on mobile devices. The lack of background music in the video can therefore also make a difference. The aim of the article is to determine the impact of music on the effectiveness of Facebook ads. As a research method the test of four advertising campaigns was used. The video ads differed only in the background music (the remaining settings and the creation of the ads were identical): the first had no musical background, the second had rock music timed with the video beat, the third - the same rock music not timed with the video beat, and the fourth one had a calm music as background music, less suited to the content (the video required rather dynamic music). It has been hypothesized that music or the lack of it in the video ad, its type and timing (or not) with the beat of the ad's video have an impact on the effectiveness of the Facebook ads. It affects, among others on the reach metric, impressions, post engagement, number of clicks on the ad, cost of clicks, click rate, video plays and video plays costs.

Keywords: music, advertising, social media, Facebook ads, ads effectiveness

1. Introduction

Facebook Ads Manager is currently one of the most popular digital advertising management tool next to Google Ads. The effectiveness of a scheduled advertising campaign is influenced by many factors. In the case of a video advertisement, one of them may be background music or the lack of it, its type and timing (or not) with the beat of the ad's video.

The aim of the article is to determine the impact of music on the effectiveness of Facebook ads. As a research method the test of four advertising campaigns was used.

The article consists of three parts. The first part discusses music as a Facebook ads effectiveness factor. The second part presents methodology of the test of four advertising campaigns. The last part is about research results.

2. Music as a Facebook ads effectiveness factor

In recent years, many publications have appeared on digital advertising (Barnes 2002, Cheng et al. 2009, Truong et al. 2010, Chi 2011, FloSi et al. 2013, McStay 2016, Ha 2017, Ma & Du 2018, Hudders et al. 2019, Lee & Cho 2020). Many authors have raised the issue of advertising in social media (Ertemel & Ammoura 2016, Alhabash et al. 2017, Jung 2017, Alalwan 2018, Voorveld et al. 2018.) and its effectiveness (Leung et al. 2015, Frandsen et al. 2016, Kuo et al. 2021). This research mainly concerned Facebook advertising (He et al. 2014, Chen 2015, Dehghani & Tumer 2015, Frandsen et al. 2016, Joshi & Kalia 2017, Tran 2017, Hamouda 2018, Silva et al. 2020, Kuo et al. 2021).

Advertising with the use of Facebook Ads Manager (tool for setting ads on Facebook, Instagram, Messenger and Facebook partner applications, the so-called Audience Network; it's an all-in-one tool for creating ads, managing when and where they'll run, and tracking how ad campaigns are performing) brings many benefits, including (see Joshi & Kalia 2017):

- Ability to reach a wide audience (in Poland in January 2022, 24.9 million users were registered on Facebook, 54% of which were women, Instagram had 11.3 million users at that time, 57% of which were women; age of users of both social network was varied from 13 to 65+ (see Social media users in Poland 2022));
- Ability to reach B2C and B2B audience;
- Ability to operate on a global scale;
- Ease of setting up an advertising campaign (the tool is easy to use);

- Small amounts are enough to set up the advertisement;
- Possibility to arrange advertisements in various forms (video, graphics, links),
- Possibility to choose various advertising targets (Choose the Right Objective 2022):
- Awareness (Brand awareness, Reach) - objectives that generate interest in product or service.
- Consideration (Traffic, Engagement, App installs, Video views, Lead generation, Messages) - Objectives that get people to think about business and seek more information,
- Conversions (Conversions, Catalog sales, Store traffic) - Objectives that encourage people interested in business to buy or use product or service.

Many factors influence the effectiveness of advertising on Facebook. These include, among others:

- Advertising goal (this is the main element determining the ad settings and its results),
- The scope of the target group (it can be wide or narrow, which affects the costs of advertising; the target group can be specified in terms of gender, age, location and other demographics issues, interests and behaviors),
- Budget (daily or lifetime) - a daily budget is the average one will spend every day; a lifetime budget is the maximum one will spend during the lifetime of ad set,
- Schedule - it is worth planning an advertisement on the days and times when the target group is more likely to see the advertisement; it may depend on upcoming occasional events, e.g. weather (in nice weather, social media is less often used), season (e.g. in summer holidays users are less inclined to use Facebook), sudden political and social events (e.g. during nationwide strikes and demonstrations in social media there is a lot of information noise and then it is better not to plan any ad campaign), planned large advertising campaigns of competitors (then it is better to postpone ours for another time, etc.),
- Ad placements (location on various applications/websites, e.g. Facebook, Instagram, Messenger and Audience network - Facebook partner applications and in various places on these applications/websites, e.g. News Feed, Facebook right column, Stories, In-stream, etc.),
- Optimization for ad delivery – possibility to choose the event one want to optimize for in ad set (i.e. landing page views, link clicks, daily unique reach, impressions),
- Ad creative – media (video, graphics), text and destination for an ad (landing page).

As part of the ad creative, one can set up a video ad. These types of advertisements are relatively more attractive to the audience due to their dynamics (they can focus attention better while browsing an application or website). The video may contain music. There has been a lot of research on the role of music in traditional advertising and its impact on consumer decisions (see Gorn 1982, Alpert et al. 2005, Allan 2006). However, there is a lack of research into what it looks like in digital environment, on social media, especially on Facebook. It seems that music may also determine the effectiveness of the Facebook Ads. This is the subject of this article's research.

3. Methodology

The aim of the research is to determine the impact of music on the effectiveness of video Facebook ads.

The following research questions were formulated:

- What is the range, impressions, post engagement and frequency of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?
- What are the cost metrics (i.e. clicks, CPC, CTR, CPM, cost per result) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?
- What are the video plays metrics (i.e. ThruPlays, Video plays at 25% / 50% / 75% / 95% / 100%, video average play time) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?
- What are the video plays cost metrics (i.e. cost per ThruPlay, Cost per 2-second continuous video play, cost per video plays) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?

It has been hypothesized that music or the lack of it in the ad, its type and timing (or not) with the beat of the ad's video have an impact on the effectiveness of the video Facebook ads. It affects, among others on the reach metric, impressions, post engagement, number of clicks on the ad, cost of clicks, click rate, video plays and video plays costs.

As a research method the test of four advertising campaigns was used. The Facebook Ads Manager was used as the research tool.

Four ads were tested, each with the same settings and the same creation (form, content, appearance). The advertisements were in the form of video. Their content concerned the field of study (encouraged to undertake postgraduate studies in the field of "Marketing and creative advertising" from October at the Institute of Law and Economics of the Pedagogical University in Krakow). The video consisted of several slides with dynamic inscriptions advertising the studio (e.g. "Professional staff of practitioners", "Friendly atmosphere", etc.) and photos (see Figure 1). Content of the ads was in Polish. It should be emphasized that it was legible and understandable also without music sound.



Figure 1: View of the tested ad on Facebook

Source: own.

The advertisements differed only in the music (or lack of it). The first ad was without music. The second commercial featured rock music timed with the beat of the video. The same rock music was used in the third ad, but was not timed with the beat of the video. The last one was with calm music synchronized with the rhythm of the video.

Settings of all four ad campaigns were as follows.

Ad objective was "Engagement". By setting this goal one can find people who will be more likely to engage with one's business online, or take desired actions on one's ad, page or send a message. In case of scheduled ads goal "Engagement" means that system found people who were more likely to view ad video.

As engagement type were set video views and as a conversion location (where the customer action will take place) was the ad.

Daily budget was 10 PLN.

All advertising campaigns started on Feb 10, 2022 and ended on Feb 15, 2022.

Custom Audiences settings of all ad campaigns were:

- Location: Poland, Kraków (all within 80 km), Lesser Poland Voivodeship,
- Age 23 – 40,
- All genders.
- Education level: Associate degree or Master's degree.

The above settings of the target group result from the fact that the ads concerned postgraduate studies at the University of Krakow.

Regarding the placement of the ads, the automatic method was selected which is recommended by Facebook. Automatic placements means that Facebook's delivery system allocated ads set's budget across multiple placements based on where they're likely to perform best. Ads could appear in various places on Facebook, Instagram, Messenger and Audience Network (applications cooperating with Facebook).

As an optimization for ad delivery "ThruPlay" was chosen. This option affects who sees ads to get the desired outcome. It means that ads were shown to the people most likely to played the video in the scheduled ads.

According to the settings, one was charged for each ad's video impression. For many optimization goals, one has paid each time an ad was served (known as an impression).

Delivery type was standard. Standard delivery uses pacing to one's spend. Pacing keeps from spending one's budget too quickly and is the recommended and preferred option for most advertisers.

The metrics used in the analysis are described below.

1. Results metrics:

Results - The number of times an ad achieved an outcome, based on the objective and settings one selected (ThruPlays).

Result rate - The percentage of results one received out of all the views of an ad.

Reach - The number of people who saw an ad at least once. Reach is different from impressions, which may include multiple views of an ad by the same people.

Impressions - The number of times an ad was on screen.

Frequency - The average number of times each person saw an ad.

Post Engagement - sum of the number: post shares, post reactions, post saves, post comment, page likes, post interactions, 3-seconds video plays, photo views, link clicks.

Clicks (all) - The number of clicks on an ad.

2. Cost metrics:

CPC (All) - The average cost for each click (all).

CTR (all) - The percentage of times people saw your ad and performed a click (all).

CPM (cost per 1,000 impressions) - The average cost for 1,000 impressions.

Cost per result - The average cost per result from your ads.

3. Video plays metrics:

ThruPlays - The number of times a video was played to completion, or for at least 15 seconds.

Video plays at 25% - The number of times a video was played at 25% of its length, including plays that skipped to this point.

Video plays at 50% - The number of times a video was played at 50% of its length, including plays that skipped to this point.

Video plays at 75% - The number of times a video was played at 75% of its length, including plays that skipped to this point.

Video plays at 95% - The number of times a video was played at 95% of its length, including plays that skipped to this point.

Video plays at 100% - The number of times a video was played at 100% of its length, including plays that skipped to this point.

Video average play time - The average time a video was played, including any time spent replaying the video for a single impression.

Unique 2-second continuous video plays - The number of people who performed a 2-second continuous video view.

3-second video plays - The number of times a video played for at least 3 seconds, or for nearly its total length if it's shorter than 3 seconds. For each impression of a video, Facebook count video views separately and exclude any time spent replaying the video.

4. Video plays cost metrics:

Cost per ThruPlay - The average cost for each ThruPlay.

Cost per 2-second continuous video play - The average cost for each 2-second continuous video view.

Cost per 3-second video plays - The average cost for each 3-second video play.

4. Findings

Below are the results of the test of the above-described four ads set in the Facebook Ads Manager that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video, marked as follows:

WM - Ad without music

RTM - Ad with rock music timed with the beat of the video

RNTM - Ad with rock music not timed with the beat of the video

CM - Ad with calm music timed with the beat of the video

4.1 What is the range, impressions, post engagement and frequency of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?

Results of the test ad campaigns are presented in Table 1.

Table 1: Results of the test ad campaigns

Type of ad	Results (ThruPlays)	Result rate [%]	Reach	Impressions	Post engagement	Frequency
WM	308	21.36	1,042	1,442	499	1.38
RTM	256	33.95	575	754	346	1.31
RNTM	287	37.37	575	768	400	1.34
CM	282	39.89	520	707	366	1.36

Source: own.

The research showed that ad without music had almost twice the reach (1,042 recipients) than ad with music. The advertisement with calm music (less suited to dynamic video and audience) had the smallest reach - 520, while ad with rock music - 575 (it did not matter whether the music was timed to the beat of video or not). It was noted that advertising without music also had twice as many impressions (1,442 audience), while video with calm music had the smallest number (707 audience). The ad with rock music timed to the beat of video - 754 and not timed - 768. The average number of times each person saw all ads was similar and ranged from 1.31 (rock ad timed to the video's beat) to 1.38 (without music ad).

Despite almost twice as much reach and impressions, the ad without music achieved slightly higher results than the other ads (308 ThruPlays, while the others - from 256 (RTM) to 287 (RNTM)). Interestingly, the result rate for music advertising was almost two times lower (21.36%) than the ad with quiet music (39.89), which achieved the highest rate. The largest post engagement was generated by an ad without music (499), but this indicator was not significantly higher than the other ads (RNTM - 400, RTM - 346).

4.2 What are the cost metrics (i.e. clicks, CPC, CTR, CPM, cost per result) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?

Cost metrics of the test ad campaigns are presented in Table 2.

Table 2: Cost metrics of the test ad campaigns

Type of ad	Clicks (all)	CPC (All) [PLN]	CTR (All) [%]	CPM (cost per 1,000 impressions) [PLN]	Cost per result (Cost per ThruPlay) [PLN]
WM	2	13.94	0.14	19.33	0.09
RSM	1	17.51	0.13	23.22	0.07
RNSM	3	5.88	0.39	22.98	0.06
CM	-	-	-	25.12	0.06

Source: own.

The calm music ad did not generate any clicks, so one cannot calculate CPC and CTR for it. The remaining ads had a very small number of clicks (from 1 for RSM, CTR - 0.39, to 3 for RNSM, CTR - 0.39). The lowest average cost of clicks was achieved in the case of an ad featuring rock music not timed to the beat of video (PLN 5.88), and the highest - with rock music timed to the beat of video (PLN 17.51). Advertising without music had a CPC of PLN 13.94, which is also quite high. The highest CPM was in the case of advertising with calm music - PLN 25.12, and the lowest in the case of advertising without music - PLN 19.33. The worst cost-benefit ratio was achieved in the case of advertising without music (PLN 0.09), and the best in the case of RNSM and CM (PLN 0.06).

4.3 What are the video plays metrics (i.e. ThruPlays, Video plays at 25% / 50% / 75% / 95% / 100%, video average play time) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?

Video plays of the test ad campaigns are presented in Table 3.

Table 3: Video plays metrics of the test ad campaigns

Type of ad	ThruPlays	Video plays at 25%	Video plays at 50%	Video plays at 75%	Video plays at 95%	Video plays at 100%	Video average play time
WM	308	441	354	327	318	291	00:06
RSM	256	321	286	267	256	255	00:08
RNSM	287	369	321	303	286	262	00:09
CM	282	339	307	292	278	255	00:14

Source: own.

Ad without music had the most: video plays at 25% (441, while other commercials ranged from 321 (RSM) to 369 (RNSM)), video plays at 50% (354, while other commercials ranged from 286 (RSM) to 321 (RNSM)), video plays at 75% (327 while remaining ads from 267 (RSM) to 303 (RNSM)), video plays at 95% (318, while other ads from 256 (RSM) to 286 (RNSM)) and video plays at 100% (291 while the remaining commercials from 255 (RSM and CM) to 262 (RNSM)). This means that ad without music was viewed the longest by the audience compared to other advertisements. However, the video average play time was the highest in the case of advertising with calm music (14 seconds), and the lowest in the case of advertising without music (6 seconds).

4.4 What are the video plays cost metrics (i.e. cost per ThruPlay, Cost per 2-second continuous video play, cost per video plays) of the video Facebook ads that differ only in the music or the lack of it, timed or not to the beat of the video, matched or not to the dynamics of the video?

Video plays cost of the test ad campaigns are presented in Table 4.

Table 4: Video plays cost metrics of the test ad campaigns

Type of ad	ThruPlays	Unique 2-second video plays	3-second video plays	Cost per ThruPlay [PLN]	Cost per 2-second continuous video play [PLN]	Cost per 3-second video plays [PLN]
WM	308	352	499	0.09	0.06	0.06
RSM	256	233	346	0.07	0.05	0.05
RNSM	287	252	400	0.06	0.05	0.04
CM	282	244	366	0.06	0.05	0.05

Source: own.

Despite the fact that ad without music was watched the longest compared to the other tested campaigns, also in terms of unique 2-second video plays and 3-second video plays indicators, it fared the best, the costs of video reproductions were the highest. As mentioned earlier, the cost per ThruPlay indicator was PLN 0.09, while for other ads from PLN 0.06 (RNSM, CM) to PLN 0.07 (RSM), the cost per 2-second continuous video play indicator was PLN 0.06, while for other ads - PLN 0.05, and cost per 3-second video plays - PLN 0.06, while for other ads from PLN 0.04 (RNSM) to PLN 0.05 (RSM, CM).

5. Conclusion

The results of the research conducted lead to interesting conclusions. Facebook video ad without music reaches almost twice as many audience, and generates almost twice as many impressions. This should be explained by the fact that many users, especially of mobile devices, browse social media in places where they cannot listen

to the sound, because it could disturb people from the environment (e.g. on the bus, at school, at the university, in the queue to the checkout in the store, etc.). Therefore, they will be less willing to play video commercials with music. Note that video ads on Facebook and Instagram play automatically while browsing. In the situation described above, if the video is with sound, more often we deal with exit action (interrupting video playback), which causes a decrease in scoring of the advertisement (the algorithm perceives it as less interesting), which in turn makes such an advertisement more expensive (therefore in the case of advertising without music, we have the lowest CPM). However, video plays cost metrics (including ThruPlays 'cost of obtaining an outcome, i.e. ThruPlays' cost in the case of advertisements without music, is slightly higher than the costs of other advertisements. This may be due to the fact that ad with audio - although less watched for the reasons mentioned above - is more attractive to audience.

The type of music also matters. Calm music ad had the highest result rate with the highest cost per thousand impressions. It also had the highest video average play time. It seems that it was the most effective ad compared to the others in terms of cost-to-goal ratio (ThruPlays).

Timing to the beat of ad's video also seems to have an impact on ad performance in terms of click cost and click percentage (ad not timed to the beat of video ad had better results). In general, however, the differences in the RNSM and RNSM results are so ambiguous and similar that more tests would have to be performed to determine whether RNSM ad is actually more effective.

The hypothesis was confirmed that music or the lack of it in the ad, its type and timing (or not) with the beat of the ad's video have an impact on the effectiveness of the Facebook ads. It affects, among others on the reach metric, impressions, post engagement, number of clicks on the ad, cost of clicks, click rate, video plays and video plays costs.

Based on the research results obtained, it is worth presenting recommendations for organizations that plan Facebook Ads campaigns in the form of video:

- If goal of an video ad is to have the highest reach or impressions as possible, one should keep ad without music sound for better results;
- If, presumably, the target group often cannot play the sound of video music (e.g. young mothers putting their children to sleep, students during classes, etc.), it is better to prepare an ad without music sound;
- Message of an video ad should always be understandable without sound (if necessary, the video should have subtitles);
- As part of the A / B tests, it is worth checking two types of music - calm and dynamic, because depending on the advertising goals, results may differ. The same goes for timing to the beat of video.

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Who wants to grow old in Welfare Sweden?

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Abstract: The research presented in this paper focuses on social media usage, specifically Facebook, in times of the Covid-19 crisis when some Swedish citizens lost trust in their official institutions. Once Sweden decided not to comply with WHO recommendations, the great majority of the Swedish population rallied around the flag in support of that move. For those who questioned this approach not much support was available, so they turned to social media. We ran a survey of 371 Facebook users gathered around the “Dr Whistleblower oxygen for all” group. Combining quantitative and qualitative analysis, in this study we analyse the role of social media in situations when people lose trust in public institutions and are left out. The most interesting and surprising result of this study is the discovery of fear for Dr Whistleblower’s future, and fear for participants’ own lives. We argue that in times of grave crisis, when we need reliable information the most, we turn to social media not only due to its immediacy but also due to its ability to connect us with a much wider circle of people than our close circle of friends can do. Then, more than ever, we look for trustworthy information, we express our fears and look for help online, thus seriously disrupting the traditional news landscape.

Keywords: Sweden; trust; social media; whistleblower; fear; social support

1. Introduction

During the Covid-19 pandemic, Swedish authorities did not comply with WHO recommendations (Lindström 2020) and Sweden became notorious for implementing the less restrictive approach, a “Swedish way” or so-called “the Swedish experiment” (Esaïasson et al. 2021), that is and was based entirely on the recommendations of the Swedish Public Health Agency (PHA) (Folkhälsomyndigheten). That strategy resulted in, as it was presented on Swedish National Television on 21st November 2020 (Rapport n.d.), an 80% death rate of elderly over 70 years during autumn 2020 due to the Covid-19 pandemic. Together with such a high mortality rate, the virus was again present in elderly homes.

In such unprecedented, dramatic times, similar to wars, terrorist attacks, or natural disasters, our need for a trusted source of information is many times increased. What happens when the public administration of Sweden, a “world moral superpower” (Jansson 2018; Trägårdh 2018; Eriksson 2020; Sanandaji T. 2020), member of OECD, UN, and WHO, in the time of pandemic crisis decides not to comply with what the rest of the World is doing (Lindström 2020; Esaïasson et al. 2021)? Who to trust when public debate is lacking, and public institutions simultaneously ignore critiques of “the Swedish experiment” expressed by its 22 most reputable academics in the field of epidemiology and health? Where are those who do not trust “the Swedish experiment” to look for information and support?

This paper analyses the role of social media, specifically Facebook, in a time of crisis when the trust in public institutions is endangered or lost. We look at a group of adult people who reside in Sweden and are gathered around “Dr Whistleblower’s” Facebook group (Dr Jon Tallinger 2020) to analyse their feedback based on a large (n = 371) web-based survey panel during the Covid-19 outbreak.

2. Background

Trust in the EU, on average, is plummeting (Drakos et al. 2019) and the same trend is identified as a global phenomenon (Gil De Zúñiga et al. 2019). This decline in trust is directly connected with the experienced worsening of macroeconomic conditions by specific countries. A large body of literature identifies Sweden as a high-trust and low-corruption country (Rothstein and Eek 2009) with a long history of citizens’ high level of trust in institutions (Rothstein 2005).

When it comes to grave threats, when one country’s population feels extremely vulnerable (situations of wars, terrorist attacks, and pandemics) people look for more support from the government, the effect known as *rally round the flag* (Schraff 2020; Bol et al. 2021; Esaïasson et al. 2021). Interestingly enough, the Swedish approach

is in some scientific research (Kavaliunas et al. 2020) hailed as “evidence-based and in close partnership between the government and the society”, a successful model “noticed by the WHO and proposed as a future model”, while simultaneously perceived by others as “overconfidence in herd immunity” and “anti-traditionalist stance towards older generations” (Lindström 2020).

The Swedish self-image of an internationally oriented, humanitarian and moral superpower (Trägårdh 2018; Lindström 2020), introduced a sense of righteousness based on a national ideal-ego (Hansson and Jansson 2021). The literature argues that this self-perception veils dark sides of the Swedish reality, like a long history of structural racism (Hällgren 2005; Reyes 2005; Listerborn 2015) and results in deadly exceptionalism (Jansson 2018). During the Covid-19 crisis, Sweden disregarded coordination with other Nordic countries, the EU, and the WHO. Residents of Sweden found themselves in a rare and unexpected situation: to choose between Swedish exceptionalism and “the Swedish way” versus the strategy advised by WHO, EU, and all other Nordic countries.

2.1 The role of social media in a time of crisis

Not only do people turn to social media in a time of crisis due to its immediacy (Castillo 2016) and in expectation of fast reaction, we do it also because social media connects us with other people, a much wider circle than our closest circle of friends (You and Hon 2019). However impressive social media’s influence on our lives is, we are witnessing the decline of trust in information achieved through social media due to its “fake news” and “conspiracy theories” dissemination frequency where “panic travels faster than the Covid-19 outbreak” (Martin et al. 2020). Rumours and conspiracies thrive in environments of a low level of security and trust (Shahsavari et al. 2020) which in the case of the Covid-19 crisis resulted in infodemic or increased fake news sharing among social media users (Apuke and Omar 2021; Islam et al. 2020). One of the greatest strengths of social media was and is one of the strongest limitations. By delivering the information at enormous speed, the same information even almost instantly available is not the most reliable (Goel and Gupta 2020). Still, fake news is not new and is known as a worldwide issue (McGonagle 2017; Apuke and Omar 2021). It is clear that users of social media must be critical when sharing news, especially in situations of grave crisis.

Though much was written about fake news and sharing unsafe myths (Iosifidis and Nicoli 2020), in this paper we focus on another effect and capacity of social media - social support in times of crisis. We have witnessed many examples of positive social media usage in the Covid-19 crisis. It is noted that during government lockdowns, informal social networks quickly mobilized citizen-to-citizen support and crowdsourcing (Harrison and Johnson 2019; Carlsen et al. 2021). The capacity of social media communication is identified as a useful channel for political activism and engagement (Ida et al. 2020). It is also noted that social media could be used more in times of crisis by official institutions (Malecki et al. 2021; Li et al. 2020). However vast and interesting the positive side of the social media communication coin is, we focus here on social media usage in times of crisis in situations when citizens lost trust in their official institutions in Sweden.

2.2 Dr Whistleblower

Finding themselves in such a rare situation, when Sweden is one of the few countries that are not complying with WHO recommendations, most Swedish citizens trusted public institutions and followed the recommendations of PHA (Esaïsson et al. 2021). However, at the same time, some questioned this approach, and who needed support.

One of those who openly criticized PHA measures and “the Swedish experiment” was a Swedish medical doctor, Dr Jon Tallinger, a specialist in general medicine. He used his personal Facebook group to publicly share information about the treatment of older Covid patients. According to Dr Tallinger, older Covid patients were not given appropriate medical care. Dr Tallinger addressed his followers for the first-time 10th of April asking for help so the oxygen could be offered to all Covid patients, as he had witnessed that older Covid patients were given morphine when according to Dr Tallinger they should be on oxygen. In his Facebook posts, he expresses strong opposition to the Swedish experiment advocating a change of proposed measures.

Dr Tallinger’s words resonated with many Facebook users resulting in aggregating many followers in a short period. After several weeks, Dr Tallinger starts another Facebook public group Dr Whistleblower oxygen for all 1st of May 2020 which at the moment of writing this paper gathers 3400 members. Once we have identified vivid activity on Dr Whistleblower’s Facebook group page we got in contact with Dr Tallinger asking for collaboration in this research to understand how people are using social media in times of crisis. Dr Jon Tallinger

agreed to help us run the survey with his followers by publishing the link to the survey on the group's Facebook page.

The data collection, analysis process and thematic analysis are described next.

3. Method

The method used in this research consists of a descriptive case study employing embedded mix-method research. We ran a survey with 371 Facebook users who were gathered around Dr Whistleblower's group. The person behind the Dr Whistleblower group, Dr Jon Tallinger, accepted an invitation to collaborate in this study and published a link to the Sunet survey tool onto Dr Whistleblower's Facebook wall. Agreeing that the survey will be short we ran it online by using the Sunet survey tool from May 27th until June 15th 2020.

The participants of the survey were given a chance to answer 9 questions. None of the questions was obligatory to answer. In a great majority (7 of 9) of questions, participants were offered to choose between Yes and No, simple dichotomous answers where they would simply choose to agree or disagree with a given statement. However, thinking that maybe some of the participants would like to say something more about these issues, and in order to not lose the more nuanced perspective (Etz et al. 2018), a free text comments fields titled "please explain why", or simply "comments" below each question was offered to all survey participants. To answer the 2nd question users were offered only textual fields, while to answer the 6th questions users were given to choose between several options. Finally, all participants of the survey signed online consent for taking part in this research study.

We have gathered more than 26 thousand words of text (approximately 59 pages) and performed a qualitative analysis of the free-text comments.

3.1 Analytical approach

The quantitative results for the survey were submitted to descriptive statistical analysis. A thematic approach was used for identifying, analysing, and reporting the results of the free-text comments (Scharp and Sanders 2019). Inspired by Braun and Clarke's (Braun and Clarke 2006), Sjøe (2014), six-step thematic analysis method as an iterative process. All qualitative comments from the survey were exported to one word document, where all comments were treated as one integral text (Glasdam and Stjernswärd 2020). To perform the qualitative analysis, through reading, three coders identified themes through the first round of independent coding and the excel file was used to copy comments aligned with specific themes. After that, a meeting was held where the differences were discussed and as well as a new coding frame. The themes that were identified by all coders were accepted and coders performed another round of independent coding (O'Connor and Joffe 2020).

Table 1 Code frequency

Code	Frequency
losing trust	104
generating trust	80
fear	46

Once codes and themes were generated and reviewed, based on the reorganisation of the material, codes were collated to identify three themes: "losing trust", "generating trust" and "fear" (subsection 4.2). Table 1 presents the frequency of codes. Finally, the quantitative analysis was performed by using SUNET software.

Since this is an explorative study that investigates an emergent, grave situation issue without preliminary research (Streb 2010), the goal of this study is not to generalise the results but rather to understand a phenomenon (Tampere et al. 2016), we argue that a methodological approach is appropriate. In the following section, we present the results of this method.

4. Results

We start by first analysing the quantitative results of the survey. After that, we present a content analysis of the qualitative data gathered through free-text comments and the answers to question 2.

4.1 The Survey

In this subsection, we present all the survey questions and quantitative results gathered from 371 Facebook users who participated in the survey (see Figure 1).

Almost all survey participants (370 of 371) answered the first question (Figure 1). The great majority (358 or 96.8%) expressed their trust in the information that Dr Jon Tallinger - Dr Whistleblower publishes, while just 3.2% said they do not trust it. As those who trust find the information on Dr Whistleblowers' Facebook page relevant, 86.7% of them (314 of 362) share the information with their Facebook contacts. Almost the same proportion of participants do not trust the information given by Swedish institutions (336 of 361) or 93.1%, as well as 91% (333 of 366) finds that information coming from Dr Whistleblower is in contrast with the information coming from the mainstream media.

	Questions	Yes	%	No	%	No of responses	Mean	Standard Deviation	Median
1	Do you trust the information Jon Tallinger - Dr Whistleblower publishes?	358	96.8	12	3.2	370	1.0	0.2	1.0
2	Please explain why do you trust/or do not trust information published by Jon Tallinger - Dr Whistleblower	Replied by filling the textual field							
3	I share information Jon Tallinger - Dr Whistleblower publishes with my contacts.	314	86.7	48	13.3	362	1.1	0.3	1.0
4	Information coming from Swedish institutions regarding the Covid-19 crisis is reliable.	25	6.9	336	93.1	361	1.9	0.3	2.0
5	Information Jon Tallinger - Dr Whistleblower publishes is in contrast to official /mainstream media.	333	91.0	33	9.0	366	1.1	0.3	1.0
6	Official/mainstream Swedish media cover the Swedish Corona situation					367	2.2	0.6	2.0
	Fairly, showing both sides (for and against) the official Swedish Corona strategy	18	4.9						
	Mostly cover stories that support the official Swedish Corona strategy	267	72.8						
	Mostly cover stories that criticize the official Swedish Corona strategy	63	17.2						
	Not sure	19	5.2						
7	Jon Tallinger - Dr Whistleblower risks something by becoming a whistleblower?	350	95.6	16	4.4	366	1.0	0.2	1.0
8	Followers of Jon Tallinger - Dr Whistleblower's social media have a political affiliation.	45	12.7	309	87.3	354	1.9	0.3	2.0
9	I agree with the official Swedish Corona strategy?	18	4.9 %	348	95.1	366	2.0	0.2	2.0

Figure 1 Survey questions and results

When asked to choose between several options (Question 6, Figure 1) to describe how official Swedish, or mainstream media cover the Corona situation in Sweden, 72.8% (267 of 367) participants said that official Swedish media mostly cover stories that support the official Swedish Corona strategy, while 17.2% of participants (63 of 367) claimed the opposite. An almost equal number of survey participants said that they find information to be covered fairly 4.9% (18 of 367), or 5.2% (19 of 367) expressed that they were not sure about it. It is very interesting to note that a great majority of participants 95.6% (350 of 366) believed that Dr Jon Tallinger risks becoming Dr Whistleblower. Nearly the same number 95.1% (348 of 366) said that they do not agree with the official Swedish Corona strategy (Question 9, Figure 1).

Finally, 87.3% (309 of 354) said that people who gathered around Dr Whistleblower's Facebook group do not have any specific political affiliation (Question 8, Figure 1). In the next subsection, we present content analysis.

4.2 Content Analysis

To get a more nuanced picture the participants were offered to leave free-text comments. As mentioned before, we have received many pages of free-text comments. Therefore, here we present the content analysis of the answers to question 2 and all free-text comments.

4.2.1 Losing trust in government institutions and media

As recent scientific contributions argue, the so-called "Swedish way", "the Swedish experiment", or "Swedish model" have been widely supported by most of its citizens at the beginning of the Covid-19 crisis (Lindström 2020; Esaiasson et al. 2021). However, just several months later, when it became evident that Sweden was looking at "the horrendous death toll" while its Prime Minister argued that the Swedish Covid strategy hadn't failed (Palm 2020), the trust in governmental institutions started to lose its ground. On a local, Swedish level, there were not many things offered for those who were not rallying around the flag (Schraff 2020). Therefore, they turned to social media. When asked directly if they trust Swedish governmental institutions they say:

Absolutely not. Very much of what comes from FHM [Swedish PHA] contradicts recommendations from WHO, and FHM [Swedish PHA] doesn't give any scientific grounds to their decisions and recommendations, they only speculate. I have done research myself (Im a published researcher in informatics, not medicine. However I understand how research is done) and I know how to look for facts. FHM [Swedish PHA] does not base their recommendations on facts

To mitigate public health threats in the digital age (Chou et al. 2018), users of social media are working hard on identifying health misinformation online. The same with those gathered around Dr Whistleblower's Facebook group. They are fact-checking, analytical people, doing constant benchmarking of Swedish procedures and results with other neighbouring countries.

FHM [Swedish PHA] together with the state have completely failed in their strategy. Thousand dead people and there is no end to it! Comparable countries like Norway, Finland, and Denmark, follow, test, treat, isolate, and that is exactly how one operates with such type of publicly dangerous infection. And they succeeded!

In line with the results of Strömbäck and colleagues (Strömbäck et al. 2020) many people do not trust mainstream media. This is how users comment on the information given by governmental institutions and mainstream media.

The general Swedish media (SVT, DN, AFTONBLADET) seem to go the errands of the politicians to make them look good rather than questioning when things go wrong. Such as the fact that directives for Drs and Nurses is to treat older Covid-19 patients palliatively (suspected Covid patients at care homes get a shot of morphine instead of Oxygen). Which is a death sentence, since morphine makes it harder to breath and oxygen eases it.

A large emphasis in the free text comments was given to the mainstream media who were identified as lacking critical thinking and objectivity. According to our informants, Swedish media was publishing mostly news that supported the "Swedish way" without traditional journalistic criticism which is in line with the literature (Wahl-Jorgensen et al. 2016).

They don't cover any source with with different opinion than Government / FHM [Swedish PHA]

Hodkinson (2016) said journalism is never unbiased. For those who answered the survey the filtering of news is made top-down, from the government level, presenting a kind of censorship. Some of the informants believed that people employed in the media fear for their positions, and therefore introduce self-censorship. Many users reported disappointment for lack of criticism during press conferences organised by the Swedish PHA.

The censor is fully comparable with Chinas. No critical review or questions or follow-up questions at, for example, press conferences. They just convey.

As Chou and colleagues argue (Chou et al. 2018) social media users are vigilant analysts. More observant informants noticed dark patterns in mainstream media reporting. Dark patterns are events where data presentation is twisted, by using small visual tricks to skew, steer the perception of the data in the eyes of the observer (Mathur et al. 2019).

It's highly manipulative, they "lye with the truth", they are very competent in gathering information, creating reports and prognosis that can be found on their web site. But their main web site has a manipulative data display that is different from all other countries way to visualise the same data, their trends point always downward.

4.2.2 *Who to trust when you lose trust in government institutions in times of crisis?*

For those who are mistrustful in government institutions, finding trustworthy information is not only difficult but hard work to do. Here we present the process of trust negotiation as described by the participants.

As (Llewellyn 2020) argues, in times of crisis trust is the most important thing if one wants to communicate health advice. Therefore, it is not surprising that trust created around the info published on Dr Whistleblower's Facebook page comes from the fact that Dr Jon Tallinger is a Swedish medical doctor. Being a doctor who publicly raised an important issue for some is a relevant base for the creation of the trust.

I trust him, he is a doctor.

The effectiveness of public institution measures in times of crisis is dependent on the trust in those institutions (Lewnard and Lo 2020). Therefore, one of the most important questions of this study was if the informants trusted the information posted on Dr Whistleblower's page. Many of the respondents reported that Dr Jon Tallinger describes the situation they recognize.

I work in health care and I know exactly what he is pointing at.

Being lost without trust in their public institutions, those who are not from the same professional field as Dr Whistleblower search and compare content published by other experts. They build trust after evaluating Dr Whistleblower's posts. This is the reply to the question if they trust Dr Whistleblower.

Of course I do! Many other experts agree with Jon also.

The trust in information published on Dr Whistleblower's page was created in case informants were able to backtrack the published events, see quotes below.

Very much evidenced. I also look it up. I got a brain. And know how to use it. His references are clear. I can follow them back in few steps

If it is not possible to backtrack and confirm the published information through some other channels, the trust is endangered. Of course, among Dr Whistleblower's Facebook followers are also those who find Dr Whistleblowers' words not completely true.

Sometimes he doesn't have details in information 100% correct, and sometimes he is blunt, but he is totally truthful!

4.2.3 *Fear*

The literature argues that healthcare professionals who raise concerns about their workplace and our health should be treated as heroes (O'Neill 2021). Unfortunately, many of them face negative consequences for speaking out, and during the Covid-19 crisis, this behaviour has spiked. It is interesting to note that the great majority of respondents, 95.6%, believed that Dr Jon Tallinger risked a lot by going public with the information he published on Facebook. They reported believing that Dr Whistleblower's public contribution was courageous,

risking his job and maybe even his medical doctor licence. Here is just one very short quote that expresses the dominant feeling.

He risks everything.

It is already widely accepted that in crisis situations social media changes the communication landscape (Coombs 2010). As social media has become a natural environment for expressing feelings (Giuntini et al. 2019), in this case too, informants turned to social media for new information and for expressing their fears. While the average Dr Whistleblower's followers read, evaluated published information, and shared content, when talking about their practices online on an implicit level they expressed another fear. Finally, people were afraid for their own lives. The words are strong and disarming.

They are lying, and killing elderly

Being left without support, deprived of traditional trust in their public institutions, a feeling of fear and insecurity permeated their lives. Unaware of the literature findings that argue for Facebook usage as a shield for decreasing stress (Rus and Tiemensma 2018), participants intuitively shared their feelings looking for relief. The feeling of distress and disappointment was directly expressed by the following quote where the user openly shares fears for their future.

Who wants to grow old in welfare Sweden?

In the following section, we lay the conclusion of this study.

5. Conclusion

Based on the results of the study presented here, we argue that regardless of rising criticism and doubts, social media remains an important channel for connection, communication, and information analysis in times of crisis. Also, without hesitation, we argue that in situations of grave crisis when trust in public institutions is lost, people turn to social media as an alternative media channel looking for help, calling for action, while simultaneously using the same channel as an emotional outlet. However, the most unexpected finding of this study is the discovery of fear.

It is important to note that here we do not talk about the fear of unexpected health outcomes in the Covid-19 crisis (Tishelman et al 2021). Many informants mention fear as a suppressing factor of open public debate, fear that controls media coverage, and finally describes their feelings about their future. The great majority of respondents expressed fear for Dr Jon Tallinger's future in Sweden, believing he risks a lot. Finally, being aware of how Sweden left their elderly without proper care and protection during the Covid-19 crisis, they report fear for their near future.

Bearing in mind that this study analysed social media practices in Sweden during the beginning of the Covid-19 crisis, a country renewed as a "world moral superpower" (Jansson 2018; Trägårdh 2018; Eriksson 2020; Sanandaji T. 2020) and the country that belongs to "the world elite" (Åberg 2019), this comes as surprise and needs further investigation.

5.1 Theoretical and practical implications

As mentioned before (see Section 1 and subsection 3.1) this is an explorative study and the results of it can not be generalized as this study analyses reactions of a quite small group of people. First, there were not many people who did not agree with the "Swedish way", and second, we analysed only those who used Facebook and openly expressed their feelings on Dr Jon Tallinger's page. Therefore, this study contributes to the analysis of social media usage of those who felt completely excluded and forgotten by the Swedish institutions.

In a country of Jante Law (Cappelen and Dahlberg 2018) where modesty and egalitarianism are appreciated and emphasised, it is not easy to find those who would publicly criticise the majority. Finding these particular people on social media does not come as a surprise as social media were used 'en masse' during the Covid-19 outbreak (Glasdam and Stjernswärd 2020). However, according to our knowledge, there is not much in the scientific literature about this group of people's behaviour or feelings. Therefore, we argue that this study could be taken as an inspiration for further research as we believe that no one should be left behind, especially in a grave crisis.

This research is also a call to Swedish public institutions to look at social media and use it in times of crisis. By now it is a very well-known fact that social media are very good tools for fast dissemination of the dominant knowledge, being true or false (Juhász et al. 2017, Iosifidis and Nicoli 2020, Apuke and Omar 2021). This fact offers an alternative and quite a cheap opportunity to the public institutions when fast analysis of minorities' behaviour and needs are in question. If public institutions are aiming and claiming to not leave anyone behind, social media analysis in times of crisis is a way to go.

Finally, this study finds the discovery of fear and silencing critical voices quite interesting and disturbing. This goes in line with Pamment's analysis (2021) and draws attention to quite dangerous "media blackout" practices. As Pamment argues, the informants of this study have also identified bending of public institutions' narrative to justify national policy (Baekkeskov et al. 2021) and protect the branding of Sweden (Jansson 2018; Trägårdh 2018; Eriksson 2020; Sanandaji T. 2020) which represents a dangerous threat to democracy.

5.2 Limitations and future research

We are fully conscious of the limitations of this study. Starting from the number of surveyed participants (371), whose contributions are followed through only one social media channel, Facebook, and during a limited period. Still, we believe that the survey result and content analysis presented in this paper is informative material that should be taken into consideration when analysing public reactions in times of crisis. Especially if we do not forget surprisingly many testimonies and striking words with which they express their feelings.

At the time of finishing this article, Dr Jon Tallinger has left Sweden and resides in Denmark, while Sweden is facing the so-called "third wave" of the Covid-19 crisis. We hope that the research results provided in this, and other studies will help Sweden and its institutions to collaborate with a larger pool of experts to find a better way for managing this and any other crisis that might come. We hope that no Swedish citizens will again feel left out or left without proper medical attention.

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Creating Sentiment Dictionaries: Process Model and Quantitative Study for Credit Risk

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Abstract: Since textual user generated content from social media platforms contains valuable information for decision support and especially corporate credit risk analysis, automated approaches for text classification such as the application of sentiment dictionaries and machine learning algorithms have received great attention in recent user generated content based research endeavors. While machine learning algorithms require individual training data sets for varying sources, sentiment dictionaries can be applied to texts immediately, whereby domain specific dictionaries attain better results than domain independent word lists. We evaluate by means of a literature review how sentiment dictionaries can be constructed for specific domains and languages. Then, we construct nine versions of German sentiment dictionaries relying on a process model which we developed based on the literature review. We apply the dictionaries to a manually classified German language data set from Twitter in which hints for financial (in)stability of companies have been proven. Based on their classification accuracy, we rank the dictionaries and verify their ranking by utilizing Mc Nemar's test for significance. Our results indicate, that the significantly best dictionary is based on the German language dictionary SentiWortschatz and an extension approach by use of the lexical-semantic database GermaNet. It achieves a classification accuracy of 59,19 % in the underlying three-case-scenario, in which the Tweets are labelled as negative, neutral or positive. A random classification would attain an accuracy of 33,3 % in the same scenario and hence, automated coding by use of the sentiment dictionaries can lead to a reduction of manual efforts. Our process model can be adopted by other researchers when constructing sentiment dictionaries for various domains and languages. Furthermore, our established dictionaries can be used by practitioners especially in the domain of corporate credit risk analysis for automated text classification which has been conducted manually to a great extent up to today.

Keywords: sentiment dictionaries, credit risk, Twitter analysis, user generated content, text mining

1. Introduction

User Generated Content (UGC) from social media platforms, which are "a group of internet-based applications that allow the creation and exchange of user generated content" (Kaplan and Haenlein, 2010), contains valuable information for decision making especially when extracting its sentiment. Sentiment is defined as "people's opinions in terms of views, attitudes, appraisals and emotions" (Kearney and Liu, 2014; Nassirtoussi et al., 2014; Stieglitz et al., 2014). Since the amount of UGC continuously increases, manual classification of the textual content is not appropriate due to the high effort associated with human coders (Neuendorf, 2002). Hence, automated real time analysis of UGC is desirable, which can be realized by sentiment dictionaries. Sentiment dictionaries consist of word lists to which sentiment scores are assigned. Although machine learning algorithms usually achieve better classification results, dictionary-based approaches are more suitable especially when the data is of great heterogeneity and a training of machine learning algorithms is difficult. Since domain specific sentiment dictionaries attain better classification results, we examine the first research question (Kearney and Liu, 2014):

How can sentiment dictionaries be created and evaluated?

In order to verify the applicability of our answer, we create and evaluate sentiment dictionaries for corporate credit risk analysis since recent studies in this domain indicate, that German language UGC contains valuable information (Mengelkamp, Hobert and Schumann, 2015). In order to do so, we answer the second research question:

How good do German sentiment dictionaries perform on textual UGC in the domain of corporate credit risk analysis?

After conducting a literature review in order to identify sentiment dictionaries, we analyse, how the dictionaries were constructed and derive a process model for creation and evaluation of domain and language specific

sentiment dictionaries. Then, we construct nine versions of German sentiment dictionaries based on the established process model. We apply these to a data set from Twitter, which has been proven to contain evidence for financial instability of companies. The results of the automated coding are compared to a manual coding performed by (Mengelkamp, Hobert and Schumann, 2015). Furthermore, we rank the dictionaries according to their classification accuracy, test for significant differences and discuss the results.

2. Approaches for sentiment dictionary creation – a systematic literature review

We describe the research methodology applied for the literature review which we conducted in order to identify existing sentiment dictionaries and how they can be constructed, in the following chapter. Then, we present the analysis, discuss results and draw conclusions.

2.1 Research methodology

We follow the methodological approach introduced by (Webster and Watson, 2002) as well (Levy and Ellis, 2006) for the literature review. The process is summarized in Figure 1. 6577 articles were identified by use of the listed keywords in the specified databases. 46 articles were considered as relevant for the analysis by the researchers.

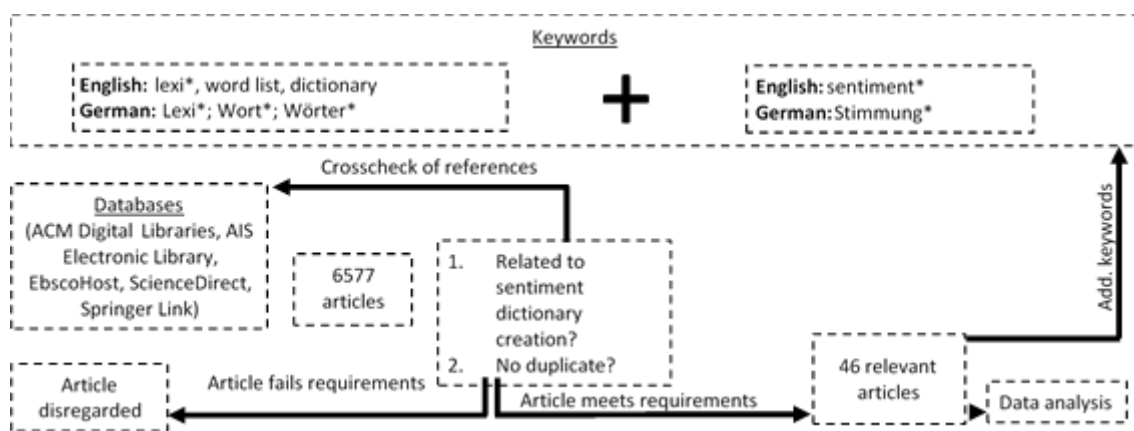


Figure 1: Methodology of literature review

The two researchers responsible for the analysis read the 46 selected articles independently from each other. They identified steps, that were carried out in order to construct sentiment dictionaries in each article. The list of steps was successively extended when new steps were identified. Then, results were discussed and names, which were assigned to the steps, were unified until the researchers agreed on each phase.

2.2 Analysis and results

In the majority of articles (31 respectively 67,4 %), English language dictionaries were constructed. Seven authors constructed dictionaries in Chinese, two for Arabic as well as German. One dictionary each was constructed for Czech, Danish, Spanish and multiple languages. The ration of domain specific to independent dictionaries is almost even since 26 (56,5 %) were created without reference to a specific domain, whereby 20 (43,5 %) were adjusted for a specific context.

The results show, that the process of dictionary creation can be divided into the superordinate phases initial construction and extension, which are described in the following chapters. The phase of initial construction was undertaken in every article, whereby a dictionary extension was conducted in only 17 articles (37 %).

2.2.1 Initial Construction

The steps of *word selection*, *polarization*, *evaluation* and *translation* are conducted in the initial construction phase. The selection and polarization phases are conducted in every article, whereby ten articles (21,7 %) translated words and 31 (67,4 %) evaluated their initial construction phase.

In the selection phase it is described how and from which sources words are extracted. Hereby, the authors of eight articles (17,8 %) relied on native speakers in order to construct sentiment word lists. In 26 of the articles (56,5 %) the words were selected from a combination of existing sentiment dictionaries. In 20 (76,9 %) of those, the word selection was conducted with software support whereas four authors (15,4 %) drafted their phrases manually and two (7,7 %) used a combined approach. Next to that, in 26 articles (56,5 %), a textual corpus was

the basis for word selection. Hereby, 20 authors (76,9 %) automatically and four (15,4 %) manually extracted words. Ghiassi et al. (2013) and Wilson et al. (2005) used a combined approach.

After the selection of words for the sentiment dictionaries, the scores and their numerical representation are defined during the polarization phase. In 10 articles (21,7 %) native speakers manually rated the selected words according to previously defined sentiment categories. In 30 of the articles (65,2 %) the polarization was based on existing sentiment dictionaries whose sentiment scores were usually transferred and adapted. A manual transfer from sentiment scores of previously established dictionaries was only performed in two cases (Bracewell, 2010; Mahyoub, Siddiqui and Dahab, 2014). 14 authors (30,4 %) utilized labels from textual corpora in order to automatically define the polarization of words.

In order to construct dictionaries in different languages, ten authors (21,7 %) translated existing dictionaries or words from labelled corpora. 7 of them relied on translation software whereas words were translated by native speakers in Mahyoub et al. (2014) only. Abdulla et al. (2014) as well as Molina-González et al. (2013) combined translation software and a manual verification.

For the evaluation of the constructed dictionaries, 26 of the authors (56,5 %) automatically applied their dictionaries to manually classified textual corpora. 5 (10,9 %) tested them against sentiment classifications of existing dictionaries and in 4 cases (8,7 %) native speakers manually evaluated the dictionaries. The authors of 15 articles (32,6 %) did not evaluate the performance of the initial construction phase. Still, all of these 15 authors conducted a dictionary extension whereupon 14 evaluated their dictionaries. Domain specific dictionaries usually attain higher rates in terms of accuracy (84,9 %) than domain independent dictionaries (61,5 %).

2.2.2 Extension

All of the authors who conducted dictionary extension algorithmically selected further words e. g. synonyms, antonyms or dialect words from lexical-semantic databases.

In order to polarize the words, which were incorporated in the dictionaries during the extension, authors rely on native speakers, sentiment dictionaries and textual corpora. 13 of the 17 authors (76,5 %), who extended their initial word lists, relied on automated extraction of polarity scores from existing sentiment dictionaries in this phase.

For the evaluation of the extended dictionaries, 15 authors (88,2 %) applied their dictionaries to already classified textual corpora.

2.2.3 Interim Conclusion

The final process for sentiment dictionary creation is summarized in Figure 2. The figure is divided into the initial construction, the extension phase and data sources. It is listed which data sources are used for the sub steps of the initial construction and the extension phase. The numbers next to the sub steps refer to the numbers assigned to the data sources at the bottom of the figure. Not all steps were undertaken by every author. Especially the evaluation and the extension phases are neglected in some articles.

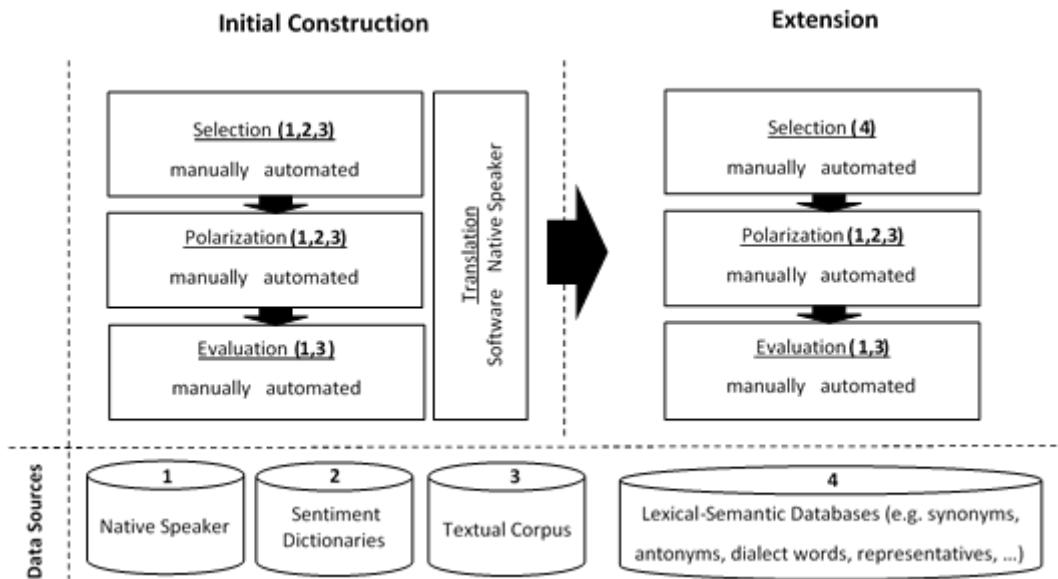


Figure 2: Process of Sentiment Dictionary Creation

Shortcomings of the identified literature include inconsistent and hence, hard to compare evaluation figures. Next to that, English is the predominant language for sentiment dictionary creation and dictionaries have not been constructed and evaluated in other languages to a great extent. Furthermore, studies about the applicability and performance of sentiment dictionaries on UGC from social media platforms in specific domains are still lacking.

3. Creating and evaluating German sentiment dictionaries for corporate credit risk analysis

In order to close the research gaps mentioned in the interim conclusion, we evaluate in how far sentiment dictionaries can be utilized to automate the process of German text classification in the domain of corporate credit risk analysis. The development of new dictionaries is based on the process model depicted in Figure 2. We evaluate nine dictionaries which we apply onto the manually classified textual corpus from Mengelkamp, Hobert and Schumann (2015).

3.1 Dictionary construction

Existing dictionaries have to fulfil the following criteria in order to be selected for automated text classification in our study:

- The sentiment categories of the dictionaries must be positive, neutral and negative since the textual corpus was classified utilizing these categories.
- The dictionaries must be publicly available.
- The language of the dictionaries must be German or English due to the language skills of the authors.

In accordance with the defined criteria, we select three existing sentiment dictionaries which we identified during the literature review to serve as a data base for selection and polarization in the initial construction phase. These encompass the German language dictionary SentiWortschatz which was established by Remus et al. (2010) as well as the English language dictionary SentiWordNet 3.0 created by Baccianella et al. (2010). The second German language sentiment dictionary (GermanPolarityClues) which we identified during our literature review was created by Waltinger (2010). Since SentiWortschatz was synchronized with the GermanPolarityClues, we refrain from considering it as an independent dictionary (Waltinger, 2012). Tests on our textual corpus revealed, that the results were identical for SentiWortschatz and the GermanPolarityClues.

Since SentiwordNet 3.0 (197.036 words) encompasses more words than SentiWortschatz (31.277 words), it enables us to evaluate if more comprehensive word lists can be translated and achieve a better performance than existing German sentiment dictionaries. We use the Google Translator to translate the words into German.

Next to that, we combine SentiWortschatz and SentiWordNet 3.0 in order to test, if the classification accuracy increases, when a German sentiment dictionary is combined with a translated English dictionary. Since multiple English words are translated to the same German word, the outcome contains 128.565 entries only. If words appear multiple times, an average polarity score is calculated.

Next to that, we utilize the lexical-semantic database GermaNet in order to conduct extensions of the sentiment dictionaries according to the process model depicted in Figure 2 (Hamp and Feldweg, 1997; Henrich and Hinrichs, 2010). By doing so, we are able to evaluate in how far the performance of sentiment dictionaries can be increased, when further entries are identified by means of lexical-semantic dictionary extensions. For each of the three dictionaries (SentiWortschatz, SentiWordNet 3.0 and the combination of both), we conducted two approaches of lexical-semantic extension. In the first approach, synonyms and antonyms are extracted from GermaNet for each of the dictionaries. The polarity scores are adopted from the seed words for synonyms. Since antonyms represent words with contrary meaning, polarity scores from the seed words are multiplied with (-1). After the dictionary extension, average sentiment scores are calculated for duplicates.

The second approach for dictionary extension differs from the first in only one aspect. The sentiment polarities for synonyms and antonyms are not directly transferred, but scores are multiplied with 0,8 respectively -0,8. Hence, words identified through lexical-semantic relationships from GermaNet are included with less weighted polarity scores than the seed words. This was done because Blair-Goldensohn (2008) revealed, that sentiment dictionaries based on words identified within lexical-semantic dictionary extensions achieve best results when incorporated with 80 % of the seed word's polarity score.

The 9 dictionaries and their relations amongst each other are summarized in Figure 3. The initial versions of SentiWortschatz and SentiWordNet 3.0 are listed on the left side of Figure 3. Hereby, SentiWordNet 3.0 represents the already translated version into German. To each of the two initial dictionaries, the lexical-semantic extensions by use of GermaNet with different weighting of polarity scores are linked. Furthermore, the combination of both initial dictionaries and its lexical-semantic extensions with GermaNet are depicted in the center section.

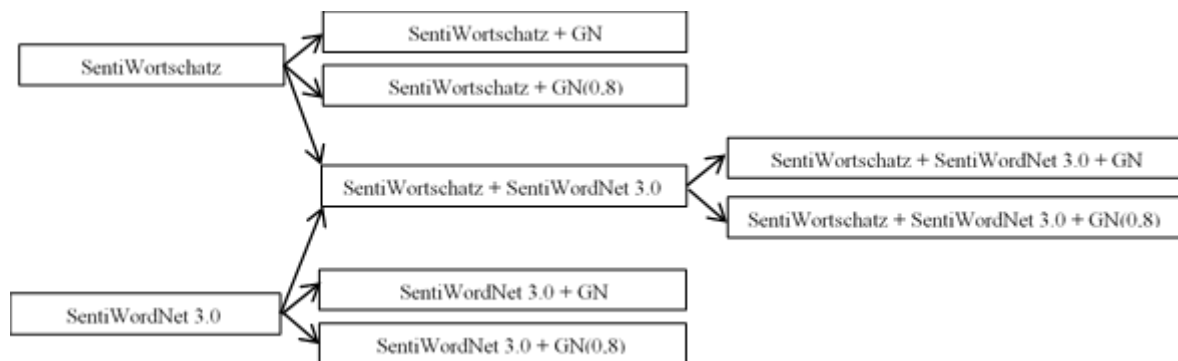


Figure 3: Sentiment Dictionaries and Relationships

3.2 Dictionary evaluation

We apply each of the dictionaries onto a textual corpus of 7071 company related German Tweets which were manually labelled by Mengelkamp, Hobert and Schumann (2015) based on content analysis guidelines established by Neuendorf (2002). The requirements for a score in order to be assigned to a Tweet are listed in the left column of Table 1. The associated scores can be seen in the right column. Since the dictionaries have only three sentiment categories (negative, neutral and positive), we summarized the scores. Hereby, we merged Tweets with scores of -2 and -1 into one category with a sentiment score of -1 and Tweets with scores of 2 and 1 into one category with a score of 1.

Table 1: Codebook

Requirement	Score
Tweet contains information regarding financial instability of the company	-2
Tweet does not contain information regarding financial instability but sentiment is negative	-1
Tweet does not contain sentiment or contains positive and negative sentiment regarding financial stability of the company	0

Requirement	Score
Tweet does not contain information regarding financial stability but sentiment is positive	1
Tweet contains information regarding financial stability of the company	2

While applying the dictionaries, the sentiment polarity of a Tweet (SPT) is calculated according to Equation (1). The sentiment polarities of words (SPW) which occur in the Tweet and the applied dictionary are summed up. Then, the sum is divided by the number of words which appear in the Tweet and the dictionary (n). By doing so, an average sentiment score considering all words in the Tweet, which are relevant for sentiment analysis, is calculated.

$$SPT = \frac{\sum_{i=1}^n SPW_i}{n} \quad | \quad (1)$$

Since the outcome of the dictionary-based coding results in numbers with fractional digits, a direct comparison with the manual coding is not possible due to the differing number format. Hence, Tweets for which a negative value is calculated are labelled with a score of -1 and Tweets to which a positive value is assigned are labelled with a score of 1. Only Tweets which do not contain words with positive or negative polarities are hence labelled with a score of 0 which represents neutral sentiment.

For a ranking of the dictionaries, we calculate the accuracy of each dictionary-based coding which represents the percentage of Tweets in which the manual and the automated approach are consistent. The accuracy is chosen because alternatives such as F-Measure, precision or recall, which are also used in existing literature, are usually considered for binary classification or focus on the evaluation of one sentiment category only (Kincl, Novák and Pribil, 2013; Lu et al., 2011).

After the ranking of dictionaries based on their performance, we verify if the differences in accuracy are significant. For this purpose, we utilize Mc Nemar’s test for significance. The null hypothesis states that two classifiers (in the underlying case dictionary A (DA) and dictionary B (DB)) achieve the same classification accuracy (Lan et al., 2009). Hence, we start with the dictionary which attains the lowest accuracy and test it against the dictionary with the second worse accuracy. Then, we test if the dictionary with the third worse accuracy performs significantly better than the dictionary with the second worse accuracy and so forth. In the last step, the two best performing dictionaries are tested against each other. For each test, a contingency table needs to be constructed which is shown in Table 2 (Dietterich, 1998; Lan et al., 2009).

Table 2: McNemar's Test Contingency Table

<i>N00</i> : Number of Tweets misclassified by both classifiers DA and DB	<i>N01</i> : Number of Tweets misclassified by DA but not DB
<i>N10</i> : Number of Tweets misclassified by DB but not DA	<i>N11</i> : Number of Tweets misclassified by neither DA nor DB

Based on the contingency table, the statistic χ is calculated which is approximately χ^2 distributed with 1 degree of freedom. The formula in order to calculate χ is depicted in Equation (2) (Dietterich, 1998; Lan et al., 2009). Hereby, the significance level of 0,01 corresponds to a threshold of $\chi = 6.64$ above which the null hypothesis can be disregarded. In this case, the dictionaries are significantly different from each other (Lan et al., 2009).

$$\chi = \frac{(|N01 - N10| - 1)^2}{N01 + N10} \quad | \quad (2)$$

The results can be seen in Table 3. It is evident, that all sentiment dictionaries achieve better classification accuracies than a random distribution which would result in 33,3 % in our three-case scenario. The best dictionary attains an accuracy of 59,19 % which is in accordance with domain independent dictionaries identified in our literature review whereby accuracies up to 87,6 % are attained with domain specific dictionaries (Hogenboom et al., 2014; Molina-González et al., 2013; Thet, Na and Khoo, C. S. G., 2010; Zhang and Peng, 2012). Furthermore, all dictionaries except the two worst differ significantly from each other. Regarding both lexical-semantic extensions of the translated SentiWordNet 3.0, no significant difference could be identified. It is noticeable, that lexical-semantic extensions which are based on SentiWordNet 3.0 represent the four worst dictionaries whereby SentiWordNet 3.0 without lexical semantic-extensions performs even better than SentiWortschatz. This indicates, that lexical-semantic extensions based on translated word lists include

incongruous words whereas solely translated word lists might perform better than language specific dictionaries due to their extent. Still, the three best dictionaries are all based on the German language dictionary SentiWortschatz and extensions of it by SentiWordNet 3.0 or GermaNet. Regarding the best performing dictionary SentiWortschatz and a lexical-semantic extension with GermaNet, the weakened polarity scores with a weight of 0,8 regarding their seed words do not improve the performance. Instead, the extension with GermaNet and polarity scores with 0,8 times the weight of the seed words performs significantly worse in contrast to a dictionary in which lexical-semantic extensions are assigned with equal scores compared to seed words. The weakened weight with 0,8 times the polarity scores of seed words improves the dictionary in one of three cases only. These results challenge findings from Blair-Goldensohn et al. (2008) and highlight a demand for further research concerning the appropriate weighting of lexical-semantic sentiment dictionary extensions.

Table 3: McNemar's Test Results

Dictionary	Accuracy	Significance Levels
SentiWortschatz + GN	59,19 %	
SentiWortschatz + GN(0,8)	59,00 %	
SentiWortschatz + SentiWordNet 3.0	54,81 %	
SentiWordNet	52,55 %	
SentiWortschatz	49,97 %	
SentiWortschatz + SentiWordNet 3.0 + GN(0,8)	45,25 %	
SentiWortschatz + SentiWordNet 3.0 + GN	45,12 %	
SentiWordNet 3.0 + GN	41,99 %	
SentiWordNet 3.0 + GN(0,8)	41,98 %	

4. Conclusion

In order to answer the first research question - *How can sentiment dictionaries be created and evaluated?* – we conducted a systematic literature review in which we identified steps undertaken for sentiment dictionary construction. The result is a process model based on which further sentiment dictionaries can be created. The process can be divided into an initial construction and an extension phase. The initial construction phase encompasses steps for word selection, word polarization and an evaluation of the created dictionaries which can be conducted manually or automatically. Next to that, software or native speaker-based translation tasks support the initial construction at some times. In the extension phase, which is conducted for 37 % of the dictionaries, selection, polarization and evaluation are performed a second time. While the selection of words is based on native speakers, existing sentiment dictionaries or textual corpora in the initial construction phase, lexical-semantic relationships such as synonyms, antonyms etc. are considered during the extension phase. For polarization of the words, native speakers, sentiment dictionaries or textual corpora are utilized in both phases whereas the evaluation is conducted by native speakers or by applying the dictionary to a textual corpus which has been classified beforehand. Then, the accordance of both classifications is assessed.

While domain specific dictionaries usually perform better than general dictionaries, statements regarding the suitability of data sources as well as detailed selection or polarization methods can hardly be made due to inconsistent evaluation figures. Furthermore, non-English dictionaries especially for UGC from social media platforms have not been considered to a great extent yet.

While working out an answer to the second research question - *How do German sentiment dictionaries perform on textual UGC in the domain of corporate credit risk analysis?* – we constructed nine sentiment dictionaries based on existing word lists, which we identified during our literature review. The best dictionary achieves a classification accuracy of 59,19 % which is significantly better than the other dictionaries and in accordance with classification accuracies of domain independent word lists identified in the review. Furthermore, all dictionaries outperform a random classification.

Our results enable researchers to draw on an overarching process model when creating sentiment dictionaries. Hereby, we recommend to unify the publication of evaluation figures and focus on figures such as accuracy

which is an indicator for the overall performance of text classification algorithms. In many approaches, differing figures which focus on only few sentiment categories are published. This hampers an assessment of effects which process characteristics have onto dictionary performance. Practitioners especially in the domain of corporate credit risk analysis can gain insights in how to automatically extract hints for financial stability from textual data by taking our dictionaries into account. Hence, manual coding effort can be reduced and processes for decision support can be improved.

Our results are restricted by the scope of our literature review. Although we aim at identifying all relevant articles, further sources might add steps to the process model. Especially articles which have been published after the begin of our analysis and are therefore not considered in our model, should be integrated in a next iteration. In addition to that, our selection of dictionaries is limited due to language skills and sentiment categories of the manual classified corpus. Dictionaries translated from other languages or a transformation of sentiment categories in order to be comparable with the corpus might attain different classification accuracies. Finally, procedures for authenticity verification of UGC need to be developed since users can anonymously create fake posts which can hamper results of the analysis (Mengelkamp, Hobert and Schumann, 2015).

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A Different type of Influencer? Examining Senior Instagram Influencers Communication

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Abstract: The aging of the population, the advance of ICT, and the opening of social networks have allowed the reception of massive phenomena led by the so-called digital immigrants. Indeed, despite the digital divide and a lesser predisposition of older people to deal with technology, it turns out that the market for senior digital influencers begins, gradually, to be marked by its growth, revealing specificities, and differentiating elements. This means that in addition to the traditional role of content receivers, older people are now active content creators, occupying a space that for a long time was restricted to younger generations, contributing to the building up of a vast audience and a wide range of interested, engaged and interactive followers. Using an exploratory approach, this research aims to study the Instagram profile of the top ten most popular elderly influencers and compare the posts of the top two digital influencers (man and women, each). For this purpose, a qualitative methodology was carried out, we examined and compared the posts of @Baddie Winkle, @Iris Apfel, @ George Takei and @dinneranddance, using several dimensions of analysis such as the topics covered, the tone of communication, and the audiovisual and multimedia resources used to create interaction and engagement with followers. The results show that fashion is one of the central themes, punctuated by a communication full of humor, fun, and eccentricity, challenging the paradigm and negative stereotype related to aging and breaking with the traditional image of decline, frailty, and disability associated with old age.

Keywords: Elderly, Senior Digital influencers (SDI), Social Media, Instagram

1. Introduction

It is undeniable the demographic aging that we are experiencing throughout Europe, resulting in a growing percentage of elderly people (65 years and over, in developed countries) and a decreasing number of people of working age in the total population. Systematically low birth rates and increasing life expectancy have been responsible for the change in the European Union (EU) age pyramid (Eurostat, 2022). Added to this is the progressive aging of the elderly population itself, as the relative importance of the very old is growing at a faster rate than in any other age segment of the EU population.

This large-scale aging process, while being considered a great achievement of humanity, is also one of its greatest challenges, as it implies consequences and an increase in economic, political, and social responses. It is in this context that the perspective of active aging emerges and, therefore, within its social and cultural context, requiring an effort that considers the life course as a whole (Elder & Shanahan, 2006) and not just looking for the elderly as a group of people with specific ages. Thus, any analysis related to old age must overcome the chronological or biological question, commonly used to define a generation. Arithmetic divisions construct nominal but not social categories (Guimarães, 2021).

Rooted in activity theory, the active aging discourse focuses on breaking negative expectations and stereotypes about old age and encouraging the continued participation of older people in society. The World Health Organization (WHO, 2002) presented the concept of active aging as a process of optimizing opportunities for health, participation, and security with the aim of improving the quality of life of people as they age and to combat age-based discrimination (Fernandez-Ballesteros et al., 2011). The objective is to make people realize their potential for physical, social, and mental well-being at all stages of life and to participate in society according to their needs, desires and abilities, providing protection, security and adequate care, when they are needed (WHO, 2002). It should be noted that what the WHO advocates are guiding actions that offer more than paternalistic practices, which, as a rule, infantilize and alienate, but dignified procedures that transform the subject into part of the solution (Guimarães, 2021).

Indeed, it is precisely in the context of the proliferation of Information and Communication Technology (ICT) in the network society (Castells, 2009) that one of the most accentuated strategies in terms of active aging can be seen, through the multiplication of public policies and actions that have contributed to achieving this “macro impacts and place emphasis on participation in a single digital market” (Coelho, 2019: 311). The purpose is to promote literacy, inclusion, and digital skills of the so-called digital immigrants (Prensky, 2001), making aging develop with quality in all areas and that this stage of life is also an asset for society.

The adhesion of seniors to the new ICTs has been growing. The most recent data from Eurostat show that, in 2020, despite continuing to stand out for the lowest usage rate compared to the rest of the population, the proportion of individuals aged between 65 and 74 years old who used the internet were 61%. Like the international scenario, in which a progressive digitization of the new older generation can be identified (Colombo, Aroldi and Carlo, 2014), the trend is towards an increase and the existence of a relationship increasingly close between seniors and ICT (Coelho, 2019), intensified by the recent world pandemic Covid 19. The same is true for social media, Miranda et al. (2021) collected not only a growth in the number of users, but also an increase in the number of daily hours spent on these digital platforms, mainly Facebook and WhatsApp. Regarding the reasons for joining and staying in social networks, interviews with focus groups made up of seniors revealed that adherence is very dependent on the encouragement and support of the closest family members (intergenerational co-education), as in the finding that it is a space that enhances the strengthening and multiplication of social bonds, providing older people with the possibility of developing new sociability and new interests, online and offline, making seniority a period of discoveries with increased well-being and quality of life.

From a consumer behavior point of view, a study called *Brands and Aged*, carried out by MindMiners (2019), through 533 interviews carried out with Brazilian seniors between the ages of 60 and 80+, draws attention to the increasingly digital behavior of the older ones, warning that it is essential that brands, marketing and advertising devote more attention to them, as many of them thrive at work, are active consumers, lead productive lives, consume content on Netflix (70%), have Spotify accounts (58%) follow and some of them become Senior Digital Influencers (SDI).

This investigation aims to study the specifics of SDI. For this purpose, based on the analysis of four SDI profiles on Instagram, we will understand how the process of influence and engagement with followers develops, using several dimensions of analysis such as the topics covered, the tone of communication, and the audiovisual and multimedia resources.

2. Literature review

2.1 Brave New World – Senior Digital Influencers (SDI)

The advance of ICT and the explosion of social media has allowed the reception of massive phenomena carried out by the so-called digital immigrants. In fact, despite the difficulties portrayed by the famous digital divide (Prensky, 2001) and a lower predisposition on the part of the elderly to deal with technology, it appears that the SDI is gradually beginning to be marked by its growth, revealing specificities and differentiating elements. This means that in addition to the role of recipients of content, the elders are now active and creative agents in the creation of content, occupying a space, for a long time restricted to the younger generations, contributing to the construction of a vast audience and a wide range of engaged and interactive followers (Miranda, Antunes & Gama, 2021a; Miranda, Antunes & Gama, 2021b).

It is important, first, to review what a digital influencer is and what its main characteristics are. A digital influencer is a person who attracts an online audience – which goes beyond their friends and family – and for those who communicate through the digital content they produce, thus exerting an influence on the behaviors, opinions, and values of others (Lampeitl and Åberg, 2017). According to Gashi (2017), the reach and resources available to digital influencers are mainly based on the following factors: content (perceived as favorable, trustworthy, and personalized); the degree of specialization and attractiveness (positive associations attributed to people, which are conveyed from physical characteristics as well as personality, ideologies, and opinions.), and the influencer's ability to build a relationship of trust.

Despite the immense space for progression that this matter entails, scientific investigations and market studies are beginning to emerge that give us an account of the particularities of this phenomenon. McFarlane and

Samsioe (2020) when analyzing the posts that SDI published on Instagram, found that they provide unique contributions to the construction of social and cultural contexts through their image, content creation and personality. In the same sense, Picázo-Sanchez and García-Marín (2021) stated that SDI use social media as a space for the empowerment of their generational cohort, a place for free expression, breaking down prejudices and barriers towards the elderly.

Miranda, Antunes & Gama (2021a and 2021b), through a content analysis of dozens of posts from the two SDI with the most followers on Instagram worldwide, concluded that these influencers are challenging the paradigm and negative stereotype related to aging, breaking with the *status quo* and with the traditional image of decline, frailty and disability associated with old age. Somehow, the belief that old age can only be lived and faced through losses and limitations is subverted by these SDI who, through the digital content they post, open paths, not only to sustain their desires, their choices, and its sensuality, but also to build social and cultural contexts adjusted to this mindset. By being protagonists of their lives, living their life projects with freedom, they project contemporary aging in a positive, dynamic, and freeway, in this brave new world!

In this regard, Guimarães (2021) adds, the misperception that youth is a priority for SDI reveals how the dominant symbols related to old age are absolutely prejudiced. What SDI wants is to look their best and take life in a lighter way, they intend to remain functional and with a purpose, envisioning a more promising horizon than death. Through a phenomenological observation of 63 SDI who work on Instagram in Brazil, it showed that the most striking common discursive characteristics of these influencers relate to the strong personality of their speeches, establishing with the followers a relationship of projection, strong empathy, affection, and bonding. Added to this is the ability to create environments that allow the exchange, especially of personal facts and experiences, opening doors for these closer relationships to be established: “it is as if it were a “friend” who was present at different times, offering a good experience. chat, a friendly shoulder or a tug of the ear, but who somehow made themselves available” (Guimarães, 2021: 111) To this mix the socially and politically (in)correct opinions, where the tone of the communication is humorous and fun is a prominent element, defending the freedom to experiment without fear of judgment and prejudice from others (Miranda, Antunes & Gama, 2021b).

Visually, the analysis of the publications of the SDI presents itself, in general, without great audiovisual resources, highlighting, on the contrary, the sovereignty of the photographs with an artistic nature, marked by the eccentricity and the exaggeration of the bright colors, the daring props and some unusual poses (Miranda, Antunes & Gama (2021a and b). In the same sense, Farinosi and Fortunati (2020) conclude that elderly influencers tend to adopt more personal and authentic styles in their Instagram communication and are more textual and less visual than their younger counterparts.

3. Research Method

In this exploratory study, we selected four of the top ten senior influencers on Instagram. The two criteria employed for their selection were 1) having both female and male influencers, in an equal number and 2) having a higher number of followers in this social networking site (SNS). The Instagram elderly influencers under analysis, as well as several of their main characteristics, are presented in Table 1.

Table 1: The 4 elderly influencers analyzed, their age, the country where they live in, their number of followers and of those they follow, and their Instagram links

Influencer	Age	Country	Number of followers	Number of people following	Instagram link
Helen Ruth Elam Van Winkle (baddiewinkle)	93	USA	3.4m	47	https://www.instagram.com/baddiewinkle/
Iris Apfel	100	USA	2.1m	175	https://www.instagram.com/iris.apfel/
George Takei	84	USA	1.4m	430	https://www.instagram.com/georgetakei/
Lance Walsh	60	UK	47.6k	80	https://www.instagram.com/dinneranddance/?hl=en

We examined these four senior influencers’ Instagram strategies and practices, considering a period of four months (from April to July 2021) at both discursive, visual, and interactive levels (e.g., Ball and Smith 1992; Farinosi and Fortunati, 2020). For data collection, an analysis grid was constructed, comprising the following

dimensions: Theme/subject publication; Audiovisual resources (sound, music); Multimedia resources (video, photography); Communication tone (humor, irony/funny, informative, emotional); Brand promotion; Signs (hashtags, icons, emojis, memes); Interaction/engagement (likes, comments, site/blog link, repost, site/blog link). To overcome any potential ethical questions that arise in social media research, all the accounts are public.

4. Results

Between April and July, the four influencers posted a total of 286 posts, of which 217 were posted by George Takei, 47 by Iris Apfel, 12 by Baddie Winkle and 10 by Lance Walsh. George Takei has a higher posting frequency. Concerning the themes posted, and from the data in table 1, it is possible to evidence that the most-posted theme was politics and human rights.

When we analyze the case of the four influencers there are differences between them. George Takei focuses the posts on eleven themes, Iris Apfel on six, Baddie Winkle, and Lance Walsh on three themes. George Takei has a more diversified approach, being politics the theme of choice. Fashion and birthday are two themes that cross the posts of three influencers, in the first are Baddie Winkle, Iris Apfel, and Lance Walsh, in the second are Baddie Winkle, George Takei, and Lance Walsh. Iris Apfel and George Takei are the only influencers who have three common themes– art, commemorative days and memories. It is also possible to see that Baddie Winkle and Iris Apfel have the food theme in common and in the case of George Takei and Lance Walsh this also happens with the health theme.

Table 2: Themes posted

Subjects	Frequency				Total
	Baddie Winkle	Iris Apfel	George Takei	Lance Walsh	
Commemorative Days		6	3		9
Art		15	2		17
Fashion	8	12		7	27
Food	2	1			3
Friends		6			6
Birthday	2		1	1	4
Health			22	2	24
Human Rights			55		55
Politics			81		81
History			4		4
Justice			18		18
Environment			1		1
Religion			1		1
Memories		2	1		1

In the posts, the four influencers mobilize audiovisual and multimedia resources to communicate, being they photography, video, and music integrated into the videos. Of these, photography is the most used resource. However, the behavior is different between the influencers. While Lance Walsh uses only photographs but George Takei, Iris Apfel, and Baddie Winkle use photography and video. George Takei posts 214 photographs, Iris Apfel posts 45 photographs, Lance Walsh 10, and Baddie Winkle posts 5 photographs. Baddie Winkle is the influencer that posts more videos with music (Cf. Table 2).

Table 3: Audiovisual and Multimedia Resources

Audiovisual and Multimedia resources	Frequency				
	Baddie Winkle	Iris Apfel	George Takei	Lance Walsh	Total
Photography	5	45	214	10	274
Video	7	2	3		12
Sound/music	6	1	2		9

When we analyze the data in table 3, the tone of communication that stands out is social and political activism. George Takei is the only influencer that posts these tones, but he has posts humor, funny and emotional tone. Baddie Winkle's posts are only funny and humorous. In the case of Iris Apfel, the funny tone is the one that is evident in most of the posts, but she also has emotional, humor and poetic posts. In the case of Lance Walsh, he doesn't have a communication tone.

Table 4: Communication tone

Communication tone	Frequency				
	Baddie Winkle	Iris Apfel	George Takei	Lance Walsh	Total
Humor	4	2	39		45
Funny	5	22	13		40
Emotional		6	1		7
Social and political activism			81		81
Poetic		1			1

In the analysis of the posts, it was also possible to identify that some resulted from paid partnerships with brands. Baddie Winkle published two posts promoting the brand Tillamook, a brand of ice cream, and Iris Apfel published six posts, 3 promoting the brand Zenni Optical (glasses) and 3 the brand Lowes Home Improvement (decoration). Lance Walsh published seven posts promoting brands sportswear, six the Supreme and one the Nike. In the case of Iris Apfel in all posts, it is clear that glasses are part of her identity like Lance Walsh with sportswear. In the case of George Takei, he doesn't promote any brand.

After the publication of the posts, there was an interaction and engagement with the influencers through likes/views and comments. In the total of the 286 posts, there were more than 10 million likes/views. In the case of comments, 145 thousand were made. When we analyze the data of each one of the influencers, it is George Takei who has more, both in likes/views and comments (Cf. Table 4).

Table 5: Interaction/engagement

Interaction/engagement	Frequency				
	Baddie Winkle	Iris Apfel	George Takei	Lance Walsh	Total
Likes/visualizations	2 713 028	1 521 889	5 802 062	24 329	10 061 308
Comments	15 343	13 691	116 021	171	• 6

5. Discussion and Conclusions

Social networking sites (SNS) increased use and popularity has been accompanied by the rise of social media influencers, usually depicted as individuals from younger age cohorts which are, as Duffy (2020) so eloquently stated, “undoubtedly a product of the digital zeitgeist” (p. 1). Yet, in the last years, the SNS and particularly Instagram have been witnessing a new phenomenon: the appearance of older adults as digital influencers, in some cases with a high number of followers. Traditionally associated with the role of content receivers, older people are progressively becoming active content creators and even, in some cases, building up a vast audience and a wide range of interested, involved, and engaged followers. Considering there is scarce evidence regarding these elderly digital content creators and their personal brand subjectivities, communicative styles, and social media practices, this exploratory study contributes to addressing this gap.

Heterogeneity seems to be the keyword when examining our results. Indeed, the findings of this preliminary study, based on the analysis of four of the top ten profiles of elderly Instagram influencers, suggest marked differences in what concerns their communicative styles, posting themes, and interests. Each of these influencers seems to have a very distinct approach as digital content creators, an unrepeatable charisma, and genuine communication that attracts an increasing number of followers. They are, each one in its manner, unique communicators with a crafted and distinctive personal brand.

With diversity as their common feature, there are a few aspects that connect these influencers, more visible in the case of both female influencers under scrutiny, Baddie Winkle and Iris Apfel. These female SDI are united in their focus on fashion and lifestyle, and both reveal a funny and humorous communication tone, with a visual communication marked by a touch of extravaganza and exuberance coupled with a provoking discourse that clearly shows a defying stance toward age representations of the elderly. Despite these common aspects, they also present differences in their communication tone and style, as already suggested in Miranda et al. (2021a, 2021b) study, and also revealed in the present research. The picture gets even more diverse when considering the two male influencers, George Takei and Lance Walsh. Even if both influencers share a common interest in health and Lance Walsh shares the female older influencers' love for fashion, this is not so for George Takei, that reveals a multitude of interests and an evident political and social activist stance. Except for Lance Walsh, these SDI communication tone revolves around humor and funny. In the case of George Takei is also noticeable an activist tone and for Iris Apfel a poetic and sometimes emotional tone. These findings suggest that the discussion

around these four SDI and their social media communicative practices must surpass gender issues and primarily attend to their specificities: they present a distinct digital persona and personal brand, different social media strategies, and their communicative styles and posting themes in Instagram also differ.

These results are quite interesting since they detach these SDI from what seems to be the stereotypical gender roles of younger digital influencers. As Duffy (2020) indicates for younger social media influencers, categories seem to adhere to normative gender scripts, with female content creators dominating fashion, beauty, and parenting, while the genres of comedy, technology, and gaming are populated by male creators, revealing a marked gender division that is not observable in these SDI.

What is also common between these digital influencers is the adoption of a posture far from the notion of frailty, loss, or quietness sometimes associated with later life; instead, they take the best that life still must give them. Each one, in its own way, communicates that aging brings along significant changes in the way of life but, even so, still means being active, interventive, free, and even nonconformist, interested and attentive to what goes on in their life, around it or even in society. And they have the will, the ways, and the power to clearly express their opinions, values, and personal interests, and with it, they introduce some traits of what positive and active aging is. This evidence is somehow like the findings of Picázo-Sanchez and García-Marín (2021), who identified, in the 3 Instagram senior profiles examined, contents characterized by humour and tenderness, disrupting the frailty and weaknesses images that are frequently associated with senior citizens. Also, like what Guimarães (2021) had already observed in female SDI in Brazil, these four popular SDI search for visibility and the possibility to express themselves to larger audiences. Instagram empowers them and provides them with a social space to express themselves, as Picázo-Sanchez & García-Marín (2021) claim. Additionally, this digital platform by giving them a window to talk to society and break aging stereotypes and prejudice, a balcony from where they can have a global reach and change mindsets, and the social discourse on what it means to be elderly in contemporary societies, gives them the power to change social and cultural contexts.

Our findings suggest that diversity is not exclusive to their communication tone and posting themes and subjects; also, the number of posts, the posting frequency, and the interaction and engagement generated among their followers are different. George Takei is the most prolific, which is not surprising given his clear purpose and focus on social and political activism, while Lance Walsh was the least digitally active during the period considered. This asymmetry is also noted when examining interaction and engagement since George Takei and Lance Walsh generate, respectively, the highest and lowest number of interactions and level of engagement. George Takei followers' high level of interaction and engagement can derive from the engaged behavior of this SDI: he posts, with a high frequency, on political and social themes of a controversial nature. This type of non-neutral publication, by its own nature, leads the followers to develop an opinion or take a position, in favor or against it, and express it on Instagram. This factor, along with George Takei's high frequency of posting, can generate more feedback from the audience than the funny/humorous communication, marked by eccentricity and by the exaggeration of the bright colors, the bold props, and the unorthodox poses of Baddie Winkle and Iris Apfel.

Moreover, the analysis of these four SDI Instagram publications reveals the presence of content without major audiovisual resources (eg video). Photographs, own or borrowed (the latter is sometimes noticeable in George Takei's account) are dominant. This is mixed with socially and even politically (in)correct opinions, where the tone of humorous and fun communication is a prominent element, laughing at themselves or the world around them.

In conclusion, previous research on older digital influencers has already documented that SDI deconstruct and even subvert the stereotyped discourse of what "old" looks, talks, and feels like, offering an alternative vision of successful aging where older people are not invisible within society but lead characters of their own life, full citizens with an active digital voice on the world (e.g., Farinosi & Fortunati, 2020; Guimarães, 2021; Miranda et al., 2021a, 2021b; Picázo-Sanchez & García-Marín, 2021). Our research supports that notion but goes one step further, by examining both very popular male and female SDI and not specifically related to fashion. Indeed, one of the major setbacks regarding scholarly work in this area is an almost exclusive focus on elderly fashion-related female digital influencers. With this exploratory study, we intend to contribute to a wider perspective on what it means to be an SDI and their strategies and communication practices in a particular SNS, Instagram.

Finally, this research has important limitations that must be addressed and can be overcome in future studies. One of these limitations concerns the sample of SDI; whose limited number and selection do not enable us to

generalize our results to the remaining elderly digital influencers. Also, these SDI were studied in a specific social networking site (SNS) – Instagram. Since each digital platform presents specific affordances and appeals to different communication strategies and practices, future research can examine a wider social media ecosystem and how these and other SDI project their branded personae in each SNS or even across the different social media platforms. Future research can also aim to understand SDI motivations, as well as which are the factors that increase their ability to influence and foster their involvement and engagement with their followers.

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I love to hate! The Racist hate Speech in Social Media

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Abstract: It is undeniable that, nowadays, hate speeches have flourished, they have become every day, banal and available to everyone. The interaction allowed by the use of devices, the potential of ICT and Social Media, formed a new participatory culture and contributed to rethinking social dynamics. The supposed illusion of anonymity and the rapid dissemination of narratives and images opened space for the proliferation of p hateful discourses against minority groups, such as those of a racist nature. This research intends to study, from the Digital Social Networks (DSN), the communicational flows of racist hate speeches in Portugal. Specifically, we propose to diagnose racist hate speech in the DSN; understand and characterize the narratives that support the spread of racist hate speech in DSN; and analyze which content and hate narratives generate more engagement in DSN; In this study, a mixed convergent methodology will be adopted. The quantitative approach will combine the use of digital methods with the analysis of social networks and graph theories. There will be 2 panels of 2 social networks (Facebook and Instagram), totaling 24 months of data collection. The qualitative approach will resort to the content analysis of the comments. In terms of results, we intend to strengthen scientific production in the area and develop a barometer on racist hate speech in Portugal.

Keywords: Hate speech, racism, digital social networks, engagement

1. Introduction

This research aims to determine how the terminology used in hate speech is configured in digital environments; changes in human relationships (with their agreements and confrontations) and the way they are presented in DSN constitute a fertile field of analysis. The research proposes several objectives aimed at this line of study: to generate a diagnosis of how these discourses are exchanged and impact the different actors and relationships in a social network; monitor and visualize how terms are related and build semantic networks; and, finally, to indicate how the contents generate different and particular reactions (engagement).

In the first part of the document, the review of the state of the issue shows how the concepts and terms of hate speech become elements that are still complex to identify and classify due to the magnitude of the issue. On the other hand, it is highlighted how the concepts of public sphere, social acceptance and resonance are evidenced by the media's ability to reproduce content and expand the scope of the narratives' intention.

In the description of the method, it is possible to identify how the qualitative and quantitative approaches generate an ideal environment for a discursive analysis that also comes from the accounting of digital content on social platforms. As can be seen, the analysis period (24 months) offers enough time to determine behaviors and patterns; furthermore, the affectation of Covid-19 or the lack of its impact in this regard is brought to the fore. The results offer several elements to consider, on the one hand there will be the reach and impact that the publications and the discourse -content in the terms- will be able to mark in the two years of analysis. On the other hand, both the hating actors and the subjects of their hatred appear represented both in the semantic networks and in the terms found.

Finally, it should be noted that the research seeks to be a turning point and helps in the search for effective answers against a hater culture that recruits new followers; data are offered that show that hate speech must be reflected from the political and attitudinal position of its managers.

2. Literature Review

The popularization of Information and Communication Technologies (ICT) has driven remarkable transformations in the way citizens participate in public life. In this new scenario, the network society and the internet, reorganized the world space and knocked down borders, giving us the power and the possibility to

consume, create, communicate and distribute content in a space of participation and free personal expression. But if, on the one hand, interaction on the internet is a determining factor of organization and social structuring, interfering in the exercise of citizenship, in political, social and economic relations, it is also fertile ground for expanding conflicting aspects of reality and relationships. social, such as hatred and all its manifestations (Pezzella and Borba, 2012; Santos, 2015).

For Timofeeva (2003) the internet created the right conditions and provided exclusive resources to expand the verbosity of hate. It is a relatively inexpensive and highly effective tool for racist individuals or groups to spread hateful ideas to an audience. Dias (2007) adds that the production, legitimation and reproduction of these discourses can be seen on the internet. For the researcher, the content of hate speech eliminates or minimizes the communicative character, since messages, when expressed, are no longer received as messages and are interpreted and felt as attitudes and behaviors.

Revisiting the literature, we find that there is no universal definition of hate speech, with different multidisciplinary understandings and approaches to the phenomenon coexisting between them (Silva, 2018; Costa, 2020; Fernandes, 2020). According to Brugger (2007, p. 21), the term originates from the English hate speech and is one that includes words that tend to insult, intimidate, or harass people because of their race, color, ethnicity, nationality, sex, or religion, among other attributes. It is an attitude of systematic hatred and aggression towards the way of being, lifestyle, beliefs, and convictions of an individual or group of individuals having "the capacity to instigate violence, hatred or discrimination against such persons". Meyer-Plufg (2009) expands the debate by extending intolerance and discrimination by gender, sexual orientation and identity, stating that discrimination and externalization are the two elements that configure the hate speech. In his words, the problem arises when thought goes beyond limits and hatred takes shape through words.

Wieviorka (2007) and Bourdieu (2012) also addressed the issue, for whom hate speech perpetuates a violence, above all, symbolic that is perceived through language and discourse and whose effects can be maintained in this context or extravasated it, moving on to physical violence.

But the topic of hatred and its exultation in the public sphere is not new! It is enough to remember Mandevillhe (1715) and his famous work *Fable of the bees*, pointing out that some private vices, such as hate, are acquiring public acceptability. What is certain is that in the last twenty years, this vice of public demonstration of hatred will have increased (Waldron, 2010), favored by the explosion of Digital Social Networks that work as a resonance chamber, propagating and amplifying its effects; and radicalizing the conflicts of social reality (Daniels, 2008). The supposed anonymity of the haters, the absence of a face-to-face interlocutor and the isolation at the time of constructing argumentative reasoning favor the distillation of hate in the posts, in the comment boxes or in the memes, pregnant with irony. With just a few clicks, a situation of non-recognition on a vast scale is installed, which offends an uncontrollable number of people and calls for countless other internet users to perpetuate this asymmetry (Boyd, 2010).

Busso (2011) when commenting on the unbridled increase in manifestations of hate on DSN states that the effect of hate speech narratives is all the more the greater the diffusing power of the medium. Baurin (2017) argues that haters use social networks to promote their hateful cause and recruit new members, using the most diverse means such as free music downloads with hateful messages, racist games, cartoon characters, images of people maimed for racial or nationalist reasons and messages aimed primarily at young people and children.

It is certain that, despite being one of the most pulsating themes today, in Portugal this narrative source is little studied (Costa, 2020). For this reason, recently, several national institutions (FCT; ACM), in the wake of the UN recommendations (2020), launched a series of initiatives, aimed at action research, recommending the reinforcement of knowledge in the collection of information and analysis of trends about of hate narratives on digital platforms to support effective responses. All these reasons emphasize the relevance of carrying out the present investigation, a multifaceted area of study with an immense space for progression. The objectives are: to diagnose racist hate speech in digital social networks; monitor, understand and characterize the narratives that support the propagation of racist hate speech on digital social networks; indicate which content and hate narratives generate more engagement in digital social networks.

3. Methods

The methods are based on a quantitative and qualitative approach organized in three stages: data extraction, mining, and data visualization from social media platforms. Our team developed a racist speech barometer, consisting of two panels - Facebook and Instagram -, to answer the goals.

From the literature review and cases reported by the media, our team created a list with 35 most frequent terms associated with racism. The intention was to map the vocabulary universe of hate speech against minority groups, based on their origin, religion, or ethnicity. The list includes words directly associated with racism in Portuguese (chink, nigger, monhe, dark-skinned, kike, Jewish quarter, etc.) and compound terms (shit gypsy, bastard nigger, naughty nigger, etc.), but also expressions that favour a more detailed analysis of this phenomenon, such as gringo (slur for foreigner), black, monkey, catinga (slur for nigger) and mulatto. Some of these slurs are difficult to translate because they lose their original meaning.

Data were extracted with CrowdTangle, a tool from Meta company, configured in the Search module. The advantage of this approach is to have access to official Facebook and Instagram data via Application Programming Interface (API). Each term of the list was introduced individually in CrowdTangle, following the tool parameters. For Facebook, the search was delimited by the Portuguese language and country of the pages manager, in our case Portugal. For Instagram, the search was determined only by the language, once the tool does not allow the configuration by place. The result of each term was stored in an individual CSV file.

The sampling period covers 24 months between March 2020 and March 2022, totaling 660 messages from one hundred of social media accounts. These social data are very diverse. It includes the day and time of the publications, URL address of the posts, pages IDs, the potential category of the content, the total number of reactions (likes, sad, love, angry), etc.

Data mining considered two procedures. In the first, the several CSV files were integrated into single databases, according to the platform. In the second, our team read the messages and eliminated information that does not add value to the goals of this study, such as duplicate posts and in other linguistic variants, such as Brazilian and Angolan Portuguese.

The databases were processed with filters and algorithms in open-source software, in an aggregated approach of the social media pages. Voyant Tools was used to determine the frequency of the terms and the association between words by co-occurrences. An analysis tool called Gephi was used to design the network narratives. Our team has also used the Modularity algorithm to delimit the network clusters, the Force Atlas 2 layout to approximate the terms according to their relations in the speech, and the Weighted Degree metric to highlight the most frequent words.

All data collected will be stored on a Solid-State Disk (SSD), protected by password, and its access and use must be previously approved by the PI. Whenever necessary, the dataset will also be submitted to an irreversible anonymization process, in accordance with the recommendations of the General Data Protection Regulation (2016/679), in force since May 2018 in the European Union.

4. Results

Our data reveals at least 213 racist messages on Facebook, published between March 2020 and March 2022 (2 years), by 74 accounts that potentially spread cyberhate in Portugal. These fanpages have a very diverse reach, gathering around 15 million supporters. Among them are accounts with more than a million followers, such as *Humor Tuga*, and others with only a few thousand, such as *Ergue-te Coimbra*, *Templarios Portugueses* or *Reconquista 1143*. Not all these pages have as their primary goal the propagation of hate speech. However, at some point, their messages have contributed to the construction of cyberhate, by boosting slurs or reporting cases of discrimination. Generally, the smaller accounts, with a few thousand supporters, tend to be openly hateful.

These fanpages are classified into 15 categories, according to the platform standards. The most representative cases, with five or more occurrences, are activity general (16.2%), media news company (8.1%), news site (8.1%) and entertainment website (6.8%). The high number of categories shows that the hate speech phenomenon mobilizes several social segments. The categories with a lower frequency in the sample – sports (4.1%), political

party (2.7%) or artist (1.4%) – also contributed to the conception of hate imaginary or to the propagation of slurs.

Almost 70% of these fanpages started operating from 2013, in the aftermath of the austerity policies adopted by the Portuguese government in facing the economic crisis. The most significant years are 2014 (17.6%) and 2015 (14.9%). Older fanpages, with ten years or more, represent 39.2%. On the other hand, the effects of the Covid-19 pandemic do not seem to have generated a significant number of hate accounts. On the national level, only 5% of the pages in our sample have been created since 2019. In a digital landscape marked by the crossing of languages, it is interesting to know which content formats are posted. Table 1 shows the most frequent types of messages. Generally, these publications reveal, among others, the visual impact of a narrative, sometimes being more textual or imagetic.

Table 1: Messages posted by fanpages (n = 213)

Contents	Posts (n)	Posts (%)
Photo	133	62.4
Link	60	28.2
Native Video	15	7.0
Status	3	1.4
YouTube	2	0.9
Total	213	100.0

Source: Facebook Graph API via CrowdTangle

A significant fraction of hate messages are images in different formats, such as drawings, photos, and memes (62.4%). In CrowdTangle's metrics, these images are grouped by the same category, even though they deserve specific research. Shared links occupy a considerable space in our sample (28.2%). These URLs tend to take fans to diverse sites, such as news portals, personal blogs, football sites and online shops. Audiovisuals, grouped in the Native Video and YouTube categories, are not very representative (7.9%). Status changes, with information about the pages, occurred punctually (1.4%). A case of these descriptions, highly nationalistic, can be read on page *Reconquista 1143*: "Reality seen as never before, through the beacon of truth. Sentinel at the vanguard of information stripped of political correctness and single-mindedness. Omnia pro Patria (All for the Homeland, in Latin)".

The message, whether photo or video, establishes the bridge between the fanpages manager and its followers. This virtual relationship is created by the fans' interactions. The publications in the sample attracted almost 110 thousand reactions, such as likes, comments or shares. In an equal calculation among the fanpages, the engagement rate is relatively low (0.69%). However, the potential reach of the pages and their number of messages are diverse. This makes it difficult to calculate the exact engagement for the whole sample. Table 2 presents the most frequent reactions by followers. The data also shows what kind of content has mobilized the network audience.

Table 2: Frequency of reactions on fanpages (n = 109,211)

Reaction	Nº	%
Likes	41,964	38.4
Haha	19,842	18.2
Comments	18,005	16.5
Shares	14,265	13.1
Love	7,571	6.9
Angry	3,937	3.6
Sad	2,451	2.2
Wow	794	0.7
Care	382	0.3
Total	109,211	100.0

Source: Facebook Graph API via CrowdTangle

The Like is the most common reaction among users of pages spreading racist posts (38.4%), followed by Haha (18.8%). In some cases, these reactions are associated with recreational racism, irony and debauchery against victims of slurs. In a considerable distance from the first place, Comments (16.5%) and Shares (13.1%) tend to indicate the deepest engagement with the messages. They require more mental effort or desire to propagate a

cosmology. Reactions associated with emotions appear in less than a fifth of our sample, such as Love (6.9%), Angry (3.6%) and Sad (2.2%). It is curious to note that the reaction Care (0.3%), related to the idea of caring for someone or asking someone to be careful, is the least frequent. Thus, many of these fanpages are not supporting someone, but attacking something.

Reactions suggest a pattern of effort. The less dedication required by a reaction creates a more frequent behaviour. This would explain why the Like comes first, to the detriment of Comments or Shares. On the other hand, each message deserves a personalized analysis, and can reveal the values, discords and worldviews of the follower. In any case, the word in these messages helps map the narratives about racism. Figure 1 shows the graph of the most frequent terms in Facebook posts, based on the co-occurrence of the words. This means that the graph allows identifying which words appear together in the same narrative, based on a statistical approach: Modularity algorithm and Force Atlas 2 layout.

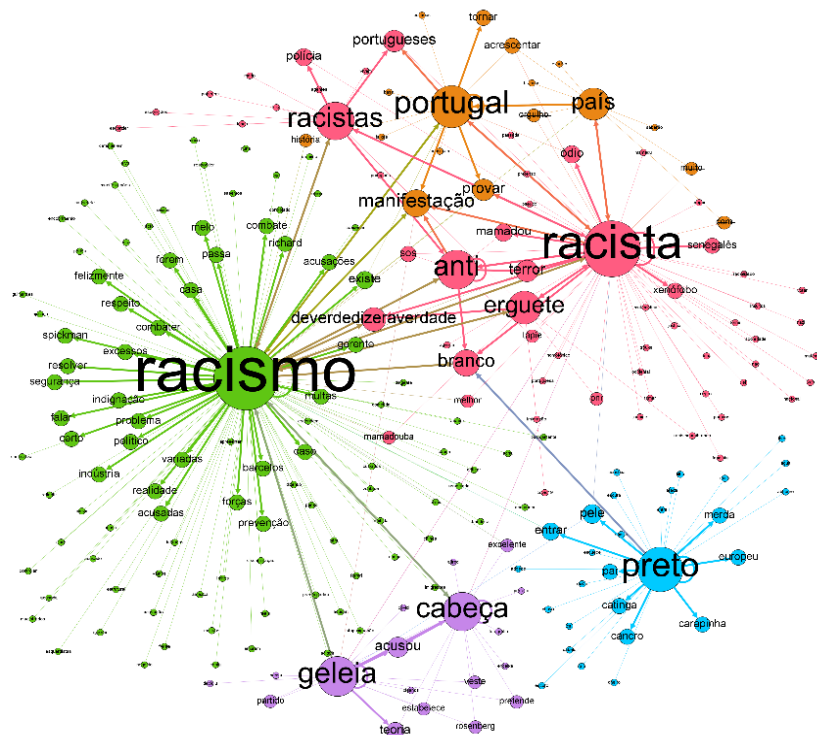


Figure 1: Graph by co-occurrence of posts words

Source: Facebook Graph API via CrowdTangle

The graph shows the emergence of five clusters organized, by their respective colours, into narrative communities. The nodes or points indicate the words, while the edges point out the relations between them. On the one hand, the size of a node indicates how often a word is used. On the other hand, the thickness of an edge reveals the proximity between terms. Each of the clusters tends to suggest a reading, sometimes diverse and opposite, of how racism is discussed.

The green cluster (45.5%) represents a view of racism from profiles with a nationalist background, attachment to traditions and the anti-immigration discourse directed at people from African and Asian. There is a relationship between terms like "respect", "to criminalise", "injustice", "to condemn" and "to fight" against anti-racist activists. The speech is characterized by compound expressions such as "stop immigration" or "anti-white racism". Some of these messages say: "the industry of racism does not stop criminalising white people", "the best way to fight against racism is (...) to ignore that it exists" or "another affront to our glories, mainly of commerce, turned into slave victimhood".

Attacks against Portuguese public personalities of African origin are more notorious in the pink cluster (26.3%). However, this discourse is directed at state institutions in an attempt to link immigrants to welfare aid and thereby the spending of taxpayers' money. Words like "national", "live", "xenophobia", "vote" and "truth" are

associated. Harsh criticism of left-wing activists and the press contrasts with praise of far-right parties such as *Ergue-te* and *Chega*. Some of these messages say: "European governments, Kings of Multiculturalism and of freedoms(?), what are they afraid of?", "the supposed anti-racist associations that live off the public funds" or "where is the sold and whore media?".

The green and pink clusters group more than 70% of the racist terms in our sample. In common, these messages attack public figures of African origin, such as Joacine Katar Moreira, Mamadou Ba and Marcelino da Mata. In the green cluster, the focus is on people. In the pink, the attack also targets government policies and anti-racism NGOs. The other three clusters represent 28.1% of the cyberhate, and they mimic hate arguments from the green and pink. The notable difference is in the blue cluster (12.5%). The narrative has an association with physical attributes, such as hair, skin and sweat. The discourse originated from the words of a participant in the reality show *Big Brother*: "black people are the ones who smell catinga" (a very bad smell). From there, the debate is woven from support to repudiation.

The nationalism shaping messages on Facebook is more visible on many of the 26 Instagram pages in our sample. These accounts posted 447 potentially hate speech messages, and may have reached over 80,000 followers – it is difficult to calculate that impact. Despite their diverse reach – from hundreds of followers, such as *Spam_Politico*, to thousands, such as *Super_Indignado*, these pages share a visual identity. Homeland signs are used as a profile image. Figure 2 shows that the preferred illustration is the national flag, from different eras, emphasising the Cross of the Order of Christ, an important symbol to the Portuguese.



Figure 2: Instagram profile image of the sample (n = 26)

Source: Instagram Graph API via CrowdTangle

In some cases, the images refer to the monarchic periods, to the Portuguese colonization and to the *Estado Novo* – period of fascist dictatorship in the country. Texts, superimposed on the images, allude to the values of the page managers – "I am patriotic" – and to the mythical space of a people in the world – "Portugal for Portuguese" –, as opposed to migratory flows and to the multicultural idea of immigration. Table 3 reveals the most posted formats by these accounts since their launch.

Table 3: Message published on Instagram

Contents	Posts (n)	Posts (%)
Photo	8,534	80.3
Video	1,188	11.2
Album	900	8.5
Total	10,662	100.0

Source: Instagram Graph API via CrowdTangle

"if the Portuguese had stayed in Angola, it would be better than Dubai". There is also the use of English phrases in an effort to connect with transnational far-right movements.

The blue cluster (35.6%) confirms the international approach, also with English phrases. Posts tend to associate immigrants from various ethnic origins with deviant behaviour. There is a relationship between terms like "ethnicity", "gypsy", "Africans", "Islamism", "deport" and "crimes". It is publicised that Portuguese immigration policies are soft, and that legal punishment does not exist against immigrants. There is a clamour for the emergence of right-wing political parties: "I want a VOX in Portugal!". Other messages say: "a group of Roma people causes chaos on the highway", "to deport that savage was too little" and "since when is Islam a part of Portuguese culture?".

5. Conclusions

Findings of this research invite us to reflect on some issues: the scope of the publications, the type of behavior of the audience, the purposes of these actions, and the future of this line of analysis.

First, although the selected platforms showed a considerable scope and significant numbers of reactions, when the depth and impact of hate speech is reviewed, it becomes clear that this type of content coexists -as it happens in digital environments- with more information than diminishes strength to the effects desired by the producers of this discourse. Also on the platforms discussion, it is interesting to observe how Facebook and Instagram behave in a similar way regarding the majority of the content. It will be vital, after the results of Instagram, to map how the use of photographs is promoted in social networks -such as this one-, which appeals to the most graphic content and that narrative alternative can generate greater impact on the public.

Regarding the behavior of the audience, the idea of the ephemeral is fundamental; users prefer to place "likes" than to comment on posts or even share them with others. The interaction with the content is then marked from a first -very basic- level. This behavior could generate content power, but explain that the final reach does not become exponentially viral. This does not mean that hate speech should be dismissed, based on this variable, but rather it allows us to contextualize how this narrative is reproduced and how strategies can be generated to counteract it. Another element on how the audience and the producers themselves relate to the content is in the linguistic characteristics. On the one hand, it is clear that the grouping of terms is a complex task since it is developed from a folksonomic perspective more than from a taxonomic standpoint. To this can be added to the interest of studying this phenomenon from the appropriation of anglicisms, a possible line of research in this field.

Finally, regarding the intention of the generators of this discourse, it can be seen that much of the narrative seeks to attack the defenders of migratory and equitable movements. In a -perhaps simpler- vision, one could speak of right or left discourses colliding; This line of discussion also offers spaces for additional and deeper inquiry, particularly because hate speech and its behavior show that the dynamic is developed to seek followers. In order to reduce its impact it must be understood, modeled and thus proposals and responses must be built to combat hate speech, the fundamental basis for all the purposes related to this research.

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Activation of the Groundswell in the Segment of Bicycle Manufacturers

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Abstract: In addition to the massive home office, the COVID-19 pandemic has brought an enormous increase in the popularity of outdoor activities. This was also reflected in the very high demand for bicycles and accessories for cyclists, which led to the groundswell effect and an increase in fan interaction and engagement within the social media profiles of bicycle manufacturers. The research design in the present paper contains a consistent and synergistically balanced share of qualitative and quantitative methods. Within the theoretical background, methods of analysis of sources from leading authors are used, especially from articles based on leading scientific journals and proceedings. The practical part uses quantitative methods in the form of data collection through the tools Zoomsphere and Socialblade. The selection of assessed business entities consisted of a ranking of profitability and evaluation according to the leading portal designed for the segment of cyclists. The findings point to the content structure of profiles on social media in the segment of bicycle manufacturers. They also point to the content structure of the best contributions on these social media and to the recommendations in the form of categories for the bicycle manufacturers segment. The authors also define the best types of posts for future content in that segment. Domestic and global businesses in this segment require knowledge of the laws on social media in the form of user behavior and the groundswell effect. The limits of the findings are in the selection of business entities, which were selected on the basis of profitability and evaluation according to the leading cycling portal, also within the limits of social media analysis and management tools. Despite the above facts, the added value exceeds the limits within the author's contribution. The originality of the paper is based mainly on the fact that the selected segment from the point of view of the groundswell effect is unexplored. It is important to examine this segment, especially due to the high demand for products in this segment and the relentless interest in the form of user interactions.

Keywords: Groundswell, social media, bicycle manufacturer segment, content strategy on social media

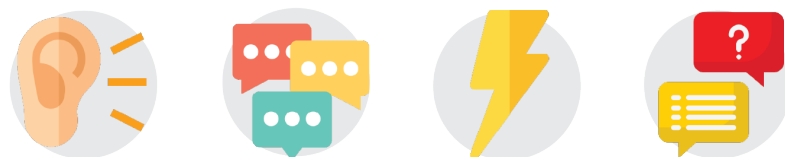
1. Introduction

The development of digital technologies has brought a significant boom in the field of social media. With a growing user base, the digital environment has gradually been updated. Users have also switched from traditional communication to communication via social media. Since then, we can talk about hybrid communication through platforms and various communication tools. Likewise, all user features have moved from the physical environment to the digital environment. This is also associated with the behavior resulting from the groundswell. (Sahaym et al., 2021) Social media have provided the opportunity to measure and evaluate the success of communication. Competitors keep their strategies exclusively in their mystery. For this reason, it is up to the scientific environment to bring functional models applicable across the spectrum as well as to specific segments. Businesses on behalf of marketing managers should regularly recognize the benefits of social media.

2. Literature review

2.1 Groundswell

The groundswell is the fundamental paradigm, which in many cases causes an increase or decrease in sales, or even interference in the scope of business entities. Following the groundswell, we can talk according to Li and Bernoff about the involuntary respectively the will-less movement of people on social media and their involvement in various situations in the digital environment. Users connect, take on their own experience and gain what they need in the form of information, support, ideas and products, and the bargaining power is characterized by each other. (Li, Bernoff, 2008) From the author's work of leading authors Li and Bernoff, we can deduce that the groundswell deserves attention. This is because it can have a positive and negative impact on the business entity. According to the authors, there are several techniques for managing the strategic and effective use of social media.



Listening - Talking - Energizing - Supporting

Figure 1: 4 characteristic tactics

Source: own processing according to Li and Bernoff

The description of the individual techniques according to Figure 1 has parts such as listening, which is characteristic of listening to customers and their needs. Ultimately, it is necessary to know the requirements of the market through the analysis of the environment and customer requirements, as well as the analysis of social media and their use. Narration has a defined main feature in the creative way of communicating with the groundswell. According to the mentioned strategy, business entities have to transform their involvement mainly into monitoring and managing social media in order to reveal user experience with the product and attitude towards the brand. Energizing as a strategy results from following satisfied customers, which if transformed into an online community that can connect customers with the brand and provide a wealth of reviews. The support covers corporate social software that is used by employees of business entities to create internal affiliation with the brand, which ultimately also affects the external environment. (Li, Bernoff, 2008) From the perspective of businesses as Sahaym says, marketing managers should also think about constantly innovating and proactive communication with users, because new ideas can also transfer greater efficiency and creative performance. (Sahaym et al., 2021) The author argues that it is important to recognize and influence the groundswell in favor of the business environment. It is important to monitor not only the company's own communication channels, but also the discussions and events that take place beyond its own social media. Only by examining the interaction and reacting in a timely manner is it possible to keep the phenomenon of the groundswell within the marginal degree of prevention of the negative impact. Developing strategies for applying the groundswell is for a number of segments. (Madleňák, 2020) After examining the available resources, we talk about the deficit composition of strategies and the overall examination in the connection of the groundswell with the segment of bicycle manufacturers.

2.2 Groundswell investigation

On the other hand, it is social media that is currently being used more widely. Jurišová assesses the wide range of possible measuring tools, as one of the best tools is the Zoomsphere measuring tool, which is also suitable for working with the groundswell. (Jurišová, 2021) The analysis of available resources revealed the need to use measurement tools that can identify various changes as well as interactions that can lead marketing managers through the analysis to a possible beginning of the groundswell. Kusá and Piatrov found findings in the findings that generations have a common factor across the spectrum if they reach a certain level of digital literacy and a state where it is desired to visit social media as a user. That is why we are seeing different generations creating the groundswell phenomenon. (Kusá & Piatrov, 2020) The authors Kollárová and Koliščáková introduce a change in behavior during the crown of the crisis. In their work, they state that the changes are visible not only in the field of shopping behavior, but also in various areas of the digital environment. (Kollárová, Koliščáková, 2021) According to Klementis, social media trends indicate a rapid shift of attention from different types of posts and different social media to other types and social media. (Klementis, 2020) The analyzed source shows that the time spent on social media is progressing slowly over the years, but the indicator that is changing faster is the shift from platform to platform and the time spent on individual platforms. As stated by Fedorko and Ferienčík (2017), it is ideal to continuously measure and set up the contributions that have the greatest involvement in any segment. The author Schultz points out the further need for research, especially from the point of view of various segments. Contributions aimed at the whole width of the target group have the best commitment. On the other hand, the day does not affect the user's commitment to the post. The number of interactions is thus focused mainly on the attractiveness of the contribution for target groups.

2.3 Bicycle industry and social media

On the other hand, the central segment of the present topic is bicycle manufacturers. As the author Hoor has pointed out at the present time, the bicycle is becoming essential in planning, political events and the academic sector. In addition, according to the author, the bicycle is increasingly becoming a key object in popular urban

culture. We observe a connection between commercialization, specialization and standardization with a focus on design, aesthetics, lifestyle and consumption. This is also the case with the corona crisis, which brings with it characteristic changes in behavior and the associated preferences and popularization trends that result from the use of bicycles. (Hoor, 2020) People all over the world have directed their time on their bikes. At the same time, driving is aimed at inducing fun, enjoyment and, in particular, alleviating fatigue during long periods of social distance. An analysis of available resources has shown that the popularity of bicycle use is high and growing.

Interest has exceeded expectations and demand for bicycles, manufacturing companies are coming under pressure and, on the other hand, people are introducing a new traffic habit into their lives. The campaigns suggest that bicycles are an alternative and at the same time a reality of traveling to work, which seems to be the current trend with growth prediction. The authors also confirm that the covid-19 pandemic has caused a phenomenon in the sports sector. (Budi et al., 2021) Evidence of the functionality of increased user representation, interactivity, and visibility of response directly contribute to increased conformal behavior is confirmed by Fortin and Dholakia (2005). Experts Heide and D'Angelo (2005) state in the published material that it is the visual type of content that is associated with a more positive reception among respondents. The question arises as to whether this finding is also applicable to the bicycle industry segment. At present, we can talk about the importance of researching business entities engaged in the production of bicycles, mainly because of it.

3. Methodology

Research design includes qualitative and quantitative scientific methods. In the theoretical basis, these are mainly qualitative methods of analysis, induction, deduction and comparison. In the area of qualitative components, it is mainly the content analysis of texts that come from leading authors in the areas with the key terms "groundswell", "social media", "social media and bicycle manufacturers". The professional texts that are used are mainly from scientific journals with a high quality rating. To the same extent, they are conference proceedings and at the end literary sources and online processing of materials from scientific authors and leading authors from practice. The aim of the paper is to show the state of social media of cycling manufacturers on the basis of theoretical background in cooperation with tools designed for social media analysis, to reveal functional patterns of communication with the groundswell and to point out the possible impact of the corona crisis. Research questions and hypotheses were established on the basis of theoretical background and research topic.

3.1.1 Research topic:

Social media and groundswell in the segment of bicycle manufacturers.

3.1.2 Research questions:

RQ1: What type of contributions and to what extent do the most important bicycle brands publish?
 RQ2: What type of posts published by the most important bicycle brands most encourage fans to be active?
 RQ3: How intensely do the most important bicycle brands interact with the audience?
 RQ4: Has the increased demand for bicycles affected the number of fans to the most important bicycle brands on Facebook?

As part of the research, we analyzed the Facebook accounts of the world's leading bicycle manufacturers. We created the sample on the basis of the ranking of the cycling magazine Bikes Reviewed published in the article *The Best Bike Brands For 2022 - The Top 60 Bike Manufacturers* (2021). We limited the sample to the manufacturers listed in the first five rungs of the ranking. We assume that certain patterns of behavior and community values work in every industry. The sample consisted of the following 5 brands: *Cannondale*, *Diamondback*, *Giant*, *Specialized*, *Trek*. (Bikes Reviewed, 2021)

Table 1: Top 5 brands of bicycle manufacturers according to the leading Bikes Reviewed portal and their turnover according to zoominfo.com and zippia.com

No.	Brand	Revenue
1	Cannondale	\$ 285.6 million
2	Diamondback	\$ 2.813 billion

No.	Brand	Revenue
3	Giant	\$ 1.9 billion
4	Specialized	\$ 434 million
5	Trek	\$ 900.0 million

The mentioned ranking is a subjective list of editors of the Bikes Reviewed portal. We chose this ranking because it is focused on typical users and takes into account their needs. In this context, it is also necessary to perceive certain differences in the popularity of brands, which are sometimes quite significant. Ultimately, it is the user experience and the bottom-up influence that, in many cases, uses user and media reviews in the decision-making process.

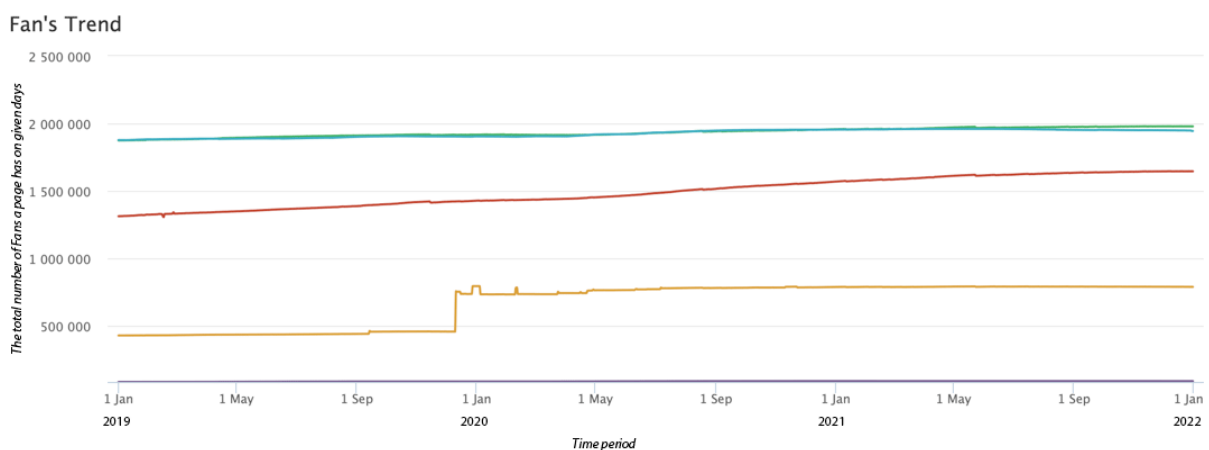
The work procedure we chose during the practical part was as follows. Using Zoomsphere analysis software, we performed three analyzes, each for a different time period. First of all, we analyzed the development of the membership base in the years 2019-2021. We focused mainly on the period of the corona crisis due to the possible specifics, which we present in the theoretical part of the paper. Subsequently, we performed a qualitative content analysis and a quantitative analysis of the interaction of contributions published in 2021. Specifically, we monitored the rough typology of published contributions, the rate of engagement for each contribution, as well as the times and days of publication of contributions. Following this analysis, we performed a qualitative content analysis of the 20 posts with the highest interaction rates. As with sample design, we wanted to stay efficient and prefer to examine a smaller sample, but more in depth. A deeper examination of the most reacted contributions will provide inspiring insights on how to properly manage social media accounts in the context of the groundswell - at least in the cycling segment - which is the main aim of our contribution.

4. Results

The following section is devoted to the results of the researched factors. The analyzes are elaborated in three sections and summaries. Specifically, it is an analysis of the growth of the fan base, the structure of contributions and an in-depth analysis of the most engaging contributions.

4.1 Growth of the fan base

The analysis of the number of fans in 2021 did not reveal any significant deviations from the long - term trend - see. Chart 1. The only obvious anomaly is the jump in the number of Cannondale fans in December 2021, which, however, can have nothing to do with the COVID-19 pandemic, which began until March 2020. The most likely explanation for such a jump is the merging of several corporate accounts.



Graph 1: The growth trend of the fan base

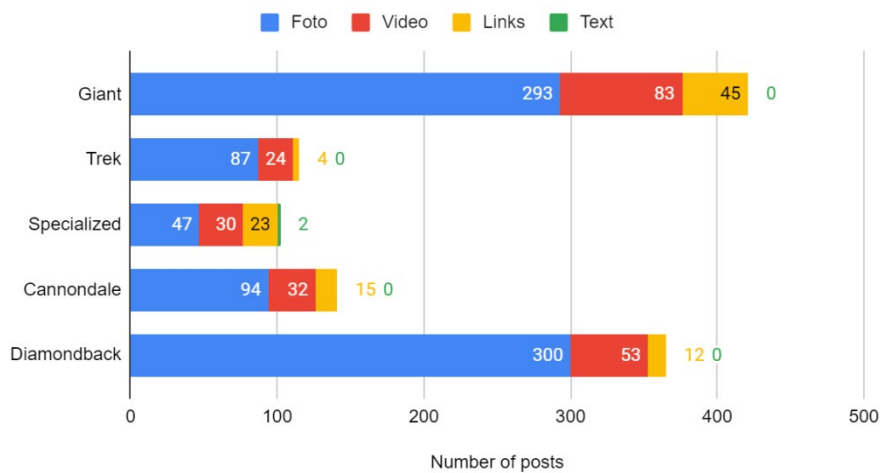
Table 2: Number of Fans

Brand	Number of fans	Share
Specialized	1 978 797	30,68 %
Giant	1 944 810	30,16 %
Trek	1 645 700	25,52 %
Cannondale	788 990	12,23 %
Diamondback	90 557	1,40 %
Total	6 448 854	100,00 %

4.2 Contribution structure

Quantitative content analysis of the contributions showed that in terms of quantity, there are two approaches to publishing. The Giant and Diamondback brands published on a daily basis, the Trek, Specialized and Cannondale brands published less frequently, at the level of 2-3 posts per week. A summary of their annual activity is shown in Chart 2. The structure of the contributions is very similar. With the exception of the Specialized account, we see a strong dominance of photo posts. They make up at least two thirds (67%) of the contributions. Approximately every fifth to every fourth contribution (23%) is in the form of a video. Sharing links to various articles is relatively rare; it is at the level of max. 11%. We see a violation of this formula in the Specialized brand, which uses significantly more video - up to 29% of the content. Photos make up almost half (46%) of posts. It also gives significant space to link sharing, accounting for up to 23%. In this account, we even noticed the publication of two purely text links that other brands did not publish in 2021.

Post structure by formats



Graph 2: structure of contributions by formats

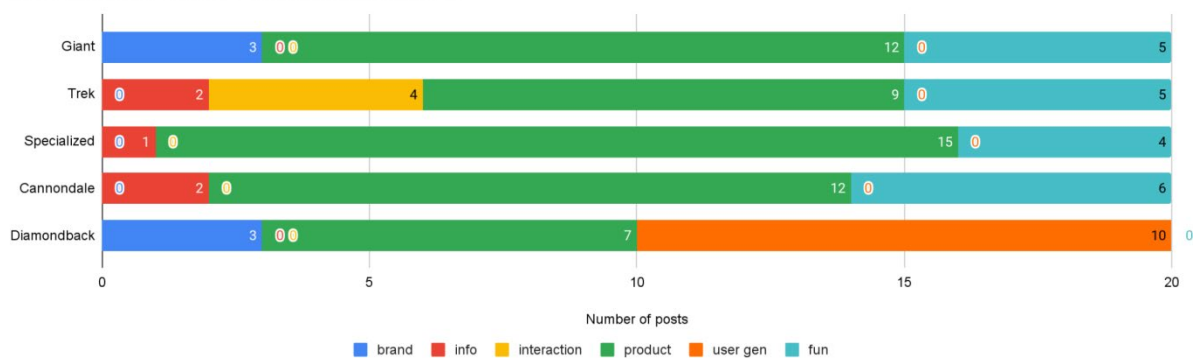
4.3 In-depth analysis of the most engaging contributions

As part of the qualitative content analysis, we focused on the 20 most engaging contributions of individual brands. The sample therefore consisted of 100 contributions. We first categorized each post and then assigned tags to describe it in more detail. A detailed analysis of the content composition (Chart 3) immediately refutes the hypothesis that lifestyle content is preferred over products. It is quite obvious that successful bicycle brands focus primarily on the product, using other types of content only as a complement. The reason is obvious, product contributions are a guarantee of higher engagement. As can be seen in Table 1, which summarizes the results of a qualitative analysis of the 100 most engaging contributions, product contributions have a much higher level of exposure than other types of contributions. Although the product-centric strategy works reliably, we may notice one exception. It is the Diamondback brand, which uses a different strategy and tries to actively work with user-generated content; we discuss this in more detail below. Tags explained the unexpected popularity of the products among the fans. Almost two thirds (61%) of product contributions were tagged as *catchy-photo* (or *catchy-video*). In most cases, these were studio shots (9), although pictures of bicycles in the middle of crushing natural scenery (mountains: 7, forest: 7) and photos from the field during the event (5) were also popular. It was in these shots that formed the core of the production that the style of the brands was most

clearly reflected. The bicycle manufacturer Specialized, for example, tended to a higher degree of stylization in the studio. Cannondale works more with photos of models in action. Diamondback and Giant prefer shots from nature. The trek seems to be trying to make the most of the minimum: it uses the urban environment, even the garden. Of course, we have no ambition to generalize. We acknowledge that analyzing a larger number of shots could change the proportion of environments used by individual brands. What we are trying to point out is that this type of contribution gives space in which the brand can show its individuality and values. Attractive shots were almost always supplemented by text pointing to some extra feature of the photographed bicycle, or its component. Often, for example, it was a frame that was associated with various superlatives. There have also been limited editions of a particular model or shots of bicycles adapted for a particular racer.

We noticed that posts from the entertainment category were also very popular, although this expression should be perceived with some reserve. In the analysis of the contributions, we realized that the cycling segment is not fun at all, on the contrary - it is technically oriented and highly competitive. The *Entertainment category* referred to posts that tried to deviate from this template and lighten the atmosphere. These were most often stories of members of the cycling community (11): athletes and enthusiasts and lifestyle contributions (5), e.g. New Year welcome, competition, etc.

Type-structure of top 20 most engaging posts



Graph 3: Content structure of contributions

The following table compares the engagement of content that includes product and non-product posts.

Table 3: Comparison of exposure of product and non - product contributions

	Number of reactions	Average per 1 post
Products	57082	1038
Other content	29630	658
		<i>n = 86712</i>

Consistent findings were provided by user-generated content analysis. The Diamondback brand worked with it exclusively, using user-generated content intensively, purposefully and for a long time. Contributions using user photos accounted for up to half of her contributions in 2021. We tried to verify whether this strategy worked or not. From all contributions published in 2021, we calculated the average number of responses per contribution. The mathematical mechanical procedure defined on the direct and indirect proportionality of the resultant was used in the calculations. At the initial input, three variables are involved in real numerical form. The output is the resultant of values while maintaining direct or indirect proportionality with an adequate value of the ratio or product of two input values of a different quantity, which are representative of the third quantity. Through the calculation, we found that the average Diamondback brand interaction rate for the entire year 2021 is 133% of the Specialized brand average interaction rate. The Specialized brand has the largest community, so its data served as a benchmark. It is not possible to make a definitive assessment of its success without knowing the budgets of the brands being compared to promote contributions. Diamondback's pro-community strategy with a strong emphasis on user-generated content seems to be at least an equivalent alternative to the product and technology-oriented strategy of other monitored brands. For completeness, we also provide a comparison of the interactions of other brands in relation to the size of their community. Trek's interaction rate is at the same

level as Specialized (99%). The Giant brand achieves 133% performance of Specialized interactions, and in 2021 the Cannondale brand had three times higher (297%) interaction rates than the Specialized brand. This creates a discussion about the extent to which this result is determined by the clever communication of the Cannondale brand, the extent to which the Specialized brand's strategy is not entirely well established, and the extent to which it is a question of the size of the budget to promote individual contributions.

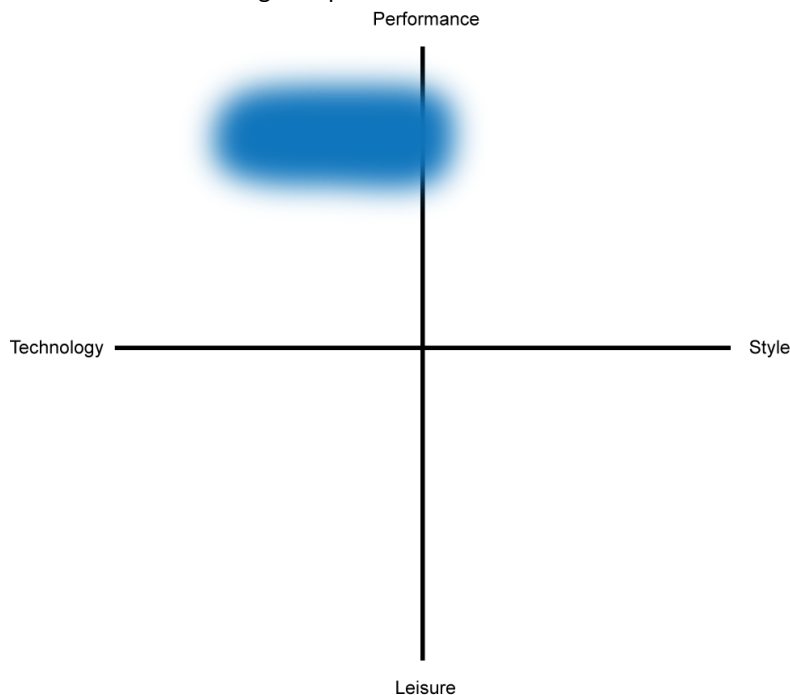


Figure 2: Cycling segment positioning in the social network environment Facebook

Source: Own processing

A qualitative content analysis of the most engaging contributions reveals a strong performance orientation of the cycling community (see Figure 2). In the context of this finding, an explanation is offered for the stability of the membership base, which does not fundamentally reflect the sharp increase in the popularity of cycling during the COVID-19 pandemic. These results suggest that the people who have driven the demand for bicycles since they started cycling much more are not the same who follow the brands on Facebook. Our results suggest that ordinary people's relationship with brands is much less pronounced and much more pragmatic. As a result, they do not identify themselves with the brand of their bicycle enough to watch it on social media. It is obvious that successful bicycle brands do not have the ambition to be attractive to a wide target group, but primarily target a significantly smaller group of enthusiastic performance-oriented cyclists who can fully appreciate their products and philosophy. The content is also adapted to this: top machines, catchy photos, elite athletes.

5. Discussion and conclusion

An analysis of the contributions of leading bicycle manufacturers revealed several publishing patterns and strategic approaches. It has been confirmed that the attractiveness of information significantly affects fan engagement (Fortin and Dholakia, 2005; Van Der Heide et al., 2012). However, it turned out that the general rules of attractiveness of content in social media in the cycle segment do not necessarily apply. Based on the work of Lin and Lu (2011) and Sledgianowski and Kulviwat (2009), who found that content providing elements of entertainment has a very positive response from fans, we assumed a significant proportion of lifestyle contributions. Finally, practical experience (e.g. Lozano (2018)) clearly shows that lifestyle contributions can relatively reliably increase the attractiveness of a brand on social media. On the other hand, our research has revealed that this may not always be the case. We've found that cyclists' webmasters significantly prioritize product submissions over lifestyle ones. Only 10 of the 100 most engaging posts were from the lifestyle category, while there were up to 55 of the 100 products. These are the product posts that reliably engage the cycling fan community. A proven type of contribution in the cycle segment is an attractive studio photo of a bicycle combined with a text pointing to a specific property or element. A thorough analysis revealed that among the most engaging contributions were several that lacked any caption, emphasizing the power of an attractive visual.

In the discussion, we see a strong parallel with sports cars in connection with this type of contribution. Erk, Spitzer et al., Who examined the attractiveness of sports cars and found that sports cars significantly stimulated activity in the ventral striatum, orbitofrontal cortex, anterior cingulate and occipital regions significantly more than other types of cars. At the same time, the nice-woman-on-quality-bike formula also worked reliably. Here, too, there is a clear parallel with the automotive segment. As early as the 1960s, Smith and Engel found that in the presence of a model, people found the car more attractive and gave it different characteristics: it looked more expensive, faster, more powerful and less safe (Smith-Engel, 1968). An attractive element specific to various segments and especially to the cycling industry is the brand-racer connection. Several studies agree that fans with a strong psychological relationship with the team, which in this case manifests itself by watching the brand on social media, maintain their support regardless of the percentage of winning teams (Funk, James, 2006; Harada, Matsuoka. 1999; Madrigal, Chen, 2008). On the other hand, the strong relationship was also reflected in the fact that just mentioning the name of the athlete in a post with a photo of his bike (the picture showed a product in the form of a bike without a racer) is enough to make this post one of the most aggressive posts. The analysis also provided a more detailed view of the fact that any contributions devoted to cheering on a sponsored competitor, as well as behind the scenes of preparations for the race, are a guarantee of popularity on the part of Facebook account administrators. Fans also reacted positively to the stories of enthusiasts who were committed to the benefit of the cycling community - e.g. to the story of a guy who builds a downhill run, or to the story of the brand's service team leader.

Our analysis also showed a very low rate of explicit engaging contributions. These posts are very rare, among the 100 posts with the highest interaction rate were only 4. In this regard, our results differ from the conclusions and recommendations of Logan, whose research showed that fans of brands are more interested in people's comments than in corporate news and therefore recommended companies to open a discussion to a greater extent (Logan, 2014). On the contrary, our research shows that in the cycle segment, despite these claims, product contributions have a much higher interaction without an obvious call for discussion. Successful social media brand communication seems to do without such challenges, and investing in attractive product content is more effective than investing in topics that would encourage audiences to respond and create a groundswell.

It would be practical to examine this phenomenon across several segments and find out whether it is a specificity of the cycle-segment or a global trend. The relatively conservative approach to publishing that we noticed during the analyzes may also be related to the effort to maximize the effectiveness of communication. Although Sahaym et al. recommend innovative communication that can be more effective than traditional contributions (Sahaym et al., 2021), among the top 100 contributions we did not find any that would formally or ideologically significantly deviate from the formulas described above. The absence of innovative contributions in the top 100 posts may also be the result of audience conservatism, which has been more interested in traditional contributions than innovative ones. To answer this question definitively, it would be useful to carry out a content analysis focused specifically on innovative communication and to analyze a larger volume of contributions.

Last but not least, our research did not find any significant changes in the long-term trend in the number of fouls. The assumption that the number of fans of bicycle brands on Facebook will increase during the COVID-19 pandemic has not been confirmed. The result, together with the previous ones, suggests that the Facebook community around bike brands is made up of highly enthusiastic, performance-oriented amateur cyclists, as set out in the performance-oriented bike brand philosophy. On the contrary, the members of the community are not ordinary people, whose relationship with bicycles is positive, but much more utilitarian. This conclusion is also confirmed by Sorenson: "Consumers are looking for outdoor- and kid-friendly activities to better tolerate the challenges associated with stay-at-home orders, and cycling fits the bill well" ("Sporting Goods, Home Fitness, and Cycling At the same time, the stability of the long-term trend of the fans indirectly indicates that it was precisely, absent on social media, the majority of ordinary bicycle users that caused a dramatic demand for bicycles during the COVID-19 pandemic. This conclusion is also confirmed by the report of the American NPD market research company. In their report, they report that sales of children's bicycles increased by 59% in March 2020, sales of e-bicycles by 85% and sales of leisure bicycles even by 121% (NPD Group, 2020).

Despite the interesting findings, we are also aware of the limits of the research. The most fundamental limit is ignorance of the exact numbers of decline in Facebook user activity in general. This trend has been talked about among social media experts for a long time, but we have not yet come across a study that would reliably describe it. The complexity of an objective assessment of the decline in activity also stems from the aforementioned fact that the visibility of contributions is directly proportional to the resources invested in promoting the contribution

and that the visibility of the contribution is highly correlated with the degree of exposure. In addition, the expectations of Facebook users have changed over time. Although our findings provide an interesting insight into the effective administration of cycling communities on social media, it is not clear whether these conclusions will be valid for two years. Logan's 2014 conclusions can be a telling example. Nevertheless, we believe that our findings are relevant. They are a significant asset in the segment of bicycle manufacturers. Social media analysis has yielded significant findings in the context of the groundswell. The identified area has been examined at a lower level in the past, although user interaction formed into the groundswell may directly affect the business entity. It is thus extremely important to continue to examine the groundswell in the impact on different business segments.

Acknowledgment

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The Level of Social Media Addiction of Y and Z Generation in North Cyprus

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Abstract: As technology has advanced, daily interpersonal communication has also altered and shifted to a different level. With the widespread use of the internet and personal technological gadgets hitting the market, social web and social media settings became the essential field of communication for humankind. Now, mostly people use internet-based social communication webs to communicate instead of having face-to-face interaction. This study will focus on the subject of social media addiction in North Cyprus. Our main focal point is the purposes of social media usage, the habits of social media usage and addiction of social media, ranging from the vast majority of the current population, who have experienced technology from a young age, Y generation, and those born into technological innovations, Z generation. During the research it has been used Aylin Tutgun-Ünal's "Social Media Addiction Scale" (SMAS) in order to analyze the social media addiction of Y and Z generations. SMAS consisted of 41 articles and was approved as constituting validity and authenticity in 2015. Besides Facebook, SMAS measured other addictive social media applications in use. It has attempted to find answers for our research questions by comparing and analyzing Y and G generations scores. By the end of this research, results enabled to determine that the Y and Z generations were on a low-scale addictiveness to social media. In any case, it has been noticed how the socially addictive scale was low with occupation, mood adjustment and differentiation on the levels of repetition and conflict. According to the research findings, participants' social media engagement was on a medium level of addictiveness; women spend more time on social media than men, receiving emotional support; social media is mostly used for interpersonal communication; and Y generation has passing more time on social media compared with the Z generation.

Keywords: Interpersonal Communication, Social Media, Social Media Addiction, Y Generation, Z Generation

1. Introduction

As well as bringing changes to the economy, politics and social fields new communication in technology also brought many changes to the daily lives of people. The technology of the internet, pc's and mobiles have played a major role in this new method of communication. This new technological communication has introduced many opportunities and made life easier, such as with fast, easy and cheap communication, acquiring information and removing the sense of time and space. The widespread use of the internet and the emerging internet-based platforms (Facebook, WhatsApp, Twitter, Instagram, LinkedIn, Google Plus, Snapchat etc.) led social media to merge into our lives. Apart from communication these platforms have become useful for fun, shopping and many other purposes, making it an essential part of human life. This virtual social environment, named as social media, has become vital in bringing the masses and people together and ensuring interaction to take place. Many researchers have demonstrated how people are spending much more time on virtual reality every day (Akyazı and Tutgun Ünal, 2013; Vural and Bat, 2010; Issaa and Isaias, 2016). The distinction between virtual reality and actual reality is becoming more indistinct as a result of growing usage, particularly among the youth. As Öze (2016b) cited, "In recent years, social media has become a big part of social life; this is related with sociology and social psychology. Social media has necessitated a new way of thinking about the relationships in the world" (s.611).

Social media and issues of addictions impact each community differently; whether it be a developed or less developed community, wealthier or poorer nations, or highly populated or less populated communities the interaction varied. For this reason, it is important to determine the level of impact social media played in different communities and level of addiction it caused. It is useful to look at the research facts of the individuals accessing social media for practical reasons in North Cyprus. This is due to its small population, living in a developing community but not being an economically independent country. According to the findings obtained from Öze's research, in 2016a; Turkish Cypriots have easy access to the internet and technological equipment, and the use of social-web and internet applications is on a high frequency. The participants of the research consisted mostly of Turkish Cypriots and 90.7% used social media. Accordingly, 100% of the Y generation, 93%

of the X generation, 75% of the Baby Boomers generation and 16.7% of the silent generation participants used social media. Participants of the research also had accounts with Facebook (83.9 %), Instagram (51.7%) and SnapChat (22.9%). Furthermore, 42.4% of the participants described themselves as taking part and being a follower of the social media, 16.1% considered themselves to be active participants and 15.3% defined themselves as followers. We must remind ourselves that this research was conducted in 2016 and in the last four years' access to YouTube and Instagram have increased considerably, especially among the youth. Having said this, the report also mentions on Digital 2021 Global Overview Report that the most popular social media platform is Facebook. According to this report, Facebook with 2.740 million users was the most used social media platform, the second most used platform was YouTube and the third WhatsApp (Datareportal 2021). According to Öze's research, in 2017, the vast majority of the participants of the research were Turkish Cypriot and used Facebook in order to develop and manage their social media relations. This made up more than half of the participants. In particular, participants within the age group 15-19 were accessing Facebook frequently, on average 81% per day, however as the age gap widened the use of Facebook became less frequent. It is worth noting that although women used Facebook more often than men they were less likely to share, like or make a comment; in other words, women prefer the position of being a passive follower. According to Öze's research in 2018, Teens and adolescents are more addicted to the Internet, and different generations display different attitudes towards technology. When it comes to the silent generation and Baby Boomers, they approach the internet with caution but support the Y and Z generation to use it. The research discovered that the volume of access to social media also depended on individual working life and pastimes.

Since 1974 Cyprus has been divided as north and south. After the 1974 war the Turkish Cypriot community was settled to the north and the Greek Cypriot community to the south of the island. The Greek Cypriots, in the south, continued to live under the official Cyprus Republic state and govern it. This Republic was constituted in 1960 and was based on both communities having eligible rights to govern it on its announcement. The Turkish Cypriots, in the north, however, declared the Turkish Republic of Northern Cyprus on 15 November 1983; this declaration was not recognised by any state apart from Turkey. As cited by Öze (2016a) "This situation causes North Cyprus to be economically and politically isolated from the rest of the world. Individuals living in Cyprus try to break this isolation individually through socio-cultural means. Technology has become one of the instruments in overcoming social entrapment" (p. 281). It is at this point that the purposes of using social media, social media habits and levels of addiction becomes crucial. This work will specifically focus on the level of addiction for the Y and Z generation. It is this generation which will shape the future of North Cyprus (the population of North Cyprus is 286, 257 people, and 48% of the population consists of the Y and Z generation).

2. Media Usage and Satisfaction

The idea of evaluating media usage and satisfaction was developed by Katz in order to assess user's motivation and satisfaction. This kind of evaluation replaced the traditional old method of researching. Katz was interested in what people do with the media rather than what the media does to them (Katz et al., 1973). According to Katz, people have basic communicational and psychological needs and, by being exposed to the media, are able to fulfil some of them (Yaylagül, 2008). In line with this approach, media users are satisfied and motivated in two different ways; one in seeking satisfaction and, two, in obtaining it. When media users explain the kind of satisfaction they expect whilst using the media, they are actually explaining the satisfaction of using the media itself (Katz et al., 1973). In this study, it has been observed how effective media is in fulfilling the needs of users. Today, people have their needs met much more effectively by the media, especially with the opportunities the internet offers in the shape of visual and audio communication (Güngör, 2011). A wide range of accessible social media environments and the frequency and intensity of this access is related to the users seeking and fulfilling their satisfactions. The full motivation gained from media usage is based on individual, social, economic, cultural and political factors. The attraction of individuals using the internet ranged from low-satisfaction in life or high-interpersonal benefits, to keeping in touch and getting emotional support from family and friends (Papacharissi and Rubin, 2000). In light of this information it has been understood how multi-facet structure is used in communication technologies and new media, and how it offers user satisfaction (Güngör, 2011; Yaylagül, 2008; Papacharissi and Rubin, 2000).

3. Social Media Addiction and Generations

Each day social media sites are attracting more users and expanding. It has become the most popular activity of our age. In spite of this the younger generation are accessing the social media irresponsibly and carelessly. As highlighted by Bányai et al. (2017), this manner of problematic use of media and Internet addiction stems from

a mixture of factors with underlying currents. The best example of this misuse is behavioral and obsessive compulsive behavior related to substance addiction (Griffiths, 2005; Griffiths, 2010). Problematic social media addiction is described as: a psychological problem developing from cognition, emotional and behavioural pattern and affecting a person's private, work/academic and social life. The impact of this leads to problems of mood adjustment, occupation, repetition and clash (Tutgun Ünal, 2015). Research has also hinted how various psychological, personal and individual issues were related to misuse of social media (Andreassen et al., 2017; Bányai et al., 2017; Kircaburun, 2016; Kircaburun et al., 2018a, b). According to a research by Chicago Booth School of Business University, users are more addicted to social networking on Facebook and Twitter than smoking and alcohol, particularly the age group 18-35. It also stated how pining the virtual network has become stronger than the desire of resting and sleeping, and this could lead to a social disaster (The Telegraph, 2012). Kraut's, 'Work on the Internet Paradox' in 1998 is considered to be one of the most important studies about networking and the bad influences it has on users. The outcome of this research has shown that the more the users use the Internet the less they are engaged with their families, feel lonely, depressed and stressful (Kraut et al., 1998). Shaw and Gant's work, in 2002, opposed Kraut's views for exaggerating his facts. They insisted that networking actually decreased loneliness and depression considerably, and improved sense of self-respect and social-contact highly. Two works with opposite outcomes can only be resolved by drafting a law about networking and satisfaction.

4. Y and Z Generation

When we look at our current environment and family settings we notice how much social media and smartphones predominate our lives. In fact, it has become inseparable from the lifestyle of the younger generation. The active users of the new media are mainly the youth/adolescence, the Y and Z generation, born in the 90's (Köroğlu, 2015). As Binark related (2015) the Y generation grew with the digital media and got introduced to computers before they were five years old. It is for this reason that individuals belonging to this generation are described as being smart, free spirited, passionate about technology and highly skilled in using technology. As for the Z generation, they are born into technological innovations and cannot imagine a world without mobile networking. According to Tulgan (2013), thanks to social networking and the internet this generation is much more privileged compared to previous generations. The advantages of accessing the net for this generation are: obtaining a wide range of information, getting to know different cultures and approaching diversity with open-mindedness. Also, it is predicted that this generation will have better career opportunities in the future through the benefits of accessing high levels of social media (such as, youtuber, blog writer and agenda setting Twitter - Instagram phenomenon) (Sarioğlu and Özgen, 2018).

5. Material and Methods

In this research it has attempted to determine the Y and Z generations internet usage and addiction on networking by using the general screening model with quantitative analysis. The General Screening model aims to identify an individual's belief, attitude, view, behaviour and expectation through a questionnaire (Gürbüz and Şahin, 2018).

5.1 Measures

The sampling of the research consists of the Y and Z generations living in North Cyprus. The research covers a two-month period, October-November 2020, and it sample-selected 200 people randomly to fill-in a questionnaire. Looking at the Y and Z generation's classification in North Cyprus, in line with figures given by TRNC's State Planning Organization; a total of 286,257 people permanently reside in North Cyprus. According to Öze (2016a), out of the total population the Y generation represented 29% (1980-2000) and the Z generation 19% (2000-onwards). Having said that, these figures date back to the 2011 census, and, as it has been 10 years, it is not considered to reflect the current figure accurately. The Kıbrıs Postası paper, dated January 2019, also agreed with this view. The paper cited the Home -Affairs Minister's remarks: "when we compare the last census, in 2011, with the birth and mortality rate we, as the Ministry, we come up with the conclusion that there are 350,000 "citizens" (Kıbrıs Postası Gazetesi, 2019). This piece of news acknowledges how the last census did not reflect the current population figure accurately. Therefore, we are unable to classify the generation in an adequate way. Even so, if we are to refer to Öze's (2016) explanation about the 2011 census, we notice that the vast majority of the 286,257 population in North Cyprus is covered by the Y generation with 29%, and they are followed by Z generation with 19%. According to Öze (2016) if they were to do a fresh census the percentage will read differently; whilst the older generation will decline the Z generation will increase.

Personal Information Forum was used to determine the participant’s demographic features and habits in using social media. Firstly, the demographic features of the participants were screened (age, occupation, gender); later the kind of social media application that was being used, from what type of device they accessed the application, when they began using this social media and how much time in a day they spent on social media was also screened.

Table 1: Demographic characteristics of the study participants

Characteristic	Study group
Participants, n	200
Gender, M/F (%)	94/106 (47 / 53)
Generation, Y, Z (%)	81/119 (40.5/59.5)
How long have you been using social media? n (%)	
Under 1 year	2 (1)
Between 1-3 years	21 (10.5)
Beetween 4-6 years	63 (31.5)
Over 7 years	114 (57)
How many hours are you connected to social media? n (%)	
Less than an hour	
Between 1-3 hours	20 (10)
Beetween 4-6 hours	87 (43.5)
Over 7 hours	67 (33.5)
	26 (13)
Type of device used to access Apps? n (%)	
Desktop and Mobile	87 (43.5)
Mobile	50 (25)
Smartphone	63 (31.5)

5.2 Participant population

As seen in Table 1., the sample chosen consist of women 53% (106 people), men 47% (94 person), Y generation 40.5% (81 people) and Z generation 59.5% (119 person). Their gender and generation layout was also reflected accurately. The vast majority of the participants engaged with social media for over 7 years (114 people), most used the devices of desktop and mobiles (87 people). Half of that ratio (87 people) accessed social media apps 1-3 hours per day.

5.3 Statistical Analysis

Statistical Package for Social Sciences (SPSS) 24.0 software was used in the statistical analysis of the research data. Before proceeding to the statistical analysis, the Cronbach Alpha test was performed for the reliability of the answers given to the Social Media Scale and it was found to be 0.956. The distribution of the participants' socio-demographic and social media usage characteristics was determined by frequency analysis, and descriptive statistics regarding the scores they got from the Social Media Addiction Scale were shown. The normal distribution of the scores of the participants from the Social Media Addiction Scale was examined with the Kolmogorov-Smirnov and Shapiro-Wilk tests, and it was determined that they did not comply with the normal distribution, and the research hypotheses were tested with nonparametric hypothesis tests. Accordingly, the Social Media Addiction Scale scores according to the gender and generation of the participants were compared with the Mann-Whitney U test, and the Kruskal-Wallis H test was used to compare the Social Media Addiction Scale scores according to the profession, the device accessed the applications, the duration of social media usage and the daily social media access time.

5.4 The Scale of Social Media Addiction

To measure the level of the participants' social media addiction the Social Media Addiction Scale (SMAS), developed by Tutgun Ünal (2015) and was implemented for accuracy and reliance. To determine the level of addiction Tutgun Ünal multiplied the scale with the subscale from the 5th degree angle. From this, the lowest and highest points on SMAS is 41-205. By subtracting the highest point from the lowest we assess the gaps of the length; and from the 5th degree on the scale we multiply the gaps by dividing it into 5. Accordingly, the scale has given these general readings on the gaps: a gap of 41-73: “no addiction”, 74-106: “little addiction, 107-139: “mild addiction”, 140-172: “severe addiction”, and 173-205: “very severe addiction”.

6. Results

Table 2: Purposes Participants Used Social Media and findings on the Variation between the Generations

Scale/Subscale	Generation	Never n / %	Seldom n / %	Sometimes n / %	Often n / %	Always n / %
To chat	Y	1/0.5	1 /5.0	16/8.0	38/19.0	16/8.0
	Z	1/0.5	4/2.0	14/7.0	45/22.5	55/27.5
To meet with people	Y	39/19.5	26/13.0	10/5.0	3/1.5	3/1.5
	Z	32/16.0	55/27.5	29/14.5	1/0.5	2/1.0
To be known by others	Y	36/18.0	18/9.0	19/9.5	5/2.5	3/1.5
	Z	54/27.0	31/15.5	24/12.0	9/4.5	1/0.5
To share news I find interesting	Y	13/6.5	23/11.5	28/14.0	10/5.0	7/3.5
	Z	43/21.5	29/14.5	26/13.0	17/8.5	4/2.0
To share photo /video/note etc	Y	5/2.5	19/9.5	29/14.5	14/7.0	14/7.0
	Z	17/8.5	26/13.0	36/18.0	28/14.0	12/6.0
To play games	Y	26/13.0	22/11.0	14/7.0	12/6.0	7/3.5
	Z	24/12.0	28/14.0	33/16.5	19/9.5	15/7.5
To look at others profile	Y	18/9.0	20/10.0	25/12.5	12/6.0	6/3.0
	Z	13/6.5	32/16.0	26/13.0	32/16.0	16/8.0
To update status	Y	15/7.5	26/13.0	27/13.5	7/3.5	6/3.0
	Z	35/17.5	38/19.0	30/15.0	14/7.0	2/1.0
To comment on others' updates	Y	13/6.5	24/12.0	21/10.5	14/7.0	9/4.5
	Z	15/7.5	29/14.5	38/19.0	29/14.5	8/4.0
To join/follow groups	Y	16/8.0	15/7.5	19/9.5	22/11.0	9/4.5
	Z	23/11.5	19/9.5	35/17.5	30/15.0	12/6.0
To listen/share music	Y	7/3.5	15/7.5	23/11.5	20/10.0	16/8.0
	Z	13/6.5	16/8.0	22/11.0	29/14.5	39/19.5
To follow celebrities	Y	18/9.0	18/9.0	29/14.5	11/5.5	5/2.5
	Z	20/10.0	31/15.5	29/14.5	25/12.5	14/7.0
Communicating for educational purpose	Y	6/3.0	14/7.0	28/14.0	21/10.5	12/6.0
	Z	25/12.5	23/11.5	34/17.0	26/13.0	11/5.5
To search for information & news	Y	1/0.5	6/3.0	13/6.5	37/18.5	24/12.0
	Z	11/5.5	22/11.0	29/14.5	40/20.0	17/8.5
To communicate with friends	Y	2/1.0	4/2.0	16/8.0	27/13.5	32/16.0
	Z	4/2.0	6/3.0	10/5.0	44/22.0	55/27.5
To check products	Y	18/9.0	23/11.5	20/10.0	9/4.5	11/5.5
	Z	40/20.0	36/18.0	26/13.0	11/5.5	6/3.0
To purchase products/brands	Y	16/8.0	21/10.5	27/13.5	11/5.5	6/3.0
	Z	36/18.0	33/16.5	24/12.0	19/9.5	7/3.5

When the social media usage purposes of the participants shown in Table 2 are examined, 35.5% of the participants are for chatting, 27.5% for listening/sharing music, 20.5% for researching news/information, 43%, 5 of them always use social media to keep in touch with their current friends, 41.5% to chat, 35.5% to communicate with their current friends, 38.5% to search for news/information frequently social media usage was determined.

21.5% of the participants to be recognized by other people, 27.0% to share the news they like or get retweets, 32.5% to share the objects they like, 23.5% to play games, 25% to .5% to browse other people's profiles, 28.5% to post notifications/status, 29.5% to comment on other people's statuses or posts, 27.0% to join groups that interest them or to make a post. to follow the group, 22.5% to listen/share music, 31.0% to follow famous people's pages, 21.0% to search for information/news, 23.0% to brand/share It has been determined that 25.5% use it sometimes to get information about the brand/products, to interact with the product pages.

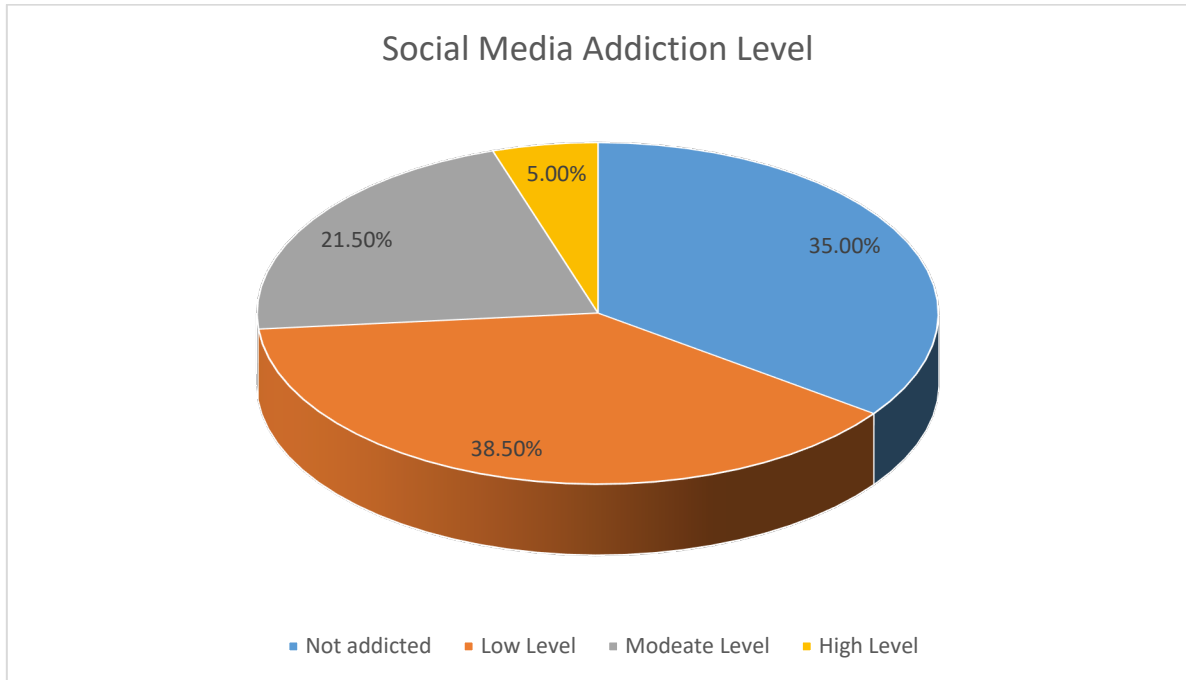
40.5% of the participants to meet new people, 24.5% to be recognized by other people, 26.0% to share the news they like, 25.0% to play games, 26.0% to browse other people's profiles, 32.0% to post notifications/status, 26.5% to comment on other people's statuses or posts, 24.5% to follow famous people's numbers, 29.5% It was determined that 5% of them rarely use social media to interact with brand/product pages and 27.0% of them rarely use social media to get information about brands/products.

Table 3: Comparison of Social Media Addiction Scale scores according to the generation of the participants

	Generation	n	\bar{x}	s	M	SO	Z	p
Occupation	Y Generation	81	29,20	10,50	28,00	79,56	-4,223	0,000**
	Z Generation	119	36,11	11,10	35,00	114,75		
Mood Adjustment	Y Generation	81	11,48	5,39	10,00	88,54	-2,415	0,016*
	Z Generation	119	13,39	5,62	14,00	108,64		
Repetition	Y Generation	81	8,11	4,01	6,00	80,54	-4,060	0,000**
	Z Generation	119	10,27	4,80	9,00	114,08		
Conflict	Y Generation	81	26,99	8,78	24,00	70,27	-6,103	0,000**
	Z Generation	119	37,34	13,23	33,00	121,08		
Social Media Addiction Scale	Y Generation	81	75,78	23,64	73,00	75,40	-5,061	0,000**
	Z Generation	119	97,11	29,30	95,00	117,59		

*p<0,05 **p<0,01 (Mann-Whitney U test)

In Table 3, it is seen that there is a statistical difference between the scores of the Y generation and Z generation participants from the Social Media Addiction Scale in general and the sub-dimensions of occupation, mood regulation, repetition and conflict in the scale. it was determined that there was a significant difference (p<0.05). The scores of the Z generation participants in the Social Media Addiction Scale in general and in the sub-dimensions of occupation, mood regulation, repetition and conflict were found to be higher than the Y generation participants.



Graph 1: Social media addiction levels of the participants

When Figure 1 is examined, it is seen that 5% of the participants are highly addicted to social media, 21.5% are moderately addicted to social media, and 38.5% are low level social media addicts, while 35% are not addicted to social media.

Table 4: Comparison of Social Media Addiction Scale scores according to the gender of the participants

	Gender	n	\bar{x}	s	M	Z	p
Occupation	Male	94	31,26	10,38	30	-2,335	0,020*
	Female	106	35,13	11,91	35		
Mood Adjustment	Male	94	11,99	5,03	11	-1,200	0,230
	Female	106	13,17	6,01	12,5		
Repetition	Male	94	8,84	3,71	8	-0,666	0,506
	Female	106	9,89	5,25	8,5		
Conflict	Male	94	33,20	12,14	31	-0,539	0,590
	Female	106	33,10	13,20	28,5		

	Gender	n	\bar{x}	s	M	Z	p
Social Media Addiction Scale	Male	94	85,29	26,17	81	-1,152	0,249
	Female	106	91,29	31,24	88,5		

*p<0,05 (Mann-Whitney U test)

According to Table 4, it was determined that there was a statistically significant difference between the scores of the participants in the occupation sub-dimension in the Social Media Addiction Scale according to their gender (p<0.05). The scores of the female participants in the sub-dimension of occupation were found to be significantly higher than the male participants.

According to the gender of the participants, it was determined that the difference between the scores of the Social Media Addiction Scale in general and the sub-dimensions of mood regulation, repetition and conflict in the scale was not statistically significant (p>0.05). The scores of female and male participants in the Social Media Addiction Scale in general and in the sub-dimensions of mood regulation, repetition and conflict in the scale were similar.

7. Conclusion and Discussion

The research discovered that the participants displayed little addiction to social media. The subscale did detect that users had mild addiction in the category of occupation. Although this rate of addiction was not considered to be concerning, the widespread use of Wifi, portable pc's, mobiles and networking environments will pose the risk of addiction levels to rise. The readings did not show any addiction variation between the genders. Women, however, were more predisposed towards addiction on the subscale of occupation and mood adjustment. Compared with men, women are more occupied and achieve emotional support from social media. There was no noticeable addiction variation between the Y and Z generations. On the entire subscale reading, however, the Z generation was on a higher level of addiction compared to the Y generation. This showed that the generations of Y and Z did not perceive the technology in the same way. The main reason for this is, the Y generation can manage to live in a world without technology whereas the Z generation cannot.

The research also surveyed the purpose of using social media, and these were; keeping in contact with current friends, chatting, listening to music, searching for information and following news. This pointed out that the participants actively used social media for interpersonal communication and fully benefited from the opportunities it offered (for instance, quick, easy, cheap communication, fun and information gathering).

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Terminology Management for Social Media Communication During Covid 19 Pandemic: A Case Study with a Portuguese Higher Education Institution

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Abstract: The process of attracting new students is a constant challenge for Portuguese Higher Education Institutions (HEIs). It is challenging because it implies the definition of a communication strategy that uses both traditional and digital tactics to promote the institution and its educational offer. Considering the constraints resulting from the COVID-19 pandemic, HEIs had to change their strategies and, in a short period, create digital communication mechanisms to facilitate new students' access to relevant information about the institution. This paper intends thus to determine and evaluate which are the predominant factors in seeking information about a degree in business sciences, specifically regarding the Porto Accounting and Business School in Portugal. To do that, we will consider the various factors that tend to influence the decision-making process of choosing a higher education degree, namely: the institutional website, social networks (Instagram, Facebook, Twitter and YouTube), other contact mechanisms (live chat, e-mail, text messages, ZOOM videoconference) and alumni testimonials. This study will also consider the role of terminology and positive language to obtain a successful communication strategy for social media. The analysis of these factors, combined with research developed with a focus group of high school students' graduates to assess their online preferences, will allow the presentation of a digital communication proposal whose purpose is to attract and retain new students. This proposal will consider the role of a strategic terminology management approach to capture students' attention when responding to their social media preferences. This paper results from the perception that being aware of the students' online preferences and communication skills and needs is essential to enhance the quality of the digital communication that HEIs promote in social media channels, especially in a time frame as specific and multifaceted as the one that we are currently experiencing.

Keywords: social media, terminology, digital communication, HEI, covid-19, information

1. Introduction

At the end of 2019, a new Corona Virus (SARS-CoV-2) was the reason for the surge of the highly contagious disease COVID-19. It started spreading worldwide and led to a pandemic situation that implied and still implies changes to the way we used to live.

Due to the high chances of contamination, many countries were initially forced to limit face-to-face contacts in several contexts, and education was one of the main affected sectors. That led to massive school closures around the world in the regular school system and in Higher Education Institutions (HEIs). In fact, around 188 countries have implemented country-wide school closures (The Lancet Child & Adolescent Health, 2020).

Thus, serious constraints started to be felt that affected HEIs activities, including those related to communication. This affected many situations regarding current students' communication and communication with potential new students who were applying to Higher Education Institutions in late August of 2020.

These constraints emerged as a problem, mainly because they could limit HEIs ability to attract new students, which is always challenging. Face-to-face contacts in professional contexts were limited due to the absence of a significant number of employees at the Porto Accounting and Business School (ISCAP) and in all other HEIs and secondary schools. Even though teleworking was in place, the truth is that face-to-face services were highly impaired in this context.

So, the consequences of these limitations were enormous due to the reduction of the communication channels and moments used to contact the institution. The volume of e-mails started to grow exponentially, the phones had constant calls and the inability to respond to all the requests was clear. However, at the same time, communication needed to exist, due to the constant changes that had to be implemented and that caused many doubts to existing students of the institution and to the new students who were now applying for higher education in general and for ISCAP in particular.

As a result, it became paramount to explore other communication strategies that would contribute to the existence of a clear and more effective communication in such a difficult and demanding environment. In this context, social media communication gained a new strength and emerged as one of the channels that could support this effort, along with a clear consideration for controlled language and terminology.

2. Objectives and Research Questions

This study was projected with the objective of answering the following research questions:

- Did Social Media Communication suffer changes during the Covid-19 pandemic?
- Was the digital communication strategy implemented by the Porto Accounting and Business School (ISCAP) successful during the pandemic?
- Was the management of terminology important for communicating in social media?

3. Background Context

3.1 ISCAP and Higher Education in Portugal during COVID 19 Pandemic

As mentioned previously, at the end of 2019, the world started to experience a situation that would soon result in a pandemic leading to massive school closures worldwide. In the majority of the countries, this situation implied an urgent need to implement alternatives that would allow students to take distance classes while preventing them from being at school.

In Portugal, the government defined that the face-to-face model would switch to a full e-learning methodology in the middle of the school year of 2019/2020, a directive that included all levels of the educational system. At the beginning of the school year of 20/21, both the Minister of Science, Technology and Higher Education, Manuel Heitor, and DGES - Direção Geral do Ensino Superior (Directorate-General for Higher Education) sent a set of recommendations to HEIs to ensure that both classes and assessments would return to a face-to-face model. However, it was paramount to comply with all the imposed public health and safety rules.

Considering that ISCAP has a high number of students (4800), some other measures were implemented internally to reduce the disease's proliferation. Consequently, a dispatch called "*Plano Excecional e Temporário de Funcionamento do ISCAP e da Atividade Letiva para 2020/2021*" (Exceptional and Temporary Operating Plan for ISCAP and Teaching Activity for 2020/2021) was issued by the Presidency of ISCAP clarifying when and which students would be allowed to attend face-to-face classes at ISCAP, and which students should attend classes online. The division of these students was based on their identification number, being then divided into odd and even number students. This led to a massive reduction in the number of students at ISCAP, allowing the risks to be lower.

This context promoted digital communication, not only via learning management systems like Moodle but also with social media platforms that had a decisive role in supporting and reinforcing the established communication process and strategies.

3.2 Social Media Communication for HEIs

As Alexa et al. (2012) state, "For a very long period of time, universities were institutions that offered education to those who could meet their prescribed entry criteria and were operating in a supply-side market, which meant that their marketing efforts were limited to a few actions, and the communication efforts were unidirectional.", but today, that is not the case, and institutions need to place themselves in the online world, fostering a more interactive communication policy to reach existing and potential students, while maintaining other traditional communication channels.

To have an effective communication strategy, it is paramount to have an online presence. Thus, social media and social networks and the workflows, environments and concepts associated to them became even more present, enhanced by the new and serious communication constraints felt. COVID-19 was a game-changer for HEI's.

It became fundamental to know how to explore these communication channels to establish a more direct communication with the different audiences and convey important information regarding the institution's everyday life. The objective was to create and sustain a more direct relation to contribute to a more engaged audience and a more involved community.

Furthermore, social media and social networks also have an important role in customer service strategy, allowing clients/users to, in some cases, obtain faster feedback than the one they would have through other traditional channels.

Consequently, it was essential to reinforce the role of the existing website and to develop and feed in a more systematic and dynamic way profiles/accounts in the most popular social networks, like Facebook, YouTube, WhatsApp and Instagram ("Most used social media 2021", n.d.). These are vital to the communication strategy of any Institution or company, given that almost half of the world's population is present in social networks ("Number of social media users 2025", n.d.).

3.2.1 The Use of Terminology in Social Media Communication for HEI

Social media provide a robust environment to get information out to the world, not only to those who follow you but also to those that come across your institutional profile for any given reason. Due to that, it tends to be an environment prone to interact with users that may have similar interests.

However, as stated by Sahlgren and Karlgren, "social media constitute a semantically volatile domain, and if we intend to operate textually in such an environment, we need to employ a methodology that can re-align its semantic model according to observed language use" (2009). This is especially important because in an environment flooding with enormous amounts of information, getting your message across may be complicated. Hence, the communication strategy that has to be put in place needs to be concentrated in two particular aspects: design and message. On the one hand, the design, which need to be appealing and allow a clear understanding of the information that institutions want to convey. On the other hand, the message needs to be precise and effective, and the use of adequate terminology contributes to it.

As stated by Bowker, "Terminology is concerned with the naming of concepts in specialized domains of knowledge." (2009). In this particular case, the domain is related to higher education-related subjects, so specific terms as courses, degrees, applications, enrolments, attendances regime, among others, tend to fit in this domain.

Sahlgren and Karlgren (2009) reveal that "most of the communication in social media is in textual form, and while social media authors adhere to most rules of text production, the low level of editorial oversight, the perceived informality of the media, and the comparatively high degree of interactivity create a new communicative situation". This *new communicative situation* that needs to be addressed if institutions want their message to get across clearly, and the proper use of terminology appears as a relevant tool to support this process.

Therefore, it is vital to have appropriate terminology management to achieve good communication results. To do that, it is necessary to bear in mind aspects of the message and use appropriate terms and invest in the institutions' discoverability with the use of hashtags. Hashtags are single words or word compositions that searchers use to enter engines and look for specific information domains. They are also called "search queries".

The use of the proper hashtags may contribute to changing "the approach from a one-to-one correspondence between a concept and a term to a one-to-many correspondence" (Densmer, 2020).

4. Methodology

4.1 Case Study and Data Collection Strategies

This case study was implemented at ISCAP during the beginning of the school year of 2020-2021. ISCAP has around 4800 students, 60 administrative staff members and 230 teachers. The number of potential students is far more, and, along with the current students, they compose the primary target audience that ISCAP intends to reach.

According to Yin, a case study "is an empirical method that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be evident" (2018). Furthermore, the author also states that a case study copes with the technically distinctive situation in which there will be many more variables of interest than data points" (Yin, 2018).

We used the case study approach for this research to analyse the strategies used by ISCAP regarding social media communication. It would be difficult to assess a significant number of different HEIs and their strategies and results, so the decision was to concentrate this study in a particular context. Furthermore, we also opted for this research method because “case studies can penetrate situations in ways that are not always susceptible to numerical analysis” (Cohen *et al.*, 2007).

ISCAP has five official communication channels besides the telephone - website, YouTube and e-mail - and three social network profiles (Facebook, Instagram, Twitter, LinkedIn, and YouTube) which revealed to be essential during the pandemic.

For this case study, and because we intended to better understand the possible communication strategies that could be used with success, we relied on a focus group of students (12th-grade students) that were on the verge of looking for an HEI to apply.

4.1.1 Focus group: Understanding your audience

As Robert Yin states, based on some previous studies, a “focus group procedure calls for you to recruit and convene a small group of persons. You would then moderate a discussion about some aspect of your case study, deliberately trying to surface the views of each person in the group” (Yin, 2018).

The discussion that is enabled is similar to an interview, but with a more flexible approach, like a conversation, where the focal point is on the interaction within the group who discusses a specific topic of interest with the guidance of the interviewer. Thus, “Focus groups are contrived settings, bringing together a specifically chosen sector of the population to discuss a particular given theme or topic, where the interaction with the group leads to data and outcomes” (Cohen *et al.*, 2007). In sum, a focus group reflects the convergence between a meeting and a conversation (Agar and MacDonald, 1995).

A focus group is an important research strategy to collect qualitative data as it allows us to understand more clearly the potential audience that we are facing in our study and the potential problems that may occur with the institution’s strategy and preferable solutions to overcome them.

As previously mentioned, our focus group was composed of secondary and professional education students (eighteen students) who were attending professional courses in Management, Marketing, Communication and Public Relations (courses that allow equivalence to the Portuguese 12th grade).

The objective of this focus group was primarily to understand how students seek information about higher education courses, the importance of social media to facilitate the process of deciding which HEI would better suit their professional aspirations, as well as analyzing their perception regarding the message and the content developed by the HEI. All the selected students intend to pursue higher education studies. However, most of them were experiencing some indecisions regarding which HEI to choose.

5. Analysis of the Results

The interaction with the focus group went for about an hour, and it was centred on three main topics:

- Search processes for degrees’ information
- Available information on the institutional website
- Preferred social networks

The conversation was recorded with the students’ consent and was transcribed for further analysis. Regarding the purpose and the dimension of this paper, it will not be possible to share, in total, all the information produced but only the central and most relevant topics for the study.

Concerning the first topic, we were able to understand that these students, during their search process for a higher education degree, tend to look for general information about the areas of studies and existing degrees through the institutional website of the Directorate General for Higher Education (DGES). After identifying the higher education institutions and the degrees they are interested in, students look for more detailed information about the degrees, as formal presentations, objectives, possible career opportunities and the minimum access grade of the previous year (in Portugal, students finish high school with a grade that is ranked in a 20 points

scale, and their average grade is what will allow them to access higher education) on the official websites of those particular institutions. Later, after consulting information on institutional websites, they begin following the HEIs on their social media.

Alternatively, when they intend to search for a degree or explore a particular area of activity, they perform google organic searches, using specific keywords related to the name of the degree, the area of activity and/or job opportunities related to a specific area.

Regarding the second topic and the contents available on the institutional website of the HEIs, particularly ISCAP, the participants of this study considered that the presentation of the degrees was comprehensive. The layouts are appealing, and all the information is easy to access.

They were also questioned if the content provided by ISCAP had quality and whether it was sufficient to support their decision-making process. All the participants considered that, at an initial stage, the contents presented allowed them to have a general idea about the degree, the objectives and the professional opportunities. However, in a second moment, the participants pointed out that some other aspects were lacking, namely:

- Testimonials from enrolled students who are attending the degree (their perspective about the degree, the contents that were taught and the teachers);
- Testimonials from former students, sharing their own success stories and professions;
- Detailed information about the contents of the curricular units;
- Videos from professionals in the field of activity of the degree;

Despite considering the importance of having a considerable amount of information that would help them in their decision-making process, the students were also clear about the need of making that information appealing. Very long texts were discouraged and stated as uninspiring to students, and concise texts and specific terminology were preferred.

After searching for information on the DGES website and on the institutional website, they tend to follow the HEI on their social media, and the most used by the participants in this study are Instagram and Twitter. Facebook, despite being the most used social media, is only used by these participants sporadically and only to keep in touch with older family members.

Concerning their preferred time of use, the participants demonstrated that they are much more active on social media at night, when they wake up or during commute. They have classes during the day, the night period tends to be the most adequate to browse.

When asked about the type of content they prefer to view on social networks, they indicated:

- Instagram – Mostly Instastories, not paying a lot of attention to their feed;
- Twitter – Generally, they enjoy all the produced content because brands and users are more prone to express honest opinions and thoughts on Twitter. Furthermore, messages are short and immediate.
- Facebook – They only tend to view content produced by family and friends;
- YouTube – They are willing to see videos, but their duration is a concern.

Due to the focus group results with potential students, we felt that we could introduce some of their ideas in our communication strategy that needed to be updated, especially due to all the communication constraints that were in place. This led to the implementation of a digital communication strategy, supported by proper terminology management, that will be described in the following topic.

6. Digital Communication Strategy and Terminology Management

Having a digital communication strategy implies, as already mentioned, an online presence. This is fundamental because “A large part of today’s students orientation process takes place online, so schools should try to invest in this online orientation and make it as accessible and easy as possible (de Boer, 2020).

The main goal of this digital communication strategy is to attract new students and make our degrees even more known while increasing the institution's notoriety.

Thus, considering the collected data from the Focus Group, we focused our attention on our website and our social media profiles, mainly Instagram.

The institutional website was used to promote interaction with broader target audiences (students, career counsellors, teachers and parents), using simple and accessible language, with short texts for more pleasant and efficient reading. The intent was to disseminate information regarding the presentation of the degree, the degree plan, career opportunities, access conditions and other relevant information as established partnerships, for example. Furthermore, there are contacts available for the degree directors on each course page, so students can contact them and obtain more detailed and updated information about the course. The website also had a clear structure and easy navigation.

ISCAP opted for Instagram, Facebook, LinkedIn, YouTube, and Twitter regarding the social media platforms. Facebook, Instagram and Twitter were the platforms selected as they are the most used social media platforms in Portugal, according to a study done by Marktest and carried out in 2021, but which has already been done in previous years with similar results (Grupo Marktest, 2021). The students used in the focus group ended up confirming these options. LinkedIn and YouTube were also added because they could reach other types of audiences that could also be interesting for ISCAP.

ISCAP has had these profiles for a few years now. Still, the Communication and Public Relations Office (CPRO) of the institution started to use them on a more systematic basis since the beginning of the pandemic because they were an accessible and dynamic vehicle for disseminating important information among existing students and potential ones. Despite having profiles in all of these social networks, Instagram (@iscap.pporto) became a priority due to the focus group results. According to the study, Twitter would also be necessary, but we could not manage it due to time constraints.

All the developed contents, as well as the timing for sharing them, must respond daily to the challenge of making online content that is helpful (Scott, 2015). Bearing that in mind and the students' suggestions, from April 2021 onwards, ISCAP launched a digital communication campaign focused on the website and social media platforms. ISCAP's digital communication strategy can be divided into four stages:

Table 1: Digital Communication Strategy

Stages	Description	Contents
Stage 1 Website "testimonies"	Association of "ambassadors" to each one of the courses. "Ambassadors" were finalist students who could share some of their experiences. The testimonies of the ambassadors were available on a specific area of the website, according to each of the bachelor courses (eight). These testimonies were highlighted on the website through a banner with specific terms that could draw some attention (e.g. Ambassadors; testimonies; sharing experience, etc.). It was also disseminated through social media, as it will be possible to observe in stage 3.	The ambassadors' testimonies covered the following contents: <ul style="list-style-type: none"> ▪ Reason for entering the course; ▪ Differentiation of the professional profile; ▪ Areas of knowledge taught in the course; ▪ Advice and tips for the new student; ▪ Experiences and learning.
Stage 2 Website "Opinion Articles"	Develop an opinion article created with opinions from students, course directors and companies.	<ul style="list-style-type: none"> ▪ Course description; ▪ Characteristics and essential skills acquired or necessary to develop a professional activity in a specific area.
Stage 3 Social Media (Instagram, Facebook, LinkedIn)	Creation of a post on Facebook and Instagram posts, along with eight 8 Instastories (one per course and a broader Instastory with information regarding all the courses). It was also developed a LinkedIn post for each one of the courses.	<ul style="list-style-type: none"> ▪ Identification of the ambassador for each course and their contact; ▪ Motivational quotes are taken from the testimonies; ▪ Hashtags association, related with the course, area of activity and the school.
Stage 4 Social media (Instagram, Facebook)	Creation of instastories intended to raise awareness about administrative procedures and other important information directed to ISCAP's first-year students.	<ul style="list-style-type: none"> ▪ Tips; ▪ Brief description of the procedures; ▪ Frequently asked questions (FAQ)

Along the previous activities, and over the course of the school year, ISCAP has also developed various activities that complement its online communication strategy. Several activities were developed with secondary and vocational schools, establishing partnerships with vocational guidance offices, promoting direct contact with teachers and students, and organizing various joint activities online (organization and participation in digital events through Zoom or Microsoft Teams and promoting online vocational guidance fairs, also through Zoom).

So, what we can describe as a student-oriented terminology was collected and structured to support uniformity and constancy in the different communication environments, was became a key factor throughout the four intervention phases, which were divided into website actions and social media actions. Using a terminological approach to support the communication strategy in the different environments led us to identifying a set of terms that became core to the content of the messages that were being conveyed and, for this very reason, maintained the attention to the followers. In addition, each publication or instastory had a set of specific hashtags intended to direct the search to ISCAP information.

Below is an example of the information contained in an instastory to illustrate the message's conciseness and the use of key terms. It is an instastory intended to draw attention to a testimony of one of the ambassadors for the Accounting and Administration course. It was translated to English for the purposes of this paper).

Table 2: English translation of an instastory

Instastory
Bachelor Degree in Accounting and Administration
Get to know Margarida Lopes on ISCAP's website Link in Bio.
#ISCAP #azulevermelho #pporto #cienciasempresariais #contabilidade #orgulhoemseriscap @iscap.pporto

The hashtags are fundamental for search purposes, and below there is a description of all the hashtags used and what they mean.

Table 3: Hashtags description

Hashtags	Translation	Description
#ISCAP	#ISCAP	The name of our institution
#azulevermelho	#blueandred	ISCAP official colours
#pporto	#pporto	Abbreviation of Porto Polytechnic Institute, to whom ISCAP belongs
#cienciasempresariais	#cienciasempresariais	It means "business sciences", one of the core areas of the course
#contabilidade	#contabilidade	It means "accounting", one of the core areas of the course
#orgulhoemseriscap	#orgulhoemseriscap	It means "proud to be ISCAP", as ISCAP's slogan.

With current students, the communication mechanisms are more established, and communication problems tend to be scarcer. Still, the proper use of terminology also showed good results since students started to reduce contact with certain services, especially the Students' Academic Office, due to more accessible access to information (Stage 4).

All the Instagram posts and stories had a common title, with a single term, that alerted new information - "infoISCAP". This term was created to raise awareness about the new information being released, and they were also numbered as "infoISCAP1", "infoISCAP2", for example. Furthermore, there was a hashtag created with the same term "#infoiscap" to enable a quick search for this type of content.

To better illustrate the terminology management in place, we will share an example of an instastory (InfoISCAP3) regarding the information on how to request a diploma.



Figure 1: ISCAP Instastory (InfoISCAP3)

To better understand the content of the instastory, the following table provides a translation for the purposes of this paper.

Table 4: English Translation of the instastory “InfoISCAP3”

English Translation
#InfoISCAP 3
DIPLOMA
Access the following menus on DOMUS: <Certificates / Diplomas> <Obtain diploma>
Use Internet Explorer or disable pop-ups in other browsers (Chrome, Firefox, etc.).

As it is possible to see from this example, similar to many others, the message is conveyed through very specific terms without resorting to complex sentences. Instructions are clear and simple, combined with clear and specific terms.

There were several other stories with specific titles, similar to the following examples: Student Card; Working Students; Official E-mail; etc. The CPRO created dozens of posts and instastories during the COVID19 pandemic.

To finalize, and in addition to the information posted on social media and the website, it was also established a flow of Instagram messages (direct messages), which also contributed, to a great extent, to the reduction of e-mails and phone calls made to some of ISCAP services.

7. Conclusions

Communication using digital media changed and evolved considerably during the pandemic and the lockdown period, as it proved to be a fundamental vehicle for disseminating information. In contrast, other traditional forms of communication were conditioned.

With the insights provided by the focus group regarding their search process for courses’ information, the available information on the institutional website, and their preferred social networks, ISCAP was able to design

a digital communication strategy that was essentially concentrated in the website and on Instagram, since these were the preferred means to obtain information according to the students' focus group.

The implemented strategy has four stages with special regard to terminology in all of them. We can conclude that the strategy was successful, not only with potential students but also with the existing ones. That is clear since new students were able, during the lockdown period, to maintain the same level of interest and adhesion to ISCAP, filling all available vacancies for the school year of 2021-2022. In the case of current students, we managed to reduce the number of contacts to services through information posts on social media that were able to clarify many doubts on several administrative processes (how to obtain the diploma, how to obtain the student card, among many other topics).

Overall, the terminology management strategy in place was concentrated in keywords/terms, used preferably individually, that were able to indicate the content of the message. Focus group students had previously been alerted to the importance of short messages, and the use of controlled language helped to implement that suggestion.

To sum up, we believe that the digital campaign implemented, along with proper terminology management, was successful, helping ISCAP achieve the goal of attracting new students and engaging the current ones, despite the exceptional situation that we are living in.

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Roma Cultural Influencers: Social Media for Identity Formation

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Abstract: In the ‘Societies and Lifestyles’ project, 2006-2009, 10 post-communist countries analysed values of so-called fringers: small ethnic groups living on the fringes of society. One of them, the Hungarian Roma appeared to have a rich cultural heritage that had been exploited without its integration into an authentic and empowering cultural presence. (Forray & Beck, 2008). Roma heritage, representing about 10 % of Hungarian population, is not exhibited permanently, rarely appear in social media and isn’t recognised even by the socially challenged Roma community. Stakeholder meetings indicate that educational poverty is more threatening for youth than financial needs: it is cultural immersion is needed to build healthy identity. As part of the HORIZON2020 AMASS - Acting on the margins – Arts as social sculpture research project, we developed a training and mentoring program for aspiring Roma cultural influencers. We assumed that social media can be an agent to fight educational poverty and can be used as an arts-based intervention to promote the development of socially challenged youth. Influencers of the Roma community, predominantly male, focus on celebrities and scandals or raise their voice against negative prejudices. Their attitudes do not encourage majority youth to read their messages. Our young Roma girl influencers show cultural values of Roma heritage in witty, youthful voice that is convincing and popular. This paper presents their emergence and shows their unique voices. After two semesters of training in Roma culture, media skills, legal regulations, and online journalism, nineteen girls have successfully established themselves in social media. When disadvantaged minorities try to raise their voices, the response is often characterised as hostile and biased (Glucksman, 2017). We identified psychological traits needed for successful cultural media presence through pre- and post-course measurement. Our training program enhanced skills in all areas with digital competence showing the greatest improvement. The process-folios (documentation of growth during training, cf. Gardner, 1999) showed increased self-assurance and commitment to Roma roots. Those who opted out of the course were threatened by the aggressive tone of social media and / or found regular presence irreconcilable with daily duties (Kárpáti and Somogyi-Rohonczy, 2021). We analysed the social media iconography (Drainville, 2018) of the Roma on Instagram and TikTok in Hungary and on the international scene and identified the scarcity of authentic cultural content. Through cultural immersion, they appropriated ancient motives and symbols that often-assumed new meaning. Not hiding gloomy reality, their intention was to show beauty in their environment and highlight cultural achievements and personal growth against all the odds. The Hungarian Roma Cultural Influencers are not only content providers – they are role models also for their communities.

Keywords: cultural identity, Roma heritage, social media presence, Instagram, YouTube.

1. Training cultural influencers – a new form of representing Roma culture in Hungary

The Hungarian Roma, about 780,000 in number, the biggest majority in a country of less than ten million inhabitants. The Hungarian Roma belong to two major tribal groups that are different in culture, lifestyle and attitudes toward education. Members of the Romungro (‘Hungarian’, Vlach, ‘Wallachian’ or ‘Olah’) tribe have integrated in the culture of the majority Hungarians, do not speak their tribal language and do not adhere to ancient customs of the Roma community. The Boyash (or ‘Beás’) have retained an identity that is deeply rooted in their art (music, dance, crafts) and their language. Roma youth suffers from educational segregation in primary level education, where ‘special’ classes with lower attainment expectations are formed that become dead alleys as they do not prepare for secondary level studies. Currently there are more and more new programmes with textbooks in minority languages and support for the training and subsequent enrolment of Roma teachers. Only about 40 % of young Roma may continue their studies after the compulsory eight years of primary education. Vocational schools, however, often fail to provide them with qualifications that guarantee employment in a rapidly transforming economy. Too short or inappropriate education and unemployment are intricately related and the social distance between the Roma minority and the social majority constantly increases (Kertesi & Kézdi, 2011).

Roma culture (apart from music) is underrepresented in Hungary. Appropriation of the cultural heritage of a nation is a basic constituent of *national identity and self-esteem*, but it is difficult to attain there is no museum of Roma art (although several artists gain international reputation) and folk traditions are also underrepresented in regional museums. (Kárpáti et al., 2014). Perhaps the best educational initiative that integrates arts-based skills development and social integration is the Genuine Pearl Foundation (Oates and L. Ritoók, 2018). Communication skills of young Roma, mostly visualisers, while education is predominantly verbal, are often

underdeveloped and therefore most of them are unsuccessful at school (Kyuchukov et al., 2017). Visualisers may be, however, very successful in communication when they use social media platforms. Communication through media is a motivating platform for self-expression, and visual language may facilitate their conceptual development.

Through a European project entitled “Acting on the Margins – Arts as Social Sculpture” (AMASS), we decided to train Roma cultural influencers and prepare them to use their media channels for raising awareness about the positive aspects of Roma life: cultural heritage as well as current achievements in arts and science. The traditional ways of popularising a culture: museum exhibitions, books, cultural events, or research conferences may be beneficial for reaching small part of the adult population that frequents these venues. However, traditional means of cultural appropriation do not come up on the radar of a young audience. The AMASS project focuses on communities on the margin, and women are considered especially vulnerable members of disadvantaged groups. Therefore, we decided to train young Roma girls to formulate powerful cultural messages on social media.

Our arts-based intervention used the Facebook, Instagram, TikTok and YouTube platforms as creative environment to mentor young Roma girls in social media use. mentoring was necessary, as the girls encountered harassment through comments by those who have general, negative attitudes towards the Roma population and criticism from family members for stepping in the limelight. Every fourth participant left the course because they could not face criticism. problems concerning the workload of producing media content was another obstacle to face, but it could be overcome through coaching time management.

The stakeholder community around our training team included local municipal decision makers, educational politicians, and community members from cultural and political associations of Hungarian Roma who reflect on course content and mentor participants. This way, we hoped to avoid cultural colonialization – a practice that filters authentic content to suit majority ideologies. Before describing our training program through the introduction of a characteristic method, we summarise the current Roma social media landscape in Hungary.

2. Roma culture as represented on social media – a brief overview

2.1 Roma – or rather, Gypsy – imagery on Hungarian Instagram channels

When you search information about the Hungarian Roma on Instagram, the first obstacle is to find authentic content. On 20 December 2021, we did a thorough Instagram survey to identify related content on Hungarian and international sites. The *#cigány* (Gypsy) hashtag included entries about the misbehaviour of Roma people in urban areas (80 %) and news about events (20 %). Content tagged *#cigány* was predominantly pejorative that reinforced prejudices among majority Hungarians. When other hashtags were used in conjunction with *#cigány*, for example, *#cigányzene* (Gypsy music), and *#cigánytánc* (Gypsy dance), comments were less harsh. Two third of these posts represented images and names of musicians, and only one third contained negative comments about venues where Gypsy music was played. These event posts predominantly targeted the Roma population who were likely to participate, and, evidently, they were neutral or positive in nature. Posts tagged *#cigányság* (Gypsy community) were rare and contained historic information. We found two accounts only that included posts with the hashtag *#romakultura* (Roma culture). One of them, Romani Design, established in 2010, is a fashion studio run by the Roma designer Erika Varga and produces highly acclaimed garments with Roma motives. The other Instagram account entitled Salföldi Oldal (“A Page about Salföld” – a Hungarian region), contained information not only about a music festival organised there, but also added related cultural context. Apparently, the only positive aspect of Roma culture that was visible on Hungarian Instagram pages (except for the two channels mentioned above), was “Gypsy music”, a mixture of Roma folk music, songs from operettas and films. “Gypsy music”, a popular entertainment style played in restaurants worldwide has little or no connections with musical heritage of the Roma. (Bands playing world music, however, draw inspiration from authentic sources – but their work is far less wide-spread and practically invisible on social media in Hungary).

We also surveyed international Instagram sites, and found a much brighter and more sophisticated interpretation of the Roma heritage. Here, the image of Roma is associated with a richly contextualised visual style, mostly with the hashtag *#Gypsy* or even *#gypsy*, that was not meant or perceived as an insult. Although some older people who identify themselves as ethnically Roma (Romani or Romany) are still offended by being called “Gypsy” and standard dictionaries also avoid this term, more and more community members – including all the Hungarian Roma we encountered during trainings and stakeholder meetings - even embrace the term.

As indicated before, “Roma” is associated with “Romungro”, the assimilated Hungarian tribe, while Boyash and Olah communities prefer to call themselves Gypsy. On the international Instagram scene, negative hashtags like “#gypsy is a slur” are still found, but #Gypsy is a predominantly positive term. With about 7.5 million images representing Roma culture in a variety of settings, from traditional crafts through the influence of their dresses and objects on fashion and fine arts, this hashtag yielded images that elevated and praised this culture. The #romani hashtag was found under only 198 thousand images, while #gypsystyle identified 1,3 million, #gypsysoul 2,7 million, and #gypsyilife 896 thousand posts. Interestingly, we found only 24 thousand posts for #gypsymusic and 18 thousand for #gipsymusic and only 870 posts tagged #Romanimusic. This genre, diluted as entertainment, does not seem to attract international content creators on Instagram, – who are, however, fascinated by visual aspects of Roma culture.

On the international scene, the vast majority of Instagram images are positive – in contrast to Hungarian postings, that are overwhelmingly negative in nature and lack cultural content. (Exceptions are event advertisements – 20 % of the posts - two cultural channels, and four channels created by two Roma intellectuals and two researchers studying Roma culture). Culture as hashtag is not used frequently under international Instagram posts either (we found 241 mentions of #gypsyculture and 870 of #romaniculture) but the millions of images with a Gypsy hashtag show a lot of cultural content. These include examples of contemporary visual art and crafts, fashion inspirations, picturesque village scenes, folk art events, etc. This positive tone and varied, attractive content is what we hope to see, besides messages about social issues without negative assumptions, in the channels of the girls admitted to our Roma Cultural Influencer Course.

2.2 Gypsy imagery on TikTok

We evaluated TikTok content related to the Roma minority in Hungary and abroad on 20 December 2021. In Hungary, #cigány is forbidden here, because of the hate speech even the music posts with the hashtag involved. Of course, there are permutations of the word that are allowed: images with the hashtag #cigányok (Gypsies) reached 2,6 million views, and #ciganyokvagyunk (we are Gypsies) 2 million. Dance is the dominant genre, as it suits the environment so well. We found 9,4 million views for posts tagged #ciganytanc (Gypsy dance) and 9,4 million for the same word with correct Hungarian spelling, #cigánytánc. The next favourite genre on TikTok was #cigányzene (Gypsy music) with 7,3 million views, and another spelling of the same word, #ciganyzenek with 3,4 million views. Only with this genre did we find the hashtag #romazene (Roma music), with 3,1 million views. This term may be more acceptable for researchers, but, as we indicated before, not particularly preferred by the community it intends to describe. For art, crafts and dance posts it is practically never used, but for music, Roma is there in social media. The hashtags #romakultúra and #cigánykultúra (and the more sophisticated content they are associated with on Instagram) were not yet present on TikTok last December.

3. Photovoice and Visual Storytelling: central methodological models for training Roma influencers

Finding your voice means also finding your scaffolding structures that help you find the right response. Cultural influencers represent more than their individual interests and value system: they have to stand up for a community. Representing culture means to deeply understand, process and reveal cultural values that may be important for followers (Poulopoulos et al., 2018). The effects of influencers go far beyond raising awareness for a product or idea. They call to action, change life(styles) and deeply influence the way their fans think about themselves and their communities. Credibility is key (Nandagiri, 2018).

Keeping the results of influencer personality research in mind, we integrated netiquette, internet law and personality assertion training in our program. In the second phase of the program, we employed a psychologist-coach also active as journalist. Mentoring was organised in small groups and also individually, online and face-to-face, on a weekly basis. After the end of the training program in December 2021, further mentoring sessions will be offered on a voluntary basis, to follow our graduates in the first phases of building their channels.

Combining digital technologies with traditional means of expression like drawing, writing, singing, playing music or engaging in creative drama may all be integrated in the work of a cultural influencer. Although our program was media-based, we intended to provide a wide spectrum of creative opportunities. (For an illustrated description of our methods, cf. Kárpáti and Somogyi-Rohonczy, 2021). We found two methods especially useful for teaching future cultural influencers about the choice of relevant topic, authentic visualisation, striking image and emotionally charged, still accurate text: Photovoice and Visual Storytelling.

3.1 Photovoice

Photovoice as a method of imaging invites to work on the boundaries of art, anthropology, sociology and politics. It encourages in-depth acquaintance with the social (cultural, personal, economic, etc.) issues that will be represented in a sequence of photographs: field work and library research, interviews, and personal experiences (Latz et al., 2016). Participatory photography means the involvement of the creator of images in the life of a community – as a collaborator, not as an observer. “... our approach brings together creative expression, media, development, campaigning, and social change to deliver projects that encourage voice, build skills, deliver advocacy and work towards sustainable change.” (Photovoice, n. d.) The technological and aesthetic aspects of photography are acquired as means to an end: capturing a culture, a lifestyle, a conflict, or a social space worth presenting.

3.2 Visual Storytelling

When you tell a story through images, you may have a wide variety of inspirations – just think of the pastry called madeleine that provokes involuntary memory: a long train of thoughts and experiences revived that create the substance of “In Search of Lost Time” (1913) by the French author, Marcel Proust. In Visual Storytelling, the starting point is also an object of special significance. Holding it in hand after a long time, they have the power of calling forth a rich and vivid imagery. One picture leads to the other – and the visual story slowly unfolds (Hsu et al., 2020). Here are a few examples of works by participants of the Roma Cultural Influencer Training at Corvinus University Budapest, realised from September till December 2021.

Anette was born in a small village in the Mátra mountains of Northern Hungary. Her source of inspiration is her grandfather, from whom she inherited a bicycle and a fancy pair of ballroom shoes. When creating her Visual Storytelling video, she explained why these objects have a cultural significance. The old man was proud of his possessions and kept them in such good shape that the granddaughter can use them even today. His active working life (supported by the bicycle) and love of Gypsy dance and music (where he put the ballroom shoes to good use) represent diligence and joy of life for Anette. She is a social worker at a state institution for the support of disadvantaged youth, where she helps girls with a troubled past to continue education, find a job or a place to live, enter the health care system etc. She has created a podcast channel where she gives voice to everyday social problems of her community, rarely heard about even in public media, and interviews experts who can offer solutions. She also uses TikTok to popularise ideas that come up in podcasts. The two channels mutually support each other, as potential podcast audience is informed from TikTok about themes of interest, and those who listen to an interview register for her TikTok channel to keep updated.

Bettina has been working at cultural centres facilitating the appropriation of Roma culture by majority Hungarian youth. Her job involves constant confrontation with prejudices against her community, therefore she selected a penknife as her centrepiece for Visual Storytelling. A dangerous weapon in a fight, and a symbol of Roma violence, and a simple household utensil used for eating or carving beautiful wooden objects – Bettina emphasized the twofold meaning of this heirloom piece that belonged to her grandfather and asked for benevolence and openness towards new interpretations.

Hajnalka defines herself as a wife and mother and wants to reinforce the existence of these values in her community. As her husband is a musician and host of television programs about music, she considers it her mission to showcase the authentic music culture of the Hungarian Roma community. She also posts on Instagram and TikTok about the presentation of Roma in films, emphasizing her major messages: “Dare to dream, step forward, become a role model!”

Vanda comes from a Romungro family that does not connect to the Roma community. In the last two years, she has been searching for her roots and joining the cultural influencer course was part of this process. The object she selected for her Visual Storytelling video was a guitar, that she presented as a work of art – a beautiful object to admire – and as a musical instrument associated with the traveller lifestyle of the Roma. A talented painter, she enriches her posts on Instagram and TikTok with her works. Her major message is that association with a community is not a matter of looks (her features do not show her Roma origin), but a matter of choice.

Mira was born in a small village in Borsod county, one of the poorest areas in Hungary. She belongs to a Roma community that does not adhere to traditions. Maybe therefore, she has chosen to tell stories through garments and spaces. Her series, “Your other face”, shows young Roma women, fashionably dressed, in shabby, still striking village spaces. This juxtaposition of model and surroundings has given rise to vehement discussions on

Instagram about the attachment to the place of birth and intentions to break out, fight prejudices and show “the other face”.

Szabina came to the course as one of the most famous Roma influencers, and anchor at Dikh TV, the television channel of the Hungarian Roma community. Her Facebook and Instagram pages attract hundreds of thousands of followers. As a result of her studies with us, her messages became less glamorous and are now targeting life choices for Roma women: the importance of realising potentials on the job, having the courage to negotiate traditional female roles in the Roma community and the problems and joys of being a divorced mother of a small child.

4. In conclusion

The main aim of the project briefly reported here was to empower young Roma girls and women to *effectively express their cultural heritage, contemporary, social issues and achievements* through social media and thus disseminate knowledge and change negative attitudes about the Roma minority. Some communication skills are essential in this mission: creation of oral and written media pieces, photos and videos and different genres in journalism.

The target group of the project was disadvantaged on multiple levels: the Hungarian Roma are a socially undervalued, economically disadvantaged minority. Moreover, in Roma culture, the women - especially young girls- have even more limited life perspectives and possibilities to decide about their future. The expected attitude in this community is to prefer motherhood over further education and professional career. This attitude is more stressed in the countryside, where the scarcity of jobs forces women to give birth and support their families through childcare allowance. Despite these factors, strong-willed Romani women are often the catalysts for change and the driving force in the families. Through an effective and authentic representation of Romani culture in social media, the new cultural influencers may build a cultural bridge between minority (Roma) and majority members of the Hungarian society.

How can we contribute to the solution of social problems of an oppressed minority through developing digital literacy skills and media expertise of a small group of young women? Educational empowerment may lead to the formation of a native group of media professionals who may represent the interests of Roma more effectively.

Through social media, our course participants may disseminate knowledge and change negative attitudes about the Roma minority. The aspiring cultural influencers have launched their channels and started creating relevant, inspiring, and educating media pieces for their own community and for the Hungarian public as well. The final work of our course participants was to create a media piece all on their own, from organising the interview to filming and editing it for a social media channel of their choice, adding text and images where necessary. Through this task, they represented nationally acknowledged Roma artists, designers, teachers, social workers etc., who may serve both as role models and as sources of cultural identity. As there is very little positive media representation of Hungarian Roma, and their cultural heritage is practically unknown to young audiences, our training program may contribute to changing the gloomy media landscape.

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Social Media about Grandparents as Childcare Providers: Evidence from Russian Region

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Abstract: Social media and the internet are proving more and more popular, even among older people. While still providing child care, grandparents become active users of social media. This research aims to estimate whether publications mentioning grandparents explore the topic of raising grandchildren and whether the increasing activity of older people on social media results in more proactive grandparental labour. The paper analyses socio-political communities—including the mass media ones—of the largest social media in Russia—Facebook, VK, Instagram, Telegram, and Odnoklassniki. The location of the publications analysed is the Sverdlovsk Region. The sample included posts mentioning grandmothers and grandfathers. The analysis identified main topics which the publications mentioning grandparents are associated with and tried to find a correlation between their activity on social media and contribution to childcare. The research shows that the publications analysed are mostly related to the topics of safety and accidents. Education and childcare rank third in terms of the frequency of posts mentioning grandparents. The publications mention grandmothers more than three times more often than grandfathers. On the one hand, social media facilitate a better understanding between the younger and the older generations. On the other hand, social media may replace face-to-face communication with grandchildren. Grandparents are becoming less involved in raising grandchildren because of the increasing retirement age and state programmes that support social activity of the older generation, which is proved by their activity on social media and results of this study. However, in the Russian Federation, the state and information support for grandparental labour (i.e., grandparents' activity while raising, educating, and taking care of grandchildren) may become one of the tools to promote fertility. The paper suggests several possible mechanisms to integrate grandparental labour in the economic subsystem of the society.

Keywords: social media, grandparents, childcare, grandparental labour, older people, communication

1. Introduction

Every year, the internet and social media are becoming more popular among older people. However, the core audience of social media established in 2005-2010, when a rate of new social media users could be increasing by 100% per year among specific age groups (Perrin, 2015). In the following decade, this rate accounted for on average 3-7% per year (Auxier and Anderson, 2021; Statista, 2021). Among older people, the increase rate was the highest but remained within the range mentioned above.

To forecast the number of older social media users, it is possible to use the cohort component method, which is effective for 10-15-year intervals. For example, in 2010, the number of social media users aged 50-64 equalled to 47% of the total adult population of the US (Madden, 2010), whereas those aged 65 and above accounted for 26% (Perrin, 2015). However, in 2021, the latter figure increased to 45% (Auxier and Anderson, 2021). (The mean value method would have been less effective in this case with the result being 52-54% of social media users aged 65 and above). The cohort component method allows arguing that within 10-15 years nearly 70-75% of the US citizens older than 65 and 80-85% of the ones aged 50-64 would use social media. In 2041-2051, these figures would increase to 80-85% and 85-90% correspondingly. (In 2021, among social media users were 73% of those aged 50-64 and 81% aged 30-49).

The increasing social media presence of older people has a vast potential for their integration into the social life—in terms of self-development, education, communication, and leisure time (Llorente-Barroso, Vinaras-Abad, and Sanchez-Valle, 2015) as well as personal fulfilment. Another advantage of online engagement lies in improving health conditions of older people. Junfeng and Jiang (2022) found that “middle-aged and older adults with access to the internet had better physical and mental health than those without, and online social capital indeed improved middle-aged and older adults' physical and mental health”. However, these positive changes also have a downside—fewer time for family and for helping children to raise grandchildren. As the cohort component method yielded the more pervasive social media presence of older people in the future, the duration and intensity of grandparental labour would hypothetically decrease over time. By grandparental labour,

Bagirova and Shubat (2021) imply the involvement of older women and men in the sphere of parents’ labour; they also consider parenting as a separate type of labour exercised while taking care of children.

The social media environment should be viewed as a determinant of the grandparental labour intensity. With that, there is currently the inverse correlation between the social media presence of older people and the intensity of grandparental labour due to the following reasons:

- The more time grandparents spend on social media, the less time they have for grandparental labour.
- Publications on social media mentioning grandparents are not related to the topic of raising grandchildren.

Today’s statistics prove the increase in both social media activity and time spent on it. The research attempts to study the context grandparents appear in on social media, which topics the publications mentioning grandparents cover, and how often these publications explore the topic of childcare.

2. Research sample and methods

The sample included posts featuring categories under analysis—“grandmother” or “grandfather”—and published in one of the following communities: mass media accounts, authorities’ and companies’ pages, socio-political communities. The analysis did not cover communities focused on entertainment, leisure, and advertisement. The sample is restricted not only by the topic, but also by the territory and time. The location of the publications analysed is the Sverdlovsk Region. Generally, the sample comprised 15 102 posts published in 2021 on 5 social media—Facebook, VK, Instagram, Telegram, and Odnoklassniki. To sample posts, a social media management instrument was used (API-Monitoring, 2021). Table 1 presents an overview of the sample.

Table 1: Overview of 2021 sample of social media posts

Number of posts	Type of account			Social media				
	Mass media accounts	Authorities’ and companies’ pages	Groups	VK	Instagram	Facebook	Telegram	Odnoklassniki
Mentioning grandparents	4,785	1,245	7,407	10,628	439	572	1,149	649
Mentioning grandparental labour	695	229	741	1,453	29	75	40	68
Total	5,480	1,474	8,148	12,081	468	647	1,189	717

Most often, posts with the keywords “grandmother” and “grandfather” are published in social media groups. Grandparental labour is almost equally mentioned in mass media accounts and groups. Authorities and companies publish posts mentioning the social group analysed less often than others.

The biggest number of posts with the keywords “grandmother” and “grandfather” was found on VK—the most popular social media in Russia with 72 million users (Mediascope, 2021); thus, it was given closer attention. Most of the Odnoklassniki users are also Russian citizens with less than 10% being from Belarus, Kazakhstan, Germany, Armenia, and Georgia. Odnoklassniki is traditionally considered a platform for older people; however, the share of its users aged 35 to 44 is 1.34 times higher than the share of this age group in the total population of Russia and 1.10 higher than that in the total number of internet users in Russia. Telegram messenger—which was banned by The Russian Federal Service for Supervision of Communications, Information Technology and Mass Media until June 2020—is the third most popular after WhatsApp and Viber with nearly 23 million users (Statista, 2021).

This research aims to analyse which topics are covered by the posts mentioning grandparents. To that end, it is crucial to evaluate how often grandparents are mentioned as grandparental labour actors—those who are involved in taking care of their grandchildren—and not only in the professional, sport- or entertainment-related contexts. A linguistic analysis of the topics covered and a text sentiment analysis were conducted. Further, there was designed a word cloud—that is “a visual representation of word frequency derived from written text” (Atenstaedt, 2017) to identify the focus of the material. The sentiment of the posts was based on the neighbouring keywords. For example, if the word “grandmother” neighbours words with the negative sentiment (“anger”, “punish”, “aggression”, “problem”, etc.), this publication was classified as the one having the negative sentiment.

3. Results

The thematic and sentiment analysis yielded the following results.

3.1 Grandmothers are mentioned 3 times more often than grandfathers.

In total, the category “grandmother” was mentioned 11 861 times on 5 social media under analysis. The biggest share belongs to VK—75.9% of the total number of the posts analysed. Figure 1 presents the distribution of publications concerned with grandparents on VK.

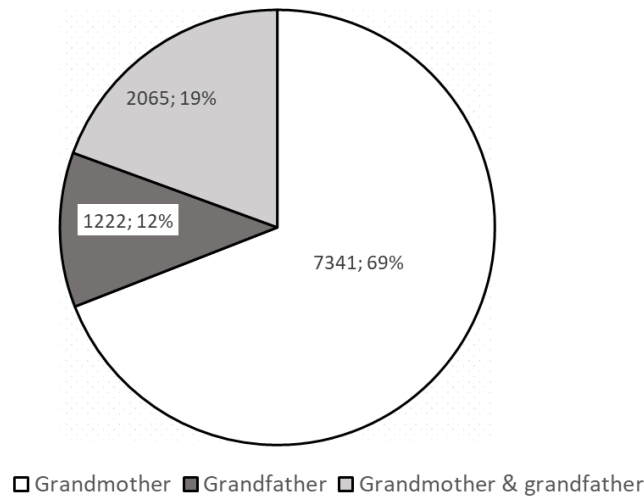


Figure 1: Distribution of publications concerned with grandparents on VK

Grandfathers were featured 2.86 times less often than grandmothers; 69% of VK posts were dedicated to grandmothers and only 12% to grandfathers. 19% of VK posts mentioned both grandparents. Other social media have the smaller number of publications, but the pattern revealed still remain. Figure 2 presents the distribution of posts concerned with grandparents on Facebook, Instagram, Telegram, and Odnoklassniki.

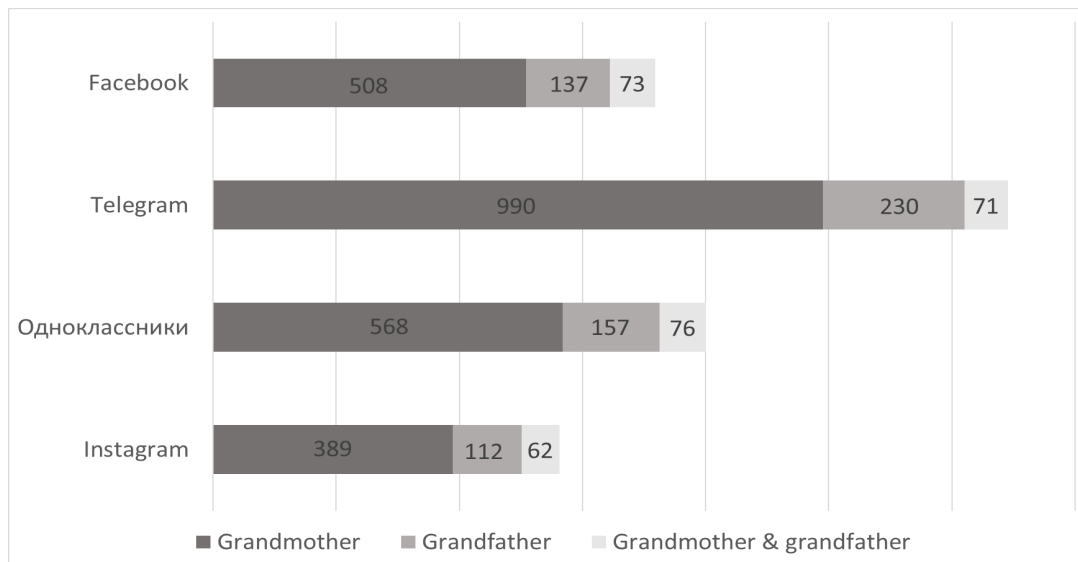


Figure 2: Distribution of publications concerned with grandparents on social media

Telegram ranks second according to the number of publications. On this social media, the gap between the number of posts mentioning grandmothers and grandfathers is even larger—more than 4 times—than on VK. (Publications mentioning both grandparents were not covered). As for other social media, the discrepancy slightly exceeds 3 times. Therefore, VK has a more even structure of mentions, but as compared to other social media, the difference is still minor. In general, grandmothers are normally paid much more attention on social media in the Sverdlovsk Region compared to grandfathers.

3.2 Education and upbringing are the third most frequent topics among the posts mentioning grandparents.

The most popular topic on all social media is safety and accidents, followed by healthcare and upbringing of grandchildren. The share of publications on education and upbringing is only 10.5% among all topics mentioning grandparents. Figure 3 shows a word cloud with all topics. The more often the topic is raised, the larger it is in the cloud.



Figure 3: Topics of posts related to grandparents

The share of posts concerned with the other two most popular topics—safety and health—is 23.5% and 14.2% respectively (of the total number of posts). The largest number of publications on these topics was found on Instagram. Culture, holidays and celebrations are mentioned on VK and Odnoklassniki equally often. On Telegram, the context of holidays and celebrations is insignificant and is often referred to the topic of social support, where the keywords analysed can be found rarely. Figure 4 presents the distribution of top topics of posts related to grandparents on different social media.



Figure 4: Topics of posts related to grandparents on different social media

On analysing the context of the keyword “grandfather”, it was concluded that the topic of security is the most popular on all social networks. Odnoklassniki mentions the topic of education and upbringing along with healthcare. The least frequent topic, as in the case of the keyword “grandmother”, is social support. On Telegram, it is not mentioned at all. In addition, culture-related topics are rarely raised on Odnoklassniki. The least frequent topics in the context of the keywords “grandfather” and “grandmother” are social support, religion, physical education and sports.

3.3 The posts covering the topic "education and upbringing of grandchildren" have mostly positive or neutral sentiments.

The sentiment analysis of publications allowed classifying the sample of posts into two groups with the first one being a group of positive and neutral publications and the second one a group of negative or problematic

publications. In general, negative publications on social media account for no more than a quarter of all units of analysis. At the same time, there are small statistical differences depending on the social media. The distribution of the share of posts by their sentiments is shown in Figure 5.

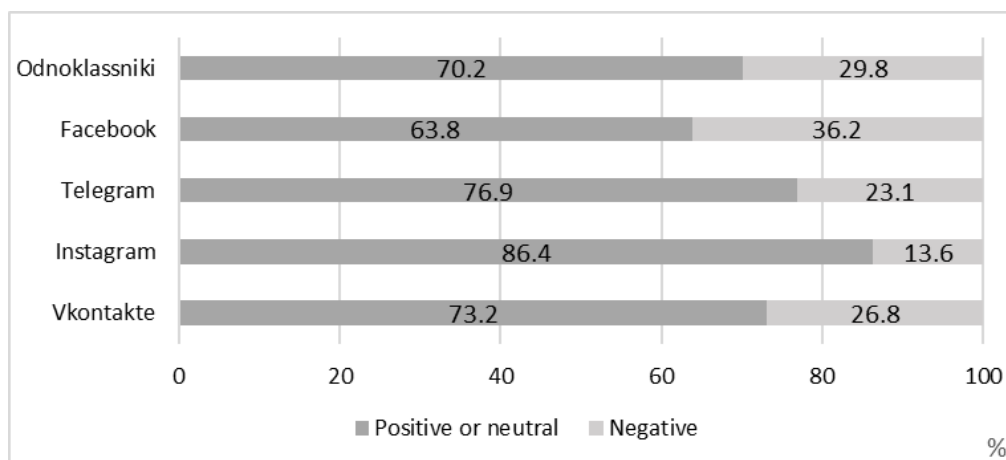


Figure 5: Sentiments of publications about grandparents

In particular, the number of negative publications is the largest on Facebook (36.2%) and Odnoklassniki (29.8%). The smallest number of problematic publications was found on Telegram (23.1%) and Instagram (13.6%), which may be due to certain features of these social networks. Facebook and Odnoklassniki are more focused on everyday communication and have a wide range of feedback tools. On the other hand, Telegram and Instagram provide fewer feedback opportunities and are used to increase the social capital.

4. Discussion

Publications about grandparents on social media and their context are important for the research to assess the information environment that emerges around the topic of raising grandchildren. The information and communication environment developing on social networks around this topic is one of the determinants of the grandparental labour intensity.

Grandparental labour can contribute to supporting family and stimulate the birth rate. In many developed countries, birth rates and the natural population growth are declining; therefore, it is crucial to find new tools and resources to stimulate fertility. At present, researchers are studying the phenomenon of grandparents' participation in raising children from various aspects. They view grandparents taking care of children as an alternative to subsidies and public childcare services in Belgium (Biegel and Neels, 2021), Spain (Osuna, 2021), China (Zhong and Peng, 2020), and other countries. Aparicio-Fenoll and Vidal-Fernandez (2015) proved that in Italy grandmothers' availability for childcare "increases the labor force participation (LFP) and fertility of daughters". This essential conclusion suggests that grandparental labour can increase the birth rate in Russia. Other studies confirm that time spent with grandchildren has a positive effect on the health of grandmothers (Gessa, Glaser, and Tinker, 2016).

At the same time, a number of researchers also note the negative effects arising from the grandparents' participation in the children's upbringing. First of all, they affect grandparents' life and self-perception. Backhaus and Barslund (2021) found "a large negative impact of grandparenthood on the employment rate of women aged 55 to 64" in 10 European countries. Simultaneously with raising the retirement age, many countries initiated Active Aging Programmes (Piekkola, 2004; Evans, Nistrup, and Pfister, 2018). They provide better opportunities for older people to participate in the economy and public life. As a result, older people are more interested in self-realisation and a more active social life, whereas a need to participate in grandchildren's upbringing leads to depression (Brunello and Rocco, 2019), financial problems (Bagshaw et al, 2015) and deterioration of health (Grinstead et al, 2003). Boon-Nanai, Thaggard, and Montayre (2021) revealed elder abuse and disrespect while taking care of children, particularly, "prolonged childminding deprived them of time which could be used to benefit them and their community in the long run". Moreover, older people could use this time for communication, extra work, or entertainment on social media. However, excessive online interaction, according to Junfeng and Jiang (2022), as well as poor understanding of the cultural context while

taking care of grandchildren (Boon-Nanai, Thaggard, and Montayre, 2021) lead to the deterioration of mental and physical health of the elderly.

Henderson et al (2017) emphasised the importance of the cultural context when studying the social phenomenon of grandparents' childcare. Thus, it is important to ensure a balance between the culture of grandparental labour, participation of older people in public life, and their social media presence, as well as to develop the information environment to maintain this balance. According to the research, the information environment around grandparents on social media is now dominated by the topics of health and medicine, safety and accidents, while the topic of raising grandchildren is one of the least frequent.

Based on results and studies mentioned above, determinants of grandparental labour intensity can be grouped according to their positive or negative impact on this process. The determinants that contribute to low grandparents' involvement in grandparental labour include:

- Raising the retirement age
- Active ageing programmes
- Support measures for women with children which encourage them to stay on parental leave for a long time
- Increasing usage of social networks among people aged 50+.

For the most effective use of grandparental labour for increasing fertility, it is necessary to reinforce the intensity determinants with a positive impact and to mitigate the negative one, which results in the lower grandparents' involvement in grandparental labour. Mechanisms to integrate grandparental labour in the economic subsystem of society, which allow overcoming the abovementioned determinants, include:

- Lowering the retirement age for grandparents actively involved in the upbringing of grandchildren;
- Supplementing active ageing programmes with the activities aimed at strengthening family ties (e.g., compensations for family cultural activities, psychological assistance for family conflicts, special courses for the elderly on the modern methods of raising grandchildren).
- Introducing direct payments for grandparental labour
- Developing the information environment on social media which would place particular focus on the importance of grandparental labour in the society.

5. Conclusions

The study explored publication topics mentioning grandparents on 5 social networks (Facebook, VK, Instagram, Telegram, and Odnoklassniki) in different socio-political online communities of the Sverdlovsk Region. The analysis showed that the main topics of such publications are safety and accidents and health and medicine. Education and childcare rank third among other topics in terms of their frequency. Posts mentioning grandmothers are published more than three times more often than those related to grandfathers. The increasing usage of social networks among people aged 50+ is considered one of the external determinants of grandparental labour intensity, which negatively affects their participation in the upbringing and taking care of children. Mechanisms to integrate grandparental labour in the economic subsystem of society, which allow overcoming this determinant, include the development of the information and communication environment on social networks, where the topic of grandparents' participation in the education and upbringing of grandchildren will be as popular as the health and social activity of older people.

Acknowledgements

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Racialised Digital Dating Experiences of Mobile Dating Application Users

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Abstract: With the emergence of mobile dating applications like Tinder, people have changed how they pursue romantic relationships. However, real-world issues pertaining to race and ethnicity that often emerge as people interact are still being experienced in the virtual world. Given the increased popularity of mobile dating applications, there is a pressing need to explore how racialised digital dating are manifested online. The study therefore explored the racialised digital dating experiences of users of the mobile dating application Tinder as well as the influence of Tinder's affordances on these experiences. Through a qualitative study based on 25 semi-structured interviews, the study identified three categories of racialised digital dating experiences: Matching Experiences, Communication & Interaction as well as Fetishism & Stereotypes. The study also revealed how Tinder affordances of Locatability, Multimediality, and Visual Dominance could be actualised by users to achieve their preferred racialised digital dating experiences.

Keywords: Ethnicities, Race, Mobile Dating, Tinder, Racialised Mobile Dating, Affordances

1. Introduction

The turn of the 21st century has witnessed society's transition towards technologically mediated forms of social engagement (Corriero & Tong, 2016). Interactions that used to occur purely within the physical world, are now supported by interconnected digital platforms (Chan, 2017). One such interaction is the quest for romantic partners which may now be pursued through digital means on applications like Tinder (Gatter & Hodkinson, 2016).

While such digital tools have revolutionised how people seek potential partners and form relationships, the social experiences that are being created and perpetuated within these digital spaces (Mason, 2016) should not be over-looked. Indeed, literature shows that dating on mobile dating platforms is racialised (McGrath et al., 2016; Spell, 2017). This implies that, on mobile dating platforms, ethnic groups are perceived differently, which might further influence their overall engagement experiences. In the context of this study, the term 'racialised digital dating' refers to dating amongst mobile dating application users within an ethnically diverse context.

Hwang (2013) states that real-world issues are often manifested in digital communities. Hence, experiences inherent to race and ethnicity that prevail in the real-world could also occur during mobile dating and should be explored. Moreover, it is important to understand how affordances of mobile dating applications might influence these racialised digital dating experiences (Mason, 2016; Timmermans & Courtois, 2018). Affordances are defined as "the potential for behaviors associated with achieving an immediate concrete outcome and arising from the relation between an object (e.g., an Information Technology (IT) artifact) and a goal-oriented actor or actors" (Volkoff & Strong, 2013, p. 823). Therefore, this study aims to explore the racialised digital dating experiences of users of a mobile dating application as they actualise the affordances of mobile dating applications. The research question is formulated as follows: *What are the racialised digital dating experiences of mobile dating application users and how are these influenced by affordances of the apps?*

The study focused on Tinder, a location-based mobile dating application (Mason, 2016). Tinder allows users to setup a dating profile that may contain an album of photographs, a short biography, and the current employer/educational institution (David & Cambre, 2016). The research question was answered Through an interpretive and exploratory case study of Tinder. 25 semi-structured interviews were conducted and the data was analysed using thematic analysis.

The paper proceeds as follows: In the next section, an overview of literature on racialised digital dating, the concept of affordances and Tinder's affordances is provided. The research design for the study is then presented, followed by a description and discussion of the findings. In the conclusion, the theoretical and practical

implications as well as limitations of the study are outlined. Recommendations for future research are also proposed.

2. Racialised digital dating

Racial preferences that exist in the real-world are perpetuated in the online dating world. For instance, users who were likely to date people of their own race are more likely to have the same preference in the digital space (Hwang, 2013). Racialised digital dating is also manifested when some races are preferred to others. For instance, mixed-raced users often enjoy an elevated status in the online dating scene in the United States (Curington et al., 2015). This racial hierarchy amongst online dating users also categorises Asian male users as the least desired aggregate user (Sautter et al., 2010) while Black women are often not favoured by users of other races (McGrath et al., 2016). The realisation that digital dating is indeed racialised heightens the need to further investigate the phenomenon. It is important to explore the experiences of the users as they engage in an ethnically diverse digital context via mobile dating applications (McGrath et al., 2016).

Individuals tend to prefer romantic partners who are similar to themselves in real life, indicating some degree of homophily (Finkel & Eastwick, 2008). This preference is also manifested in the digital dating world whereby users often prefer other users who are similar to themselves (Hitsch et al., 2006). Indeed, the effects of homophily are more pronounced in the digital dating scene compared to the real-world (Gibbs et al., 2011). Fiore and Donath's (2005) work echo this sentiment and found that between pairs that had already matched on online dating services, they were statistically likely to share certain characteristics. Race was found to be the most significant indicator of homophily and could be the most important variable in determining whether a user is attracted to a potential match (Toma & Hancock, 2010). It must be noted that individual preferences in relation to mate selection is hard to measure, due to the fluid nature of attraction and the subjective factors that influence it (Finkel & Eastwick, 2008). The current emotional state of an individual also impacts their affinity towards a potential partner (Finkel & Eastwick, 2008).

3. Understanding affordances

According to Chan (2017, p. 247), affordances are "the subjective perceptions of artefacts that are based on their objective qualities". Affordances are possibilities for action and relate to the "multifaceted relational structures" between the artefact and the user. These relational structures further enable or constrain possible behavioural outcomes (Evans et al., p. 36). To unpack a tool's affordances, both functional features as well as social processes should be examined. This approach overcomes the limitations of both socio-psychological theories and technologically deterministic theories (Harindranath et al., 2015).

According to Pozzi, Pigni and Vitari (2014), affordances emerge through a cognitive process that includes four stages: 'affordance existence', 'affordance perceptions', 'affordance actualisation' and 'affordance effect'. 'Affordance existence' infers that an affordance exists irrespective of whether an actor cares about it or even perceives its existence. 'Affordance perception' infers that actors need to perceive or recognise an affordance in order to exploit its potential. This recognition process is influenced by the features of the tool, the capabilities and goals of the actor as well as external information. 'Affordance actualisation' relates to the actions undertaken by actors as they utilise and take advantage of the perceived affordances of tools to achieve specific outcomes. Lastly, as affordances are actualized, the process may result in an 'Affordance effect', which could relate to enabling conditions to generate additional affordances, development of additional features and/or enabling change (Pozzi, et al., 2014).

Past studies have mostly focused on the first three stages of existence, perception and actualization, and have not fully explored 'affordance effects' of technologies (Hafezieh & Eshraghian, 2017). Hafezieh and Eshraghian (2017) further claimed that while studying social media technologies, it is particularly important to explore outcomes of actualization. This study will follow this recommendation while seeking to explore the influence of Tinder's affordances on racialized digital experiences of users.

4. Tinder's affordances

There exist various affordances of Tinder. Authenticity relates to Tinder's reliance on a third-party (e.g. Facebook) to verify the users' authenticity (Tanner & Tabo, 2018). Synchronicity is to the ease with which real-time messages are exchanged on Tinder (Marcus, 2016). Portability is the accessibility of Tinder at various locations through the use of smartphones. Immediacy relates to the availability push notifications when users

receive messages and matches, even when the application is closed or inactive. (Timmermans & Courtois, 2018). Locatability relates to Tinder's reliance on users' geographic location to identify potential matches (Ranzini & Lutz, 2017). Multimediality relates to users' ability to link their Tinder profile to other social media profiles (Ranzini & Lutz, 2017). Lastly, Visual Dominance relates to the users' ability to use both text and images to design their profiles (Timmermans & Courtois, 2018).

5. Research method

The study was interpretive and exploratory. Interpretivism was ideal for this study, as the understanding of socially constructed issues, such as race, requires analysis of the intrinsic experiences and thought patterns felt by participants (Ritchie, Lewis, Nicholls, & Ormston, 2013). An exploratory study is a useful way of seeking new insight or assessing a phenomena in new light, especially to further clarify understanding of a problem and pinpointing the nature of the problem (Saunders et al., 2015). The purpose of this study was exploratory as it attempted to outline how the affordances of Tinder lent a hand in influencing racialized dating.

For this study, 25 semi-structured interviews were conducted to encourage respondents to expand on their responses and share important contextual information about their lived experiences. Interview lasted between 45 minutes to 1 hour and were conducted through video conferencing (i.e. Skype). The interviews were recorded after having obtained permission from the participants. Upon reaching saturation, each recording was transcribed and shared with the respondent to ensure accuracy.

The first part of the interview captured the respondents' demographic profile. Next, users racialised digital dating experiences were explored. Lastly, to understand the influence of the affordances on these experiences, questions around Tinder's functional features as well as the participants' social processes were formulated.

It was also important to conduct the study in a racially diverse context, to have access to respondents from various ethnical background. Hence, the study was conducted in South Africa, a country with complex ethnical categories (Dolby, 2001). A purposive sampling strategy was followed to identify respondents from this ethnically diverse context. Two sampling criteria were identified namely: race and gender.

A race or ethnicity is defined as a major division of the human race, with members sharing distinct physical characteristics (Morning, 2008). Defining objective ethnical categories is a challenge, as no globally recognised categories have been set (Firestone & Scholl, 2015). Since the study was conducted in South Africa, the ethnical terminology employed in this study aligned with that of Statistics South Africa. This was particularly relevant as participants would most likely have been exposed to these specific terms and categories (Dolby, 2001). Statistics South Africa classify the population according to 5 categories: Black African, White, Coloured (i.e. mixed race), Asian, and Other (Statistics South Africa, 2012). To obtain a holistic understanding of the race-related challenges of users, experiences of all genders were considered and participants were asked to self-declare their race.

Participants with an active Tinder account for more than one month were considered. This ensured that participants had previously engaged in social interactions with other users. Participants were identified through word of mouth and social media. The snowballing technique was also used to identify participants. An overview of the participants' demographics is provided in Table 1.

Data collection and data analysis were conducted concurrently. After each interview, the recordings were transcribed and imported into NVIVO. Thematic analysis was then performed, following the step-by-step guide outlined by Braun and Clarke (2006).

Table 1: Respondents Demographics

Respondent Acronym	Racial Category	Sex	Respondent Acronym	Racial Category	Sex
F1	Black	Female	M1	White	Male
F2	Black		M2	Black	
F3	Black		M3	Coloured	
F4	Black		M4	Coloured	
F5	Black		M5	Black	
F6	Black		M6	Coloured	
F7	Asian (Indian)		M7	Black	
F8	Coloured		M8	White	
F9	Black		M9	Asian (Indian)	
F10	Black		M10	White	
F11	Black				
F12	Black				
F13	Black				
F14	Coloured				
F15	Black				

6. Findings & discussion

The analysis of the interviews revealed three categories of racialised digital dating experiences: *Matching Experiences, Communication & Interaction* and *Fetishism & Stereotypes*. Each of these categories are now discussed, supported by relevant quotations from respondents.

6.1 Matching experiences

Racialised digital dating was manifested through the matching experiences of the participants. The matching experiences were influenced by the participants willingness to engage with the different ethnic group and as well as Tinder’s feature ‘ability to adjust the search geographic radius’.

Participants who were willing to explore and engage with other ethnicities explained that they were more inclined to do so through the app, as opposed to the real world. However, in spite of their willingness to explore and engage, some participants had limited matches with people from other ethnicities. While they swiped right, they did not necessarily receive a positive response from Tinder users of other ethnic groups. Respondents reported that they sometimes adjusted their preferred age group and geolocation radius to broaden their choices, but that was not always successful: *“I do swipe on people outside of my own racial group, but that has never really resulted in anything” [I-6]*

Respondents reported that some ethnicities are over-represented on Tinder, which further influenced their matching experiences. This might be related to the location of the users, whereby in South Africa, some regions are more populated by people from certain ethnic groups. Depending on the ethnic preference of the participants, this was deemed as both an advantage and a disadvantage: *“I would say that there’s more of the other race than my race. Obviously I don’t know if other people notice that but there’s definitely more” [P-C].*

Tinder provides users who are willing to engage with other ethnic groups with the opportunity to tap into this aspiration, allowing them to partake in a behaviour that they might not have easily had offline. Past literature has stated that homophily is predominant in the digital dating scene (Gibbs, Ellison, & Lai, 2011). But, this study found that through Tinder, some users are also inclined to explore other ethnic backgrounds, and this is further supported by the locatability affordance. Tinder is location-based (Ranzini & Lutz, 2017; Timmermans & Courtois, 2018) and if the user has a search radius that includes people from diverse ethnic background, they are presented with more potential matches.

However, the locatability affordance can also be a downside for those who are willing to explore. The distribution of South Africa’s population grouping tends to be clustered according to suburbs or regions. In other words,

some regions are predominantly populated by people of certain ethnic groups (Statistics South Africa, 2012). This tends to further limit the option of the Tinder users.

From an affordance theory perspective (Pozzi et al., 2014), Tinder is designed to be location-based (*affordance existence*). Users are aware that they can easily modify the search radius and some are able to utilise this feature to their advantage (*affordance perception*). In particular, they can adjust the search radius to tap into a wider pool of users from diverse ethnic backgrounds as required (*affordance actualisation*). However, there are two main constraints limiting the affordance effect (i.e. whether or not they match with someone from a different ethnic group). First, the location radius by which users could feasibly extend their search might still not offer access to a more diverse ethnic group. Secondly, a match also depends on the other users' willingness to engage with people of a different ethnic group (i.e. homophily).

6.2 Communication & interaction

Racialised digital dating experiences were manifested in the way in which participants of different ethnicities communicated and interacted with each other. Some respondents explained that they changed how they usually communicate while interacting with matches of a different ethnicity. They sometimes behaved in a manner that was not in line with their ethnic identities: *"But on Tinder, if you're going to go with the whiter way of doing things if you're hooking up or chatting in a certain way, doing something you wouldn't ordinarily do as a black or coloured person, that could definitely change the way we interact with the app based on of that"* (P-3)

Some participants adapted their language, choice of words (i.e. avoided certain slang words) and sometimes their accent while engaging with matches from other ethnicities. This is usually dependent on their perceptions of their matches' expectations. For some, this felt like a restrictive experience whereby certain words or slang that they felt more comfortable with could not be utilised freely: *"Whether it's like, a different race or anything well with talking I have to switch up the accent so that like they understand me, because I add a lot of Zulu words, Swati words whenever I speak English"* (P-K)

Topics of conversations were also chosen differently based on the ethnic group of the match. However, in some cases, respondents felt that interactions with other ethnicities were less fluid. They experienced the need to try harder get the other person to like them: *"I've found that while talking to people of other ethnicities depending on whether you want that person to like you are not like it almost seems like you have to make the conversation more interesting"* (P-A)

The findings revealed that the multimediality affordance is useful to Tinder users who engage with people from other ethnic groups and who find the communication to be less fluid in that regard. Tinder allows users to explore the social media profiles of their potential match (*affordance existence*). Users are therefore aware that they can potentially explore the various social media profiles of their matches to better relate and understand them (*affordance perceptions*). More specifically, users browse the social media profiles to understand how the matches usually communicate, identify potential conversation topics and understand their likes and dislikes (*affordance actualization*). They then adapt how they communicate accordingly (*affordance effect*). It is interesting to note that this is a common behaviour that most mobile dating users partake in when they are interested in a match. However, this study found that the multimedia affordance can also be useful in enhancing the quality of communication between users of different ethnic groups.

6.3 Fetishism & stereotypes

Some respondents felt fetishised while interacting with matches from other ethnic groups. In particular, they were of the opinion that some matches only want to experience being with someone of a different ethnic group, without necessarily seeking a more serious relationship. Some attribute the degree of fetishism experienced with the age group of the matches, whereby older matches tend to partake in this sort of behaviour more than others: *"They're just there for a fetish sort of an interest because none of them are serious"* [P-C]

In addition to fetishism, certain stereotypes tend to be attributed to ethnic groups. Respondents tended to associate certain stereotypes to matches of certain ethnic groups and also felt that certain stereotypes were associated to them by others. Examples of stereotypes could relate to people's choice of music, movies, sports, and even their expectations from a relationship: *"If I matched with a white guy, I will automatically assume that they're like, I don't know, really into like gym stuff. Very weird, but I automatically assume that they really into fitness"* [P-F]

The findings found that both the multimediality (Ranzini & Lutz, 2017) and visual dominance (Timmermans & Courtois, 2018) affordances could support the fetishism and stereotyping behaviour. As previously mentioned, Tinder is designed to provide users with access to pictures of potential matches either through their profile (visual dominance) or through other social media sites (multimediality) (*affordance existence*). Those who perceive themselves as victims of fetishism feel more vulnerable because of these affordances (*affordance perception and actualisation*). The study did not identify any insight into how users utilise multimedia and visual dominance to fetishise others. Instead, it unpacked the experiences of those who feel fetishised because of multimediality and visual dominance of the app (*affordance effect*). In other words, while the affordances might be actualised by other users, they nonetheless perceive the effect of these affordances.

Table 2 summarises the influence of Tinder’s affordances on the racialised digital dating experiences of users.

Table 2: Tinder Affordance Summary

Affordance	Affordance Existence	Affordance Perception	Affordance Actualisation	Affordance Effect	Racialised Digital Dating Experience
Locatability	Location-based design	Users’ awareness of the ability to customise the search radius on Tinder	Adjustment of search radius based on ethnic group interest	Access to wider pool of ethnic groups BUT mitigated by other users willingness to explore & search area demographic	Matching Experience
Visual Dominance	Profile design using Text and Images	Users’ awareness of how to design and customise their profile on Tinder to suit their needs	Profile design using specific images and text to indicate ethnic group preference Other users’ access to the pictures on their profile	Recipients perception of being fetishised	Fetishism & Stereotypes
Multimediality	Link to other social media platforms	User awareness of the ability to view other users social media profiles via Tinder	Access to users’ social media profiles to understand their matches communication style, and preferred topics	Ability to adapt communication to certain ethnic groups’ perceived style and preference	Communication & Interaction
			Other users’ access to their social media profiles	Recipients perception of being fetishised	Fetishism & Stereotypes

7. Conclusions

Mobile dating applications like Tinder have fundamentally changed how people pursue romantic relationships. However, as users engage on these platforms, they interact with people of diverse ethnic groups, which might result in digital dating being racialised. In order to design better systems and avoid perpetuating inequalities within society, it is important to explore how users of mobile dating applications experience racialised digital dating. Therefore, this paper examined how racialised digital dating experiences are manifested on Tinder, as well as the influence of Tinder’s affordances on these experiences. This influence was examined using the Affordance Theory.

The study contributes to the Information Systems (IS) literature by detailing how users experience racialised digital dating on a mobile dating platform like Tinder. In particular, three categories of experiences were identified: *Matching Experiences*, *Communication & Interaction* as well as *Fetichism & Stereotypes*. It is important to note that these categories of experiences highlight the fact that some users are willing to explore and engage with people of different ethnic groups while others prefer not to. Moreover, when users are indeed willing to engage with other ethnic groups, a resulting match is not always guaranteed and the potential interaction and communication is not always fluid. There are circumstances that influence users’ ability to match with people of other ethnic backgrounds. The other users must also be willing to engage in such a manner to

increase the likelihood of a match. Moreover, the external environment in which the users operate also play a role (e.g. where they are located and the demographics of the search area). As users engage with people from other ethnicities, they may perceive the communication to be less fluid and hence feel the need to change how they communicate to appear more attractive and interesting to their matches.

The study also contributed to IS literature by providing new insights into the influence of Tinder's affordances on the four categories of racialised digital dating experiences. The study specifically identified three affordances that play a role in how users experience racialised digital dating: Locatability, Multimediality, and Visual Dominance. The study specifically highlighted how these affordances could be actualised by users to achieve their preferred racialised digital dating experiences. Whether or not a user is willing to engage with users of a different ethnic group, Tinder's affordances can be used to support that preferred mode of interaction. The existence and perception of Tinder's affordances are standard. What matters is how users actualise these affordances to achieve their desired outcome.

The study also has practical implications especially pertaining to how mobile dating applications can be designed. Indeed, some users experience challenges in how they communicate and interact with different ethnic groups. Some of these challenges are related to communication. This reveals an opportunity to improve on the design of the mobile dating applications to include features that support and facilitate communication between ethnic groups. There is also a need to include features to better protect users who feel fetishised and hence vulnerable on the platform.

It is important to note some of the limitations of the study. First the qualitative study was limited to South African users. While the South African context is ethnically diverse and was thus considered particularly relevant for this study, the country also has historical circumstances, which might have influenced the results. Secondly, the researchers sought to acquire a relevant and representative sample, but it was not possible to interview some white female users. Their perspectives would also have been useful for the study.

Further research could be conducted to further evaluate the findings derived from this study using a wider sample of users, preferably from a broader range of countries. It is also recommended that future studies explore mechanisms to enhance Tinder's features in order to improve the ease of communication and better protect vulnerable users.

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Regulation of Social Media Intermediary Liability for Illegal and Harmful Content

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Abstract: The discussion focuses primarily on the manner in which the distribution of social media content needs to be governed in ensuring illegal and harmful content is limited (e.g. not accessible to children) whilst ensuring freedom of expression and speech. Closely linked to intermediary liability is the manner in which social media platforms self-regulate harmful content on their platforms. Since the European Union (EU) and the United States of America (US) implemented legislation pertaining to intermediary liability, technologies and business models have evolved to such an extent that legislation will have to be reformed to provide for the changes in the way users communicate today and the manner in which social media companies deal with content, especially harmful content. Whilst the United Kingdom (UK) is considering implementing the Online Safety Bill, the EU is considering updating the e-Commerce Act of 2000 by means of the Digital Services Act (DSA) and the US is re-evaluating section 230 of the Communications Decency Act (CDA) of 1996. The discussion explores the impact the proposed legislation will have on intermediary liability and self-regulation of content.

Keywords: social media intermediary liability; illegal and harmful content; Digital Services Act (DSA); Online Safety Bill; section 230 of the Communications Decency Act (CDA); social media self-regulation

1. Introduction

The discussion focusses on the reform that is required in respect of intermediary liability and/or content regulation to curb illegal and/or harmful content on social media.

There appears to be a correlation between the business model of large social media companies and harmful content. Although the platforms are free, they are profit-driven. Large social media companies have a specific business model, namely an engagement-driven advertisement-reliant business model. The platforms use algorithms to identify users' preferences allowing for the promotion of highly personalised content in addition to maximising scroll time, which incentivises customised, and thus potentially more harmful, content.

It is not only the business model of large social media companies that may contribute to harmful content, but some users may exploit social media platforms for illegal and harmful content. There are compelling arguments for reforming the liability regime for online intermediaries. Closely linked to intermediary liability is the manner in which social media platforms self-regulate content. Companies may not be incentivised to address harmful content on their platforms without legislation compelling them to do so.

Following the UK, both the EU and the US are looking to reform intermediary liability, and other countries may follow suit. In 2021, India implemented legislation governing intermediary liability. It is preferable to develop a set of policies that social media companies can apply globally. The internet is borderless and therefore government regulation should aim for a universal cyberspace in which free speech is protected and people feel safe to exercise their right to free speech but at the same time, this space must not allow illegal and/or harmful speech.

As governments are considering the reform of social media liability and self-regulation of content, consideration should be given to the following inter-linked issues:

- How should social media intermediary liability for illegal and harmful content be regulated?
- How should a government regulate illegal and harmful content on social media?
- Which human rights' safeguards pertaining to social media content and intermediary liability should government regulation have in place?

Each of the inter-linked topics could justify a discussion on its own. The purpose of the discussion is to provide an overview of the issues that a government should take into consideration when determining the manner in which government regulation should deal with social media liability for content and self-regulation.

2. Understanding the necessity for reform of intermediary liability

Social media plays a huge role in providing all users with freedom of speech. Prior to social media, main stream media controlled the conversation. Social media changed this and provides users, who may have been voiceless, a platform to share ideas and opinions (Smith and Van Alstyne, 2021).

Unfortunately, not all voices are harmless and there have been many examples over the years of communication that is harmful. For content that is harmful, but not illegal, social media platforms self-regulate through “community standards” and “terms of use” that users agree to when joining.

There are numerous examples of instances where self-regulation has not been successful in disabling access to harmful content, which has led to calls for statutory regulation (Woodhouse, 2021a). The UN found that Facebook had been a major platform for spreading hatred against the Rohingya in Myanmar, which in turn led to ethnic cleansing and crimes against humanity (Joseph, 2018). The video sharing site, YouTube, seems to automatically guide viewers to the extreme versions of what they might be searching for, for example, a search on vegetarianism might lead to veganism; jogging to ultra-marathons and Donald Trump’s popularity to white supremacist rants (Joseph, 2018). According to research conducted in September 2021 by the Campaign for Accountability’s Tech Transparency Project, Facebook allowed advertisers to target teen users as young as 13-years-old with inappropriate and dangerous content. Such content included advertisements promoting “pill abuse, alcoholic beverages, anorexia, smoking, dating services and gambling” (Smith, 2021). In September 2021, the whistle blower Frances Haugen, a former data scientist with Facebook, accused Facebook of failing to make changes to Instagram after internal research showed apparent harm to some teens and of being dishonest in its public fight against hate and misinformation (Milmo and Paul, 2021).

Joseph (2018) opines that human rights abuses might be embedded in the business model that has evolved for large social media companies in their second decade. In 1996, when section 230 of the US CDA was passed and in 2000, when the EU e-Commerce Directive came into operation, the internet was made up of largely chat rooms run by small start-ups. Now, large social media companies such as YouTube, Twitter and Facebook have become information gatekeepers that have vast control over what information users see and how that information is organized.

Several characteristics of the business model of large social media platforms have raised serious concerns. Social media platforms, such as Facebook and Twitter, are free, but they still need to make money which they generate from advertisements. The problem is not the advertisements, but the manner in which users are targeted with personalised advertisements. The business model only works if the companies collect large quantities of personal data from their users to understand their preferences, behaviour and choices. The companies use this to promote advertisements. The business model of social media platforms is therefore built on engagement and popularity which are linked to advertisement revenue. To build engagement, social media platforms amplify content to get attention (Edelman, 2021). Platforms make more money when users spend more time on the platform, reveal more information about themselves and see more ads. Algorithms on the platforms can actively direct users from the mainstream to the fringe, subjecting users to divisive and emotional content which are aimed at maintaining user engagement (Edelman, 2021).

It has been alleged that Facebook and Instagram give more credence to profit than protecting users against harmful content (Smith and Van Alstyne, 2021). In 2020, civil rights groups organized a boycott, called #StopHateForProfit, in which they urged companies to stop paying for advertisements on Facebook to protest the platform’s handling of hate speech and misinformation (Watney, 2020). Despite these calls, it does not appear to have had an effect on profit. In 2020, Facebook reported a net income – a US measure of profit – of more than \$29bn (£21bn) (Milmo and Paul, 2021).

Not all social media companies have a similar business model to large social media companies and when reform is discussed, it should not only focus on social media companies such as Facebook, Instagram or YouTube (Sankin, 2021). The business model plays a major contributing role to harmful content, but users may also exploit social media platforms to post illegal and harmful communication. It has become clear that there must be legislative rules in place that serve as oversight to incentivize social media companies to remove harmful content. The low incentive of social-media platforms to curb harm impacts negatively on public trust with the

consequence being that society cannot fully benefit from these services, making it harder for legitimate online businesses to profit from providing them (Smith and Van Alstyne, 2021).

It is against the above-discussed background that the UK, EU, the US and other countries are now looking at intermediary liability for illegal and harmful content and how it may be reformed to address the concerns discussed. In February 2021, India implemented the Intermediary Guidelines and Digital Media Ethics Code Rules in response to serious incidents of online incitement to violence (see Internet Freedom Foundation, 2021; United Nations Human Rights, 2021).

3. Reform proposed in respect of social media intermediary liability for user-generated content

3.1 Introduction

Johnson and Castro (2021) identify the different approaches to intermediary liability that are currently applicable are under scrutiny. In general, the intermediary is not liable for user-generated content. Some countries provide for a take-down notice or removal where they have “actual knowledge” of the harmful content, but legislation does not outline in detail the obligations of social media companies (Watney, 2018).

As indicated, both the UK and the EU are seeking to tighten the statutory rules applicable to online intermediaries to ensure trust, accountability and transparency, but the approach to achieving it is different (Moynihan, 2021; see par. 3.2 and 3.3 hereafter).

- The EU is adopting an asymmetrical model imposing specific and defined obligations with broad exceptions whereas the UK is proposing to capitalise on the existing English law concept of a “duty of care”, with more onerous monitoring obligations and a potentially narrower set of exceptions (Moynihan, 2021; see par. 3.2 and 3.3 hereafter).
- The UK Online Safety Act addresses illegal and harmful content and uses an umbrella concept of “harms” whereas the DSA focuses only on content that is illegal. It is important that harmful content is addressed and not only illegal content. Defining the concept of harmful may prove to be challenging (see par. 3.2).
- In terms to the proposed DSA, the intermediary will not be held liable for user content if the intermediary complies with the legislative obligations. General monitoring or active fact-finding obligations will be prohibited. The UK government has reviewed the safe harbour exceptions provided by the e-Commerce Directive. Moynihan (2021) indicates that the government is of the opinion that the current regime is “not the most effective mechanism for driving behavioural change by companies. The existing liability regime only forces companies to take action against illegal content once they have been notified of its existence” (Moynihan, 2021). Moynihan (2021) indicates that it is likely that the UK government will introduce specific monitoring obligations for limited categories of illegal content.

It is important to note that UK and EU legislation distinguishes between large social media platforms and other platforms, with large platforms complying with more obligations. India’s legislation, the Intermediary Guidelines and Digital Media Ethics Code Rules, distinguishes between a social media intermediary and a “significant social media intermediary”. The latter consists of 50 lakh (5 million) registered users and as such, the intermediary will have to comply with additional obligations (Internet Freedom Foundation, 2021).

3.2 Brief summary of the UK Online Safety Bill

The discussion hereafter provides a broad outline of the proposed bill which has undergone vigorous consultations since 2019 (Woodhouse, 2021a and 2021b; Lomas 2021).

The Online Safety Act (available at <https://www.gov.uk/government/publications/draft-online-safety-bill>) will provide a single regulatory framework to tackle a range of harms. Online harms includes behaviour that may hurt a person physical or emotionally (Woodhouse, 2021a). It could be hurtful information that is posted online, or information sent to a person.

At the core of a company should be a duty of care that takes reasonable steps to protect users from illegal and harmful content (Milmo, 2021; Woodhouse, 2021a). The reasonable steps that companies are expected to take are proportionate to their service’s known risks and resources, and social media platforms will only be held accountable if they fail to meet the duty of care. Companies will be required to moderate user-generated content in a way that prevents users from being exposed to illegal and harmful content or activity online (Lomas, 2021). An

independent regulator, Office of Communications (Ofcom), will oversee and enforce compliance with the duty of care.

The bill distinguishes between category 1 and category 2 services. Category 1 services refer to companies that provide high risk, high-reach services and these companies will have additional duties. The largest and most popular social media sites (category 1 services) will need to act on content that is lawful but still harmful, such as abuse that falls below the threshold of a criminal offence, encouragement of self-harm and mis-/disinformation. The social media companies would be required to publish transparency reports about the steps taken to tackle online harms.

The duty of care is split into three parts, namely (Milo, 2021):

1. preventing the proliferation of illegal content and activity, such as child pornography, terrorist material and hate crimes (such as racial abuse);
2. ensuring children are not exposed to harmful or inappropriate content; and,
3. ensuring that adults are protected from legal but harmful content. Category 1 services provided by large social media platforms, such as Facebook, Twitter and YouTube, will have to explicitly specify how they will address legal harms in their terms and conditions and Ofcom will hold them to account.

The processes that companies need to adopt to fulfil the duty of care would be set out in codes of practice published by Ofcom after consultation. Companies would need to comply with the codes or be able to demonstrate to Ofcom that an alternative approach was equally effective. Ofcom would enforce compliance and its powers would include being able to fine companies up to £18 million or 10% of annual global turnover, whichever is higher, and have the power to block access to sites (Woodhouse, 2021b).

For users, three new criminal sanctions will be brought for the offences of sending messages or posts that “convey a threat of serious harm”; posting misinformation – “false communications” – intended to cause non-trivial emotional, psychological or physical harm; and sending posts or messages intended to cause harm without reasonable excuse (Milo, 2021).

3.3 Brief summary of the EU Digital Services Act (DSA)

In 2020 the European Commission introduced the Digital Services Act (DSA, available at <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=COM%3A2020%3A825%3AFIN>) (European Commission, 2021). The DSA is not intended to replace the e-Commerce Directive but proposes to update the e-Commerce Directive by imposing obligations on social media companies.

Gerritzen et al (2020) and O’Sullivan (2020) highlight the following provisions which are relevant for the purposes of this discussion:

- The DSA requires every hosting provider or online platform to put in place a user-friendly notice and takedown mechanisms that allow for the notification of illegal content. Online platforms will need to establish internal complaint-handling systems, engage with out-of-court dispute settlement bodies to resolve disputes with their users, give priority to notifications of entities that have been qualified as so-called trusted flaggers by the authorities and suspend repeat infringers. Users may contest the decisions taken by the online platforms to remove their content, including when these decisions are based on platforms' terms and conditions. Users can complain directly to the platform, choose an out-of-court dispute settlement body or seek redress before courts.
4. The DSA provides new and far-reaching transparency obligations for online platforms relating to the measures taken to combat illegal information. If content is removed, an explanation needs to be provided to the person who uploaded that content. Online platforms must also publish detailed reports on their activities relating to the removal and the disabling of illegal content or content contrary to their terms and conditions.
 5. There is an obligation on online intermediaries to include in their terms and conditions information on any restrictions on the use of data provided by the users, with reference to the content moderation mechanisms applied, algorithmic decision-making and human review.
 6. There are also transparency obligations concerning online advertisements. As indicated, the business model of intermediaries is based on advertisements (discussed at par. 2).
 7. An intermediary that does not comply with the DSA provisions faces steep fines for non-compliance of up to 6% of the annual income or turnover of the provider of intermediary services and periodic penalty

payments for continuous infringements of up to 5% of the average daily turnover of the intermediary in the preceding financial year per day.

In addition to the rules set out above, very large platforms must also comply with additional rules. Very large online platforms are those platforms which have more than 45 million active monthly users in the EU and they pose a particular risk in the dissemination of illegal content and societal harm. The large platforms will have to analyse any systemic risk stemming from the use of their platforms and put in place effective content moderation mechanisms to address the identified risks (e.g. illegal content, privacy violations, etc). They will have to provide transparency on the main parameters of the decision-making algorithms used to offer content on their platforms (the rankings mechanism) and the options for the user to modify those parameters. They will have to establish and maintain a public repository with detailed information on the online advertisements they featured on their platforms in the past year. They have to designate a dedicated compliance officer responsible for the compliance with obligations under the DSA and undergo an annual independent audit. They may also, upon request of the competent authority, give access to the data necessary to monitor their compliance with the DSA to the competent authority but also to vetted academic researchers that perform research into the systemic risks. The European Commission will have supervisory and enforcement powers in relation to very large platforms.

Enforcement of the DSA will be the responsibility of various resourced Member State-level agencies, but with the Commission monitoring progress and retaining some power to step in if required.

3.4 US intermediary liability legal position

As indicated, the problem with section 230 of the CDA is that when platforms are granted complete legal immunity for the content that their users post, it also reduces their incentives to remove content causing social harm (discussed at par 2). Section 230 does not protect platforms in criminal cases or in cases involving copyright claims, sexual exploitation of children and sex-crimes work (Johnson and Carson, 2021).

The way forward pertaining to section 230 reform is uncertain. The US could consider the approaches taken by the EU and the UK (discussed at par. 3.2 and 3.3) and decide if one or a combination of the approaches would work within the context of the U.S. legal landscape.

Zuckerberg has been calling for new regulations for social media platforms (Sankin, 2021). In March 2021, Zuckerberg gave testimony to Congress in which he made the following statement, “Platforms should be required to demonstrate that they have systems in place for identifying unlawful content and removing it. Platforms should not be held liable if a particular piece of content evades its detection—that would be impractical for platforms with billions of posts per day—but they should be required to have adequate systems in place to address unlawful content” (Zuckerberg, 2021). Zuckerberg’s submission is tied to the common law standard of duty of care. In the US, businesses have a common law duty to take reasonable steps to not cause harm to their customers, as well as to take reasonable steps to prevent harm to their customers (Smith and Van Alstyne, 2021). Social media companies will not face litigation if they exercise a reasonable duty of care.

The following considerations should be noted:

- The duty of care proposed by Zuckerberg is not a new concept. The UK’s proposed Online Safety Bill has the standard of duty of care at its core (discussed at par. 3.2).
- The regulations cannot focus only on large social media companies but should also consider smaller social media platforms that may not have the same business model as the large social media companies. In this regard, the reform proposed for the UK and EU draw a clear distinction between small and large social media companies. India’s statutory social media rules also draw such a distinction (see par. 3.2).
- There needs to be transparency in respect of social media platforms’ use of algorithms and advertisements. Algorithms may steer a user towards harmful content and in this regard, the EU reform provides clear guidance.
- Whether there should be an oversight body to ensure enforcement is open to debate (Moster and Rosen, 2021). In my opinion, similar to the EU and UK proposed legislation, there must be an agency that should oversee enforcement. The fear is that if government has such authority, it could abuse the power and restrain or criminalize speech with which it disagrees (Moster and Rosen, 2021). Although such fears may be justifiable, there are civil organisations that can hold such an oversight body accountable (see par. 5 hereafter).

4. Government regulation of specific forms of social media content

Some governments are of the opinion that social media self-regulation is not effective and therefore they have implemented legislation that governs specific forms of social media content.

In 2017, Germany passed the Germany's Network Enforcement Act (Netzwerkdurchsetzungsgesetz, or "NetzDG") which requires social networks with at least two million German users to remove "manifestly unlawful" content within 24 hours of receiving a complaint, with fines of up to €50 million for non-compliance (Watney, 2018). The law applies not only to hate speech, but also to other forms of unlawful content, such as defamation, incitement to crime, non-consensual pornography and depictions of violence. In 2020, the Bundestag passed a reform to the NetzDG that added more obligations. The amendment requires social networks to report certain types of unlawful content to Germany's Federal Criminal Police Office (Johnson and Carson, 2021).

In March 2019, the Christchurch mosque shooting took place in New Zealand in which a lone Australian gunman killed 51 worshippers and injured an additional 49. The shooter live-streamed the attack on Facebook and the video quickly spread across the Internet, continuing to circulate on social media even after Facebook removed it. Before the attack, the shooter had also uploaded an 87-page anti-immigrant and anti-Muslim manifesto to 8chan, an anonymous online forum popular among white supremacists and other extremists (Johnson and Carson, 2021).

In response to the live-streaming of the video of Christchurch mosque shooting, Australia implemented the Sharing of Abhorrent Violent Material Act targeting violent content on social media in 2019 (Johnson and Carson, 2021). The definition of "abhorrent violent material" includes acts of terrorism, murder, attempted murder, torture, rape, and kidnapping (Johnson and Carson, 2021). The Act requires content, internet and hosting providers to, within a reasonable time, report to the Australian Federal Police abhorrent violent conduct that is happening in Australia and accessible through their services or hosted on their services. If they fail to comply, they will be penalised. The Act also creates a new offence for content and hosting service providers around the world who fail to expeditiously remove abhorrent violent material.

In June 2021, the EU also responded to the live-streaming of the Christchurch shooting by implementing rules on addressing the dissemination of terrorist content online. Platforms will have to remove terrorist content referred by Member States' authorities within 1 hour. The rules will also help to counter the spread of extremist ideologies online - a vital part of preventing attacks and addressing radicalisation (European Commission, 2021b).

5. Human rights safeguards

Social media provides a valuable platform for interactive social interaction. Unfortunately, some of the interaction is harmful and illegal. Social media intermediary liability reform is aimed at eliminating illegal and harmful speech in a transparent manner by holding both the provider and user accountable.

Users have the right to free speech, but there are limitations to free speech and expression. It cannot include propaganda for war, incitement of violence or advocacy of hatred (Watney, 2021). Smith and Van Alstyne (2021) opines in respect of section 230 reform that, "There are no First Amendment protections for speech that induces harm (falsely yelling "fire" in a crowded theatre), encourages illegal activity (advocating for the violent overthrow of the government), or that propagates certain types of obscenity (child sex-abuse material)." Providers should not provide users with a platform that allows harmful and illegal content under the guise of free speech.

Proposed legislation aims to provide a cyberspace in which all users are protected against harmful and illegal content without eroding speech to such an extent that legitimate speech is restricted. The aim of the reform is commendable and needed, but the challenge facing governments is the manner in which they achieve this aim.

Hicks indicates that social media liability legislation must have a human rights-based approach (United Nations, 2021). The UN Human Rights (2021) makes various recommendations that may serve as human rights safeguards, namely that regulation should focus on content moderation rather than content-specific restrictions; that decision-making should not only be made by algorithms but have a human component; that

moderation should be transparent and that there must be an appeal procedure with the courts being the final adjudicator on the lawfulness of content.

As indicated, the proposed EU and UK reform have different approaches. The EU reform focuses primarily on illegal content, but harmful content will have to be addressed. It may be that EU member countries will implement legislation to address specific forms of harmful content (see par. 4). I support the UK reform in providing for illegal and harmful content. The problem is identifying what may constitute harmful content. Where someone live-streams, for example a murder-suicide, such content must be removed. The EU's detailed social media platforms' obligations are commendable (see par. 3.3).

The safeguards must ensure trust, transparency and accountability. To ensure free speech, legislation must provide the user with reasons for the removal and an appeal procedure. In my opinion, enforcement of the legislation and oversight are important to ensure accountability and trust. I am not in favour of general monitoring obligations (see par. 3.1) as it may result in restricting legitimate speech.

6. Conclusion

The reform of social media intermediary liability is needed to bring liability into the 21st century.

Hicks warned in 2021, "When democracies start regulating, there is a ripple effect across the world, and other countries may follow. The internet does not have borders - we need to aim for a global digital space where it is safe for people to exercise their rights" (UN Human Rights, 2021). With reference to Hicks' warning, the greatest drawback to the proposed reform is that various countries will each have their own intermediary liability legislation. This means that social media companies will have to comply with legislation in different jurisdictions. I am of the opinion that countries - in consultation with social media companies, civil organizations and affected business - should have discussed the reform on a global level and that they should have come to some agreement on the approach. This would have resulted in a harmonized approach.

The proposed reform will soon be implemented. It will be interesting to see which countries follow the EU or UK approach to liability and self-regulation. Once implemented, the effectiveness and impact of the regulation on social media platforms, users and free speech may be determined.

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E-MINT: A Gamified App for Empowering Parents in Their Role as STEM Gatekeepers

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Abstract: When it comes to initiatives engaging children - especially girls - in STEM education or careers, parents are often a neglected group, despite being regarded as the most important gatekeepers in this field because they can have an impact very early on. They frequently feel under-informed and, as a result, lack the self-confidence to take on this role. The E-MINT project starts here and aims to motivate parents and equip them with the skills to serve as role models and mentors to their children. The Science Capital approach, a proven successful framework for creating awareness, fostering motivation and imparting knowledge in the context of science education, serves as the structural basis of the E-MINT app. This especially applies to the content and functionalities of the app, which is divided into four areas: "What you know". In this section, parents are encouraged to explore their own knowledge of STEM professions, gender stereotypes, career choices, educational pathways and future technologies. "How you think". In this part of the app, career aspirations, behaviour in different situations or thoughts about the future are told in short picture stories. "What you do". The app provides free access to virtual E-MINT Makerspaces. Parents can use the app to complete projects on 3D printing, environmental technology and upcycling at home. "Who you know". In this section of the app, parents are encouraged to use their own personal social network to improve their skills as STEM gatekeepers for their children. They are guided step by step through a social network analysis with the aim of visualising their personal STEM networks and finding ways to expand it. The pre-survey showed parents to be well informed. Parents were most likely to lack information about new technologies and STEM education. In the post-survey, the usability of the app was rated as very good. The comparative survey on parents' STEM knowledge showed slight changes. Parents in the post-survey knew more about training opportunities for STEM professions, about the disproportion of men and women in technical professions and the importance of gender stereotypes for career decisions. Parents' views also changed slightly in the post-survey. Specifically, their attitudes towards computer games, which they now see as having more potential to increase children's digital curiosity, and they see computer games more as a gateway into technical professions.

Keywords: STEM, Gatekeepers, Science Capital, Nudging, Gamification, Maker Space, Gender

1. Introduction

Artificial intelligence and robotics have already found their way into our everyday lives, and technological innovations are developing at a previously unimaginable speed. In order to be able to participate in these developments, the German term "MINT"¹ (mathematics, informatics, natural sciences and technology) emerged as a field of study. Although professions in the MINT or STEM core areas of computer science and natural sciences promise a high degree of security when it comes to future employment opportunities, too few young students choose a career in this field. This is especially true for girls and young women. The many reasons for this have been well researched. Gender stereotypes still prevail in our society, and so, alongside the education sector, parents play the key role in getting their children interested in STEM professions.

E-MINT is dedicated to address this issue and to explore how parents can take on the role of coaches or mentors for their children in this area. The focus is on getting adults who have little or no connection to STEM fields excited about the topic. The aim is to help parents build the skills they need to be positive role models for their children.

¹ English: STEM

2. Science Capital

In order to understand the term "science capital", one must first explain the concepts of "capital", "habitus", and "environment" according to Pierre Bourdieu (Bourdieu, 1983, 1986). "Capital" refers to the resources that an individual can draw on for his or her success in society (Claussen & Osborne, 2013). These include social capital, economic capital, cultural capital, and the higher-level symbolic capital (prestige). The more capital, the better cards one holds to act socially, while the value of the types of capital changes depending on the situation. "Habitus" refers to a person's entire appearance, from lifestyle to attitude to life. It is acquired in the course of growing up through social experiences, and forms our ideas of self-evident and impossible life situations. The "environment" is understood as the set of rules by which actions are taken, the conditions and relationships of an environment that determine the interplay of capital and habitus and recognise them as legitimate.

The Science Capital approach as proposed by Archer (2015) (which measures and aims to increase a person's scientific capital) is based on Bourdieu's cultural theory, which compares everyday life to a game in which each person has different, transformable potentials, which arise from their sources of capital and can be used or transformed in exchange for others. The rules for such transformations are dictated by the environment. The Science Capital approach adapts Bourdieu's cultural theory to the needs of science education in the twenty-first century, emphasizing the importance of a person's self-efficacy in the scientific context (Area Knowledge), their attitudes and commitment (Area Attitudes), their own activities and activities of educators with content or practical relevance (Area Making), and their existing private or professional network (Area Networking).

In some environments, an individual's capital and habitus work well: they can play the game with ease. In others, their capital does not adapt to what is needed for the environment. Their habitus does not fit. They are less able to engage in something or their efforts are not valued as engagement. They cannot play the game or decide against doing so. Science Capital can be applied as an analytical tool (Archer et al., 2015) to better understand individual participation in scientific engagement. It helps to understand why some people are better equipped for science and some less. It also explains the different levels of well-being of people in STEM activities. Science Capital can be captured in several dimensions:

- Science Literacy: an individual's knowledge and understanding of STEM and how STEM works. This includes their confidence that they understand STEM.
- Science preferences: the extent to which an individual sees STEM as relevant in their own life.
- Symbolic knowledge about the transferability of STEM in the labour market (knowledge about the internal value and transfer of STEM qualifications).
- Consumption of science media (books, TV, online content).
- Participation in extracurricular contexts (e.g. visiting museums/zoos/aquariums/science Clubs).
- Knowing people (family, friends, peers and the wider community) who work in science jobs.
- Talking to others (friends, siblings, neighbours) about STEM in everyday life outside of school.
- Family, and especially parents, with STEM knowledge and qualifications.

By specifying these dimensions, Science Capital offers tools to foster a scientific habitus and develop capital across social, cultural, and symbolic STEM pathways. E-MINT integrates the innovative approach of Science Capital as a basic framework within the project methodology to better understand the broad target group of parents and their fields of action on the one hand, and to increase their degrees of freedom in supporting their children in STEM on the other.

3. Motivational Framework

3.1 Gamification

Playing is learning. And every child loves digital games. Today's children and young people grow up as so-called "digital natives" (Prensky, 2001) with digital media and use them in a natural way. The fact that the lives of generations Y & Z are digital and playful can be seen in gaming trends - 50% of under-25s are interested in e-sports, and every seventh Austrian regularly consumes game-related content via various channels such as Twitch (Jugend-Internet-Monitor, 2019). According to a study by GfK on behalf of ÖVUS, 5.3 million Austrians play digital video games. The average age is 35 years and the average time per week is about 10 hours. The games are played on PCs/MACs, smartphones, game consoles or tablets/handhelds. Digital games offer a wide range of challenges and opportunities, such as testing cognitive and motor skills.

Gamification builds on the use of game mechanics in naturally non-game contexts (Deterding, 2011). The goal is to specifically set desired behavioural impulses. This involves applying the motivational and feedback techniques that have been proven in games. Games provide clear goals (Hunicke et al. 2004; e.g. quests), they reward (Vorderer et al., 2004; e.g. badges, level-ups), they allow competition or cooperation with others (Yee, 2006; e.g. in the form of rankings, multiplayer elements) and they provide an interactive framework for different experiences and skills (Ivory & Kalyanaraman, 2007; Jansz, 2005;). The development of an emotional connection to the story, links to previous experiences, or the repetition of content in the story are all conducive to the transmission of learning content (Herbst 2014). Gamification has been successfully used in various application areas to promote participation, such as in the context of civic courage (Coronado & Vasquez, 2014), civic participation (Thiel & Lehner, 2015), e-learning (Barata et al., 2015) and e-government (Al-Yafi & El-Masri, 2016).

3.2 Nudging

Nudging as a model of gently influencing human decisions originated in behavioral economics. Thaler and Sunstein (2008) define nudging in their seminal work as a positive intervention aimed at voluntary behavior change. These interventions, known as "nudges," have primarily been used in the field of health protection (Quigley, 2013). The concept of nudging is based on motivational psychology models and has obvious parallels to the gamification principle. In contrast to gamification, however, artificial goals and rewards give way to subtle decision-making strategies. Nudges increase the visibility of behavioral alternatives by informing, encouraging reflection, and promoting social exchange. Several studies have been conducted to demonstrate the impact of nudging on human behavior via legal regulations (Quigley, 2013; Vlaev et al., 2016), on health (Marteau et al., 2011; Hanks et al., 2012; Olstad et al., 2014), and on physical activity levels (Te Brömmelstroet, 2014), with results indicating a 10-30% increase in desired behaviors. There are to date, however, no known STEM-related articles or meta-analyses that show the effect size of nudging as an intervention.

In social research, there are repeated calls to draw on behavioural theories in order to reinforce positive effects on attitudes or behaviour by means of theory-based interventions. For our own research approach of voluntary, playful behavioural change or knowledge transfer in the course of E-MINT, the Transtheoretical Model (TTM) (Prochaska & Velicer, 1997; Prochaska & DiClemente, 2005) and nudge theory are particularly well suited. Nudges ultimately serve to gently motivate people to do things voluntarily that they would not have done or would not have done to the same extent without them. The great advantage of targeted nudging based on levels is that the respective nudges are tailored to the individual target group's level of motivation and knowledge:

1. No Intention - There is no intention to change the behaviour → informative and awareness-raising nudges (e.g. educational information on the topic of STEM professions, on prevalent stereotypes, on emerging technologies – "What you know");
2. Intention formation - There is an intention to change behaviour → knowledge-conveying and reflective nudges (e.g. STEM success stories and insights into the attitudes of other users – "How you think");
3. Preparation - The target behaviour is targeted, first steps have been taken → social and normative nudges (e.g. personal STEM role models made visible in the social network analysis – "Who you know");
4. Action - Concrete actions are set in relation to the target → virtual STEM makerspaces – "What you do";
5. Maintenance - The goal behaviour is to be maintained in the longer term → stabilising and preventive nudges (e.g. representation of the individual learning progress through experience points).

4. Methodology

4.1 Research Material - the E-MINT App

The different sections of the E-MINT app were designed based on the Science Capital Framework. The theoretical foundation is reflected in a simplified version that deviates slightly from the original guiding theory. This applies to the menu structure, the available rubrics, content and functionalities of the app. The demonstrator was created using an already developed SaaS solution "ovos play". Since ovos play was developed as a micro-learning system, an implementation concept was created based on it to enable short and interactive storytelling packages. To ensure ease of use for the target group, care was taken to use a common user interface with simple navigation. Therefore, the most important pages, such as the home screen and access to the four main sections, were anchored in the main navigation.

4.1.1 Section I: "What you know"

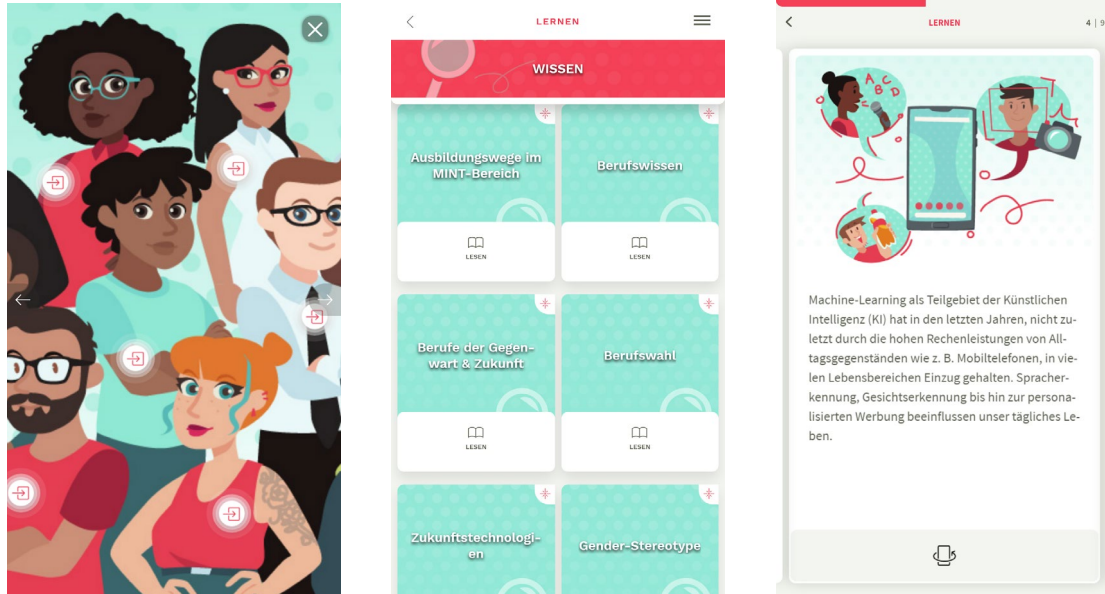


Figure 1: Section within the app relating to STEM knowledge

Parents are encouraged to explore their own knowledge about STEM professions, gender stereotypes, career options, educational pathways, and future technologies in this section. E-MINT does not claim to be a career counselling tool or to test parents' knowledge in a quiz-like format. Rather, the goal is to pique people's interest. The app presents the areas of knowledge in the form of maps with an interactive, activating narrative. As a central gamification mechanic, experience points were given out depending on the amount of knowledge cards read by the respective user.

4.1.2 Section II: "How you think"

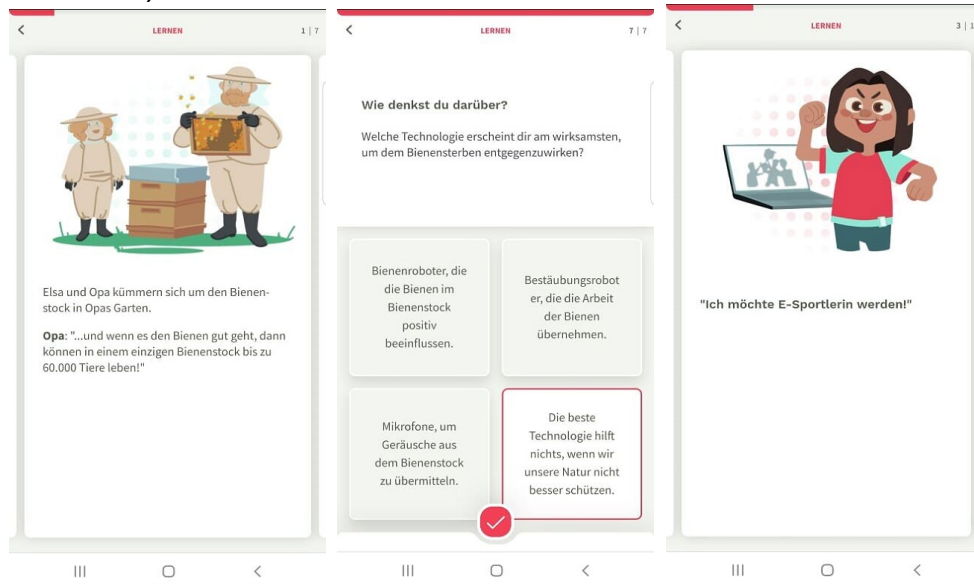


Figure 2: Section within the app relating to STEM attitudes

In everyday life, parents are frequently confronted with new challenges and questions, whether they are about their children's career goals, behaviour in various situations, or future plans. Because there is usually no clear "right" or "wrong," these usually provide plenty of discussion points for debate. In this section of the app, current events are told in the form of short picture stories. "What do you think about it?" is the question that follows each story. The results can then be compared to the results of all E-MINT users. In addition, expert advice on the subject is provided. The goal is to encourage parents to actively address their own attitudes while remaining aware of their role as gatekeepers.

4.1.3 Section III: "What you do"

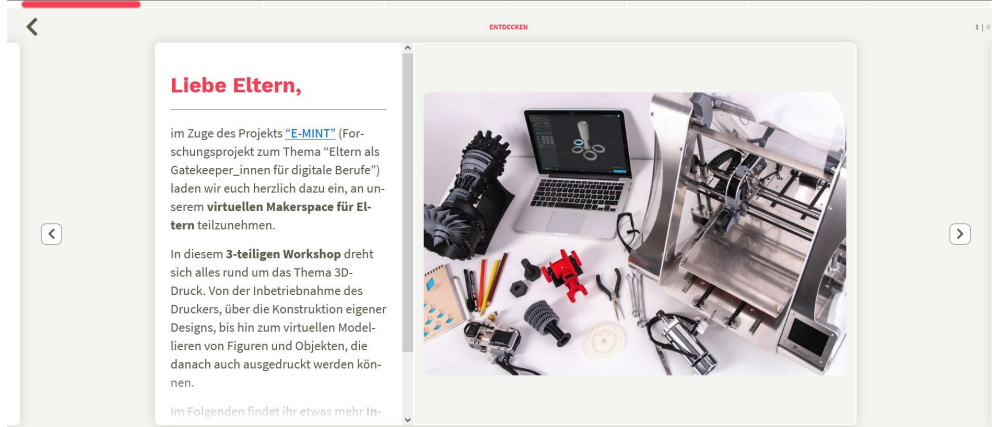


Figure 3: Section within the app relating to Maker Spaces

One of the primary goals of E-MINT is to give parents access to making tools. The app allows users to gain free access to virtual E-MINT Makerspaces. Parents can use the app to develop projects at home in the areas of making (3D printing), environmental technology (air quality, particulate matter), and upcycling (using and improving existing materials). The original project plan was to run the Makerspaces on-site, but due to the COVID 19 pandemic we decided to use the virtual makerspaces format in the final E-MINT product after successfully testing it.

Parents who participate in the virtual Makerspaces receive an "E-MINT Makerspace Package" containing equipment and materials for implementation. This can be used for a limited time and is then returned, or it can be purchased and kept in the family. Parents can already take the first steps toward using the tools themselves, guided by the app. They receive additional explanations and introductions to the topics, as well as opportunities for questions and discussions, during a joint online workshop using a video conferencing tool. This combination of online learning, app-supported tutorials, and individual experimentation allows for self-directed and self-regulated learning.

4.1.4 Section IV: "Who you know"

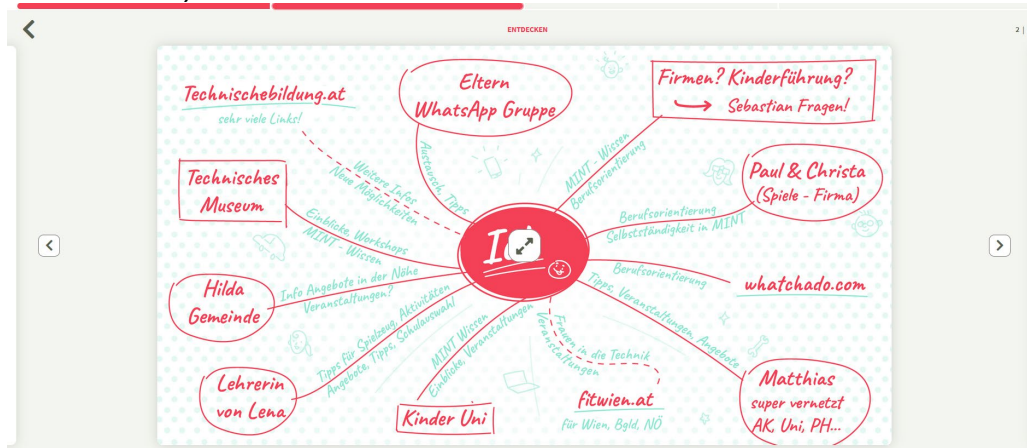


Figure 4: Section within the app relating to personal STEM networks

Parents are encouraged to use their own personal social network to improve their skills as STEM gatekeepers for their children in this section of the app. They are guided through a network analysis step by step with the goal of visualizing their personal STEM network and identifying potential starting points for its expansion. Furthermore, parents are encouraged to share their experiences and knowledge, for example, through social media networks. This section of the app was designed as a DIY social network for fostering the development of entrepreneurship in the context of future education as well as business opportunities.

4.2 Research Design

The research design of the E-MINT project is based on a user-centred design approach, in which potential users were the focus of the conception and development of the app from the very beginning (cf. needs analysis). This also applies to the evaluation of the E-MINT app, in which both formative and summative evaluation methods were used. The formative evaluation was carried out with two focus groups that took place on 1 and 2 December 2020, i.e. at a time when the E-MINT app was already available in a beta version. Before the focus groups, the participants were asked to test the E-MINT app to the extent that they could form a concrete picture of it.

For the summative evaluation of the pilot test, a pre-test, post-test design was used. The aim was to test the E-MINT app under real-life usage conditions, i.e. to make it available to parents over a period of 3 months to gather their individual experiences of using it. The pre-survey took place between 23 February and 01 April 2021. The post-survey took place between 01 and 14 July 2021.

4.3 Sample

Questionnaires were used for the pre- and post-tests. In addition to the demographic data of the participants, their knowledge about STEM and their attitudes towards STEM and technology were collected in the pre-test. The post-test built upon these areas and supplemented them with the aspect of usability, a general assessment of the app and its content levels, which are based on the science capital approach (knowledge, attitudes, network, making). A total of 109 responses (69 female, 38 male, 1 diverse, 1 n/a) were received for the pre-survey, and 42 parents (30 female, 12 male) participated in the post-survey - mainly in the age categories from 30 to 50 years.

5. Findings

The pre-survey of the pilot test showed parents to be well informed. The most common need for information was about new technologies and STEM education.

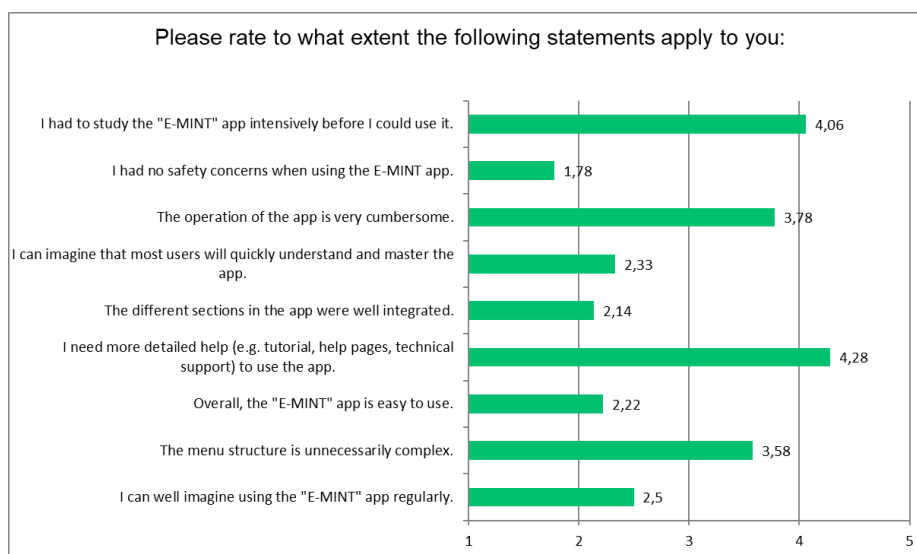


Figure 5: Usability rating of the E-MINT app (N=42; 1 = "fully agree", 5 = "do not agree at all")

A five-point Likert scale was used to evaluate the usability of the E-MINT app. In particular, the need for assistance in using the app was clearly rejected with a mean value of 4.28, and the parents surveyed also tended to disagree with the question about whether they had to deal with it intensively before using it. The app is not considered to be difficult to use (M=3.78) and the menu structure is not considered to be too complex (M=3.58). Parents did not have any safety concerns in this survey (M=1.78). The general use of the app (M=2.22), the integration of the individual areas of the app (M=2.14) and the question of comprehensibility for other users (M=2.33) were also rated rather well. On average, the parents can imagine using the app regularly with a value of 2.50.

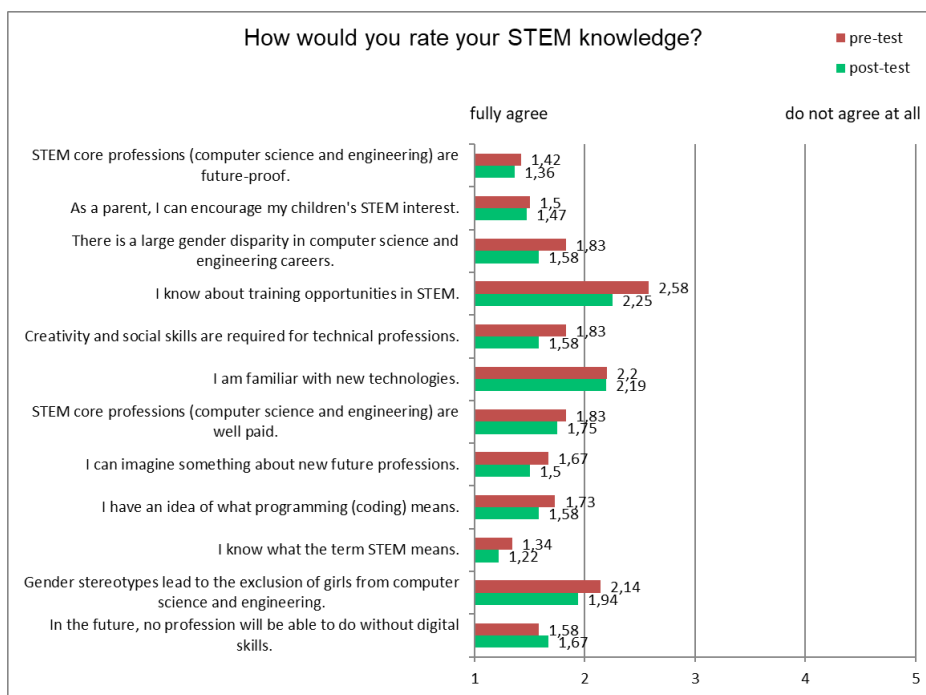


Figure 6: Comparison of STEM knowledge between the pre-test (N=109) and post-test (N=42); 1 = “fully agree”, 5 = “do not agree at all”

The comparative survey analysing the impact on parents’ STEM knowledge shows slight changes. Parents in the post-survey know better about training opportunities for STEM professions, about the disproportion of men and women in technical professions and the importance of gender stereotypes for career decisions, about coding and that creativity is required in technical professions. They can imagine more about future professions and know that the core STEM professions are well paid. In detail, the comparison between the two surveys showed the following results: The comparison of the pre-survey with the post-survey tends to show a very slight to slight (statistically non-significant) increase in STEM knowledge among parents. The evaluation of the statement “I know about new technologies” remains the same. With a value of 0.33, the question “I know about STEM training opportunities” shows the highest increase. Only the statement that there will be no professions without digital skills in the future is interestingly less agreed with by parents in the post-survey than in the pre-survey (0.09). This does not seem logical; one explanation could relate to the selection of occupations in the “views” area, an section within the app where personal views on technical career paths were reflected upon.

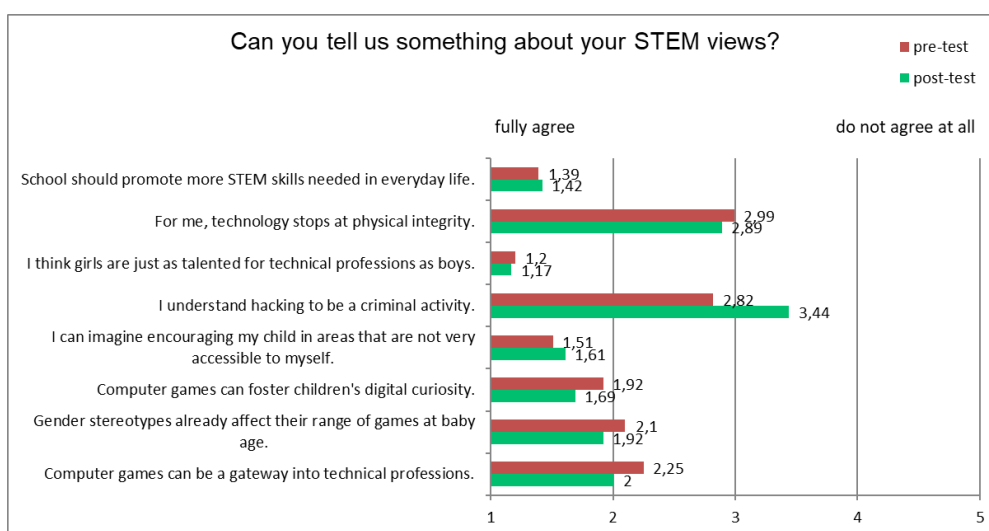


Figure 7: Comparison of STEM attitudes between the pre-test (N=109) and post-test (N=42); 1 = “fully agree”, 5 = “do not agree at all”

Parents' views also changed slightly when comparing the results of the pre-survey with the post-survey. Specifically, their attitudes towards computer games, which they now see as having more potential to increase children's digital curiosity. They also see computer games more as a gateway into technical professions. A slight increase in agreement can be seen for the statement that gender stereotypes are already developing in babies. In detail, the comparison between the two surveys showed the following results:

There were no or minimal changes in the statements that were already strongly agreed with in the previous survey, namely that schools should increasingly promote STEM skills and that girls are just as talented as boys for technical professions. Parents' views on computer games have changed slightly. They agree by a value of 0.23 that children's digital curiosity can increase through computer games and with a value of 0.25 more strongly with the statement that computer games can be a gateway to technical professions. With a value of 0.18, this also applies to the statement that gender stereotypes are already being established in infants. The biggest change, of more than half a point (0.62), occurred in parents' understanding of hacking as a criminal activity. While parents were indifferent to the statement that hacking is a criminal activity in the pre-survey (M=2.82), they tended to disagree with it in the post-survey. This again probably has to do with the story in the views section about the e-sportswoman and her participation in hackathons.

6. Conclusion

The evaluation was guided by the science capital domains of knowledge, attitudes, experiences and resources (Archer et al., 2015; DeWitt, Archer & Mau, 2016), which were used to structure the content of the app. Evaluation also focused on the usability of the app on a technical level and in relation to its content. While there were still slight problems with technical use in the pilot study, which could be solved quickly and easily, the structure and navigation in the map decks were perceived as intuitive and easy to use. Likewise, the low-threshold character of the content - easily comprehensible - was referred to positively.

The area of knowledge was also well received by parents. It became apparent that the participants in the pilot study saw themselves as very well informed about the importance of STEM already and in the future. This does not correspond to the typical parent in the current literature (McClure et al. 2017), but can probably be explained by the high level of education of the participants in the pilot study. Only their knowledge about training opportunities for STEM professions and the significance of gender stereotypes for the choice of technical professions proved to be expandable. The area of perceptions is assessed similarly. The parents already assume that there are no differences in aptitude between girls and boys in technology and are confident that they can actively support their children - even in a subject that is not accessible to them at first. This is also slightly in contrast to the literature (Milagrosa et al. 2012), which shows that parents are often not aware of their essential role on the one hand and often do not have the knowledge of how to support their children in the STEM field. The parents who have taken advantage of the virtual makerspace have an extremely positive perception of this offer, which has enabled 3D printing and fine dust measurement in the lockdown in their own living room. The organisation, the instructions in the app and the workshop leaders were all rated particularly highly by the parents.

7. Future Research

A major limitation in generalising this evaluation is that the participants in the evaluation cannot be regarded as representative. Three quarters of the parents have a university degree or a degree from a university of applied sciences, which explains their high level of knowledge in STEM, but does not enable transferability of the present study to other educational contexts. Also, the ratio of 2/3 women and 1/3 men in the pre-survey (3/4 women, 1/4 men in the post-survey) may reflect societal stereotypes of tasks for children in the educational context, especially in lockdowns (e.g. Beigewurm, 2020) but seems to be clearly improvable especially with regard to the model functions of parents. Therefore, in order to anchor the project sustainably and broadly, other target groups should be included in further evaluations.

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Linguistic Characteristics of Social Media Messages Spreading across Geographic and Linguistic Boundaries

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Abstract: Social media enable messages to be exchanged beyond geographic constraints. Some of the messages could be shared and forwarded by people with different cultural backgrounds across different geographical regions. Studying the content of messages that can reach diverse populations is important for practices such as movement propagation and global marketing. Existing studies mainly investigated the characteristics of messages that are popular, i.e., shared or forwarded by more users. As the diffusion of information is prone to be echoed inside certain geographical and linguistic boundaries, popular messages are not always to be shared and spread across geographical and linguistic boundaries. We investigated the linguistic characteristics of social media messages that can reach and be disseminated by people across nations, and across geographic and linguistic boundaries in the MeToo movement. Specifically, we analyze the diffusion paths of messages according to the geolocation of tweets and conducted statistical analysis to compare the linguistic characteristic of tweets that spread across geographical or linguistic boundaries with those that do not. We focus on the linguistic characteristics from three aspects: ‘emotions’, ‘social relations’, and ‘economics, politics, and religion’. Our findings reveal that popular messages tend to contain more negative emotions, however, messages with negative emotions are unlikely to be disseminated across geographical or linguistic boundaries. On the other hand, messages on economic topics or non-adults’ issues are more probable to be disseminated universally. The findings provide insights on the content that is more probable to be shared and disseminated by people with different cultural backgrounds across geographical regions.

Keywords: Information Diffusion; Twitter; Transnational Movement; Content Analysis

1. Introduction

Social media enable the spread of information beyond geographic constraints, which facilitate cultural and social globalization (Choi *et al.*, 2013) in the forms such as transnational movements (Della *et al.*, 2015). Marketing and propagation projects are implemented on social media platforms, some of which aim to achieve transnational impact (Sirkeci, 2013). The diffusion of information on social networks has been studied a lot. Many focus on the identification or characterization of posts that are more likely to be shared by users, i.e., popular (Firdaus *et al.*, 2018). As people tend to communicate with those who share similar backgrounds or interests, the diffusion of information is prone to be echoed inside certain geographic and language boundaries (De Choudhury *et al.*, 2010). Therefore, popular information does not always have a transnational impact. It has been found only a small proportion of popular tweets have transnational diffusion (Yu *et al.*, 2020). In this study, we investigate characteristics of information that is more probable to be disseminated by people from different geographical regions with diverse cultural backgrounds.

The diffusion of information on social networks is through posting and sharing (Suh *et al.*, 2010). Taking posts on Twitter as an example, the popularity and spatial diffusion of a tweet can be measured based on the number of retweets and the geographic distribution of its retweets. We aim to address two questions:

RQ1: For tweets of similar popularity, what linguistic characteristics differentiate their potentials to disseminate to regions with different geographic proximity, starting from a transnational level to a trans-continent level?

RQ2: For tweets of similar popularity, what linguistic characteristics differentiate their potentials to disseminate to regions with or without linguistic proximity?

We conducted a study on the spatial diffusion of information in the transnational MeToo movement. Many factors could influence the diffusion of a message. The popularity of topics changes over time with occurrences of events (Hu *et al.*, 2016). We set the study in the context of the MeToo movement on Twitter to control factors such as the time and topics, to focus on the relations between linguistic characteristics of messages and their

spatial diffusion. Hashtag MeToo (#MeToo) has been used as a symbol of the exposure and condemnation of gender-based violence on social networks since October 2017, which forms the uptake of the MeToo movements across many countries in the world. Transnational movements such as the MeToo movement are one of the scenarios where we can observe information spread globally. In this study, we examine the spatial diffusion of the MeToo tweets and conduct statistical tests to identify the linguistic characteristics of tweets with different levels of spatial diffusion. The study has three main contributions:

- The diffusion of information is investigated from a spatial perspective. Specifically, geographic proximity and linguistic proximity are used to measure the diffusion across geographic and linguistic boundaries.
- The findings imply that the linguistic characteristics that lead a message to be popular such as negative emotions may retrain it from disseminating across geographic and language boundaries.
- Through analysis of #MeToo tweets, this study sheds light on the linguistic characteristics of information that disseminate across geographic and language boundaries, which may assist content-generating in social movement propagation that aims for global impact and provides insights about factors that relate to the development of transnational social movements.

2. Literature review

2.1 Sentiment and Topics on the Diffusion of Information

Recent studies have examined whether emotions affect the diffusion and what roles emotions play in the 'virality' of messages. Stieglitz and Dang-Xuan (2013) found that emotionally charged tweets are more widely transmitted than neutral messages. There is a positive correlation between the number of retweets and the proportion of words indicating positive and negative emotions of tweets on political events. Several researchers have investigated the effect of different emotions or polarity of sentiment on diffusion. Ferrara and Yang (2015) found that negative messages spread faster than positive ones, but positive messages finally can reach more audiences. Tsugawa and Ohsaki (2017) found that negative information is likely to be retweeted more frequently and rapidly than positive or neutral information. Fan *et al.* (2016) categorized emotions into joy, anger, disgust, and sadness, and found anger is more contagious than joy given that anger could trigger more follow-up tweets with anger emotions. Similarly, Chen *et al.* (2017) found that angry tweets spread more rapidly than happy tweets. These studies are conducted based on short social media posts like tweets. Emotions are also found to relate to the diffusion of long texts such as news articles. Berger and Milkman (2012) coded the sentiment of New York Times articles and found that 'virality' was partially driven by physiological arousal. Content that triggered positive or negative emotions was more viral. Kim (2015) analyzed the sharing and viewing of New York Times news articles on health and found that samples with positive sentiments had more views.

Most research focused on how sentiments or emotions relate to information diffusion. Little has been done to understand the effect of structural components such as indicators of social relations or cognition on diffusion. Arnaboldi *et al.* (2016) used direct contacts between users and their friends to measure social ties and found tie strength and the number of retweets is highly correlated. In this work, we explore the emotions, social relations, and economics, politics, and religion components on the spatial diffusion of information.

2.2 Information Diffusion and Geographical Proximity

Although the information on social networks has the potential to spread globally across geographic boundaries (Takhteyev *et al.*, 2012), studies showed that diffusion is mostly constrained in a certain geographic scope (Wang *et al.*, 2012). The diffusion of information partially relies on network structures of users (Guille *et al.*, 2013), while most social-network friendships are dependent on geographic proximity (Liben-Nowell *et al.*, 2005). Several studies have revealed that users are more inclined to become friends with those who live close (Kulshrestha *et al.*, 2012; Scellato *et al.*, 2010). The geographic proximity of users can predict the diffusion paths in the networks (Wang *et al.*, 2013). De Choudhury *et al.* (2010) further showed that information from users who have similar locations tend to have similar information diffusion patterns in terms of network topology-based reach and spread. These studies imply that popular messages on social media may not reach a wide range of audiences or have transnational diffusion. A few studies have characterized the spatial diffusion of information. Kwon *et al.* (2015) has developed a spatiotemporal model to examine the spatial diffusion of different types of messages during the Egyptian Revolution 2011. They defined four types of proximity, i.e., physical, diasporic, economic, and ideological proximity, to measure the relations of other countries to Egypt, and examined the diffusion of ad-hoc reporting, situation verifying, and action supportive messages in these countries. Results showed that ad-hoc reporting and action-supportive messages were widely exchanged across

geographical boundaries. Here, we aim to understand the linguistic components of ‘emotions’, ‘social relations’, and ‘economics, politics and religion’ in messages on their spatial diffusion.

2.3 Information Diffusion and Linguistic Proximity

Users who use the same language are more likely to build connections on social media platforms (Kulshrestha *et al.*, 2012). Information is mainly disseminated among people who speak or understand the same language. Through an analysis of the social relations based on retweets and mentions on a global scale, Hale (2014) found most of the interactions are in the same language. Linguistic proximity is usually indicative of the economic relations of countries (Hutchinson, 2005) or communities that share similar interests (Samoilenko *et al.*, 2016). However, there is always information disseminated across linguistic boundaries, as there are multilingual users who play the bridging roles to extend the information diffusion chain (Hale, 2014). In addition to the transnational diffusion, we study the linguistic characteristics of tweets that spread to countries without linguistic proximity.

3. Data Collection and Methods

3.1 Twitter Data set

We acquired a list of hashtags used in different countries related to the MeToo movement. These include #MeToo, #YoTambien, #SendeAnlat, #WithYou, #WeToo, #QuellaVoltaChe, #AnaKaman, #RiceBunny, #BalanceTonPorc, #Cuéntalo, #TimesUp, #TimeisNow, #MeQueer #немолчи, #СераКажувам, #米兔, and #미투. English tweets that contain at least one of the hashtags were retrieved. We only used English tweets as the translation of different languages to one may generate variances in the tones and sentiment that affect the consistency in content analysis. English is the most used language in the MeToo movement (Yu *et al.*, 2020). In total, we gathered 609,476 tweets through the Crimson Hexagon platform (now Brandwatch), which includes original posts and retweets from 209 nations from October 15, 2018, to January 15, 2019. The retrieved Twitter messages are associated with provenance information at the country level, which is derived either by the geo-tagged information or by the location indicated in user profiles. Each post includes the author, country of origin, text, and type—whether it is a “tweet” (original posts), a “reply”, or a “retweet”. Table 1 shows the top 10 countries with the highest number of retweets.

Table 1: Number of retweets and original posts for selected 10 countries

Country	Retweets	Original Posts
United States of America	15908	2294
India	9954	1339
Japan	2481	225
United Kingdom	1989	426
Canada	1244	396
Argentina	723	103
Australia	711	140
France	556	122
Indonesia	356	27
Spain	308	120

All the retrieved retweets contain the author and content information of the original posts. Through content matching, we can detect all retweets and sharing of an original post to identify the geographic diffusion of a message. We got a total of 41,864 original posts that have been retweeted, the retweet frequency varies from 1 to 4,004. The retweet periods of original posts vary from 1 day to 3 months. More than 95% of retweets happen in fewer than 10 days. Therefore, we take the retweets in the first 10 days to compute the number and geographic distribution of retweets for all the original posts. The spatial diffusion of original posts varies from 1 country to 69 countries.

3.2 Methods

3.2.1 Grouping Messages according to Diffusion Outcomes

The spatial diffusion of a message is measured based on the geographic distribution of its retweets at a country level. The popularity of a message is defined as the total number of retweets it gets. We are interested in the spatial diffusion reaching countries that have different levels of geographic and language proximity. Previous studies have defined geographic proximity as two countries that are on the same continent (Java *et al.*, 2007;

Kulshrestha et al., 2012); and linguistic proximity as two countries share the same languages (Kulshrestha et al., 2012; Samoilenko et al., 2016).

We separated the original posts into three groups according to the level of diffusion across geographical boundaries: i) retweets only exist in the country where the original post was created (OneCountry); ii) retweets exist in other countries but only in those that have geographic proximity (on the same continent) to the origin country (Geo-I); iii) retweets exist in countries that do not have geographic proximity to the origin country (Geo-II). Based on the linguistic proximity of countries, we again divided the original posts into three groups: i) retweets only exist in the country where the original post was created (OneCountry); ii) retweets exist in other countries that share the same official language with the origin country (Lang-I); iii) retweets exist in countries that do not have linguistic proximity to the origin country (Lang-II). Figure 1 illustrates the three types of tweet diffusion of tweets originating from the United States (US).

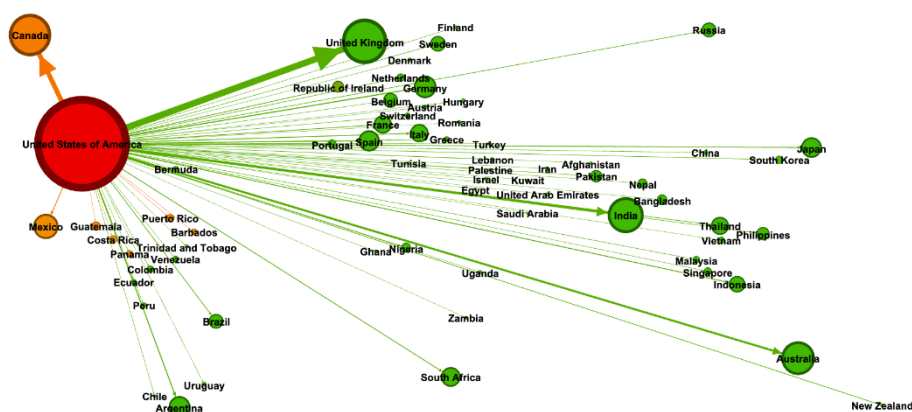


Figure 1: Three types of diffusion for tweets from US. The nodes represent countries. Orange arrows represent diffusion from the US to other countries in North America. Green arrows represent information diffusion to countries not in North America. Node size reflects the number of retweets to these countries.

3.2.2 Control Popularity

Tweets that spread across geographic boundaries usually have a higher number of retweets, i.e., more popular, than those that spread only in one country. Therefore, tweets in the three groups may present certain linguistic features due to the popularity level of tweets, as the linguistic characteristics of information, such as emotions, can affect the popularity in diffusion (Ferrara and Yang, 2015; Stieglitz and Dang-Xuan, 2013). To focus on the characteristics that are related to spatial diffusion, we control the popularity of tweets in different groups. Then, we measure the Cohen’s D value (Durlak, 2009) to compare the popularity of tweets in four pairwise comparisons: OneCountry with Geo-I, OneCountry with Geo-II, OneCountry with Lang-I, and OneCountry with Lang-II (Table 2). An effect size under 0.2 can be considered a small difference between the two groups. Since all Cohen’s D values of pairwise comparisons in Table 2 are smaller than 0.2, we can conclude that the popularity level of tweets is similar between groups.

Table 2: Effect size of pairwise comparisons for four sets of groups

Groups	Pairwise Comparisons (#tweets)	Cohen’s D
Geographical	OneCountry (377) and Geo-I (136)	0.191
	OneCountry (377) and Geo-II (720)	0.102
Linguistic	OneCountry (347) and Lang-I (410)	0.088
	OneCountry (347) and Lang-II (112)	0.193

3.2.3 Content Analysis and Statistical Test

We apply SEANCE to analyze the linguistic components of tweets (Crossley et al., 2017). SEANCE contains predefined word vectors under categories of sentiment, cognition, and social order. It can be used to measure multiple linguistic dimensions of English text. Each tweet is analyzed from three aspects: i) *Emotion*, which includes dimensions such as positive emotion, negative emotion, sadness, hostile, and anger; ii) *Economy, Politics, and Religion*, which measures the proportion of words relevant to the topics of economic, wealth, and religion, etc.; and iii) *social relation*, which measures the proportion of linguistic indicators of social roles and

social bonds. 66 indicators are belonging to these three categories. Each indicator measures one linguistic dimension of the text. The score of an indicator is calculated by the ratio of indicators in the sentence. For example, in the message “We all know they are trying hard to win over women voter’s using fear mongering #metoo and identity politics. My question is what are they going to do for men?”, one out of 30 words is identified to exist in the word list of Fear_Emolex, so the Fear_Emolex is 0.033 for this tweet.

We checked the homoscedasticity of all the indicators in the four pairwise groups by examining if their variances are the same. Tests showed that none of the 66 indicators are homoscedastic. We then performed Welch’s Anova tests to examine the differences between the means of groups (McDonald, 2009). Due to the unequal sample sizes and unequal variances of the indicators, we conducted Games-Howell tests for post-hoc pairwise comparisons (Schlegel, 2016). This test is based on Welch correction and uses Tukey’s studentized range statistic, which is widely used for testing the differences between means of two groups when their variances are unequal.

4. Results

4.1 Tweets Disseminating across Geographical Boundaries

Table 3 shows the statistical test results for the indexes that are significantly different. We list the pairwise comparison between OneCountry and Geo-I, and between OneCountry and Geo-II.

Table 3: Statistic test results for popular tweets disseminating in one nation versus across nations in one/many continents

Category		Indicators	OneCountry and Geo-I		OneCountry and Geo-II	
			MD	Upper/lower limit	MD	Upper/lower limit
Emotion	Negative emotion	Negative_EmoLex	-0.003	0.011/-0.016	0.010**	0.018/0.002
		hu_liu_neg_nwords	0.003	0.015/-0.009	0.009**	0.017/0.002
		hu_liu_neg_perc	0.047	0.145/-0.051	0.071*	0.134/0.008
		vader_negative	0.008	0.036/-0.021	0.018*	0.035/0.001
Economics, politics, legal & power	Economics & Wealth	Econ_2_GI	-0.007	0.001/-0.016	-0.005*	0.000/-0.010
		Wlttot_Lasswell	-0.007	0.001/-0.014	-0.004*	0.000/-0.008
	Legal & Rectitude	Legal_GI	0.007	0.015/-0.001	0.006*	0.012/0.001
		Rclose_Lasswell	0.000	0.003/-0.003	0.002*	0.004/0.000
		Rctot_Lasswell	-0.001	0.009/-0.011	0.007*	0.013/0.001
Social relations & communication	Communication	Com_GI	-0.008	0.002/-0.019	-0.008**	-0.002/-0.015
		Comform_GI	-0.012*	0.000/-0.024	-0.004	0.003/-0.011
	Social relations	Nonadlt_GI	0.000	0.001/0.000	-0.003***	-0.001/-0.005
		Race_GI	0.001*	0.003/0.000	0.001	0.002/0.000

Observation 1. Most of the significant indexes in the Geographic set are not significant between the pair of OneCountry and Geo-I (except ‘Comform_GI’ and ‘Race_GI’), which reflects that the linguistic characteristics of messages that spread in one country are very similar to those spread in countries with close geographic proximity. Geographically close countries may tend to share similar economic or cultural backgrounds. The spatial distance in diffusion may not be affected by the characteristics of the content if the diffusion is in countries with close geographic proximity. Nevertheless, messages that spread to countries in other continents present different characteristics, which are to be presented in the following observations.

Observation 2. Negative tweets are less probable to be disseminated across geographical boundaries. The mean deviations (MD) in negative emotion indexes (Negative EmoLex, hu_liu_neg_nwords, hu_liu_neg_perc, vader_negative) are all positive in the first pairwise comparison (OneCountry - Geo-II), which shows that messages that spread across continents generally carry fewer negative emotions. Messages that trigger negative emotions may be viral (retweeted by many users), but the diffusion tends to be constrained to countries that share close geographic proximity. This finding confirms that popularity in diffusion is not equivalent to the wider geographic scope of diffusion. Messages with less negative emotions are more probable to reach diverse and geographically far apart populations.

Observation 3. Tweets that contain economy-related linguistic components tend to spread to countries without geographic proximity, while tweets with legal or rectitude components are more likely to spread within a country or to countries in close geographic proximity. The proportions of economic and wealth elements (Econ_2_GI,

Wlittot_Lasswell) are significantly higher in tweets that spread across continents, while the index values of legal (Legal_GI) and rectitude (Rcloss_Lasswell, Rctot_Lasswell) elements are significantly smaller comparing tweets in OneCountry and Geo-II. The economy is the most popular topic in online news articles according to the Project for Excellence in Journalism (Purcell *et al.*, 2010). On the other hand, as legal systems of countries differ, tweets addressing legal issues or advocating for rectitude can be more limited to national or closely located countries.

Observation 4. Messages mentioning children or youth are more retweeted by diverse and geographically far apart populations. A social role is one dimension that belongs to the category of social relations, which includes indexes of 'Female', 'Male', 'Humans', and 'Non-Adults' etc. The index of Nonadlt_GI refers to words associated with infants through adolescents. Tweets that spread in one nation have significantly lower Nonadlt_GI values compared to those spread across continents (MD= -0.003***). The transnational #MeToo movement has provided a new avenue for adolescent survivors to disclose sexual abuse or assault (Alaggia and Wang, 2020), and non-adult issues may be a universal concern and trigger information to be disseminated across national and continental boundaries.

4.1 Tweets Disseminating across Linguistic Boundaries

We performed two pairwise comparisons: OneCountry with Lang-I and OneCountry with Lang-II to investigate the factors that relate to dissemination across linguistic boundaries. Table 4 shows the indexes that are significantly different in either of the two pairwise comparisons.

Table 4: Statistic test results for popular tweets disseminating in one nation versus across nations with/without linguistic proximity.

Category		Indicators	OneCountry and Lang-I		OneCountry and Lang-II	
			MD	Upper/lower limit	MD	Upper/lower limit
Emotion	Negative	No_GI	0.000	0.002/-0.002	0.003***	0.002/0.004
		Negativ_GI	0.005	0.015/-0.005	0.022***	0.009/0.034
		vader_negative	0.008	0.028/-0.012	0.047***	0.019/0.074
		Negative_EmoLex	0.004	0.014/-0.006	0.022**	0.008/0.035
		Hostile_GI	-0.001	0.008/-0.009	0.016**	0.005/0.027
		Anger_EmoLex	-0.001	0.006/-0.009	0.014**	0.004/0.024
		Fail_GI	0.001	0.004/-0.002	0.004**	0.001/0.007
		hu_liu_neg_nwords	0.005	0.013/-0.004	0.015**	0.004/0.027
		Ngtv_GI	-0.001	0.008/-0.009	0.013*	0.001/0.024
	hu_liu_neg_perc	0.031	0.103/-0.041	0.118*	0.010/0.226	
	Positive	hu_liu_pos_perc	-0.017	0.046/-0.079	-0.133**	-0.236/-0.029
Economics, politics & legal	Economics & Wealth	Econ_2_GI	-0.005	0.001/-0.010	-0.013*	-0.025/-0.002
		Wlittot_Lasswell	-0.003	0.001/-0.008	-0.010*	-0.020/0.000
	Legal & Rectitude	Legal_GI	0.004	0.011/-0.002	0.013***	0.005/0.021
		Rcgain_Lasswell	0.001	0.004/-0.001	0.004**	0.001/0.007
		Rctot_Lasswell	0.005	0.012/-0.002	0.012**	0.004/-0.020
Social relations & communication	Communication	Com_GI	-0.011**	-0.004/-0.018	-0.004	-0.015/0.007
		formlw_Lasswell	-0.008*	-0.001/-0.015	-0.006	-0.017/0.006
	Social relations	Nonadlt_GI	-0.003**	-0.001/-0.005	-0.005**	-0.010/-0.001
		Ptlw_Lasswell	0.000	0.005/-0.005	0.008*	0.002/0.014

Observation 5. Tweets that spread to countries without linguistic proximity contain fewer negative emotions. The mean difference (MD) of negative emotions, such as negative (Negative_EmoLex) and hostile (Hostile_GI) are both positive in the comparison between OneCountry and Lang-II. This finding is similar to Observation 2 in Section 4.1. While nearly half of the contents in the MeToo movement are angry-related (Yu et al., 2020), the anger might rise empathy for people who live far away (Berger and Milkman, 2012), such tweets are less likely to spread to countries with no linguistic proximity. In addition, Table 4 shows tweets that disseminate across linguistic boundaries contain more positive emotions (hu_liu_pos_perc).

Observation 6. Tweets with more economic, and wealth-related components are more probable to spread to countries without linguistic proximity, while tweets on legal matters and expressing rectitude are less likely to go beyond national or linguistic boundaries. The economic and wealth indexes (Econ_2_GI, Wlittot_Lasswell) have significantly negative MD in the comparison between OneCountry and Lang-II, while legal and rectitude

indexes (Legal_GI, Rcgain_Lasswell) have significantly positive MD. These results are like the findings in observation 3 in 4.1. Meanwhile, the MD of Nonadlt_GI is both negative at the significance level of $p < 0.01$, which complies with Observation 4 that messages on non-adult issues in the MeToo movement can especially trigger people from diverse countries to share.

5. Conclusion and Future Work

We investigated the characteristics of social media messages disseminating across geographic and linguistic boundaries. For RQ1, results showed that tweets containing more negative emotions are unlikely to spread across continents, while those focusing more on economic topics or non-adults' issues can travel a long distance across geographic boundaries. Regarding RQ2, there are similar patterns: tweets that disseminate to countries without linguistic proximity contain more positive, fewer negative emotions, and are less focused on legal or rectitude matters. There are several directions to explore in our future work. First, we will include more cases to figure out if the findings are specific to the diffusion of #MeToo messages and if the findings can generalize to other cases. Second, we would like to figure out who and what are the roles of users in the diffusion of messages across geographic and linguistic boundaries.

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Communication of Slovak Eco-innovation Companies with Social Media Users

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Abstract: Social media is widespread worldwide and firmly defined in today's communication. Available resources point to dynamic changes in consumer behavior, to which even ecologically oriented business entities must respond. Therefore, it is appropriate and necessary to look for innovative solutions that will contribute to improving the communication of eco-innovative businesses with their followers on social communication platforms. The aim of the paper is to map and describe the current state of communication of the responded Slovak eco-innovation companies with social media users. The communities that are emerging on social media are the driving force behind today's market environment. Communities can be talked about in connection with the pressure they exert on eco-innovation businesses, entities and other business areas. At the core, the authors focus on the interpretation of partial results from their own pilot survey, which serves as an input survey for mapping the current communication and will be a key basis for subsequent research. The interpreted findings from the survey come from a quantitative survey using a standardized questionnaire, which was answered by a total of 142 respondents, who represent representatives of Slovak eco-innovation business entities. From the author's research, we can define which digital platforms use subjects to communicate with their followers, how often they communicate with them, through what type of contributions and with what frequency they publish contributions. The results indicate reserves in the given issue. For this reason, further research and education of subjects is important. The limits of the investigation are in a smaller number of business entities and in the possibility that business entities did not provide true information. The authors of the article did not come to the conclusion that someone would carry out a similar survey within the Slovak eco-innovation entities, and therefore they point to the results of their own pilot survey. Eco-innovation entities do not currently have information on the communication process with their followers on social media. The authors consider the interpreted results from the pilot survey to be original and necessary due to the absence of marketing statistics, which would subsequently help businesses to set up the right online marketing strategy.

Keywords: Eco-innovation Performance of Slovakia. Online marketing communication. Social media marketing. Social Media as a Communication Channel. Social media users. Types of Social Media

1. Introduction

Changes in consumer behavior in the current period open up space for innovation of the current communication strategy. Communication is a key task for any business that intends to sell its products or services, with the goal of interpreting the information in a language that is acceptable to the target audience. The communication of eco-innovation activities of entities is more dynamic than in the past, due to the technological innovations that are used for online communication in the whole spectrum of the environment. For this reason, in the article we present the results of the secondary research, focused on the communication of business entities on social media, the frequency of publishing contributions, their interaction with users and the types of published contributions.

2. Literature review

Eco-innovation plays an important role in all business activities, as it is clear that a sustainable future also depends on the success of eco-innovation. Environmentally oriented entities focus primarily on innovative approaches to the production of their products or the ecological provision of services, while seeking to eliminate harmful environmental impacts and also to increase their economic potential (Huong Tran, Paparoidamis, 2020).

Based on the above, it is necessary to think about the recipient of this innovation, focusing on online consumers who can learn about eco-entities through a selected communication platform - social media. Several world-renowned authors write about eco-business entities. In their study, Gurtner and Soyez (2016) state that the success of eco-innovation depends mainly on individual acceptance by the final beneficiaries of eco-innovation, which is transformed into a final product or service. From the point of view of the practical application of innovations in eco-innovative business entities, we would add that the public is interested in information about the production processes and products of eco-innovative companies. It is important to include in the concept of

solving environmental problems the losses of economic competitiveness, which is transformed in the core of the so-called eco-innovation. In the context of the place of scientific research, it is crucial to define the current view of the studied country. According to the European Innovation Scoreboard (EIS), the Slovak Republic is currently one of the moderate innovators, ranking 21st in the EU (Eraportal, 2022). According to available statistics published under the auspices of the Slovak Business Agency, it is important to note that SMEs (small and medium-sized enterprises) make up more than 99% of all enterprises that contribute to GDP, which is associated with creating a suitable competitive environment. The application of eco-innovation, or green innovation (GI) in its business activities, helps to build awareness of the subject for various stakeholders (Gürlek , Ali Koseoglu , 2021). In the article, Vanko and Zaušková state that the current trend of using social media offers opportunities for communication of emerging ecological problems and eco-innovations (Vanko, Zaušková, 2019). According to research conducted under the auspices of the Slovak Business Agency (2018), the second most common indicator according to which it is possible to evaluate the innovation activities of Slovak SMEs is that these companies have introduced marketing or organizational innovation in their business (Slovak Business Agency, 2018). Based on the statements of several authors, we came to several findings, which we would supplement by the fact that in order to set up the right communication strategy on social media, it is necessary to introduce a suitable communication model of interaction with social media users. As the authors Ščepková, Zaušková and Kubovics state, social media are based mainly on the sharing of emotions, opinions but also on user experience, which creates space for the emergence of user communities (Ščepková, Zaušková, Kubovics, 2021). Communication media have become a part of our lives, and therefore it is desirable for business entities to adapt to this trend and communicate where their customers or potential customers are located. The advantage of digital marketing can be observed especially in the availability of tools that individual digital communication platforms offer. In their scientific contribution, Krizanova and the team of authors state that the Internet offers innovative marketing tools through which information can be shared globally (Krizanova et al, 2019). According to statistics from Datank (2020) it can be interpreted that 31% of business entities in Slovakia have implemented steps and measures in the past period that should lead to reducing the negative impact on the environment and according to the same statistics about 46% of Slovak entities have implemented such measures in the last period. One of the goals of communication, as we have already said, is to respond to current social events and, through appropriate tools, to attract the target audience and 'draw them into the story'. This process is much easier to implement in the online space than in the offline environment. Based on our findings from various researches to date, we can define that visual content is interesting to the audience and people are looking for it. With the advent of the technological era, information retrieval and sharing has become faster and more accessible than ever before (Hrdináková, Fázik, 2021). The author Marková classifies among the advantages of digital marketing communication indicators such as: availability, diversity, coverage, targeting, personalization, interactivity, collection of valuable data, measurability, efficiency, easy start-up, and possibility of updating and relatively low costs (Marková, 2021). In this context, we consider the threats and, conversely, the opportunities that the development and continuous improvement of technological communication platforms brings to business entities. Businesses are constantly exposed to possible confrontation with the recipients of their communication messages. So it is clear that in today's world marked by technological change but also by the coronavirus pandemic, people spend much more time online. This statement is confirmed by statistics according to which the average number of active internet users is at the level of 62.5% of the world's population, i.e. 4.95 billion people worldwide (Datareportal, 2022). Based on the above, it can be stated that if the number of digital technology users is growing worldwide, it is essential that businesses also communicate their eco-innovation activities through online communication platforms.



Image 1: Social Media Stats in Slovakia (February 2022)

Source: Statcounter, 2022

It is also necessary to interpret current statistics on the current use of social media. According to GlobalStats statistics, the latest results published in February 2022 can be interpreted. The results of the research interpret that 76.51% of the total market share of the social network Facebook, 10.79% Pinterest, 4.54% Instagram, and 3.38% is for Twitter, 2.5% YouTube and the smallest market share is Reddit 0.98% (GlobalStats, 2022).

Go4insight conducted a survey on a sample of 1,000 respondents aged 15-79 in the period February-March 2021, among other things, asked about the frequency of use of social networks in Slovakia at least once a day.

The most numerous was Facebook, followed by YouTube, Instagram, Pokec, Pinterest (Go4insight, 2022). These facts are also confirmed by statistics from Datareportal (2021) and NapoleonCat (2022). In addition to the findings we have made so far, it is interesting to follow the visual content that is best for communicating with users on social media (Socialbakers, 2022). Murár states that the principle of active content creation as one of the mainstays of social media has influenced the liberalization of the publishing industry but also mass communication as such (Murár, 2021). According to the authors of the article, social media can influence people and transform their opinions. Dean states that 4.48 billion people currently use social media worldwide, more than double that of 2015 (Dean, 2021). These statistics also reflect the fact that people prefer communication over social media over personal communication, which can be an opportunity for marketers. We believe that visual content is an important factor for the communication of entities with users, it would be interesting to find out what visual content users consider most appropriate.

3. Methodology

An examination of the resources within the theoretical background has revealed less covered areas, which is important to examine to complement the knowledge. The aim of this paper is to find out the current state of communication of Slovak eco-innovation companies with social media users, through the analysis of theoretical knowledge and the results of our own research. The working procedure focused on the study of available resources with a focus on statistical research of scientific and professional sources, especially from scientific journals, proceedings of international scientific conferences and other scientific publications. Subsequently, the authors identified the output questions they derived from the authors' previous research. Behind this, a research design was established based on the best possible verification and explanation of the identified research issues.

The next stage was the collection of questionnaires and subsequent evaluation. The next part is the survey method, which the authors define as standardized query. The form of the survey was set for an electronic questionnaire due to the circumstances of the ongoing pandemic during the limitation of closer contact. Due to the defined type, method and form, the questionnaire will be used as a research technique which helps to achieve the set goals with regard to research design. The form and type of the questionnaire resulted from the available data collection tools. The questionnaire was conducted anonymously and took place on an online platform. In summary, the questionnaire contained 27 questions, from which the authors selected 6 questions.

All selected questions were closed. As already mentioned, the target group consisted of business entities that implement eco-innovations and are located in Slovakia. The research was maximally adapted to the required topic and reliability was defined as quantitative. The questionnaire survey was focused on finding out the current state of communication of Slovak eco-innovation companies with social media users, in which respondents operating at the levels of management or leading positions of the respondents participated in the survey. The representation of enterprises was segmented as an ordinal variable into a division into micro (1 - 9 employees), small (10 - 49 employees), medium (50 - 249 employees) and large (250 - higher - employees). The questionnaire was distributed within Slovakia by random sampling, for reasons of statistical fairness, because this method eliminates all undesirable influences affecting the selection of business entities, and therefore we can mark the research sample as unaffected. The total collection time was set at 3 months.

The questionnaire subsumed to six survey areas:

- through which social media business entities communicate and interact with users,
- how business entities communicate their business activities on social media,
- what reactions do business entities encounter in connection with the communication of their eco-innovation activities on social media,
- whether business entities monitor and evaluate data obtained from implemented eco-innovation activities,
- what awareness do businesses have about the "groundswell" phenomenon,
- what tools from the SOLOMO concept (social, local, mobile) are used by business entities within the framework of internal communication.

In the article we present only the results of the survey from the first area "through which social media business entities communicate and interact with users", where we set three research questions:

RQ1: Which digital social media platforms are most often used by eco-innovative companies to communicate with internet users?

RQ2: In what timeline do eco-innovative companies communicate with users on social media?

RQ3: Is visual content on the social media of eco-innovative businesses at the highest frequency?

In the discussion and conclusions, the authors mainly use a comparison with previously published studies and bring a result with a deeper critical assessment and recommendation for the future.

4. Results and discussion

The resulting part contains partial results of the survey, which was carried out in the period from November 2021 to the end of January 2022. The respondents were Slovak eco-innovative business entities. The specific places of operation of business entities - respondents, are shown in Figure 1. Based on the findings, we can point out that the respondents carry out their business activities mainly in the western part of Slovakia. The most frequent cities in terms of the performance of their business activities of the respondents are the cities of Bratislava, Trenčín, Trnava and Žilina, which also includes the overall representation of businesses in Slovakia (SBA, 2019).

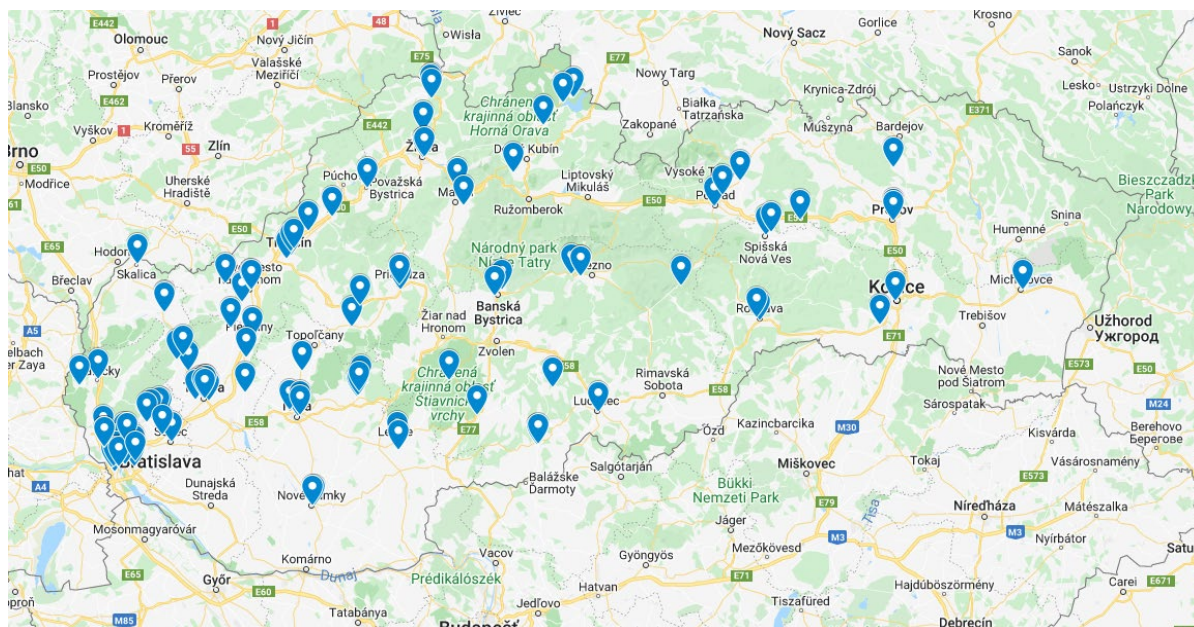
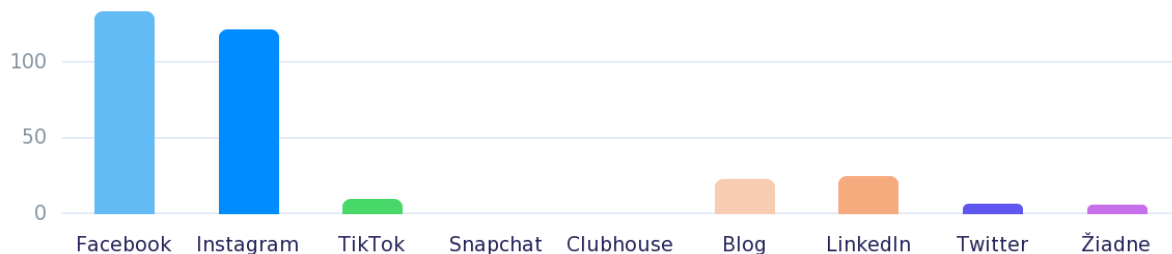


Figure 2: Map of areas in the survey of involved business entities in the Slovak Republic

Source: Own processing and Google Maps, 2022

The number of respondents who completed the complete questionnaire was 142. The answers for the given size of the company at micro 59.40% followed by small (10 - 49 employees) 18.20%, the penultimate was medium with 7.00% and finally large with 15.40%. The representation of enterprises in the survey copies the number of enterprises according to information provided by the SBA, where there are the most micro (230,054) and small enterprises (13,099), the least are medium-sized enterprises (2,900). However, the statistics show the number of all business entities and do not specify eco-innovation entities. There are no similar statistics to examine eco-innovative businesses. Large companies (669) are specific because they mostly use marketing agencies to communicate with users, and for this reason the ratio has been greater for us to capture large companies that operate on social media themselves. The narrow specification for ecologically oriented subjects was conditioned by a question in the questionnaire. The wording of the question was "Do you implement eco-innovation as part of your business?" with the answer "yes" and "no". The result was a breakdown of the subjects with subsequent selection. The nominal variable in this case has quantitative binary characteristics. The result of the values "yes" was 94.4% and the answer "no" was 5.60%. Only positive answers are placed in the next selection, as a result of which the results of values for business entities with a focus on environmental activities are ensured. Given the

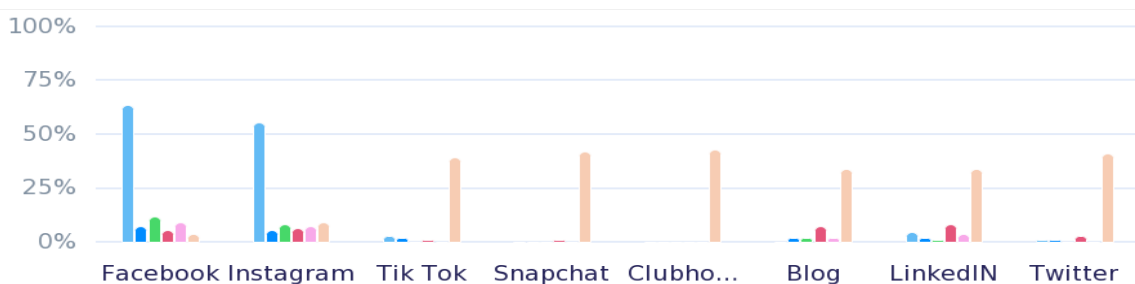
defined goal and the first research question identified, it was important to identify specific platforms that eco-innovative companies prefer for their communication with users. The following Graph 1 visualizes respondents' answers to the question of *what digital social media platforms they use to present their eco-innovative business*. The research is an ordinal variable where it is possible to mark multiple answers from "Facebook", "Instagram", "TikTok", "Snapchat", "Clubhouse", "Blog", "LinkedIn", "Twitter" and "None". By examining the published statistical data, the most used social networks in Slovakia were selected. Specifically, it is Facebook, Instagram, TikTok, Snapchat, Clubhouse, Blog, LinkedIn, Twitter and the last option was "no option".



Graph 1: Use of digital platforms by eco-innovative businesses

Source: Own processing, 2022

In the results of the questionnaire survey, it is possible to observe the highest frequency in two answers, which have a share of over 80.00%. It is a social platform Facebook with a share of 93.70% and then Instagram with a share of 85.30%. The most widespread social medium within eco-innovative business entities that implement eco-innovations is in the home environment of Facebook and Instagram. LinkedIn with a share of 17.50% and Blog with a share of 16.10% are represented to a lesser extent. TikTok is represented to a minimal extent with 7.00%, followed by Twitter with 4.90%. Snapchat and Clubhouse were not recorded between responses. On the other hand, 4.20% of respondents stated that they do not use any social media. Respondents could choose to tick more than one answer. The results showed that the most used social media across eco-innovative companies are Facebook and Instagram. The theoretical level led to the finding that Facebook is the most used social network in all segments worldwide. The discrepancy arises in the use of other social media, where YouTube is the second platform on a global and Slovak scale, and Pinterest is the market share. Another area to be explored is the availability of financial resources that businesses can invest in the development of communication on social media platforms. We consider it important to deal with the issue of education in the field of online marketing communication. Subsequently, subjects will be able to communicate more easily with their followers also through new social media. From the point of view of the focus of the surveyed business entities, it is necessary to take into account the specific demographic composition of the target group, which needs to be adapted to the type of content. Based on the findings of the new available study NapoleonCat, it can be stated that the most numerous target group for the social network Facebook are users aged 25-34 years, in the second 35-44 years and the third category are users aged 18-24. The most represented users on Instagram are 25-34 years old, the others are aged 18-24 and the third are aged 35-44 (NapoleonCat, 2022). On the other hand, we can discuss the target group for eco-innovative businesses. Harker (2021) states that there are different typologies of target groups of eco-innovation actors. One mentioned is the target group of 35-44 years. On the other hand, Fisher, Bashyal and Bachman (2012) list the 21-25 target group as the most numerous, but the latest Responsesource surveys (2020) list 18-24 years as the largest target group. For this reason, we can also discuss the involvement of other social media for younger age groups, e.g. Tik-Tok. Another area that we examined was the frequency of communication of eco-innovative business entities with social media users; the visualization is shown in Graph 2.

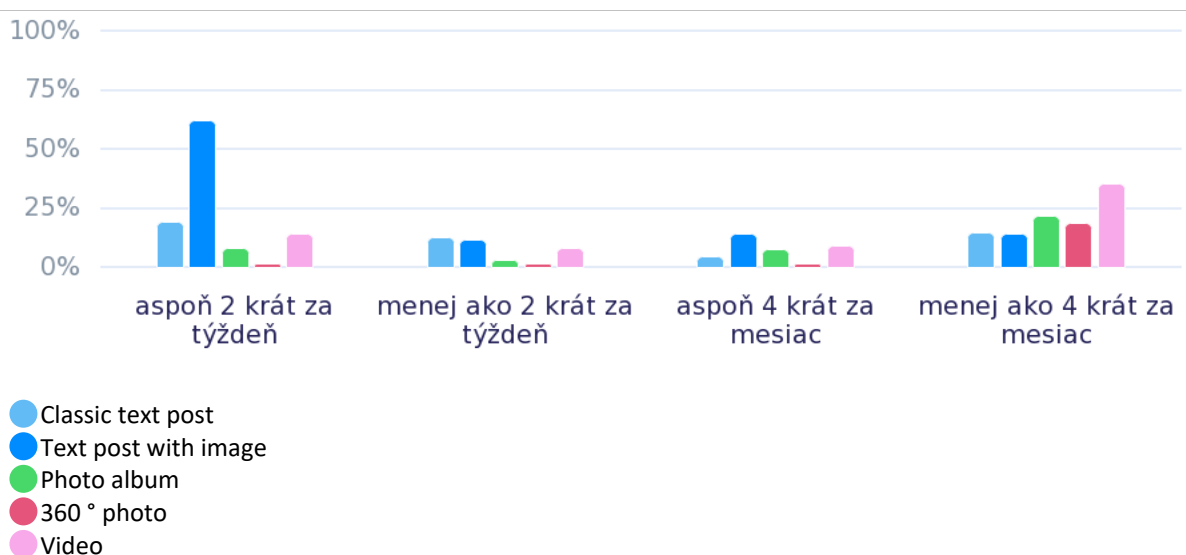


- 5 times a week
- less than 2 times a week
- 2 times a month
- less than 4 times a month
- to a different extent
- all

Graph 2: Frequency of communication of eco-innovative business entities with social media users

Source: Own processing, 2022

As Postrcon (2022) says, regular communication with users is very important because it encourages users on company profiles to be more engaged and more fans (Southern, 2019). However, we must point out that if operators do not communicate regularly and consistently, they will lose their followers, who are attracted by the competition. The results show that eco-innovation entities communicate on Facebook 2-5 times, which seems to be sufficient, as this statement is also confirmed by the author Persico (2021), who says that on the social network Facebook and Instagram, entities should communicate at least in range 3-7 times a week. The blog responded less than 4 times a month. According to Blog Hubspot (2020), it is advisable to blog to communicate with your readers at least once to four times a week. According to the author Gannon, it is also necessary to communicate at least 3 times a week on the social network LinkedIn. It follows from the above that eco-innovation entities communicate in sufficient frequency on the social networks Facebook and Instagram, and this is insufficient within Blog and LinkedIn. In view of the findings, eco-innovation actors should pay attention to the sufficient frequency of contributions to social media that have an intersection with their target communication group, but also to other social media that have an intersection with their target groups. The third area of research is the type of content and the frequency of publishing on social media. The following chart is devoted to the type of content that companies publish on social media. The breakdown is based on the percentage of post types for the selected content types. We observe the highest values for text posts with an image, where it is noticeable that the highest value is for a text post with an image at a frequency of at least 2 times a week. Other noticeable increased values are especially in the area of publishing types of contributions less than 4 times a month, where the mood within the video is dominant, followed by a photo album and a 360-degree photo.

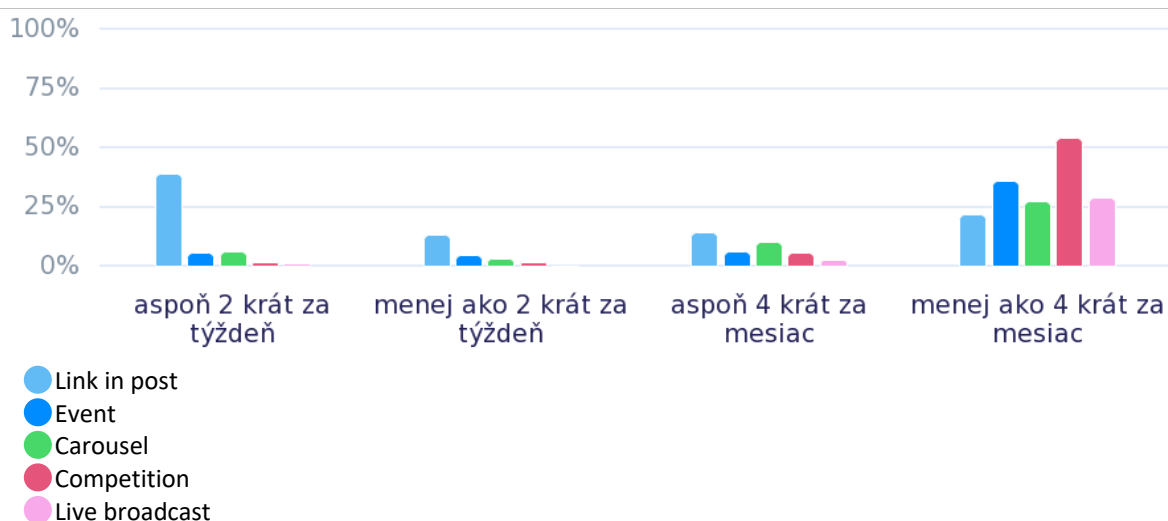


Graph 3: Types of content and frequency of publishing articles on social media

Source: Own processing, 2022

Graph 4 complements the breakdown with other categories of contribution types. We can observe the highest frequency response we contribute less than 4 times a month. The highest frequency is in competition, where it is possible to achieve higher interaction with communities on social media. In the curtain behind the competition

is an event where it is possible to see a value higher than 25%. On the other hand, there is specificity in the area of links in posts where the limit of 25% is exceeded in the answer at least 2 times a week. According to Biteable (2022), visual posts work best for users. This is mainly due to the attractiveness of the content type. Business entities engaged in eco-innovation activities show the right contribution with respect to the types of contributions. On the other hand, businesses should also publish tenders that result in a dominant amount contributed less than 4 times a month.



Graph 4: Types of content and frequency of publishing articles on social media

Source: Own processing, 2022

The results presented in this chapter answer the research questions. The discussion also pointed out the recommendations that eco-innovative businesses should use when communicating on social media.

5. Conclusion

Communication of eco-innovative business entities on social media is an important part of creating communication strategies (Rezníčková & Zaušková, 2021). This is mainly due to the use of social media as a tool for awareness raising, interactive communication with the customer and, ultimately, sales. Social media users can very easily meet their needs or requirements by connecting with business entities. It is also important for businesses to monitor, analyze and evaluate the behavior of social media users, as users may have either a positive or adverse effect on the entity and its subsequent communication or business activities. Based on the results of the survey, we can delve deeper into the communication of Slovak eco-innovation entities with users of various social platforms, as a result of which we can proceed to specific research of selected areas of communication on the platform, which should help research subjects to set the right communication strategy. At the end of this paper, it is necessary to point out the needs of further research of eco-innovation entities and also their necessity of education in the field of research, which should help entities to solve various situations that entities may face in the online environment of their business.

Acknowledgment

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PhD Research Papers

Virtual Communities of Practice for Research Postgraduate Students: Determining Needs and Reducing Isolation

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Abstract: Postgraduate research is considered a lonely endeavour with students frequently experiencing social and intellectual isolation. Research offices in many higher education institutions have developed programmes to support supervisors and students undertaking research studies and supervision. These programmes include instruction on research techniques and methodologies but are often lacking in community-based approaches such as creating support and peer groups where students can share information and ideas directly. This study explores the use of online communities of practice as a support tool for postgraduate researchers in a university in Ireland. The research questions seek to determine the antecedents for successful implementation, the dominant problems associated with using online communities, and the motivators for, and barriers to, participation in communities of practice in this context. The study facilitates student collaboration by implementing a community of practice on an enterprise social network (ESN) platform. These platforms are increasingly used in industry to facilitate online community groups that collaborate professionally and socially. Professionally, ESN can be used as a platform to host virtual communities of practice (vCoP), where members can engage in sharing knowledge of their practice domains and experiences. The promotion of ESN and vCoP for this study is a joint initiative of the Research Support Office, the Students' Union, and the Postgraduate Society, who advocate for a strong peer to peer support system for postgraduate students. The study adopts an Action Research design and a mixed-methods approach, and data collection includes system use metrics, surveys, focus groups and interviews. The practical objective of the project is to manage the implementation of the virtual community as a peer-to-peer support environment, and success is determined primarily from usage statistics. This may lead to developing a framework for implementation that is generalisable to other higher education institutions.

Keywords: communities of practice, student isolation, enterprise social networks, postgraduate research, knowledge sharing, action research

1. Introduction

The postgraduate research experience is unique to every individual, generally involving considerable investment of time, money, and emotional energy (Greener, 2020). Although many postgraduate researchers work within research groups and centres, their projects are unique and require extending the existing body of knowledge in their fields with novel findings. Due to the isolating nature of research and the time commitment required, research students frequently do not have time to engage in extracurricular activities and may lack opportunities to meet and communicate with peers, increasing the chances of being isolated from other students for much of their research journey. Postgraduate loneliness and isolation are well documented and seen as an inevitable part of the research journey (Lin and Huang, 2012, McLaughlin and Sillence, 2018, Sawir et al., 2008). According to Sawir et al. (2008), the feeling of loneliness is caused by a lack of social networks and being distant from other people.

The past decade has seen a significant increase in internationalisation of higher education. Globalisation and mobility have created new possibilities for postgraduate students who may see studying abroad as prestigious and an investment in their future careers (Greener, 2020, Sawir et al., 2008). These students relocate and separate from family and friends to research in a country where the culture, customs and language may differ (Greener, 2020). Consequentially, international students may find this study period very challenging, with an increased risk of isolation from the outset, and they may never fully engage with their host institutions. Sawir et al. (2008) found that 65% of international students experienced feelings of loneliness.

Completion rates for postgraduate students are generally accepted to be considerably lower than for undergraduate students. According to Litalien and Guay (2015), attrition rates for doctoral students in North America are estimated at between 40% and 60%. Bednall (2018) places Australian public university postgraduate attrition rates at even higher levels, and Jones (2013) cites several international studies that range from 33% to 70% attrition for PhD students. For those research students that do finish, the majority take longer than the prescribed time in which to do so. For example, Van De Schoot et al. (2013) found that only 10% of PhD

candidates in the Netherlands complete their studies in four years, and the average completion time is five years. Many of the 10,500 postgraduate research students currently registered with Irish universities will never complete their degrees, and many others will take far longer than is expected to complete. A 2021 survey by the Higher Education Authority (HEA) and the Union of Students in Ireland (USI), to which 34% of postgraduate students contributed, found that 36% of them were not very aware of the various supports available, such as extracurricular activities, healthcare, and counselling (HEA, 2021). The study found an even lower awareness amongst part-time research postgraduate students. 30% of respondents also indicated that they were not confident of completing their research in the allocated timeframe. It is estimated that postgraduate numbers will grow by 30% in Ireland by 2030 (Hunt, 2011). This projected growth exacerbates the challenge faced by higher education institutions (HEIs) and policy makers, and new structures and practical solutions need to be explored to meet the diverse learning and social requirements of these students.

2. Research Journey

The postgraduate research journey can be a challenging experience, with several studies reporting high-stress levels, poor mental health, and fatigue amongst students (Desa et al., 2012, Kato et al., 2019, McLaughlin and Sillence, 2018, Sawir et al., 2008). Social and intellectual isolation is common, and both contribute to feelings of loneliness (Conrad and Phillips, 1995, Crick et al., 2021, Janson, Howard and Schoenberger-Orgad, 2004, Lee and Chan, 2007, Lewis, Wolff and Bekker, 2021). Although loneliness caused by social isolation is well understood, Sawir et al. (2008, p.18) describe students feeling 'topic related loneliness', caused by having no one to discuss research topics with due to their novelty. Janson, Howard and Schoenberger-Orgad (2004) describe writing a thesis as a lonely activity. Although the time to think and write in solitude is necessary, it is likely that only a few acquaintances are sympathetic or marginally interested in the research, and finding someone to talk to can be difficult. Mewburn (2017) describes feeling isolated with accompanying imposter syndrome and cites a colleague who was surprised to complete a PhD whilst retaining any friends.

Janson, Howard and Schoenberger-Orgad (2004) describe the research journey as having peak experiences and refer to the work of Csikszentmihalyi on peak dimension. Csikszentmihalyi (1990) describes 'flow' as a level of attention so intense that it equates to complete absorption in a task. The individual is so immersed in the action that their understanding of time is skewed. Janson, Howard and Schoenberger-Orgad (2004) describe similar feelings amongst postgraduates, with a sense of anticipation, ranging from curiosity to inspiration and passion. The beginning of the postgraduate journey is filled with infinite possibilities and the students may undergo intense experiences of deep involvement and challenge. However, amongst these feelings of enthusiasm and expectation, there can also be subtle, short-lived feelings of uncertainty and anxiety. Students' emotional states fluctuate between positive and negative. There are times when they are overcome with doubt about the relevance of their chosen topic and their ability to complete the research, and they may experience imposter syndrome. The goal to finish a postgraduate research project seems unreachable and intensifies negative feelings. Janson, Howard and Schoenberger-Orgad (2004, p.4) "began to feel isolated in what seemed to be an unending emotional storm". Students can mistrust their decision to undertake the research and doubt whether they have the capability or stamina to complete their studies.

According to a HEA (2021) student survey, feelings of isolation increase for research postgraduate students who work from home or have no working space. In Ireland, only 60% of these students have adequate access to on-campus facilities required to engage with their research, suggesting an increased risk of isolation for the remainder. The suitability of the workplace and facilities is perceived in practical terms for some, such as the benefit of having a quiet room, but may also consider the opportunity to learn how to connect, collaborate, and form networks with other researchers. While autonomy is part of the research, the importance of a community and opportunities to discuss research with peers is essential.

Starting postgraduate research can be confusing due to its unstructured nature. Mewburn (2022) remembers going into the PhD office each day for months, feeling lost, wondering how a PhD was achieved, was she reading enough, and finding it difficult to organise a day. In the absence of classes, postgraduate students lack opportunities for developing friendships and the network they provide (Sawir et al., 2008). Janson, Howard and Schoenberger-Orgad (2004) found that students felt unsupported, and with little opportunity to meet peers they lacked a sense of belonging and had no community. Ali and Kohun (2006) discuss student isolation at different phases of doctoral programmes and determine a lack of communication, miscommunication, and confusion as a basis for isolation. When students believe they have no network to join, they are more likely to experience

isolation and loneliness (HEA, 2021). The HEA student survey indicates that only 47% of students feel that they have frequent opportunities to discuss their research with other research students, just 44% agree they have opportunities to become involved in the wider research community beyond their department, and just 45% agree there is someone in their institution they can talk to about their day-to-day problems.

These challenges to beginning and staying in postgraduate research have a detrimental effect on degree completion rates and it is incumbent on HEIs to address them (Greener, 2020). According to Sawir et al. (2008), loneliness is an unavoidable aspect of postgraduate research and can only be alleviated by providing structured communities for students. Being included leads to positive emotions and interaction with peers and helps students learn (Osterman, 2000). van Rooij, Fokkens-Bruinsma and Jansen (2021) found that a sense of belonging makes a substantial contribution to retention and satisfaction, and that HEIs can take action to create environments that engender a sense of belonging, emphasising the importance of social activities so that everyone can get to know each other.

3. Communities of Practice

In many HEIs, research offices have developed programmes to support supervisors and postgraduate students on the research journey. These programmes include instruction on research techniques and methodologies but are often lacking in community-based approaches, such as the creation of support and peer groups, where students can share information and ideas directly with each other. One particular type of group that may be useful is a community of practice (CoP). A CoP is a knowledge management technique that has been used in companies and public organisations for the past twenty years to provide professionals with a platform to facilitate knowledge exchanges and interpersonal interaction (Bolisani et al., 2020). According to Wenger (2011), a CoP is a group formed by people who want to engage in collective learning to advance their knowledge in a shared domain, and it facilitates the management, development, and advancement of knowledge among a group of professionals, and should assist participants in doing their work more effectively. Important CoP principles include shared goals, reciprocal accountability, open communication, mutual engagement, sharing material and emotional resources (Wisker, Robinson and Shacham, 2007). Janson, Howard and Schoenberger-Orgad (2004) describe seeking and obtaining emotional and academic support through implementing a CoP while working on their research. Eight PhD students were brought together to discuss their research journey and the reaction to their shared negative experiences led them to form a CoP, creating frequent opportunities to meet virtually and in-person to discuss theory, technical, and emotive issues. This helped the students to emerge from isolation and form a supportive peer group. Students consulted the community when they needed to, enabling problems to be solved innovatively, creating new solutions, and adapting and refining new knowledge.

According to Corcoran and Duane (2019), CoPs can be face-to-face or online, and groups can be large or small, with characteristics of informality and flexibility. Social media technologies can provide resources to manage knowledge flow to support knowledge management systems (Nisar, Prabhakar and Strakova, 2019) and are particularly useful in facilitating online or virtual CoPs (vCoP) (Corcoran and Duane, 2018). According to Murphy (2016), a vCoP is a community that supports the same fundamentals as a CoP, where members can share knowledge of their practice domains and experiences, potentially crossing geographical and political boundaries to pursue mutual interests or goals. vCoPs can be hosted on Enterprise Social Network (ESN) platforms, which are social media systems used in an enterprise environment, allowing employees to connect and communicate in a secure space. Companies have begun to incorporate ESN to foster collaboration and enable new work practices amongst employees (Leonardi, 2017). According to Dhasarathy et al. (2021), the effective use of an ESN can result in a 20% to 25% improvement in the efficiency of knowledge workers. Several studies have demonstrated that ESNs have been successfully used in industry to facilitate online community groups that collaborate professionally and socially (Brown, Sikes and Willmott, 2013, Bughin and Chui, 2013, Leonardi, 2017). Common ESN platforms include Microsoft Communities (Yammer), Facebook Workplace, IBM Connections and Salesforce Chatter (Riemer et al., 2020).

Appropriate strategies and innovations are needed to support an ever-diversified postgraduate student population and the potential of the CoP model in helping these students overcome obstacles on their journey is evident. The benefits that research students can derive from being part of a community should lay the foundations for CoP development in HEIs for this purpose. However, Makori (2015) argues that resistance to embracing digital knowledge is the standard rather than the exception and that this condition is prevalent

amongst this student group. To produce tangible, meaningful change and thriving communities to support postgraduate researchers, the reasons for this resistance must be explored and understood.

4. Research Design

The underlying problem of research postgraduate student social and intellectual isolation provides a starting point for the study, and this is well evidenced in the literature (Desa et al., 2012, HEA, 2021, Kato et al., 2019, McLaughlin and Sillence, 2018, Wisker, Robinson and Shacham, 2007). It is also evident that these students lack opportunities to engage as a community within the university and this is exacerbated by a lack of essential facilities to conduct their research on campus. The Covid-19 Pandemic furthered their isolation by enforcing remote working, and this has been highlighted by the National Forum for Teaching and Learning, who emphasise the need for HEIs to examine community-based approaches to increasing the sense of connection and belonging felt by all student groups (NFTL, 2021). An online community emerged as a possible solution to increase research postgraduate student engagement with each other to reduce social and intellectual isolation.

The study explores the use of vCoP as a support tool for postgraduate researchers in a multi-campus university in Ireland. The creation and promotion of the vCoP in this context is a joint initiative of the Research Support Office, the Students' Union, and the Postgraduate Research Society, who advocate for a strong peer-to-peer support system for postgraduate students. The main objective of the project is to manage the implementation of the vCoP as a peer-to-peer support environment, and its success will be measured from usage statistics, such as total users, active users, comments, and likes. The research questions seek to determine the antecedents for successful implementation, the dominant problems associated with using online communities, and the motivators for, and barriers to, participation in CoP in this context. The practical outcome is to develop a vCoP to alleviate the pressures felt by postgraduate students, whether they be intellectual, social, or emotional. A successful implementation may lead to the development of a framework that is generalisable to other HEIs.

The practical implementation involves setting up a vCoP on an ESN for postgraduate students. Various ESN platforms were investigated to assess their suitability to host the community. Facebook, Twitter, and Instagram were considered social platforms and not formal enough to implement for communities in this context. Microsoft Teams and Microsoft Communities (Yammer) are freely available in the university and already integrated into the portals and communication channels. Microsoft Communities has similar usability to Facebook groups, and as Facebook is already a familiar tool to most people, students should find Communities user friendly and easy to navigate. The platform is secure, and community groups can be made private with restricted access, ensuring that members can feel safe communicating with their peers. The principal investigator on the project is an officeholder in the Postgraduate Research Society and is taking the lead in creating and managing the vCoP. Because Action Research (AR) is an approach that recognises the practical involvement of the researcher in implementing change and observing the results (Baum, MacDougall and Smith, 2006, Coughlan and Coughlan, 2002), it was considered to be a suitable research approach for the study.

According to Stowell and Cooray (2017), AR is used to encourage a systematic, iterative approach to research, and it is particularly suited for analysing collaborative and community groups (Kemmis, McTaggart and Nixon, 2014). The design of an AR project focuses on planning a series of interventions to promote action, creating changes that are analysed to measure their efficacy, and the results are used to inform further cycles of planning, action taking, and learning (Bruce and Easley, 2000, McNiff and Whitehead, 2010). The AR model for this study was developed by Susman and Evered (1978) and adapted by Corcoran and Duane (2018). It consists of five phases of Diagnosing, Action Planning, Action Taking, Evaluating, and Specifying Learning, as illustrated in Figure 1. For this study, the AR cycles are designed to coincide with academic semesters, allowing for up to six cycles over a two-year period, beginning in September 2022. A package of interventions will be designed for each cycle, informing the actions that need to be taken to grow the vCoP. The analysis of the impact of each intervention will inform the package of interventions for the following cycle. According to Coughlan and Coughlan (2002), although the planning, doing, and evaluation of cycles are to be expected, they cannot be entirely created or planned ahead of time.

It is anticipated that several barriers to participation will have to be addressed, including promoting awareness of the community to a large number of postgraduates distributed across several campuses; technological barriers; attitudes to using the technology; providing adequate training, and maintaining engagement. However, this list is not exhaustive, and a central research question is to discover the impact of these and other barriers

that may emerge. The primary goals of the study are the successful implementation of the vCoP, to understand the dominant problems associated with using online communities, and what the motivators for, and the barriers to, participation are in this context.

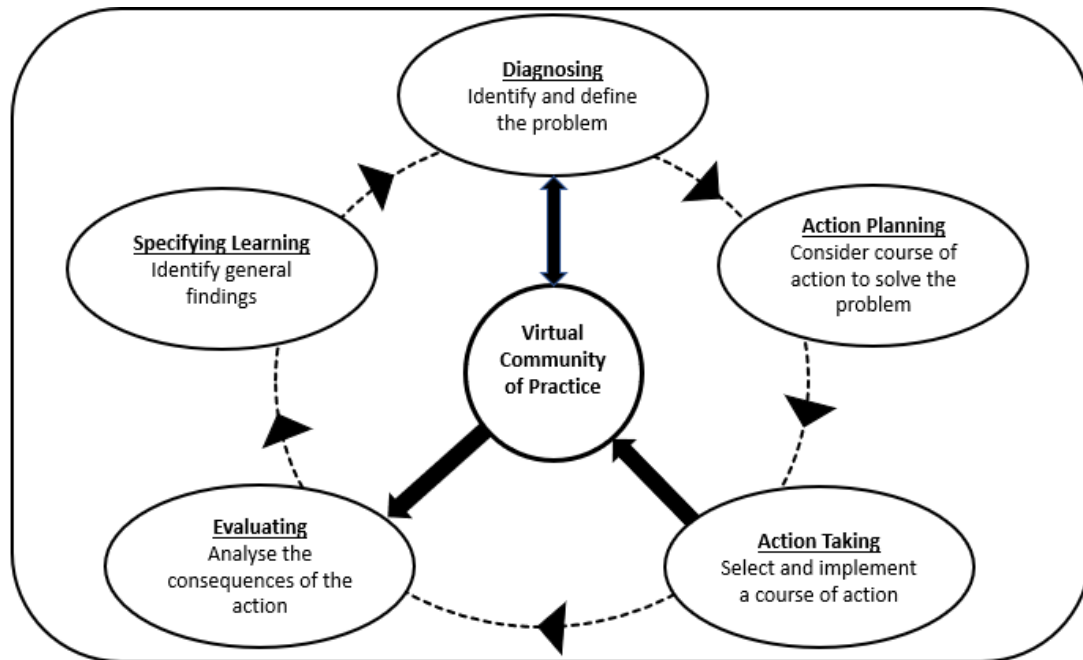


Figure 1: Phases of the AR Design

4.1 Data Collection and Analysis

The study proposes a mixed-methods approach, using several data collection techniques, including field notes, written reflections from personal logs and notes, surveys, focus groups, semi-structured interviews, and system metrics. Taking field notes from observations is an essential part of AR (McNiff and Whitehead, 2010), and these can be used to form the basis for reflective journaling, an important tool for the Evaluating and Specifying Learning phases of the AR cycles (Clark et al., 2020, Leitch and Day, 2000). System metrics from Microsoft Communities will be used to interpret use and engagement in the vCoP, and thematic analysis will be used to help understand participants' motivation for use.

During the early AR cycles, semi-structured interviews will be conducted with participants from a sample of the research postgraduates and will explore the current experience and ascertain general awareness of CoPs, ESN, and social media use. The data will be analysed to understand the current student experience, determine requirements, and how a vCoP might enhance their research experience. Focus groups will be used to facilitate a dynamic brainstorming approach with postgraduates to create a concept map of requirements (Lee-Kelley, 2019). Focus groups enable an innovative, creative thinking environment and can help to interpret experiences and understand barriers to student engagement with the vCoP (Clark et al., 2020). These group sessions will look for suggestions to improve the vCoP and discover what supports the students need to enhance their learning and social experience. Findings from the semi-structured interviews and focus groups will be used to inform questions for surveys, that will be conducted during the later AR cycles. According to Venkatesh, Brown and Bala (2013), surveys are a standard research tool for gathering information about participants' feelings, beliefs, and attitudes about a topic. A number of hypotheses will be developed from a thematic analysis of the qualitative data collected during the early AR cycles and the surveys will be designed to quantitatively examine these. Because data is informally analysed throughout an AR project to reflect on the implications for practice, and to formally analyse and develop findings, it provides an opportunity to identify unanswered questions and offers the possibility of new directions for the research (Kemmis, McTaggart and Nixon, 2014).

5. Conclusion

The postgraduate journey is ever evolving, and it is undeniable that research postgraduate students are burdened with various demands, including the pressures of research completion and meaningful knowledge generation. High dropout rates have competitive and financial impacts on HEIs as most of their research output

is dependent on postgraduate students. Quality supervision, project characteristics, psychosocial factors, and research culture have been determined to influence student satisfaction and research completion. However, the prevalent research culture in HEIs does not normally address the intellectual and social isolation of students and, and it is imperative that HEIs look at new and innovative ways to support postgraduates to mitigate these problems. As CoP have been widely and successfully used by enterprises and professional groups for some time, they should be considered as a potential solution to increase peer-to-peer engagement amongst postgraduate students. CoP principals are based on shared goals, reciprocal accountability, mutual engagement, pooling of material, and emotional resources, so enabling students to connect with their peers in this manner is likely to positively affect all areas of their research. The resultant socialisation should lead to more inclusion and feelings of belonging. Research support offices need to understand the importance of social support provided by the institution to break the feeling of isolation amongst postgraduate students to help increase their chances of success. Although faculties can take initiatives to promote socialisation amongst students, the institution is better placed and equipped to provide mechanisms for promoting student interaction, and these should be a central component of postgraduate student support structures.

In developing and fostering such communities, HEIs must also afford students the time to participate in community activity. Additional workloads are common for research postgraduate students where working overtime in the evenings, weekends, and holidays is seen as the norm. Students may find it hard to refuse extra tasks fearing they may harm their future career prospects. Although supervisors play a significant role in protecting students from undertaking projects too large for one person and agreeing to too many extra responsibilities outside of their research, such as teaching, supervision, and side projects, membership of a CoP would allow students to compare their situations with their peers in other departments and disciplines and empower them to understand their own situations and perhaps resolve them.

There is limited research on the use of community-based approaches to support research postgraduate students and it is increasingly important to understand how they may be used as support tools in this context, particularly with likely further pandemic-enforced remote working arrangements. A lack of on-campus facilities available for research postgraduates is also likely to enforce remote working in this group as numbers grow, and this may increase the sense of isolation for students affected. In seeking to understand the social and collaborative needs of research postgraduate students, determining the barriers to participation in a vCoP, and discovering the perceived benefits of participation, this study should be of interest to others working in this field, research support offices, and policy makers in HEIs.

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Flagging Controversies: The Effect of Flagging Mechanisms on the Zhihu Platform

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Abstract: This empirical study explores the formation and configuration of public opinions on Zhihu, a major knowledge-sharing social media platform in contemporary China. Though recent studies examined the impact of flags on citizen journalism, how users make meaning of flagged content and how flags affect public opinions largely lack contextualized explanation and investigation. Thus, this research takes the flagging mechanisms of Zhihu as a vantage point to analyze how public opinions are configured in a flagged controversy. This study focuses on a posted question on Zhihu: “*How to understand Greta Thunberg’s advice for Chinese to stop using chopsticks for the environment’s sake?*” This study probes the interplay between users, platforms, and public discourses in the ad hoc controversy. The finding suggested the frontpage and backstage of the flagging activity structure an unequal relationship among Zhihu users. Significantly, the flagging mechanisms broaden the circulation of controversy rather than intervening in spreading rumors. Besides, this study found a frame of newsworthiness employed by Zhihu users. In addition to the framing, there is a pattern of prioritizing information sources in public discussions.

Keywords: Chinese platforms, Zhihu, flagging, knowledge, ad hoc public, content moderation

1. Introduction

In April 2020, a speech given by Greta Thunberg about the usage of chopsticks hit the headlines of major Chinese news websites. According to the coverages, Greta Thunberg gave a speech advising Chinese people to stop using chopsticks to save forests and protect the environment. This speech soon became a controversy that provoked a discursive vortex in social media, especially on the Zhihu platform, one of the largest knowledge-sharing communities and question-answering platforms in the Chinese digital spaces. This controversy is contentious from two perspectives: 1) *the factuality of Greta’s speech is in doubt* - if Greta gave the speech is not proved, and 2) *the scientific credibility of Greta’s advice for environmental protection are in doubt*. As for the latter, it is questionable if Greta’s advice is supported by scientific evidence or by political ideologies. This incident is soon flagged as “of doubtful truthfulness” on Zhihu, while it remains viral among Zhihu users. This case (hereafter as the chopsticks controversy) exemplified a discursive phenomenon involving the interplay between the flagging mechanisms of platforms, users’ behaviors, and public discourses.

Zhihu is one of the largest social question-answering platforms among Chinese-speaking users (Zhao et al., 2020). Zhihu users can propose and answer questions about specific topics such as breaking news. Like Quora in English social media spaces, Zhihu encourages knowledge exchange and social collaboration among its users (Wang & Zhang, 2016). Recent scholars also observed that large members of Zhihu users are well-educated, middle-class Internet users (Peng, 2020; Peng et al., 2021). Therefore, Zhihu is an appropriate site for exploring the discursive relationship and socio-cultural structure in the global context of climate change. Previous scholars also pointed out that it is crucial to consider the role of platform mechanisms in producing social structure (van Dijck et al., 2018). However, the flagging mechanisms of digital platforms remain insufficient explorations in scholar inquiry (Crawford & Gillespie, 2016). This literature insufficiency is demanding further empirical and theoretical probes in the studies of the Zhihu platform and the effect of its flagging mechanisms on public deliberations and knowledge dissemination. Therefore, this research is motivated to contribute to the literature gap.

The chopstick controversy is positioned in an ad hoc event of detecting fake news. In this case, the public discussions are pluralized and rife with fragmental information and individual expression of attitudes. This phenomenon leads us to the configuration role of the digital platform in the emergence of the ad hoc public. In an ad hoc public, knowledge gathering and information circulation are decentralized and fragmented (Bruns, 2018). Yet, it needs nuances empirical investigation in different cultures and societies to understand how platforms enable and constrain users’ efforts of “collecting, assessing, selecting and curating content” about specific news items (Bruns, 2018, pp.104).

Thus, this research takes the flag mechanism of the Zhihu platform as a theoretical angle, aiming to address the main research question - **how public opinions are shaped and structured in an ad hoc flagged controversy**. As to address the research aim, this study is unfolded following **three sub-questions**: 1) how Zhihu users participate in controversy through the flagging mechanisms on Zhihu, 2) what discursive patterns or characteristics can be observed in users' posts, and 3) what kind of information is prioritized in users' responses to the controversy.

This article firstly reviews the literature on flagging mechanisms and their reification in the following. Then, this paper reflects on the previous research on ad hoc public and Chinese digital public spheres. In the third section, the methodology for this research is elaborated. The section of result and data analysis presents the findings of this study. The closing section is the conclusion and discussion about the contribution and limitations of this study.

2. Theoretical framework

2.1 Flagging mechanisms in Chinese social media platforms

Plenty of major social media platforms, such as Twitter, Facebook, and Weibo, design the function of the flag for crowdsourcing efforts of fact-checking and misinformation detecting to platform users (Kim et al., 2018). Previous research on flagging demonstrates that flags play an important and specific role in the "techno-cultural construct" (Van Dijk, 2013) of social media platforms (p. 29). They are part of available tools that facilitate, compartmentalize, and quantify user feedback (Gerlitz and Helmond, 2013). In other words, flags function in two directions: 1) it enables users to report and signal controversial content such as misinformation and rumors to other users, and 2) it triggers feedback into the platform's algorithms in the way of mediating users' behaviors. As a result, it provides a practical mechanism for regulating and moderating content on behalf of the platform users. Considering the socio-cultural consequences, such effects of flagging could further cause effects on the shaping of public opinions and community values in public spheres (Crawford & Gillespie, 2016). Thus, the flagging mechanisms could serve as a theoretical prism for unfolding the role of platforms in a controversy. In the case of chopsticks controversy, the conceptualization of ad hoc publics could shed light on exploring the discursive effect in the public discussions in a digital environment.

Studies of flagging on Chinese social media platforms remain few in the previous research. Some scholars pay attention to verifying information sources and debunking rumors (Zeng et al., 2019; Xu & Gutsche, 2021). Resonating to Crawford and Gillespie's findings, these studies also found that the mechanism of debunking rumors on Chinese social media encourages users to participate in fact-checking. However, in terms of the effect of flagging in Chinese contexts, previous studies lack socio-cultural contextualized understanding and interpretation. Specifically, how users make meaning of the flagging as a symbolic expression instead of a practical tool deserves further investigation. For instance, in the case of the chopsticks controversy, how users respond to the flag and how users react to the untruthfulness deserve an in-depth analysis. What effect of flagging mechanism could cause public opinion and power relationships requires more empirical studies and theoretical discussions.

2.2 Ad hoc public and Chinese digital public spheres

An emergence of ad hoc public is occupying the Chinese public sphere due to the vast use of social media. Previous studies referred ad hoc publics to the public assembled rapidly by and on social media platforms, often triggered by breaking news stories. This public is defined by their shared efforts to gather, evaluate, selectively amplify, and curate the picture of a breaking news event. Ad hoc publics are characterized by shared topics, low barriers of participation, fragment information, unverified sources, large audiences, and rapid circulations of information (Bruns, 2018). Accordingly, the public discussions gathered under the question "How to understand that Greta Thunberg advised Chinese not to use chopsticks for environment's sake?" can be seen as the ad hoc publics emerged on Zhihu publics. In this chopstick controversy, Zhihu users can participate in the event by answering, following, commenting, liking, and sharing the question page of Zhihu. As a result, a large amount of information was mobilized and reached the broader public.

In the previous research on major social media such as Facebook and Twitter, the emergence of ad hoc publics in a digital environment is academically encouraged and criticized. On the one hand, digital media's facilitation role helps broaden public engagement in social issues, such as collective citizen journalism (Hermida, 2014, p.360). Also, the agency of users in the production and circulation of information is expanded beyond professional and conventional journalists (Vis et al., 2013). In addition, the collaboration between users and

digital platforms is found contributing to the social media curation of diverse information (Papacharissi & de Fatima Oliveira, 2012). On the other hand, the emergence of ad hoc publics vis-à-vis public deliberations is often challenged and criticized due to the opaqueness of the platform's algorithms and the emotion-charged responses in the digital public spheres. The foremost criticism is that the backstage of a digital platform, i.e., algorithms for information flows and recommendations, remains unpublic. How they affect public attention and journalist practices is untransparent to the public (Crawford & Gillespie, 2016). Besides, the affective connection and personal emotions blended in the public deliberations about news events and public concerns may trade-off the Habermasian ideal for public spheres (Schäfer, 2015). Moreover, the low barrier of participation and fast spread of voluminous information are obstacles to preventing rumors (Zubiaga et al., 2016).

Particularly, considering the contemporary Chinese digital public spheres, a media-hype manner of discussing public concerns and current affairs is seemingly occupying the Chinese public sphere due to the vast use of social media. Meanwhile, much of English scholarship rarely notice the dynamics of the digital space in China but are often confined within a conceptual framework that merely focuses on the "democratization" potential of the internet and the subversive agency of netizens (Schneider, 2018). It is remarked that many of the English-language scholarship is bogged down in a pervasive "digital orientalism." This paradigm regards the digital process in China as a unique case in which the Internet is ought to be facilitating democracy and the subversive power against the nation-state (Schneider, 2018, p.18). Following this digital orientalism, some scholars argue that the "domestic tug of war between the Party-state and society in China" is playing itself out on the internet (Lagerkvist, 2010, p.20). Therefore, it needs to be pointed out that a large part of the previous studies has generalized the role of social media technology as a catalyst for democratization in Chinese society. They assume confrontational relationships between the state and the people as the sole force underlying and mobilizing the digital public sphere. Therefore, it is demanded to take a close look at features and functions of Chinese platforms to give a situated view on the contemporary Chinese digital public sphere.

To fill the gap between the changing platform mechanisms and the insufficiently contextualized understanding of contemporary China, this research takes the function of flagging on Zhihu as a vantage point. It aims to dissect the socio-cultural consequences of the controversy. This study pays specific attention to how the flagging mechanisms of Zhihu constrain and enable users to participate in a controversy-based ad hoc public. Further, regarding the globalization and digitalization in contemporary societies, this exploration could spotlight the social and political implications of digital communication within and beyond China.

3. Methodology

This research adopts digital ethnography as a research scheme for approaching the research field. This scheme focuses on digital platforms, specific social contexts, and semiotization (Varis, 2016). As such, digital ethnography enables researchers to approach the field as situated and contextualized in the digital environment afforded by platforms. Hence, this study is conducted by following users' discursive activity overtime on the Zhihu platforms, examining the interplay between platforms, users, and public discourses. For this research, I set my fieldwork site on one Q&A site pivoting on the posted question "How to understand that Greta Thunberg advised Chinese not to use chopsticks for the environment's sake?" I chose this specific Q&A site because it was the only query flagged as "doubtful truthfulness" on the incident of Greta's speech. Also, this case aggregates the most answers amongst all questions on the Zhihu platform relating to the incident of Greta's speech. As below, Figure 1 demonstrates the basic information of the flagged Q&A page of the chopstick controversy on Zhihu, providing a context for understanding and analyzing this discursive phenomenon.

As for data collection, this research retrieved posts from a Q&A site on Zhihu. During the digital ethnographic observation and data collection, I collected 1,556 posted answers under the questions. Because the Zhihu platform does not provide APIs for data crawling, I manually collected data until the themes and patterns appeared in data achieve saturation. The forms of data include texts, images, video, and the metrics on each posted answer. Among others, one piece of online video is recorded. The rest is text-and-image based data screenshotted in the form of PDF. In terms of the metrics, it is only possible for collecting the numbers of comments and upvoting of each post. Other metrics, such as downvoting, is not visible due to the feature of the Zhihu platform (Guo & Caine, 2021). This research also recorded the digital classifications designed by the platform: user's verification of expertise and influences. The recording continued from April 2021 to October 2021. Table 2 illustrate the recorded data of the observed answers.



Figure 1: The flagged question-and-answer page of the chopstick controversy on Zhihu platform

Table 1 Summary of observed users’ answerers in the chopstick controversy

Username	Labelled in this paper as	Zhihu badge (s)	Likes	Comments	Date
书孰鼠术	Shu	Influential (1,000 followers)	350,000	913	2020-11-30
阵雨	Zhen	Influential (100,000 followers)	140,000	350	2020-05-05
远方青木	Yuan	Influential (100,000 followers) Professional on this question (awarded by another user)	4,433	405	2021-04-17
菲拉克图斯	Fei	none	3,510	270	2020-04-19
王冰	Wang	Influential (1,000 followers)	3,868	235	2021-05-18
我变成了一条狗	Wo	Influential (100,000 followers)	190,000	531	2020-04-13
Wave	Wave	none	1,795	97	2020-04-25
英国留学君	Ying	Influential (1,000 followers)	8,768	241	2021-07-19
木耳	Lin	Influential (100,000 followers)	2,628	353	2020-04-13
继续者张付	Ji	Influential (100,000 followers)	9,163	478	2020-12-19
小马	Xiao	Influential (1,000 followers)	2,240	324	2020-04-23

This research adopts discourse analysis (Jones et al., 2015) as an analytical instrument to investigate the data. Precisely, analysis is unfolded from perspectives of contexts for meaning making (digital interface and actor’s posts), the content of answers (texts and discursive patterns of posted answers), actors (the answerers on the Q&A page), and the power relationships among Zhihu users, and between users and the platform. Discourse analysis in the digital environment considers texts as the “aggregate of semiotic elements that can function as a tool for people to take social action (Jones et al., 2015, p.5)”. Thus, this research emphasizes the textual data, including articles, images, audio messages, video clips, and on-screen texts such as metrics, hyperlinks, and digital interfaces. In addition, according to Jones et al., discourse analysis strengthens this research with a critical perspective of probing into ideological agenda and power relationship that often unexpressed on texts (2015). Hence, this research will focus on what is prioritized in constructing public discussions by platform mechanisms and platform users.

4. Results

4.1 Flagging as an act: Frontpage and backstage

Flagging as a technological function of the Zhihu platform provides both front-page information and backstage access for users to understand and respond to a controversy on the platform. Regarding the front page of the chopstick controversy, the flag can be seen under the question, signaling controversial content. On Zhihu, when a user posts a question, other users can follow, answer, comment, bookmark, share, flag, and invite different answerers to answer the question. Regarding these platform-provided social functions, flagging showcases definitions of “controversy” on a question-answering platform.

In this case, Zhihu classified controversial content into eight categories: 1) the posted question is of low quality, 2) the posted question contains advertorial spams, 3) the posted question contains online trolling and violence, 4) the posted question contains harmful information, 5) the posted question involves infringement, 6) the posted question contains harassment content, 7) the posted question contains information against Chinese cyber civilization agenda (footnote), and 8) the posted question implies self-harm and suicidal attempts. These eight types together define the meaning of “controversy” on Zhihu. As such, Zhihu users construct a technological understanding of controversy. On the one hand, the Zhihu platform defines the “controversy.” The flagged controversy phenomenon on the Zhihu platform can be regarded as a communicative genre. It is recognizable and pluralized by interactions among users and between users and the platform. On the other hand, users following the regulation can flag any content as “controversy.” The flagging behavior will algorithmically label the content and feed it into the platform algorithm, recommending it to users who are active in discussing controversies. By such a procedure, a mechanism of platform moderation is accomplished by the collaboration between platform regulation and user labor. In the case of chopstick controversy, the posted question is flagged in the first category, warning that “the posted question is with doubtful truthfulness.” Due to this warning signal, content moderation also becomes part of the discussion. The posted question is no longer the only focal topic for users. The flagging becomes an inviting signal for users to pay attention to the rumor detection.

Besides the front page, users can also participate in the controversy through a backstage-like “question log.” This question log shows how different users edited a query on the backstage of the flag over time. As illustrated in figure 2, the question log of the controversy provides a historically contextualized understanding to users. This question log shows two points about the meaning-making of the controversy. Firstly, though Zhihu users can edit the content, the Zhihu platform owns the authority to make the final decision on it. Secondly, only those users with high scores of “yan” (“盐值” in Chinese, a symbolic calculation for classifying Zhihu users) can edit the log. According to the regulation of the Zhihu platform, how to calculate yan scores of users is emphasizing the degree of users’ activeness and the impact of users’ behaviors on the platform. However, the formula of calculating and weighing is not transparent to users. These two observations suggested a nuanced mechanism of the emergence of ad hoc public proposed by Bruns (2018). Instead of the low barriers to participation, the Zhihu platform has opaque criteria to the public, heightening the threshold for public engagement. In addition, the topics of ad hoc public are not always shared by participating users. In the chopsticks controversy, both the front page and question log show that users are constantly debating on the topics. Especially on the question log, topics are changed over time, from the “Chinese” to “foreigners” at the early stage to “environmental protection” to “fake news” later. However, no matter how high-yan-scored users edit the topics, the Zhihu platform owns the final decision. As we can see in the figure, the Zhihu administrator can lock, close, and resume the discussion and edition on the question.



Figure 2: A screenshot of the "question log". Translation is placed on the right side of the figure.

4.2 Meaning-making of flagging in an ad hoc controversy

The posted answers in the chopsticks controversy showcase a pattern of framing newsworthiness in discursive practices. Three strategies are observed: contextualizing controversies, selecting evidence, and showing personal attitudes. The latter two are often equipped with specific knowledge, such as scientific or journalist expertise (See figure 3).

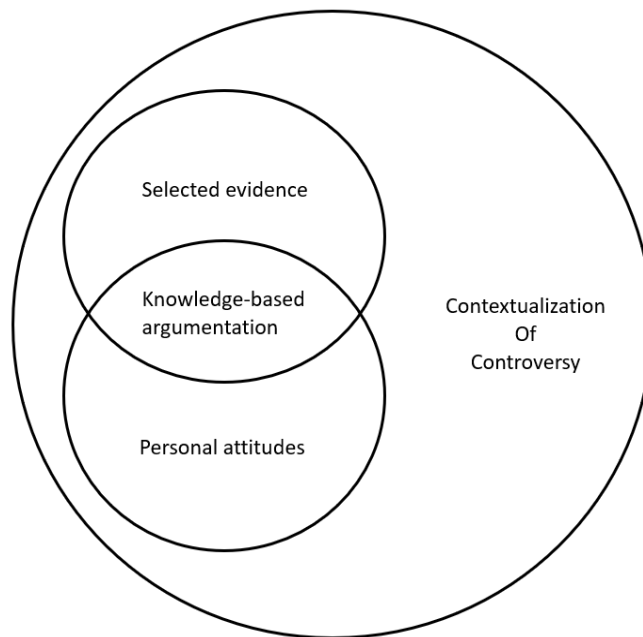


Figure 3: A pattern of framing newsworthiness

4.2.1 Framing controversy in specific socio-cultural context

In terms of contextualizing the controversy, the socio-political contentions towards environmentalism are a prominent theme. This is also responding to the topic posted on the question. In the posted answers, the socio-political contentions are specifically exemplified in two directions. One is the challenges against the "western" dominance of environmental discourses. The other is the politicized scientific stances in ecological issues from the "non-western" perspective. In the following analysis, I take Zhihu users Shu and Zhen as examples, presenting how influential answerers contextualized the discussion in the chopsticks controversy.

From the answer of Shu, the first point we can observe is that the answer neither responds to Greta’s speech nor evaluate the factuality of the speech. Instead, it started straightly with an accusation of how Britain destroyed Malaysia’s environment. This accusation suggested that the responsibility of Britain to protect forests is historically ignored. This case illustrates two significant characteristics of Zhihu answerers: 1) whether Greta’s speech is fake news is not the focus of the controversy, and 2) this controversy is not only about the topic “Chinese” but also related to different non-western societies. Similar to Shu’s answer, user Zhen straightly pointed to the anti-green consumption of countries of European and America (see figure 4 below). In addition, the answer provided by Zhen extends the discussion from protecting forests to criticizing Europe-and-America-led international business of disposable cutlery. These posted answers thus contextualized the chopsticks controversy in a contesting historical and political point where “western dominance” in the climate change discourse is questioned and challenged by non-western societies. Further, this contextualization has two discursive effects. First, it tacitly approves the truthfulness of the news about Greta’s speech on the usage of chopsticks. Secondly, it enables the algorithm to identify the controversy with the clustered content of environmental issues instead of encouraging fact-checking and misinformation-detecting. By such interplay between Zhihu users’ answers and the platform algorithm, the flagging function of Zhihu is transmuted into an invitation or a venue for broader discussions and debates in the discourse of climate change and environmentalism. In other words, flagging is no longer a warning signal for stopping the circulation of fake news like the vision of Brun’s ad hoc public. Instead, ironically, it encourages the spreading of unchecked information and rumors.

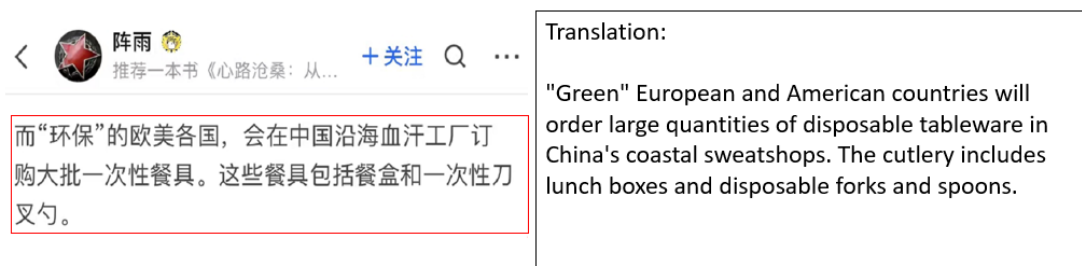


Figure 4: Screenshot of the answer posted by Zhihu user Zhen

4.2.2 selecting evidence and personal attitude

Following the contextualization of public concerns, the second component of framing newsworthiness is the knowledge-based argument. Noticeably, it is often blended with selected evidence and the personal attitudes of influential answerers. The chopsticks controversy shows that answers with high ranking and large responses are often rife with knowledge-specific evidence such as historical facts, scientific findings, external information sources, and personal experiences. Blended with the evidence, these answers often employed emotion-charged expressions. In the following, I will take Zhihu user Yuan’s answer as an example, presenting how a knowledge-specific answer is blended by evidence and personal attitudes.

In the answer posted by Yuan, the scientific evidence is specifically aimed to contradict the narrative of protecting forests. In Yuan’s response, the main argument is that the core of environmental protection is slowing industrialization instead of planting trees. As for supporting the argument, Yuan selected the advice of Ding Zhong-Li as vital evidence. Ding Zhong-Li is an academician of the Chinese Academy of Science. In the realm of climate change, he was well-known for outspokenly questioning the western-dominant narrative. In Yuan’s answer, Ding Zhong-Li was not only cited but also hyper-linked in his answer. This linked keyword of Ding Zhong-Li strengthens the credibility of Yuan’s answer. In addition, it could aggregate related content with users who are interested in the topics about Ding Zhong-Li and associated discussions about climate change. As an effect, the selection of this evidence supports Yuan’s answer and gives it an expert-like position.

Besides the selected evidence, readers can also sense a resisting attitude of Yuan against the oppressing position of America in the global market of carbon emissions. In Yuan’s answer stated that “*America took its refusal as a matter of course. Make every Chinese enjoy 80% of the carbon emissions of Americans? Don’t make a fool of us. That’s not going to happen. Chinese don’t deserve such portion of carbon emissions.*” The tone and the ironic rhetoric in Yuan’s answer strongly expressed the resentment towards the inequality in the global market of carbon emissions shares. In addition, this emotion-charged message often appears in the topic of “Chinese.” The

chopsticks controversy is also tagged with this topic. At this point, we may find a patriotist narrative and antagonistic emotion in Yuan's expert answer.

4.3 Curating ad hoc public: Prioritization of unflagged-concern

Regarding content curation on the Zhihu platform, the chopsticks controversy case suggested two layers of the order of visibility: 1) prioritization in public discourses and 2) prioritization in information resources.

Firstly, the chopsticks controversy illustrates those answers, including videos, texts, and images, are presented in a platform-designed order. This order is described as "by default," suggesting a neutral position. However, the order of these answers shows a prioritization in terms of modality and groups value. From the aspect of modality, the highest-ranked answer is a "video answer" (see figure 5 below). What is noticeable is the brief introduction under the video: "*Watching the video helps get a quick answer.*" This short sentence suggested a platform prioritization of high velocity instead of constructing community values or gate-watching public discourses. In addition, compared to other answers, the metrics such as views, up-voting, likes, shares, and comments are not as large as the lower-ranked answer. Yet, the video is still prioritized for readers to read and understand the controversy. Besides the prioritization of modality, the other aspect is groups values. Among the text-and-image based posts in the chopsticks controversy, the highest-ranked answers are majorly emphasizing the discourses of environmental protection instead of fact-checking. In this flagged controversy, though it is flagged as "doubtful truthfulness," substantial amounts of top answers are confronting Greta and the western-centered narratives of climate change. On the one hand, this prioritization suggests an algorithmic order designed by opaque calculation. On the other hand, it reveals the effect of the flagging mechanisms of datafication in the process of knowledge dissemination. What is debated is no longer what is flagged for. Instead, how to attract more attention and facilitate data traffic drive the changes of public discourses and groups' values in a controversy.



Figure 5: The highest-ranked answer is a "video answer"

Secondly, besides prioritization in public discourses, how users evaluate the countability and trustworthiness of information sources in the controversy showcases a prioritization of external resources. In this chopstick controversy, when it comes to the factuality of Greta's speech, most Zhihu users migrate the information outside Chinese media to Zhihu. For example, one Zhihu user screenshotted related information on Quora.com, an English SQA platform, and posted them on Zhihu. Without detailed translations of the information from English to Chinese, this Zhihu user pointed out that Greta did not give the speech in the case by underlining some sentences in the English resources in red. This pattern of migrating information from English media to Zhihu reveals that though the flagged controversy provides an ad hoc public where users share information, there is a priority of outside information among different information sources. On the one hand, this suggested the inequality of access to information among Zhihu users. On the other hand, it unveiled public spaces where discourses are fragmented due to different information access and prioritization.

5. Conclusion and discussion

This paper analyzed the flagging mechanism and its effect on an ad hoc controversy on Zhihu platform. It is found that the public discourses in the case are pluralized beyond what was flagged for in the first place. In other words, the research findings revealed that the meaning-making of flagged content is both defined by platform regulation and groups values. As a result, an ad hoc public based on the flag mechanism facilitates the data traffic by spreading contentions instead of intervening in the circulation of misinformation and rumors.

Specifically, the interplay among the backstage access, users and platform operators revealed that flagging as an activity of "gatekeeping" (Crawford & Gillespie, 2016) is obscurely constrained by platform operation. What is noticeable is the interplay between users' agency and platform-designed open backstage area. However, such

backstage is unequally accessible among users. This finding resonates with the “point structure of participation” (Crawford & Gillespie, 2016). Yet, the case of Zhihu is nuanced due to the platform algorithms of how to calculate points of users and who has the final decision on removing or retaining controversial content. Further, platform mechanisms algorithmically designed the inequality for increasing data traffic.

Besides, this research finds that the meaning-making of flagged content in an ad hoc public is pluralized. Platform users do not always value or emphasize what is flagged for. Instead, participants often use a frame of newsworthiness to contextualize and “reproduce” (Blommaert, 2005, p.48) meaning. In this frame, I observe a pattern of blending knowledge-specific evidence and personal attitude. Significantly, this pattern often contributes to the construction of an amateur-expertise narrative. Previous research also pointed out that scientific communication on Zhihu nowadays has deconstructed the boundary between experts and non-expert (Yang, 2021). This finding may contribute to the discursive practice of how the discourse authority of non-scientists is constructed on the platform environment.

In addition, this research further highlights the prioritization of content in terms of velocity and groups values. Previous research found that members of Zhihu are majorly well-educated, middle-class intellectuals (Peng 2020). Since the nature of this chopstick controversy is relevant to scientific knowledge and information access, it encourages the participation of Zhihu users who have access to information from non-Chinese media and who have a knowledge background of environmental protection. What is prioritized in their posts unveiled how today’s internet-literate evaluate information and its effects on knowledge dissemination and circulation. This finding may contribute to understanding how “public trust” (Gauchat, 2011; Habermas, 1989; Yang, 2021) of science-related information is conditioned and stratified in a knowledge-specific controversy.

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Political Discourse in the Knowledge Economy: Edutainment as a Genre

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Abstract: In the socio-political context of a strategic transformation of public diplomacy in China, non-governmental discourses such as intellectual discourses have been showing increasing visibility both online and offline, at home and abroad. Through a digital ethnographic approach, this study investigates the meaning-making of the political discourse that uses edutainment as a genre by foregrounding the media activities of a commercial media company branded by Guan Media and the media discourse of an involved intellectual. Social media are changing the normality of knowledge production and distribution and the traditional media communication logic. Whether it is market-based filter bubble and echo chamber, politically controlled censorship, or spontaneous grassroots engagement, what is important is why and how mainstream discourses are constructed because of these factors through social media as a new form of political communication. To show the complexity of media communication of political messages in China, micro-level close observation on highly visible forms of news production and distribution by non-government actors is necessary. There are two levels of analysis in this study: self-branding of researchers in the knowledge economy, and edutainment as a genre of political discourse. Multimodal discourse analysis is adopted to discover the specific discursive and media strategies through the theoretical lenses of knowledge-power structure and semiotics. The cooperation of commercial media companies and intellectuals from higher education is found to be promoting a new form of political communication, in which edutainment works as a genre for better media presentation. In the context of the knowledge economy, edutainment content adjusts to the ideological dynamics of the socio-political reality in China in the tide of globalization and digitalization. This study contributes to understanding the participation of non-governmental actors in political communication and public sentiment on politics when political communication has become more dynamic and better organized by adjusting to the new media age.

Keywords: knowledge economy; political discourse; self-branding; social media; edutainment

1. Introduction

Knowledge has been increasingly the main resource for ensuring economic growth in developed countries (World Bank 1998). With the rapid economic development and the popularity of online infrastructures in China, the variety of online learning has expanded to a wide range. According to an industry report (QuestMobile 2018), China's Generation Z (people born in 1995-2009) which is the biggest mobile internet user group, spent more time on learning apps than entertainment apps. This is a sign that the knowledge economy in China has become a part of everyday life and embedded in people's lifestyles. The range of knowledge can be very wide, from academic findings to fun facts. Different kinds of knowledge are targeted to different audience groups. This study is interested in the form and genre of the production and dissemination of political knowledge in this social context. To show the complexity of media communication of political messages in China, micro-level close observation on highly visible forms of knowledge production and distribution by non-government actors is necessary. Specifically, the content production strategy of a Chinese media company named *Guan Media* and one professor who has a series of knowledge videos about China's politics and economy published through *Guan Media* is observed and analyzed. There are two dimensions of the analysis in this study: self-branding of researchers in the knowledge economy, and edutainment as a genre of political discourse. Multimodal discourse analysis is adopted to discover the specific discursive and media strategies through the theoretical lenses of knowledge-power structure and semiotics.

2. Theoretical framework

2.1 Self-branding as a social media strategy in the knowledge economy

The self is regarded as a commodity for sale in the labor market (Hearn 2008). As part of enterprise culture, self-branding has now infiltrated the neoliberal knowledge economy (Bandinelli & Arvidsson 2013). Many studies about self-branding think of it as a device of self-promotion for marketing (e.g., Gandini 2016) and as a result of the rapid globalization of advanced consumer capitalism (Khamis, Ang & Welling 2017). In these studies, the rise of social media is another significant factor for the popularity of self-branding. Social media encourage the value of self-branding for the efficacy and visibility of the communication of ideas and values. Such communication enhances the scale of participation, which is often followed by market profit and more. The use of social media helps build up an individual reputation and promote self-branding behaviors through constructing a more

authentic self without the medium of institutions. However, it is important not to see self-branding as a purely individual activity even though Web 2.0 and the related techniques reflect a fragmented economy that celebrates individualism (Marwick 2013). Branding as one of the fundamentals of marketing has expanded to penetrate a wide range of life (Bandinelli & Arvidsson 2013). Self-branding in the knowledge economy is not only a strategy for individuals to stand out in the labor market, it also is a strategy to deliver social or cultural value to consumers and construct social identities through micro-marketing in micro-communities (Arvidsson 2011; Schroder 2009), which may then produce market profit and more. Therefore, we see a more salient “self” as knowledge providers whose goal is to achieve a good reputation and authenticity in communication on social media. Furthermore, self-branding enables new practices of sociality that are not limited to the branding of the self but act as marketing work that combines networking with the management of social relationships (Gandini 2016). For instance, individual videos and blogs of influencers which have become the main news sources of young people rely on social networking sites and apps such as Twitter and Instagram.

Bubbles and the micromarketing function of social media are designed to create communities and groups. In the political context of new public diplomacy in China, we see growing micro-communities of political knowledge production and distribution. In this context, we can also see how intellectuals participate in a collaborative circle, a network of peers, reacting on and responding to the words of the other (Heynders 2016). Making use of the networking and grouping features of social media, intellectuals have more potential to expand the visibility of their ideas and knowledge. They combine and effectuate media activities such as hyperlinks, hashtags, citing, or simply showing up in the same media activities. Reputation as social capital is mobilized and implemented by professionals embedded within a network of personal contacts (Gandini 2016). This is to say, even though self-branding is a key tool used by professionals to keep focused contact with the audiences since such relations are the basis for social networks and public performances, the ideas, and visibility of professionals rely on networking to get promoted. Besides the networking via online infrastructures, the link with governmental discourse also helps attract attention and facilitates the spread of values. In a global neoliberal environment, the collaboration between higher education and governments has been deepened in the knowledge economy because higher education has contributed more to policymaking (Olssen & Peters 2005). The new form of public engagement encourages intellectuals to mediate and facilitate messages of others, especially of governmental discourses. This partly explains why intellectual discourse has become a major component of non-governmental political communication.

2.2 Edutainment as a genre of political discourse

The advent and popularity of television were regarded as providing a new medium for delivering political information while offering consumers a wide array of new ways to use their leisure time (Gentzkow 2006). What comes with the new way of life brought by television is the culture of entertainment. In the era of Web 2.0, entertainment has become an even intensely active word in many fields besides politics. The entertainment of learning has been widely discussed in education where a new word was created: edutainment. Edutainment is named as a hybrid type that is based on visualizing and animation made with the formats like games, diegetic things, and visual materials (Buckingham & Scanlon 2001). It is a style of teaching and learning through various media technologies based on the idea of combining playing and learning (Rapeepisarn, et al. 2006). In the context that expert discourse and content industry have been reshaped through the form of web-mediated knowledge dissemination, edutainment is not only associated with games, but also online videos in which hybrid multilingual and multimodal online texts are utilized (Santini 2015). Edutainment is now working as a genre of learning knowledge by which expert discourse is re-mediate in online edutainment videos with a mixed feature of formal and informal register and closer interaction with the audiences (Santini 2015).

However, studies on edutainment often focus on its pedagogical approaches and values instead of seeing it as a new genre of knowledge dissemination. First of all, we need to define knowledge. In a newly published industry report (TopKlout 2021) on the “knowledge related content” on Chinese main social media and websites, besides traditional-defined professional knowledge such as school subjects, natural sciences, finance, and arts, the knowledge ecosystem online has expanded widely including practical life skills. People have been eager to learn with the guide of media platforms that aim to improve content value, user value, platform value, and business value through purchasing knowledge-related products. Knowledge in the digital era has become an umbrella word covering facts, skills, science, humanities, and everything people find useful but don’t know yet. In Foucault (1972)’s power-knowledge structure, knowledge is a key means of exercising power to mobilize various economic, social and cultural resources. In such relation, discursive formations allow some thoughts and actions but occlude others, which means knowledge itself is an ideological work. The dissemination of political discourse

in the form of edutainment, therefore, deserves a closer look at its cultural and social codes. There has been a long debate on whether humanities and social sciences can be regarded as a science like natural sciences. One thing clear is that knowledge in politics and culture cannot avoid the confrontation with subjectivity and value judgment. The patterns of actions concerning politics-related knowledge show how experts in these fields make meaning of the social world and at the same time how they shape the social world.

The above report also points out that the engagement of individual scholars has become a new trend. Self-branding fits well with the form of edutainment in the traditional teacher-centered education approach. However, in the knowledge economy, the content design and production of edutainment are strongly consumer-centered. With the three characteristics: teacher-centered approach of education, consumer-centered content production, and ideological values embedded in academic analysis and hard facts, edutainment can be seen as a new structuring of political knowledge and a new genre of political discourse.

3. Data and methods

Guan Media is the main observatory subject of this study. It is a Chinese commercial media company founded in 2016, mainly producing short videos concerning humanity and scientific topic. It has been showing growing media visibility on both YouTube and one of the biggest Chinese video platforms bilibili. In 2020, it was evaluated as the second place in the rank of “the Most Influential Uploader in Science section of bilibili in June” (wjam123456 2020). Its YouTube channel is established in 2017 and is named by *Guan Video* owning 559,000 followers and more than 168 million views (retrieved on 2021-12-01). Most of its videos on YouTube are in Chinese and are updated later than on bilibili, which means the main audiences of its YouTube channel are Chinese living abroad. Either for YouTube or bilibili, in the diaspora of Chinese, young people are the main users. Understanding the feature of the audiences of *Guan Media* videos is important for the analysis of the media strategy and content design of this media brand. Multimodal discourse analysis is used as the analytical tool in the investigation of the self-branding strategy and the features of edutainment as a genre of political discourse with a focus on the activities and media products of one scholar on YouTube channel of *Guan Media*.

4. A case study on *Guan Media*

4.1 Self-branding and edutainment in expert discourse

Self-branding is the main character of *Guan Media's* video programs. More and more scholars are launching their programs under the channel of *Guan Media*. On the home page of the YouTube channel of *Guan Media*, the images of three professors are put into the center as shown in figure 1. One of them is Professor CHEN Ping wearing a t-shirt printed with the following sentence: “Do what the Americans do. Don't do what the Americans say”.



Figure 1: The background image of the home page of Guan Media on YouTube. Retrieved on 2021-07-23 <https://www.youtube.com/c/GuanVideo%E8%A7%82%E8%A7%86%E9%A2%91%E5%B7%A5%E4%BD%9C%E5%AE%A4/playlists>

The deliberate choosing of this particular photo in which Professor CHEN wearing this t-shirt, which is casual but with a strong and straightforward statement, indexes a clear value judgment and the recognition of such value by *Guan Media*. The printed t-shirt is part of American culture and t-shirt messages are a visual testimony to the identities of wearers (Danna 1992). Scholars on *Guan Media* have a common feature: pro-government stance. The flow of knowledge is largely dependent on the cultural and organizational contexts in which people are encouraged to develop and share their knowledge (Clarke 2001). A Chinese pro-government professor wearing

an American culture product on which text is printed in English indexes a multilayer of meanings. The text portrays America as a country that doesn't walk the talk. English as a lingua franca is used to declare the indistinctive attitude both at home and abroad. It is intertextual with his branding slogan shown in the introduction of *Guan Media* in figure 1: "Professor CHEN Ping, a physicist who is researching on economics. Have a thorough knowledge of both China and the west. Create a philosophy of my own. Update on every Tuesday". The multilingual capability increases the authority of his arguments. The discourse forms a value that when you criticize the west on the basis that knows about the west, your arguments become more trustworthy. Besides, as discussed, the main group of audiences of the YouTube channel of *Guan Media* is Chinese living abroad. English t-shirt is better for further dissemination. Below the videos of Professor Chen, there is a link to an online shop selling cultural products such as t-shirts and mugs branded by the professor as shown in figure 2. It is a good reflection of how edutainment products receive profits. Furthermore, the statement is connected to the nationalist discourse that is invoked by the recent trade war between the US and narratives such as "China threat". In the power struggle of the US and China, expert discourses are significant to the way the ordinary people understand the situation and values of each other's country.



Figure 2: The link below Professor CHEN's videos on Guan Media channel on YouTube for selling cultural products such as t-shirts and mugs branded by him. Retrieved on 2021-07-23.

<https://www.youtube.com/watch?v=MRhIulbOrjQ&list=PLr0JU80OrK4gITvl8MCMli5kdc1zyl2Gx>

There are 219 episodes of the playlist of Professor CHEN Ping on the YouTube channel of *Guan Media* (retrieved on 2021-12-02). The topics of these videos can be roughly categorized as Chinese domestic politics, international politics, political economics, physics, biology, education, law, and commentary videos on hot-spot issues. The wide range of the video contents is a representation of the colorful academic experiences of the scholar. According to Research Gate (n.d.), Professor CHEN's research covers monetary economics, financial economics, economic complexity, law, and economics. He got his doctor's degree in physics in the US. According to Peking University (n.d.), his research areas are even wider including cultural anthropology and history of science, etc. In general, his videos on *Guan Media* share the following features:

Content-wise: 1) The use of statistics (especially non-China sources). 2) The comparison between China and the US. 3) Upholding the Chinese political system. 4) Interdisciplinary analysis.

Video-making-wise: 1) Home bookshelf as a background. 2) The use of a typical speaker-centered lecture mode. 3) The use of visual aids in (relevant supporting photos and video footages in between his talks). 4) Mostly 5-20 minutes long.



Figure 3: Part of the intro of the integrated video of Professor CHEN Ping about the 2019 Hong Kong protest on the channel of *Guan Media* on YouTube, showing the self-branding of Professor CHEN Ping as "Sword discussion on Mei Mount". Retrieved on 2021-11-23.

https://www.youtube.com/watch?v=7RryhO_ViQI&list=PLr0JU80OrK4gITvl8MCMli5kdc1zyl2Gx&index=6

Professor CHEN has an alias *Swordman on Mei Mount* (Meishan jianke 眉山剑客). His video programs are branded accordingly by *Sword discussion on Mei Mount* (Meishan lunjian 眉山论剑) as illustrated in figure 3. He explained that it is inspired by his working experience as a railway worker in the Mount Mei area from 1968 to 1974 during the Cultural Revolution (Chen Ping: Why do I address myself Meishan jianke and Jimo Qiucuo 2020). He started to teach himself economics from then and that five-year overturned his understanding of Adam Smith's *The Wealth of Nations* because even in the chaotic time, the railway system was still well-managed strictly by the country which is different from Smith's laissez-faire approach. The personal experience, casual dressing style, the use of theory and statistics, the interdisciplinary academic background are all modes adopted in his videos and are signs indexing his discourse of supporting the political system of the Chinese government.

5. Is knowledge neutral? The moral authority of political knowledge

This section is about the observation of another media strategy adopted by *Guan Media* on YouTube. Benson (2015: 83-84) concluded three characteristics of YouTube as text: YouTube pages deploy multiple semiotic modes; YouTube pages are products of multiple authorship; YouTube pages are highly dynamic in the sense that the text of the page constantly changes in response to user and machine-generated input. Signs are addressed as multimodal objects rather than linguistic ones (Blommaert 2013). In the interface of every video in the channel of *Guan Media* on YouTube, we can see a written title given by *Guan Media* (the user of YouTube) below the image and above the number of views (alter automatically based on views) and uploading date (machine-generated texts). *Guan Media's* branding practices on the page of YouTube are embedded in the multimodal context of YouTube. What is different and noticeable is the semiotic sign of a red cross **X** in front of the title of some videos uploaded by *Guan Media* on YouTube. As illustrated in figure 4, *Guan Media* made a playlist with a collection of these red-cross-tagged videos. In the observation of the special semiotic mode of **X**, this part seeks to understand this highly visible symbol from the perspective of its authorship and dynamics through the analysis of the interaction between *Guan Media*, YouTube, and the audiences of *Guan Media* on YouTube.

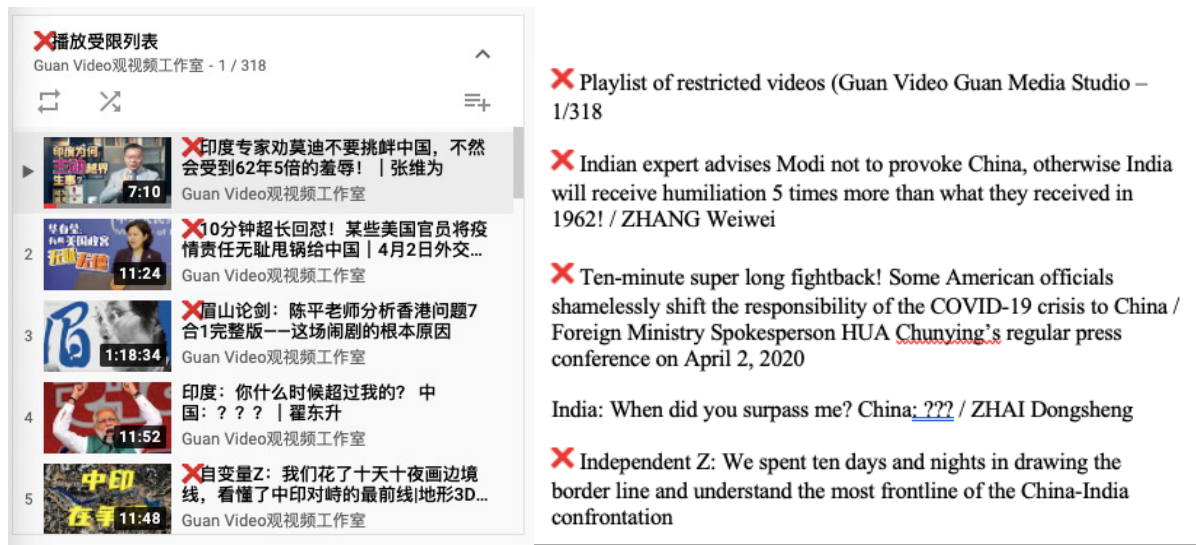


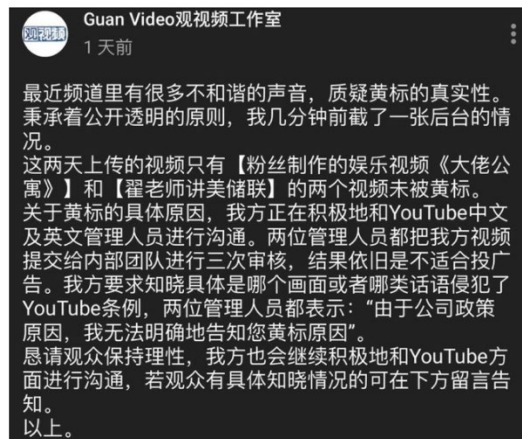


Figure 4: *Guan Media* collected all the videos that are claimed to be restricted by YouTube in one playlist. Retrieved on 2020-10-12.

Many of the videos are given a red cross icon in the lists as **X**. According to *Guan Media's* explanation shown in Figures 6-7, these videos are limited because of YouTube's monetization policy. YouTube explains the monetization policy as content that is not suitable for ads will result in a "limited or no ads" monetization state. *Guan Media* addresses the restriction as "yellow icon incident" instead of "red icon incident". What is the yellow icon? According to the "advertiser-friendly content guidelines" given by YouTube (n.d.),

[users] will see the "limited or no ads" icons ( or ) when [they]'ve turned on monetization for a video, but our automated systems or policy specialists believe that video does not meet our advertiser-friendly content guidelines.

demonetization can be the same thing in different discourses. It has a symbolic and highly recognizable meaning that the pro-CPC voices are intentionally restricted and suppressed.



Guan Video Studio: (1 day ago)

Recently there are many discordant voices questioning the facticity of the “yellow icon incident”. Adhering to the principle of open and transparent, I made a screenshot of our data statistics in the backstage a few minutes ago.

Among the videos we uploaded in these two days, only two haven’t been put the yellow icon. As for the reason of the yellow icon, we have been actively communicating with YouTube administrative staff who provide Chinese and English service. Two staff have given our videos to their team for third time review. The result is still that these videos are not suitable for ads. We require to know what exact image or narratives violate the YouTube regulation. The two staff both said: “We can’t tell you the reason of the yellow icon according to our company policy.”

We appeal our audiences to stay rational. We will keep on actively communicate with YouTube. If any audience know the exact reason, please leave a message in the commentary area below.

Figure 7: A zoom in on the texts in figure 6 which were sent by *Guan Media* in the community area on YouTube (designed for the discussion between the channel and its followers in the form of written interaction). Retrieved on 2020-02-10.



Guan Video Studio:

Our videos are seriously restricted from the backstage. We hope that you can help us spread our videos by forward, liking and commenting!

Steve L:

Sh*t! Professor Ping CHEN's talks are based on facts and are restricted, while the non-sense accusation from the U.S. Secretary of State Pompeo that 1 million Uighurs are imprisoned in detention camp in Xinjiang has been received by the west as facts. YouTube is disgusting!

Ital73:

I'm a Hongkonger. I don't agree with general election. People who rule HK should be patriot HongKongers. Those who support the independence of HK should not be allowed to become legislators or chief executive.

Huangxingtu:


I don't know about the situation of other languages. But as long as a Chinese video is tagged with the red cross , I regard it as a symbol of truths, facts, and the disclosure of the bad things done by the West!

Figure 8: Comments of the audiences of the videos that are tagged with the red cross in the channel of *Guan Media* on YouTube. Retrieved on 2020-02-12.

The reception of the audience shows the effectiveness of the semiotic tool. Just as some people presume that what is censored are truths, many audiences of *Guan Media* presume that what's red-tagged are truths, see figure 8. In the public sphere of YouTube as an intermediary, messages about the meaning and value of censorship are across the communication among YouTube, video uploaders, and audiences. The three actors are interrelated and their role as message sender and message receiver is dynamic and interchangeable in the communicative discourse constructed by structured multimodal semiotic resources. Moreover, from the perception of the netizen Steve L (in figure 8), scholars present their knowledge and professionalism in political issues in the videos, which wins the trust from its followers and results in comparison between their pro-CPC discourse and the western politicians' critical discourse about the leadership of the CPC. The online infrastructures of YouTube and the feature of multi-authorship of it provide affordances for the interaction of Chinese media, western media, Chinese audiences, and western audiences about the meaning of a pair of moral concepts: censorship and counter-censorship.

6. Conclusion and discussion

This study explores edutainment as a genre of political discourse used by non-governmental organizations, in specific, university scholars, and commercial media platforms. The members of the *Guan media* community are aware of the advantage of using digital technology and the globalized context. The online visibility of their activities is based on the bigger social context of the power struggle between China and the US in the international arena. The features of edutainment are shown through intellectuals' scientific use of data and statistics, their identity as professionals, their language register, their self-branding strategy, and dressing style, which are all resources to construct the genre of their linguistic activity. In turn, the resources they use are indexical to their identity as intellectuals. Self-branding and the genre of edutainment as two dimensions of communication determine the scope and scale of social interaction of political discourse in the knowledge economy. The cooperation between commercial media companies and researchers from higher education, and their major presence and position as knowledge producers and disseminators underline new media activities and strategies in the context of knowledge economy and globalization. Edutainment as a genre of political discourse enhances the authority of political knowledge, which is never neutral and without value judgments. In the context of the knowledge economy, this cooperation provides edutainment content adjusting to the ideological dynamics of the socio-political reality in China in the tide of globalization and digitalization. This study contributes to understanding the participation of non-governmental actors in political communication and public sentiment on politics when political communication has become more dynamic and well-organized by adjusting to the new trends in the new media age.

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Police_hu as a best Practice: Online Reputation Management of the Hungarian Police on Instagram

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Abstract: The findings of studies carried out by Google show that 22 percent of the organisations and companies searched for themselves online in 2001. The figure was 56% in 2013, so it can be assumed that this proportion will be even higher in 2021. In the digital age a new concept, an essential professional and social skill is emerging – *online reputation management*. It is not indifferent what type of digital footprint has been left behind in online space, and it is not only true for citizens, but also for companies and organisations, and for the police as well, nowadays. The aim of reputation management is to make the overall picture of the organisation well-known and influence it positively. The use of policing social networking sites is applied between the police as a service provider organisation and the members of the community, and there is a chance for sharing and getting real time information. As a result, policing social networking sites bear utmost importance for citizens, journalists and press officers as well. Police officers not only seek to share information but persuade the citizens to cooperate. The limited importance of textual content can be seen and in parallel, the visual content has become more important. It can be stated that the members of community do not expect a quantitative, but a qualitative presence. Thus, it is the number and quality of comments that reveal how deeply users have been involved in the topic and its imagery content. This study deals with the Instagram profile of the Hungarian Police (police_hu) between July 3, 2019 and July 3, 2020. Applying the method of discourse analysis, the research characterises the most popular and most commented entries during the one-year period. As a result, it can be said that the process taking place on the Instagram of the Hungarian Police implements a kind of brand building, which can be considered a positive example of police communication, while the characteristics of *policing digilect* can be well observed and analysed.

Keywords: social media, Instagram, Hungarian Police, online reputation, policing digilect

1. Introduction

Social media sites are widely used as communication platforms in different areas of life, such as commerce, tourism and education, and people spend hours every day using these applications, interacting with each other and browsing for the latest news (Heravi & Harrower 2016). In recent years, studies and research have been investigating the role and potential of social networking sites, their beneficial and harmful effects (Heravi & Harrower 2016, Hall 2019), and a similar process can be witnessed in Hungary as these sites are used in several areas of life (e.g., marketing, education) (Veszelszki 2019, Barnucz & Uricska 2020). In many states of the United States, Finland and even in neighbouring Slovakia, law enforcement agencies use these sites on a daily and conscious basis to reach the members of the community. These interfaces are essential as they offer the possibility to share and obtain information in real time, making them central not only to inform the public, but also for journalists and press officers. Although Hungarian law enforcement organisations have not fully exploited the potential of these sites yet, the current results are encouraging.

In fact, a real paradigm shift is needed in this area in Hungary, but the ongoing reform of the organisation's communication strategy should not have to consist of a single campaign, a single decision and a single action, but gradual and continuous changes. As a consequence, the police can adapt to the expectations of the members of an ever-changing society towards the police (Molnár 2018). The fundamental issue of police reform is also the relationship between the individual and the existing powers, and in this context the quality of communication between the two parties is crucial, as described in detail by a domestic law enforcement expert (Less 2015) and by domestic and international law enforcement communication experts (Molnár 2018, Colbran 2020).

2. Theoretical background

With the emergence of information society, digital transformation is not a matter of choice, but an inevitable phenomenon that everyone must prepare for. This is confirmed by the government's decision and its legislative intent is reflected in the foresight. It says that no one can compete in the 21st century with 20th-century knowledge. The areas of intervention and transformation are no longer only in the fields of public education,

higher education and adult learning, including law enforcement training (Borszéli 2019), but they also affect the employment world (Pirzada & Khan 2013, Barnucz & Uricska 2021). The importance and the necessity of digital competences are underlined by the unexpected fact that from March 2021, Hungary has been officially infected with the coronavirus for about a year, and due to the pandemic situation, students in public and higher education studied at home, and adult workers also performed their tasks digitally, working from home.

The Hungarian Police – compared to law enforcement agencies abroad – have appeared on social media platforms relatively late, the police have had a Twitter account since 2016, the police_hu page was launched on Instagram on 3 July, 2019, and since 22 April, 2020 they also have a Facebook page. The later launch on social media may explain why the Hungarian police have not yet fully exploited the potential of these forums. The communication of police personnel is regulated by the Decree of the Ministry of the Interior No. 30/2011 (IX. 22.) on the Police Service Regulations. Section No. 73 *'Public appearance of the police officer'* sets out the framework for the public appearance of the police officer. This is a legal provision, and its violation may go beyond insubordination. The other public law regulating the use of social networking sites was adopted in 2019 with the Statement 41/2019 (XII. 13.) of the Hungarian National Police Headquarters on the use of social media and the Internet by the police. According to Section 37 of the standard, *'when expressing an opinion in social media as a private person, an employee who is a member of the Police staff shall respect the reputation and organisational interests of the Police.'* However, before the instruction came into force, it had already become common practice to undermine trust in the organisation publicly without any consequences, as there was no official resolution on this. Complementing the legal framework with other legal instruments to regulate organisations was essential, as the information that is published online about individuals and organisations and its impact on digital identity are not at all the same (Beduschi 2019).

The findings of studies carried out by Google show that 22 percent of organisations and companies searched for themselves online in 2001. The figure was 56% in 2013 (URL1), and it can be assumed that this proportion is higher in 2021. Nowadays, in order to explore business opportunities, to build and consolidate business relationships, or even to look for a job, it is common from both the employee and employer side to check the digital footprint of an individual, an organisation or a company on multiple online platforms (Micheli et al. 2018). The need for online reputation management is increasing, where individuals, public figures and even companies want to control their digital footprint. Although this is still a relatively young business and research area, a growing number of companies and experts (McDermott 2018, Micheli et al. 2018) are addressing this field.

Online reputation management emerged from the field of Public Relations (hereinafter: PR) in the 2000s with the increasing and continuous expansion of the internet and social media. The aim of the online process is, on the one hand, to establish continuous contact, communication or communication strategy with the customers and the interested parties (Stenger 2014); on the other hand, to influence the digital identity mentioned above. As discussed by Molnár (2018, p.11.), *'a strategy is a comprehensive concept that defines long-term goals, lines of action and tasks that can be an effective tool for achieving organisational goals.'* The aim of the strategy can be to promote either individual reputation or the digital reputation of an organisation.

Online reputation management can play a preventive, stabilising or even restorative role, which is mainly about producing positive information and disseminating it through the right channels. In general, online PR involves the publication of information and articles about organisations and individuals that try to portray them in a favourable light. While their short-term impact is typically positive, their long-term impact is difficult to measure. Once the life cycle of an article is over, the fact is that few people will find and read it.

Social networking sites exploded into this process and turned the media world on its head, because the organisations are directly represented on these sites, and communication professionals try to influence online presence in a positive direction (Markos-Kujbus & Gáti 2012). Reputation management is not just about marketing and online PR, and it is far from a one-off activity. It is more than that. The short-term result of the use of police social networking sites may be that the service nature of the police is becoming more prominent in these communication channels.

Whether on Facebook, Instagram or Twitter, the members of the organisation communicate with the members of the public in an informal manner, therefore it is extremely important that those who operate such platforms are prepared for the activity. On Instagram, the visual and textual elements exist together. Posts that are accompanied by a video and photos are popular. In fact, videos in which a famous person (URL2) or a 'celebrity'

(e.g., an actor [URL3], singer, priest [URL4]) lends their name to the work of the police are visibly more popular, as are images that are considered almost artistic and contain a latent reference in addition to the overt, explicit content, possibly with the user himself telling a story via the image (see research results). It can be said that the public expects a qualitative rather than necessarily quantitative presence on the web from the organisation (Uricska 2020a).

3. Research questions

In the autumn of 2006, unprofessional and disproportionate measures were implemented by the police with the citizens, therefore substantive measures had to be taken to decrease the power distance (PDI) between police officers and citizens (Éberhardt 2020) in Hungary. The employees of the professional law enforcement organizations should be aware that they are for society (Éberhardt 2020), more precisely, they are for protecting and serving the members of the society.

This study aims to present a new approach to police-citizen communication and relationship that is focused on image and reputation management. The verbal and visual content of the Instagram profile of the Hungarian Police is traced and analysed in the first year, which can be considered brand building and a positive example of police communication. The profile was launched on 3 July 2019, and in its first year the administrators created a high-quality platform in terms of both visual and verbal content that only a few public administration organisations could present in early 2021. Even the Government of Hungary appeared on Instagram more than a year later, on 17 September 2020 (URL5). When creating interfaces, it is important to harmonise several factors in order to ensure that the information shared reaches the interested parties.

There are different ways to enhance the reputation of an organisation or a person. One is appropriate communication, whether it is offline (Molnár & Uricska 2018) or online. *'Police have come to acknowledge how important managing and controlling their public image is, and how such activities are a significant step towards (re)building legitimacy in a landscape where police are at the same time less and more 'visible' to the public than ever before'* (Wood and Mc Govern 2021:309). To observe the importance of digital law enforcement communication (Veszelszki 2017ab, Istók 2018, 2019, Uricska 2020ab), the following research questions were examined:

RQ 1 Is there a change in the image of the police compared to the past (police jokes, news about police abuse)?

RQ 2 If yes, what changes have been observed in the image of the police?

RQ 3 If yes, what has changed the image of the police compared to the past?

RQ1 asks specifically about changes to police image which is a very relevant question for police forces. The longitudinal approach allows a view into this question and the results aim to present the changes in them.

4. Research design and methods – Sample selection

In the study, the Hungarian Police's ten most popular posts (police_hu) created during the first year (3 July 2019 - 3 July 2020) on Instagram were analysed using the method of content analysis as *'content analysis is simply the study of recorded human communication'* (Babby 2002, p.352). During the sampling period (July 2019 - July 2020), the activity, the advertisements and willingness to communicate were examined through the entries (N=695). The study sample was n=10, where the units of analysis were the topic of the posts, the number of likes and the associated interactivity, as well as the number and quality of comments.

The posts were not obtained all at the same time, the material was collected and saved continuously (after 1 month), but reactions and engagement were also checked at the end of the sampling period as time spam could have influences on the number of reactions and engagements. As the comments can be checked as there is a date next to the comments when they were written, surprisingly, there were not so many extra reactions. The reason might be that on Instagram (and on other social media platforms) that the users have to roll back in the newsfeed, however new users of the site can roll back to see earlier posts as well. However, because of growth in the number of the followers could influence the engagements as well. Therefore, data was asked from site administrators as well, to check whether there is a correlation with the most popular post observed and the stored ones by them.

5. Results

Based on the willingness of the community members to cooperate and participate in dialogue (number of comments) during the period studied, the ten most popular posts could be divided into 3+1 themes in terms of content: 1) naming puppies; 2) policewomen, and recognition of femininity in the profession; 3) photos of the police spokesperson; 4) and finally, police cars. The research questions focused on assessing the image of police. The image was operationalised and measured through reactions and engagement as stated by Pokrócos (2019:124), *'police communication facilitates police action; it is a part of the culture of action. It can create a positive police image...'*

Table 1: The most popular posts in the first year of police_hu

The most popular posts topic	Date	Reactions	Engagement (comments, emoticons)	Link
Naming puppies (call-to-action post)	29 October, 2019	3600	930	https://www.instagram.com/p/B4M2XD1BPcB
Feedback to citizens about naming puppies	28 November, 2019	5600	110	https://www.instagram.com/p/B5bAZJ4h2fp
Promoting the police profession (police women)	26 February, 2020	5500	198	https://www.instagram.com/p/B9CxjKnhXDF
Police women	18 January, 2020	7300	100	https://www.instagram.com/p/B7eVB47hUON
A police woman (with handcuffs)	4 April, 2020	6800	140	https://www.instagram.com/p/B-hrUG1BVTB/
Kristóf Gál, the Spokesperson of the National Police Headquarters	11 March, 2020	2200	198	https://www.instagram.com/p/B9my1sZhxCK
Kristóf Gál, the Spokesperson of the National Police Headquarters and Cecília Müller, Chief Medical Officer of Hungary (a hug after the first phase of coronavirus epidemic)	18 June, 2020	6200	135	https://www.instagram.com/p/CBIXB77AkL0/
Police cars	21 April, 2020	3400	100	https://www.instagram.com/p/B_QCIUsBtZ
Police cars	6 April, 2020	2600	130	https://www.instagram.com/p/B-phZv3hiCp
A police car (Audi)	7 June, 2020	4700	120	https://www.instagram.com/p/CBJOayzh9Ff

After the launch of the profile, it took several months to increase the number of followers who respond to posts by liking or commenting. The first successful post was in October 2019, when puppies had to be named. Although the topic doesn't seem to be related to the police profession (of course it is, as puppies become sniffer dogs), the post received a record number of comments.

It is an interesting fact that five of the top ten most popular posts were created during the first wave of the coronavirus epidemic (March 2020 - June 2020), which may be due to the fact that the internet browsing habits of the users changed and they spent more time reading social media sites (Aristovnik et.al. 2020).

5.1 Naming puppies



Figure 1: Naming puppies. Source: URL6.

The entry was created on October 29, 2019 (Figure 1). The post received 3600 likes, but the number of comments was more indicative as the call-to-action¹ post received 930 comments. This post can be regarded as a good practice, the members of the police force tried to encourage the members of the public to cooperate in naming the puppies. According to the creator of the post, two important things are reflected in this post. Firstly, it was necessary to identify and establish the right information channels with the different policing disciplines and then to find the professionals from whom the signal was received to present the story. This is how they got to the Police Education and Training Centre in Dunakeszi. On the other hand, an important principle is to engage followers in order to generate interaction that can strengthen the relationship between the police and civilians, which is one of the main goals of the Instagram profile of the Hungarian Police. The nearly 1,000 comments show that the direction is the right one, as people are receptive to the topics shared by the police when they address the followers of the page with a story which they can identify with.

5.2 Promoting the police profession

The entry was posted on February 26, 2019, and the photo shows six young policewomen in uniforms (Figure 2). The image originally appeared in Cop Magazine, and it was requested for use and posted by the administrators of the site. The post received more than 5,500 likes and around 200 comments. The ladies are appearing with their first name and their chosen profession, clearly promoting the police profession that they define not only as a job but also as a career. The administrator compares the organisation to the closest bonds of social life as the word *'family'* is used as a metonymy in the text of the entry. Its fundamental aim is to strengthen the feeling of *'we are a family'* among the police personnel.



Figure 2: Police women. Source: URL7

According to the site administrator, the most important lesson for them was that there were a lot of trolls² who commented, and because of the comments, strict moderation was required. It is essential for them to stand up for their colleagues, as was the case here.

¹ The term *call-to-action* (CTA) is used in the field of marketing and became a common practice with the popularity of social media. It refers to a content that targets readers, viewers or users and encourages them to take a specific action. A CTA content should be short, clear and convincing.

² In internet slang, it refers to a person who harasses an online community with sarcastic, hurtful and off-topic comments.

5.3 Kristóf Gál, the Spokesperson of the National Police Headquarters

The date of the creation of the entry is March 11, 2020, after the worldwide spread of the coronavirus and its appearance in Hungary (Figure 3). As Kristóf Gál was a member of the Operational Staff³, temporarily there were no posts with his appearance on Instagram, because his daily, often overwhelming performance in the Operational Staff no longer allowed him to do so. Nevertheless, the calendar he promoted was one of the most popular posts of the sampling period, based on the number of comments received. His personal fame and recognition were never in question before, and now it is indisputable.



Figure 3: Kristóf Gál, the Spokesperson of National Police Headquarters. Source: URL8.

The administrators of the site have tried to take advantage of the popularity of the spokesperson Kristóf Gál in the past, as they are doing now, to reach their aims with their messages. His personal popularity is coupled with a personal recognition, as can be seen from the content of the comments. In several cases, he is compared to Pál Győrfi, the spokesperson of the National Ambulance Service, and in numerous posts the civilians congratulated the organisation on being able to place a credible and socially accepted police officer as the head of the organisation’s communication. This demonstrates that subjectivity (citizens’ perception) and credibility (Kristóf Gál’s professionalism) can be attributed to the popularity of the organisation (the police).

5.4 Online reputation – highlighting a comment

Regarding Figure 4, it is already proven that not only the number of likes, but also the number of comments, and even more so the quality of comments are the indicators of the degree of identification with the topic and its visual content. The picture is part of one of the most successful posts in the first year of the Instagram profile of the Hungarian Police, so the highlighted comment photo is not a coincidence.



Figure 4: Police women – highlighting a comment. Source: URL9.

A user who wrote his comment with his name and face: „En pedig a police.hu kommentjeit irtó értelmes és jó humorú egyént dicsérem most meg. 😊 csak így tovább...közelebb kerülhetünk egy kicsit a rendőrség emberi oldalával is.” (The translation in English: ‘And I praise the intelligent and good-humoured person who writes comments on police.hu. 😊 keep it up...we can get a little closer to the human side of the police.’)

The comment has two relevant pieces of information. On the one hand, reading the comment sections in the first year (3 July, 2019 – 3 July, 2020), it is clear that members of the public appreciate and praise the

³ The Operational Staff for the Control of the Coronavirus Pandemic was established by the Government of Hungary on 31 January 2020, by Government Decision, Lex Covid.

communication style of the operators they see on police_hu. The humour used on a daily basis is clever, intelligent and although responding correctly to specific situations would be difficult for the site's followers, or even the citizens in general, this is not the case for the site's operators. At an international level, several police organisations have also made '*a strategic decision to employ humour on social media to increase community engagement with their content and manage their public image*' (Wood and Mc Govern 2021:305). On the other hand, the sampling period shows that the public is getting used to the presence of the police on this platform. Of course, there is no uniform opinion, since, as in all other cases, there are those who are surprised by the direct tone and style of the organisation's presence on the social networking site, compared to the authoritarian style of communication they experienced in the past. The facts confirm that the public welcomes the innovation, and it is visible in the increase in the number and quality of comments.

6. Discussions

The digital, verbal and visual content created on police_hu restructures the relationships among individuals, society and different organisations. This is evidenced by the fact that the communication practice of the Hungarian Police on Instagram led to a kind of rearrangement, and resulted in a positive change in the image and opinion of the police, based on the data of the online platform observed and analysed. By the conscious use of the site, the police organisation recognised the need for dialogue among the members of the public, at least those who have online access, Instagram accounts, and are curious about, or even follow the police on this platform.

The analysis of communication strategy was not a part of this study, but bilateral, partner communication with the target group was fully implemented during the sampling period. In other words, thanks to the high quality of the digital communication processes in law enforcement, not only the relations between different organisations (in this case the Hungarian Police), but also between individuals and a relatively well-defined layer of society seem to be reorganising.

Taking advantage of the possibilities of immediate response, the Hungarian Police strive to reach the population directly, to build trust and partnership, thus changing the perception of the organisation in a positive direction, and this is reflected in the feedback (content of comments, emoticons). However, it is worth correcting the misconception that negative opinions are moderated on social media. If someone expresses a negative opinion in a civilised way, without being personal or offensive, or without being political in their comments, then that content will not be moderated. Freedom of expression exists on social media, albeit the question is how the user applies it.

Based on the sampling period, it can be said that the content of the site is of great service to the members of the community. The quality of the visual and verbal content, the quality of the police's digital discourse, and the use of the more direct style of language, the *policing digilect* (Veszelszki 2017ab, Uricska 2020ab), also answered our third research question. Compared to the traditional channels of the police, for example television, radio, or even the traditional webpage of the Hungarian Police, www.police.hu, a more informal style and language variety exist on the site that can be mainly identified in the tone and the vocabulary of the entries examined.

7. Conclusion

The research results show that one-sided and formal communication is replaced by two-sided communication on Instagram. The right application of the possibility of two-way communication to gain the trust of the public is coming to the forefront. It defines a more personal and informal language, a new style of policing language. The site operators are well aware of this style of police terminology that is clear and comprehensible to the widest possible audience, thus helping to create a public image of the police based on trust and reducing the communication barrier between the police and the civilian population. As future steps, the research can be extended to other channels by the Hungarian police, (e.g., Facebook, Tik Tok), to surveys of the civilian population and police personnel, to interviews with communication experts and police personnel of different ranks, as well as to identification and abstraction of international best practices.

Andrea Kozáry, a Hungarian researcher also devoted two studies to the topic of trust, researching primarily the political-sociological aspects of the place and prestige of the police in the society, but also the importance of communication as part of this. Her reflections and quotation – '*Trust comes on foot and goes on horseback*' - are entirely appropriate here (Kozáry 2018, 2019).

The police have taken the first steps to build trust by adapting to the attitude of the social networking site with the application of *policing digilect*, a communication practice that has been overwhelmingly welcomed by the site's followers. This is confirmed by the fact that the site had been present for more than two years and created one thousand and two hundred posts at the date of submission of this manuscript. This fact shows that this activity is time-consuming, and requires a continuous and active presence. This kind of community building is not only a quantitative process, but also qualitative, and therefore a fragile one.

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Online links in this article

- URL1: A Google felmérése [Google survey]. <https://bit.ly/39rG8Rz>
- URL2: Gál Kristóf az Instagram kommunikációjáról – videó [Kristóf Gál on Instagram communication – video]. <https://bit.ly/3rszdNI>
- URL3: Jankovics Péter színésszel készült videó a 112 hívószámról [Video with actor, Péter Jankovics on the emergency number 112]. <https://bit.ly/3fenGiu>
- URL4: Gál Kristóf és Hodász András atya [Kristóf Gál and Father András Hodász]. <https://bit.ly/3w2fEix>
- URL5: Új intézkedések a járvány ellen [New measures against the epidemic]. <https://bit.ly/3hrFho8>
- URL6: Névadás kutyakölyköknek [Finding names for puppies]. <https://bit.ly/3qCYyEf>
- URL7: Rendőrhölgyek [Police women]. <https://bit.ly/3l6LXlj>
- URL8: Gál Kristóf, az ORFK szóvivője [Kristóf Gál, the Spokesperson of National Police Headquarters]. <https://bit.ly/3bDngje>
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Masters Research Paper

Social Media Analysis and Strategic Recommendations for a Non-Profit Organization in Germany

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Abstract: Nowadays it is impossible to imagine life without social media - Facebook, Instagram and Co. have become important platforms for public discourse, political communication and opinion-forming. Not only for companies, but also for nonprofit organizations (NPO), networking via social media creates potential. On the one hand, they offer a cost-effective dialog opportunity to address many interested parties and new target groups. On the other hand, the interaction of high-quality content and strategically planned social media posts not only gains reach, but also members and donations for the organization. At the same time, social media opens up space for hate speech, discrimination and racism, which is why a strategy to steadfastly counter negative reactions online is becoming increasingly important for nonprofit organizations as well. The purpose of this paper is to examine how the regional nonprofit organization in the welfare sector – German Red Cross district association in Leipzig and the surrounding region – is targeting social media communications to achieve its established goals of recruitment and fundraising. Unlike previous studies that focus on single social media platforms, this study examines the use of multiple social media platforms. This study included a qualitative analysis. We used qualitative content analysis (Mayring, 2015) to gain in-depth findings into the social media work of the NPO and its competitors. In the first step, competitors of the NPO were selected for the analysis based on their activities on the social media profiles on Facebook, Instagram, Twitter and YouTube. For the selection of the competitors, own selection measures were chosen in order to make a suitable sample selection. Content categorization was used to interpret information within the social media profiles. The focus was on the textual and visual design of the social media accounts and individual posts of the competitors. For this purpose, the period of data collection included the months of June and September 2020. In summary, posts from 17 social media profiles were considered in the analysis, and we analyzed 21 Facebook posts, 12 Instagram posts, 15 tweets, and 20 YouTube videos. Based on the results, a strategic approach for the social media work of the non-profit organization could be developed in the form of recommendations for action. In addition, more donation campaigns are to be included in social media. Emotional storytelling leads to more interactions, which can generate a higher willingness to donate.

Keywords: Social Media Strategy, NPO, Non-profit Organizations, NGO, Fundraising, Facebook, Instagram, TikTok

1. Introduction

Social media is an important communication tool in terms of external corporate communication, which creates new challenges for nonprofit organizations (NPO) in terms of their diverse stakeholders and limited marketing budgets and technologies. The purpose of this paper is to examine how a regional nonprofit organization uses social media communications to achieve its membership recruitment and fundraising goals. The object of research is the German Red Cross district association in Leipzig and the surrounding region.

In the context of social media activities, it is essential to develop a strategic process (Phases 1 to 9) so that appropriate measures can be taken to improve the nonprofit organization's chances of success in a targeted manner. (Bruhn, 2014)

Despite the enormous importance of systematic planning of social media activities, many companies still act without any strategic process. This is due to the fact that the development is still quite recent, but also to the individual characteristics of this communication tool. The strategic planning process plays an important role in this context, since despite the limited controllability of user-generated content it is necessary to act in a targeted manner. Furthermore, this planning process forms the basis for a necessary control of the success of social media activities in order to evaluate the communication instruments with regard to their efficiency. (Bruhn, 2014; Stumpp et al. 2021)

In this context, the specifics of the communication policy of nonprofit organizations have a special significance. They are characterized by the diversity of stakeholders, the scarcity of the available budget, the immateriality as well as the polarization potential of corresponding messages. (Bruhn & Herbst 2016)

1.1 Phase 1: Analysis of the status quo of social media activities (situation analysis)

The analysis phase is the first step in a systematic process of social media activities and a prerequisite for any measures on the social media platforms. The information basis for planning social media activities is a situation analysis. A retrospectively conducted social media analysis is created on the basis of a structured process and serves as an in-depth analysis of the current situation. (Lammenett, 2020)

As part of the analysis, different aspects of the company's overall environment must be taken into account (Bruhn, 2019). For future decision-making processes, the relevant marketing situation is first examined. This is done with the help of the internal and external situation analysis. The internal analysis focuses on the success of previous measures as well as future application possibilities and the evaluation of social media competence. The external analysis, on the other hand, focuses on the use of social media communication by competitors. (Bruhn, 2014)

1.1.1 Internal factors

The nonprofit organization is currently using various communication tools: social media, advertising via print media, public relations, online communication, trade shows and exhibitions, and event marketing. Some of these are compatible with social media communication, e.g. by inviting and informing people about events and trade fairs, but also by live streaming during these events.

1.1.2 External factors

Social media has long been established in the welfare sector, especially on social networks, blogs or sharing platforms. Here, attention is called to fundraising campaigns or vacant positions in the organization. Interaction with the target group takes place on these platforms.

1.2 Phase 2: Setting purposes on social media

The next step is to define social media communication goals (Bruhn, 2014). It is very important for companies and organizations to ensure that their social media goals are formulated in line with the company's key communication policy goals. The definition of measurable success factors, so-called KPIs (key performance indicators), is essential for setting social media goals. They are used to control and check the effectiveness of running social media campaigns. (Rauschnabel et al., 2012)

Based on classic social media goals and nonprofit-specific marketing and communication goals, the following objectives can be identified for NPOs:

- Increasing (brand) awareness, employer branding.
- Recruitment of employees and young professionals
- Sales of nonprofit services
- Acquisition of financial resources
- Improving image and reputation
- Increasing website visibility, reach, and traffic
- Increasing community engagement, interaction with the community
- Winning media contacts (stakeholders).
- Gaining information.

The nonprofit's social media presence aims to increase brand awareness and reach. Sub-objectives are to increase the number of job applicants and donation willingness.

1.3 Phase 3: Target group identification on social media

In the context of target group identification, it is necessary to determine those target persons who are to be addressed in order to realize the social media goals. By identifying, prioritizing and characterizing the targeted social media audience, a basis is created for planning the measures. (Bruhn, 2014).

It is also important to identify those platforms on which current and potential consumers or buyers are active. This can ensure that the relevant communication measures are applied on the social media platforms that are relevant for the target groups. (Bruhn, 2014)

The specific target groups (I to IV) for social media of the nonprofit organization in the welfare sector are:

1. people who are interested in vacant positions,
2. people who are interested in a training position,
3. people who are interested in volunteer work, and
4. people willing to donate (monetary donations/in-kind donations/blood donations).

1.4 Phase 4: Selection of suitable channels and definition of Key Performance Indicators (KPI)

In this phase, the selection of suitable social media platforms is made in order to reach the intended target groups and formulated objectives (Hilker, 2012). In addition, the definition of suitable KPIs (key performance indicators) for measuring the success of the social media presence is indispensable at this point (Grabs et al., 2018).

1.5 Phase 5: Determination of suitable content and topics (agenda setting)

In marketing communication, a content strategy is the basis for successful content work. In the social media sector, this is also called a social content strategy.

Without sound, long-term content planning, there is a risk that users will not see a clear line in an organization's social media communication. This in turn can lead to a lack of desired reactions from the community or hoped-for effects in the long run. For this reason, it is imperative to make the best use of social media by providing attractive content. The content should encourage users to share and bind them more emotionally to the brand in the long term. (Löffler & Michl, 2020)

In this context, creativity is particularly required in content development for social media, because high-quality content thrives on authenticity and its appealing presentation (Grabs et al.). In this context, it is particularly important to consider what specific content the selected platform requires.

1.6 Phase 6: Planning responsibilities, resources, budget and organizational aspects

In terms of human resources, many organizations have a less formalized staff and organizational structure. This is often accompanied by a lack of written regulations and long decision-making processes (Bruhn & Herbst, 2016). However, competent social media officers are necessary within the framework of a social media marketing strategy for the planning and implementation of content measures. They are responsible for the entire coordination, organization and budget management in this area. The question arises as to whether these activities should be the responsibility of an in-house employee or external support. This decision depends on factors such as company size, budget restrictions or the scope of social media activities. (Pahrmann & Kupka, 2020)

In general, the provision of marketing budget in the nonprofit sector is characterized by low acceptance from the perspective of members or donors (Bruhn & Herbst, 2016). Although the financial resources in the marketing area of nonprofit organizations are quite limited compared to commercial companies, they show enormous potential in terms of social media communication and serve the success of corresponding measures on the social platforms, for example, by disseminating content and increasing engagement. (Grabs et al., 2018)

In addition, organizational aspects must be considered in the course of a social media marketing strategy. For holistic planning, it is advisable to create a communication plan (also: editorial plan), which informs in a clear form about desired messages, deadlines or responsibilities, among other things, and should be made available to the marketing managers at any time. There are currently numerous tools that support the planning and publication of social media content. Examples of so-called social media publishing tools include Hootsuite, Buffer, Sprout Social. (Pahrmann & Kupka, 2020)

1.7 Phase 7: Strategy decision

The definition of a social media strategy must be made with regard to cost and time expenditure as well as authenticity, changeability and regionality. A distinction is made between passive and active strategies. Companies with an active social media strategy make their own content available to users in the social media in order to achieve the defined goals and address the intended target group. In the reactive (passive) social media strategy, the focus is on user-generated content, which is used to observe, record and evaluate the activities of users and market participants through monitoring. (Bruhn, 2019).

1.8 Phase 8: Strategy implementation

Once a suitable strategy has been selected, it is up to the organization in this step to ultimately implement it for the social media area - taking into account the timing as well as the content scope (Ceyp & Scupin, 2013). This is the operational implementation of the chosen strategy, which involves, in particular, the definition of appropriate measures in terms of content, technology, organization, and personnel. For the selection of social media measures, not only the intended target groups are important, but also existing information about individual user groups. Depending on an active or passive social media strategy, the respective measures are ultimately implemented on social media. (Bruhn, 2014)

1.9 Phase 9: Social media success measurement and evaluation of the strategy

The final phase involves checking whether the goals of the individual social media strategy have been achieved. If possible deviations from these goals become apparent, appropriate measures for the further development of the strategy must be derived. (Decker, 2019) In practice, companies use surveys of the social media community, for example, to check the strategy and see whether they are meeting the expectations of their followers in the social media.

2. Research Design

On the one hand, the research used the method of qualitative content analysis by Mayring (2015). On the other hand, trend-setting platforms were examined under consideration of individual criteria. The method of qualitative content analysis by Mayring (2015) is a method that interprets and evaluates material in a rule-guided and comprehensible manner with regard to a question. In the context of social research, it deals with the understanding and interpretation of texts, but can also be applied to material that is not written down. Analyzable content can be not only texts, but also photos, images and other illustrations in print and online media, advertising messages from the press, radio, Internet, content from online media, blogs, chats, forum posts (Springer et al., 2015, p. 76).

2.1 Method of qualitative content analysis (Mayring, 2015)

The communication science method of qualitative content analysis according to Mayring (2015) was used to analyze the social media environment of the nonprofit organization.

The purpose of the comprehensive analysis was to provide in-depth insights into the social media work of the nonprofit organization and its competitors. These findings are essential in order to develop a strategic process of social media activities for this organization by means of recommendations for action. Only Facebook, Instagram, Twitter and YouTube were considered for the study because the nonprofit organization itself is active only on these platforms.

The analysis will be limited to various social media platforms and corresponding profiles and posts. Social media profiles or posts (=object of analysis), which represent both text and image or video elements, severely limit the choice of analysis methods. Any methods based on data collection by means of interviews or surveys are out of the question for the analysis. For this reason, the qualitative content analysis according to Mayring is the most suitable method. It pursues the goal of systematically processing material and thus serves as a basic framework for the analysis. (Mayring, 2015)

2.1.1 Determination of the starting material

The first step was to determine the material to be examined for the analysis. For this purpose, selection measures were chosen independently in order to select a sample. This initial material included selected social media profiles of German welfare organizations as of the cut-off date of September 25, 2020. In addition, the content and activities on the individual platforms in the month of September 2020 were relevant.

The analysis on Facebook included a total of five profiles and 21 posts.

For the analysis on Instagram, a total of three profiles and twelve posts were examined. Compared to the social media channels Facebook, Twitter and YouTube, this corresponds to far less investigation material. The reason for this is the lack of suitable competitive comparison partners on this platform. To counteract this and obtain sufficient research material, the period of analysis was extended to two months (June and September 2020).

The analysis on Twitter included five profiles and 15 individual tweets on the platform.

The analysis on the video-sharing platform YouTube included a total of four accounts and 20 video posts. In addition to an initial examination of the various success factors of the platform, a targeted analysis of the last five video posts as of the reporting date of November 30, 2020, was carried out with regard to various criteria.

Table 1: Overview of competitors in the welfare sector including their social media activities

	Facebook	Instagram	Twitter	YouTube
competitor I: Diakonie Leipzig	X	X		X
competitor II: AWO Leipzig- Stadt	X			
competitor III: ASB Regionalverband Leipzig e. V.	X			
competitor IV: Johanniter-Unfall-Hilfe e. V. Regionalverband Leipzig/Nordsachsen	X	X	X	
competitor V: Malteser Hilfsdienst e. V. Leipzig	X	X		
competitor VI: Diakonie Dortmund und Lünen gGmbH			X	
competitor VII: Diakonie Düsseldorf			X	
competitor VIII: AWO Potsdam Bezirksverband			X	
competitor IX: Malteser Hilfsdienst e. V. Kassel			X	
competitor X: ASB Brandenburg				X
competitor XI: Malteser Krankenhaus St. Franziskus-Hospital				X
competitor XII: ASB Bonn/Rhein-Sieg/Eifel e. V.				X
sum of the analyzed social media activities	5	3	5	4
total	17			

2.1.2 Determination of category system

Subsequently, the determined source material was interpreted for relevant information. For this purpose, a content-based categorization within the social media profiles was used. The focus was on the textual and visual design of the social media accounts and individual posts.

The content analysis took place on two levels: The profile analysis included social media profiles of the charities on Facebook, Instagram, Twitter and YouTube.

Table 2: top categories and subcategories of the profile analysis

top categories	sub categories			
	Facebook	Instagram	Twitter	YouTube
profile information	<ul style="list-style-type: none"> • name • description • Verification (blue check mark) • opening hours • website URL • phone number • cover image • profile picture • donate function 	<ul style="list-style-type: none"> • name • description • Verification (blue check mark) • profile picture 	<ul style="list-style-type: none"> • name • description • Verification (blue check mark) • cover image • profile picture 	<ul style="list-style-type: none"> • name • description • Verification (blue check mark) • banner

top categories	sub categories			
	Facebook	Instagram	Twitter	YouTube
success factors	<ul style="list-style-type: none"> number of followers Number of likes Number of times 'I was here' 	<ul style="list-style-type: none"> number of followers number of ,following' number of postings use Instagram Reels use IGTV Instagram Highlights date of the first posting 	<ul style="list-style-type: none"> number of followers number of ,following' number of tweets date of joining 	<ul style="list-style-type: none"> number of followers number of videos number of playlists number of views date of joining

In the context of the posting analysis, individual postings of the accounts were examined. Top categories and subcategories were formed in each case. The top categories were

- General & Success Factors
- Content: Text Quality
- Content: Image Quality, and
- Other.

These top categories were assigned subcategories per platform (Facebook, Instagram, Twitter, YouTube).

2.1.3 Review of the source material

After the initial material and the top categories and subcategories were determined, a review of the category system revealed that in some cases too much or too little information was available for an investigation. Accordingly, an appropriate adjustment took place.

The review of the category system revealed that excess data was available for the social media channels Facebook and Twitter, so that the analysis focused only on the five best posts in terms of reactions and likes.

The table below shows an overview of the results of the competitor profile analysis versus the NPO (German Red Cross).

Table 3: Results of the competitor analysis

competitors	platforms												
	Facebook			Instagram		Twitter			YouTube				
	followers	likes	'I was here'	followers	postings	followers	tweets	date of joining	followers	videos	playlists	views	date of joining
I	1098	954	5	284	51				106	31	3	22830	09/2011
II	1051	1028	0										
III	1266	1220	0										
IV	1143	1078	73	435	47	40	109	05/2017					
V	1253	1176	0	924	87								
VI						390	659	07/2013					
VII						376	508	02/2017					
VIII						618	1271	01/2018					
IX						397	1119	11/2010					
X									193	41	8	54247	06/2012
XI									126	25	9	155968	12/2014
XII									1210	23	4	814756	03/2017
NPO	2070	1931	55	2145	1200	236	1095	05/2018	95	18	0	12654	01/2018

2.2 Analysis of trending platforms

The qualitative content analysis according to Mayring (2015) is to show in which way the welfare sector already communicates via social media, which topics are central and how this is presented on the platforms Facebook, Instagram, Twitter and YouTube.

For the development of a social media marketing strategy, it was additionally necessary to consider other platforms: XING and LinkedIn, weblogs, Tumblr, WhatsApp, Facebook Messenger, Wikipedia, Pinterest, Reddit, Google reviews, kununu and glassdoor, Snapchat, Flickr, TikTok, Spotify.

Individual criteria were formed and examined for this analysis.

The research criteria were:

1. Potential for marketing use of the platform in connection with social media goals of the NPO.
2. Identification of the target group on the platforms based on age structure, gender distribution, household income

3. Findings & Discussion

3.1 Results of the method of qualitative content analysis (Mayring, 2015)

Comparing the German Red Cross district association in Leipzig and the surrounding region with its competitors, it shows that the NPO has a stronger social media presence, and in some cases also higher numbers of subscribers and likes. However, there is no channel-specific or target group-oriented content in the postings so far, nor is there any continuity. The most interesting topics for the NPO's social media presence are probably:

- Representation of the organization as an employer
- Insights into the activities and stakes of volunteering.

Twitter and YouTube have enormous potential, which is not yet fully exploited. Furthermore, with regard to social media communication in the welfare sector, no pronounced community management is currently discernible, as the interactions on the platforms studied are currently quite capable of development.

Channel-specific functions (e.g., Facebook donation button, Instagram reels) are not being used at this time.

Facebook offers enormous potential for the NPO's very diverse target group. On Instagram, the NPO reaches a target group between the ages of 18 and 34 in particular. This includes target group I in particular, but also a selected group of people in target groups III and IV.

The use of Twitter makes sense, provided that topics from the voluntary work are published ostensibly. On YouTube, various video formats are useful. The videos can provide authentic insights into the organization by employees and volunteers.

Video	Aufrufe ↓ ▲	Durchschnittliche Wiedergabedauer	Durchschnittliche Wiedergabedauer in Prozent
<input type="checkbox"/> Gesamt	14.248	1:16	44,9 %
<input type="checkbox"/> Praktikum im Altenpflegeheim	2.497 17,5 %	1:01	57,6 %
<input type="checkbox"/> Ehrenamt beim Deutschen Roten Kreuz macht Spaß	2.102 14,8 %	1:12	35,4 %
<input type="checkbox"/> DRK-Kita "Villa Kunterbunt" in Schkeuditz	1.410 9,9 %	1:36	47,8 %
<input type="checkbox"/> Hauptamt beim Deutschen Roten Kreuz macht Spaß	1.209 8,5 %	1:23	40,8 %
<input type="checkbox"/> Hauptamt in der Geschäftsstelle beim Deutschen Roten Kreuz mac...	919 6,5 %	1:07	50,0 %
<input type="checkbox"/> Vorstellung der DRK-PlusCard für Mitarbeiter des DRK-Kreisverband...	808 5,7 %	0:59	70,4 %
<input type="checkbox"/> 04552 Borna - DRK-Rettungsdienst Tag und Nacht	755 5,3 %	1:48	38,2 %
<input type="checkbox"/> Praktikum in einer KiTa	746 5,2 %	0:38	63,5 %
<input type="checkbox"/> DRK-Tagespflege Zwenkau	729 5,1 %	2:08	54,6 %
<input type="checkbox"/> Drachenbootrennen zum Laurentiusfest in Zwenkau 2019	529 3,7 %	1:59	36,1 %
<input type="checkbox"/> Internationaler Tag des Ehrenamtes	474 3,3 %	1:21	57,7 %

Figure 1: YouTube Insights - Top videos of the NPO

Table 4: Best practices: Competitors from content analysis (YouTube)

competitors	YouTube video
Diakonie Leipzig	https://www.youtube.com/watch?v=sg4JdwOhfbw
Diakonie Leipzig	https://www.youtube.com/watch?v=d-uAK03ffbE
ASB-Mittel-Brandenburg	https://www.youtube.com/watch?v=LS0GmOVT1vw

Due to the extremely broad target group of the NPO, Facebook and Instagram are to be used primarily in the context of employer branding. The majority of the target group is reached on these platforms. However, the younger generation (Generation Z) is not active on these channels, which is why it is advisable to use Snapchat and YouTube to reach people interested in training at the German Red Cross. By handing over the Twitter account to the volunteer office, authentic insights into volunteer activities are provided, which can attract new prospects.

Facebook and Instagram are not only useful in connection with strengthening one's own employer brand (employer branding), but they also serve to attract those willing to donate. With the help of the donation function on Facebook, current donation campaigns can be implemented within the platform. The focus of Instagram is exclusively on generating donations in kind, as popular topics such as sustainability and environmental awareness in relation to the clothing industry are positively received here, and the lack of hyperlinks in the post descriptions means that the publication of donation campaigns is not target-oriented.

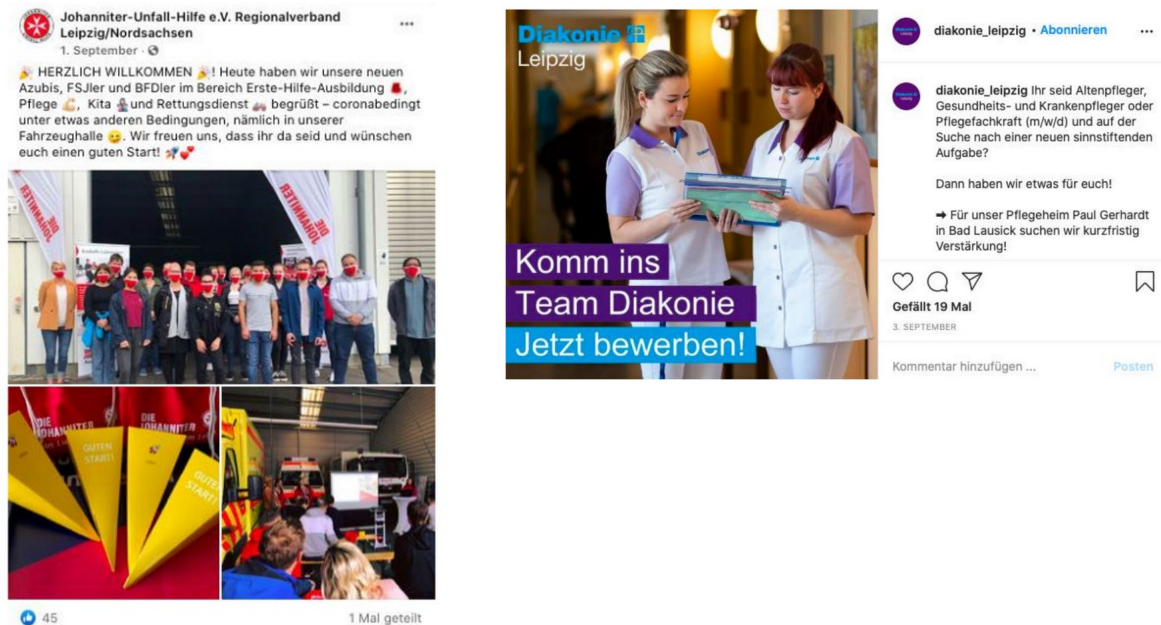


Figure 2: Best practices: Competitors from content analysis (Facebook & Instagram)

The increasingly shorter attention spans of users must be taken into account in content development. It is advisable to implement so-called snack content, which is quickly perceived and processed by users and thus tends to lead to reactions by users. Accordingly, a positive effect on the reach can already be achieved with little effort for content creation. Classic examples of snack content include short video sequences as well as infographics, definitions, quotes or memes and GIFs.

Furthermore, the NPO's community management on social media can definitely be improved by aiming for an exchange and interaction with the community in order to achieve a growth of subscribers or followers. Dialogue with users is thus possible via comments, direct messages but also story interactions. Furthermore, more questions should be asked of the users and external content, such as news, reports or studies from the industry, should be shared in the own newsfeed.

3.2 Results of the analysis of trending platforms

The use of the professional network XING makes sense for the NPO, as it contributes to achieving the objectives of the welfare organization. By maintaining the XING profile and publishing job advertisements, XING serves the

goal of recruiting personnel. The networking character of the platform makes it possible to attract donations through supporting members.

With regard to addressing "Target Group I", there is enormous potential, as specialists and managers with an above-average level of education can be reached here, e.g. managers in care facilities or daycare centers of the organization.

The platform offers further potential with regard to "target group IV", as intensive networking on XING with other companies may lead them to agree to make one-off or even regular financial donations to the NPO.

For the NPO, rating platforms are a must in order to counteract a negative online reputation. In this context, regular monitoring should be used for the various rating platforms. Although rating portals do not contribute to the direct achievement of objectives on social media, they should nevertheless be given high priority by the NPO. These platforms are considered to have a special credibility.

For the NPO, the use of Snapchat is relevant because a much younger target group can be reached on the platform. Thus, it would serve the goal of recruiting personnel, especially for "target group II".

The NPO should definitely consider placing ads on Spotify. Ostensibly, people between the ages of 20 and 39 can be reached on Spotify with the goal of recruiting personnel. Accordingly, the platform appeals in particular to the "target group II" of the nonprofit organization and in part also to persons of "target group I".

Selected platforms are out of the question for the NPO's social media work. In some cases, they require a lot of time and personnel resources. For this reason, weblogs, WhatsApp as well as TikTok were excluded as platforms for the organization. In addition, other channels such as Tumblr, Wikipedia, Pinterest, Reddit and Flickr are not at all suitable with regard to the goals or target groups as well as topics of the NPO.

4. Conclusion

The results from the comparison of the social media work of the German Red Cross and its competitors show that the NPO is far ahead of its competitors at the regional level. The NPO can record more publications, subscribers and reactions to the respective postings. However, the NPO's social media activities have so far taken place in an extremely unstructured manner. As a result, the potential of the individual platforms is not fully exploited. This is because each platform comprises individual target groups as well as channel-specific content and topics that need to be taken into account. Accordingly, the optimal use of content measures must be taken into account in future social media activities. These measures should focus in particular on presenting the NPO as an attractive employer as well as providing insights into volunteer activities and missions.

In addition, more donation campaigns are to be included in social media. Emotional storytelling leads to more interactions, which can generate a higher willingness to donate.

In the course of identifying suitable platforms, Facebook, Instagram, Twitter, YouTube, XING, Snapchat, Spotify and rating platforms were selected for the German Red Cross district association in Leipzig and the surrounding region.

On the one hand, Facebook and Instagram are used to increase awareness of the NPO as an attractive employer (employer branding) in the region due to their large regional reach. On the other hand, the increase of willing donors is pursued here, whereas Instagram is exclusively suitable for the acquisition of donations in kind.

In order to reach as many target groups as possible with the messages, the use of video formats on Snapchat and YouTube is essential. The younger target groups (Generation Z) are the most active on these platforms. Targeted content can be used to attract trainees in the fields of nursing or daycare, for example.

For the music streaming service Spotify, which is predominantly used by younger generations, the use of paid media makes sense in order to reach potential interested parties for an employment at the NPO with targeted audio spots.

In addition, XING is a suitable network for drawing attention to open vacancies and networking with companies and sponsors. A well-maintained XING profile helps to present the company as an attractive employer and thus arouse the interest of potential employees.

Twitter is primarily used for mission communication and should be filled with appropriate content. Twitter thus functions as an information channel that leads to more people being interested in volunteering by providing authentic insights into volunteer activities.

In addition, rating platforms have a direct influence on the online reputation of an organization. Continuous monitoring and responding to incoming reviews is necessary to work against a negative image. Accordingly, platforms such as Google and kununu as well as donation portals must be checked by the NPO with regard to an existing presence and relevant measures must then be taken. Further research is recommended to identify the relevant rating platforms and to develop such measures.

Basically, it is important to encourage the community on social media to interact, such as comments, likes or shares. In this context, the application of consistent community management is of fundamental importance in order to communicate with users in a consistent manner.

All in all, the presented process steps (phase 1 to 9) of analysis, planning, implementation and control serve the systematic use of social media communication. They are a prerequisite for the NPO's promising social media activities.

The qualitative research showed that concrete measures with regard to the NPO's social media communication should be limited only to the platforms Facebook, Instagram, Twitter, YouTube, XING, Snapchat, Spotify, and rating platforms. In this context, with regard to the trend-setting channels, a further intensive research of the competitors is also recommended in order to find out the entire potential of these channels.

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Work in Progress Papers

YouTube as a Source of Educational Content in Teenagers' Learning Practices

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Abstract: YouTube is one of the most popular online social spaces nowadays combining features of both a huge repository of information and a social networking service. Millions of people use this video-sharing platform daily. Entertainment (sports, comedy, music, movie trailers), information seeking (missed news, product reviews, research on a specific topic), and educational purposes (how-to videos, learning math, or tactics for video games) were discussed as main motivational aspects for watching YouTube videos (Lagger et al. 2017). Usage of YouTube for educational purposes became particularly relevant for teenagers as a support for their home-schooling. Our goal is to find out what strategies teenagers use to find relevant educational content on the service and how important this content was for their everyday learning practices before and during the COVID pandemic. We analyzed online behavior of 34, 14 to 15-year old teenagers (47% male) who took part in a long-term adventure trip with digital media left aside. We gathered quantitative data seven months before the trip (March 2019), just before the trip (October 2019), on the last day of the trip (April 2020), and five months after the trip (September 2020). We also conducted in-depth interviews with nine teenagers, who named YouTube as their favourite online service. Our intention is now to conduct nine additional interviews with the same teenagers to see whether their everyday learning practices changed within the last year. Implications drawn from this study, further research perspectives, and limitations will be presented and discussed.

Keywords: YouTube usage patterns, educational benefits of YouTube, social media overuse, teenage usage of social networks, online learning

1. Introduction

YouTube is an US-American online video-sharing platform and one of the most popular online social spaces combining features of both a huge repository of information and a social networking service. Due to its data traffic, it is the second biggest website worldwide, second only to its holding company – Google (Alexa Internet). The amount of new content on the platform, and the number of people watching, are growing constantly, with platform users uploading more than 500 hours of fresh video content per minute (Tubefilter). The platform provides a huge variety of both user-generated and corporate media content, including video clips, music videos, documentary films, live streams, video blogs, educational videos, etc.

YouTube was founded in 2005 and just several years later first articles addressing the potential educational value of YouTube appeared, giving educators and teachers advice on how to choose and integrate video material from YouTube in their classes (Mullen & Wedwick 2008; Berk 2009; Jones & Cuthrell 2011). Video technology in general, and YouTube videos in particular, were argued to be an especially effective modes of instruction and learning. Berk (2009) describes video as a vital tool for learning as it utilizes both hemispheres of the brain and activates all core intelligences. The left hemisphere processes language and the right hemisphere processes nonverbal input such as visual images, colour and sound effects. Video also taps into the core intelligences of the human brain – verbal/linguistic, visual/spatial, and musical/rhythmic - encompassing all of the ways that the human brain learns (Berk, 2009). In this way, video technology creates the ideal learning situation.

YouTube as an educational tool receives growing attention from researchers and teachers. Research appeared analysing student perceptions towards the use of YouTube as an educational tool for learning (Maziriri et al. 2020; Buzzetto-More 2015). A modified conceptual model based on the technology acceptance model (TAM) was proposed by Maziriri et al. to explain student perceptions, attitudes, and intentions to adopt YouTube as an education tool. They found that perceived usefulness has a more significant impact on university student perceptions toward learning through YouTube in comparison to the perceived ease of use. Incorporation of YouTube into course instruction was found to enhance student's perception of learning efficacy and increase engagement (Buzzetto-More 2015).

The YouTube studies are mostly focusing on adoption and usage of YouTube within secondary or high school settings as an in-class experience. Our focus is on teenagers' usage of YouTube for educational purposes at home and their perceived usefulness of YouTube for general education.

Home-schooling due to Corona-Pandemic made self-education and effective search for information even more important than before. Our aim is to reveal what strategies teenagers use to find relevant educational content on the YouTube platform and how important this content was for their everyday learning practices before and during the COVID pandemic. Additionally, we are going to check the consistency of teenagers' attitudes towards YouTube and the consistency of their YouTube usage practices. Our ambition is also to check what factors may be crucial for teenagers' perception of YouTube usefulness.

2. Methods

To assess how constant teenagers' perceptions of YouTube and YouTube usage practices are, we decided to use a longitudinal design which included the long-term media withdrawal phase.

2.1 Sample

We examined the YouTube usage and YouTube related attitudes of 34, 14 to 15-year-old teenagers ($M=14.5$, $SD=.57$; 47% male). All teenagers were attending gymnasiums (grammar schools) in different regions of Germany. The peculiarity of the group is the fact that the teenagers volunteered to take part in a sailing adventure that lasted half a year between October 2019 and April 2020. The usage of digital media was forbidden during the trip, except for a limited time during some land stops.

2.2 Instruments

Data were collected through a questionnaire and individual in-depth interviews.

To assess self-reported frequency of general media usage, we applied relevant subscales from *the Media and Technology Usage and Attitudes Scale (MTUAS)* (Rosen et al. 2013). The usage part of the scale consists of 11 separate subscales, e.g., video gaming, e-mailing, text messaging. We applied two subscales that can be potentially relevant for YouTube use - Internet searching and media sharing. All questions are answered on a 10-item frequency response scale from 1 (never) to 10 (all the time).

To measure YouTube usage of teenagers we asked the following question: "How often do you use YouTube?". Answers were possible on a 7-point scale from "never used" up to "very often". We also asked an open question: "What is your favourite online social network?".

Nine teenagers named YouTube as their favourite service before the trip. We invited all of them for interviews half a year after the trip and all teenagers accepted our invitation. Individual in-depth semi-structured interviews were conducted via videoconferencing software Zoom and included 12-16 questions (e.g., "What YouTube channels do you follow?", "Did you miss YouTube during the trip?", etc.). The length of interviews was between 40 and 60 minutes, depending on teenagers' previous experiences with media in general and YouTube in particular.

2.3 Data Collection and Analysis

Teenagers completed questionnaires three times: six and a half months before the trip (March 2019, T0), directly before the trip (October 2019, T1), and five months after the trip (September 2020, T3). For gathering data SoSci Survey online web-application was applied. Individual in-depth interviews were conducted via Zoom in December 2020, all interviews were recorded and transcribed. More interviews are planned.

Statistical analyses were performed with the IBM SPSS Statistic Software (Version 26). All values in data sets were valid (no missing values).

3. First results and discussion

YouTube usage has significantly dropped after the trip ($p=.017$, $d=0.41$). Before the trip (T1), 41.2% of teenagers stated to use YouTube "very often", while after the trip, only 11.8% stated so. At T1 5.9% of teenagers reported that they never used YouTube before and the same stayed true at T4. Boys were found to use YouTube significantly more than girls (boys $M=5.19$, $SD=1.328$; girls $M=3.83$, $SD=2.007$; $p=.029$, $d=0.8$).

Internet searching and media sharing have not changed significantly after the intervention ($M=4.55$, $SD=2.15$ vs. $M=4.42$, $SD=1.44$ and $M=2.47$, $SD=1.19$ vs. $M=2.68$, $SD=1.39$ respectively), with internet searching being much more popular practice than media sharing ($p=.00$).

Interviews revealed that the main reason to use YouTube for teenagers is entertainment. However, YouTube is also an important source of educational information. Teenagers use YouTube both on computer and on smartphone. Some search directly in YouTube, while others use google first. Normally the choice of videos relates to school topics and to teenagers' private interests. For example, one boy plays guitar, so he searches for videos to learn new melodies; a girl loves singing and searches online for new songs; another boy draws and looks for videos for inspiration and to learn new techniques.

Most of the teenagers used YouTube regularly for school and this purpose accounts for 10 to 50 % of their overall usage. One respondent said, "A lot of topics that I for example haven't got in class, I can watch there again and they are again explained and visualized, so it is much easier for me to understand" (Paul, 14 / names changed). Several teenagers mentioned "MyLab" and "Simpleclub", mostly German online learning platforms with several YouTube channels that provide free online tutoring focusing on different disciplines for school and college students. However, several teenagers noticed that it is sometimes hard to concentrate on useful topics; they are easily distracted and they can press one or two buttons and watch something else. One respondent commented, "At the beginning I watch video on the topic and then other video is suggested regarding to another topic and I go there, click on it although it has nothing to do with the topic, but is still interesting and then..." (Andreas, 15).

4. Preliminary conclusions and limitations

The results shown that teenagers extensively use YouTube in search for information in general and school-related topics in particular. A long-term separation from digital media reduced the overall appeal of YouTube and influenced teenagers' usage of the platform. We revealed a general narrowing of video types that teenagers watch, the increased interest in informational videos with more attention on topics instead of persons and generally a more critical attitude to digital media and the YouTube service.

Our research has several limitations in relation to our sample and research methodology. We have a relatively small sample. To quantify teenagers' usage of YouTube, we rely on self-reported estimates; though is a widely used method, the real use may differ from self-reported figures (Andrews et al. 2015). Additionally, teenagers might have given socially desirable answers. Despite these limitations, the importance of YouTube for education as a support for teenagers' learning practices stay obvious.

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Youth Participation and Social Media: Potentials and Barriers

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Abstract: This work-in-progress-paper presents the multi-layered research design of the Austrian team in the U-YouPa project. First, we give a brief overview of Social Media use in Austria. After a short description of our research design at a glance, we focus on our methodological considerations for four case studies. Our research approach can be used to explore youth in its diversity and to prevent limited perspectives.

Keywords: youth participation, social media, case studies, participatory research, diversity

1. Introduction

A decline in election participation has been observed in most European countries since the mid-1980s. But young people are still interested in participating in democratic life, they just demand new opportunities which are often located online (European Commission, 2016). Against this background, we explore interconnections between online platforms and youth participation in the international research project “U-YouPa. Understanding Youth Participation and Media Literacy in Digital Dialogue Spaces” (The Research Council of Norway). One of the main goals of the project is the development of methods, concepts and empirical knowledge that contribute to increased understanding of the potential participatory online spaces. It is carried out by Oslo Metropolitan University (Norway) (lead), FH JOANNEUM – University of Applied Sciences Graz (Austria), University of Music and Performing Arts Graz (Austria) and Malmö University (Sweden) between 2020 and 2024 (funded by the Research Council of Norway, SAMKUL, project number 301896; <https://uni.oslomet.no/u-youpa>).

The Austrian team has a special focus on youth participation in Social Media (SoMe). We define youth participation as “both ‘spaces’ where young people can express their views and opinions but also opportunities for decision makers to listen to those views” (Crowley and Moxon, 2017: 13). In contrast to mainstream media where production is restricted to media professionals, SoMe “[...] allows the creation and exchange of user-generated content” (Kaplan and Haenlein, 2010: 61). Therefore, SoMe could be a tool for participation and for connecting with communities. Young people use SoMe for different activities, so it is important to consider the characteristics of each platform. There is no single concept of SoMe; rather, they can take different forms such as “blogs, discussion forums, wikis, video-sharing sites, photo-sharing sites, social bookmarking, and social networking sites” (Chugh and Ruhi, 2019: 1).

2. Social media use by Austrian youth

The frequency of SoMe use by young people is quite high in Austria: 74.5 % of people between 16 and 29 use SoMe daily (RTR, 2018). The Youth-Internet-Monitor 2021 shows that Austrian teenagers between 11 and 17 use especially three online platforms (Saferinternet, 2021): They use 1) WhatsApp to share pictures, videos and locations, and for group chats or phone calls, 2) YouTube for entertainment and information and as a search engine, and 3) Instagram for sharing images and stories. The Digital News Report Austria shows that Instagram, Snapchat and TikTok are increasingly used by people between 18 and 24. The most common platform among this group for news consumption is Instagram. In contrast, Facebook is still very popular among 25- to 34-year-olds (Gadringer et al, 2021).

3. Research design

The central question of our study is how SoMe spaces can enable participation for young people between 15 and 29. We focus on this age group as the EU defines youth as young people up to the age of 29 (European Commission, 2016). As the emic perspectives (Kubik, 1996) of young people and their diversity is in the centre of our research, we are guided by a qualitative-oriented and participatory research design. This research approach is flexible and allows young people to set their own priorities and share with us those details of their SoMe use that are meaningful to them (Flick, 2018).

We have been conducting four case studies in which we analyse the SoMe use of young people and SoMe spaces relevant to them. We include different participatory activities for young people to play an active role in the

research process as co-researchers. Therefore, a range of methods and techniques are combined. Through this approach, we try to meet young people at eye level and to deal with topics that are important to them.

First of all, we analyse communities initiated by young people. Herein, we focus on already organised groups. To make our case studies comparable, we have developed four leading questions: a) how is the term (political) participation defined and used, b) which digital platforms are used for which activities, c) what is currently missing on digital platforms to enable participation, and d) what has changed through COVID-19.

To gain understanding of youth participation and the role of SoMe in stimulating (political) participation, we also deal with initiatives that are started top-down by youth, media or political organisations. We discuss general topics that are relevant for society and ask young people how they engage in SoMe spaces and how they perceive selected top-down initiatives.

4. Case studies

4.1 LGBTQIA+

Background. The largest EU-wide LGBTQIA+ survey shows that over half of the people surveyed are never or rarely open about their identity (European Union Agency for Fundamental Rights, 2020). Therefore, digital spaces are often the first spaces LGBTQIA+ youth turn to. Young people use SoMe “to safely navigate their lives through learning, participating, engaging, communicating and constructing identities in digital spaces” (Lucero, 2017: 117).

Group description and sampling strategies. We are trying to reach members of these communities in Austria to learn about their SoMe use and important topics. Approximately half of the identified German-speaking LGBTQIA+ SoMe spaces are designed to live exclusively online where anonymity and respectful conversation is guaranteed. As this is a sensitive issue, we choose the snowball sampling strategy for recruitment (Patton, 2015).

Methods. When inviting LGBTQIA+ youth to participate, it is important to choose a format that ensures anonymity but also offers creative and fun elements. Therefore, we work with a participatory conference where the participants co-determine the session topics related to SoMe and participation. On the interactive video-calling platform Gather.Town, we set up an online BarCamp (Marquardt and Gerhard, 2019) that encourages the participants to engage and empowers them to take the learnings back into their communities (Wagaman, 2015). Afterwards the discussions of the Barcamp are compared with the main topics covered in online LGBTQIA+ communities in general.

4.2 Fridays/Students for Future

Background. Young people are in a unique situation as the ongoing climate catastrophe affects their future. Therefore, this case study focuses on young people who take action in the grassroots movement Fridays For Future (FFF). FFF has motivated millions of people around the globe to actively protest to ensure climate justice and equity (e.g., Wallis and Loy, 2021).

Group description and sampling strategies. This case study focuses on the local group of Fridays/Students For Future in Graz (FFF/SFF). While FFF addresses the general public, SFF focuses on higher education policy. FFF/SFF work together very closely when it comes to strikes but hold separate meetings, working groups, and SoMe channels. Based on their suggestions, we concentrate on the SoMe teams of FFF and SFF.

Methods. The case study starts with ethnographic observations and informal conversations at demonstrations and networking meetings to become familiar with the existing structures and networks of FFF/SFF (Gobo and Molle, 2017). Workshops and card sorting activities are applied to specify and prioritise research topics (e.g., Best et al, 2021). The next steps include interviews, group discussions, auto-ethnographies (e.g., Chang, 2008), and identity boxes (Brown, 2019).

4.3 Skateboarding scene

Background. Since the beginning of the COVID-19 pandemic, inner-city public spaces in Graz have been increasingly used by young skaters. As a reaction to complaints from residents about noise pollution, the city of Graz introduced a ban on skaters doing tricks in public spaces in April 2021. This led to a lot of protest actions.

In addition to demonstrations and art actions in public spaces, much of the mobilisation of allies took place on SoMe (Sackl-Sharif, 2022).

Group description and sampling strategies. The skateboarding scene in Graz can be found in different public venues where smaller groups and circles of friends exist side by side. To reflect the diversity of the skater scene, we include skaters who are as diverse as possible in terms of age, gender, origin, and skateboarding venue. To accomplish this maximum variation sampling strategy (Patton, 2015), it is important to work with gatekeepers, such as people from skate shops or the local skate club GRÄB.

Methods. To develop background knowledge, reports about the skate ban in print and online media are analysed. In addition, the most important online platforms of GRÄB playing a central role in the protests and the online platforms of the political party FPÖ, which were essential in advancing the ban, are investigated. The content analysis is conducted with the software MAXQDA20 and the content analysis approach by Mayring (2014). The next steps include interviews with young skaters and ethnographic observations (Gobo and Molle, 2017).

4.4 Perception of top-down initiatives

Background. In Austria youth-related agendas cover a wide range of topics and tasks. However, the Youth Value Study 2021 found that projects such as youth parliaments are perceived as public relations activities of those with power (Heinz and Zandonella, 2020). Therefore, it is important for us to ask young people directly about their perception of youth participation and the role of youth.

Group description and sampling strategies. The selection of the young people follows the principle of maximum variation (Patton, 2015) and we try to integrate as many different young people as possible into the sample. The variation criteria include age, gender, origin, education, and place of residence.

Methods. We start to identify initiatives that focus on youth and try to address the platforms and formats that young people frequently use. Besides publicly available material (podium discussions, videos), we gather recently installed accounts from politics and media on popular SoMe platforms. Examples are participatory journalism projects on Instagram and TikTok accounts by politicians or important newscasts. With this stimulus material we conduct (online) workshops with young people to get insights from their point of view and more examples of projects that reflect or miss their (SoMe) reality.

5. Conclusion

In this work-in-progress paper, we are proposing the design of different case studies to get an understanding of youth participation and the role of SoMe. We address two main starting points to tackle this challenge: topic- or community-based bottom-up initiatives and top-down initiatives. The planning and results of the first activities conducted show that characteristics, habits, and perceptions held by young people related to interest-based groups and the initial situations are manifold. As SoMe is increasingly being a commonplace, the question of youth participation and digital dialogue spaces will be further specified in the next steps of the research project depending on the respective context and groups and, most importantly, led by the participant's priorities, interests, and opinions.

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Contextual Factors behind Audience Engagement Behaviours of YouTube Vloggers: A Case Study

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Abstract: YouTube as a social media site for online videos has become a major platform for the distribution and consumption of video blogs (vlogs). Famous YouTube video bloggers (vloggers) can obtain large audiences and become important for product marketing. The success of vloggers can be related to the achievement of audience engagement, manifested by viewers' participation and consumption on YouTube. Existing studies have explored vloggers' audience engagement behaviours (AEBs) in their videos. This work-in-process research shifts focus from content to the vlogging "context" - situational factors involved during the production of vlogs. Context has been studied in subjects including human-computer interactions (HCI), television and language use, but rarely in vlogging. Previous research unveiled that context could affect bloggers' written content. Research in marketing suggests the effect of context on brands' engagement strategies towards consumers. However, the relationships between vlogging context and vloggers' AEBs in videos have rarely been explored. This study explores the question "How can vlogging context affect vloggers' audience engagement behaviours in videos?" This study implemented a qualitative analysis of videos from two famous UK YouTube vloggers. The analysis currently focuses on exploring how three key types of context (vlogger, audience and environmental context) may affect the two AEBs - interaction and self-disclosure. The results propose that the three contexts affect vloggers' AEBs through multiple contextual factors within each context. This highlights the importance of the vlogging context regarding its impact on vloggers' implementation of AEBs. The study contributes to establishing a further understanding of AEBs of vloggers by taking context into account in addition to content. It provides another angle to evaluate vloggers and social media producers' practices for building audiences.

Keywords: vlog, audience engagement, context, YouTube, social media, behaviour

1. Introduction

Audience engagement on YouTube refers to viewers' consumption of video content, and their participation activities (e.g., subscribing, commenting and liking) beside consumption on the site (Khan, 2017), reflecting the building of relationships between viewers and creators. As a video-based social media site, YouTube has become a major platform for user-generated video content, including video blogs (vlogs), one of the popular video types on YouTube (Burgess and Green, 2018; Kaminsky, 2010). Vlogs are a type of video in which video bloggers (vloggers) present their daily activities or other topics (Zhang, 2018). Popular YouTube vloggers can develop large audiences and can help promote products for marketers via their impact on consumers' opinions (Nouri, 2018).

It can be argued that vloggers' success in terms of audience bases can relate to their establishment of audience engagement, reflected by the gaining of, for example, subscribers, comments, views, and likes (YouTube, 2022). Research has already shown that to engage audiences, vloggers implement *audience engagement behaviours (AEBs)* in videos. Two common AEBs are interaction and self-disclosure. For example, vloggers interact with viewers by responding to comments (Tur-Viñes and Castelló-Martínez, 2019), and disclosing personal information (Marôpo, Jorge, and Tomaz, 2020) to deliver a sense of authenticity to connect viewers (Jerslev, 2016).

This work-in-process research shifts attention from the content of vlogs that contain AEBs to "*context*", which has rarely been discussed in vlogging. Context relates to situational factors in media (e.g., television, music, social media) content production, dissemination, and consumption (Bickham and Rich, 2006; Lena, 2006; Jaakonmäk, Müller and Vom Brocke, 2017). In other areas, for example, context refers to situations of environments and participants in language use in a non-online communication environment (Clark, 1996). Context has also been referred to as circumstances of entities in Human-Computer Interaction (HCI) (Farahbakhsh, 2021). This paper views vlogging context as *situational factors involved during vlog production*.

Context can affect (online) media content. For example, the context of bloggers such as their motivations can shape the written content (Nardi et al, 2004). The context of uploaders such as whether young creators were monitored by their parents can affect the content types uploaded on YouTube (Yarosh et al., 2016). In traditional media, for example, Lena's (2006) research in music production found that the song lyrics in the market context

dominated by independent labels were written differently from the ones in the market dominated by major labels, indicating the effect of context on the traditional media content. As an online audio-visual media on YouTube, which is also an audio-visual format of blogs, it can be argued that vlogging context can affect vlog content. However, limited research explored the relationships between context and vloggers' AEBs in the content. Researchers already indicated context (e.g., policies, market environment) can shape brands' strategies to engage consumers (Van Doorn et al, 2010) in marketing, instead of the field of vlogging. Therefore, this research explores the question: "How can vlogging context affect vloggers' audience engagement behaviours in their videos?"

2. Methods

A qualitative case study was implemented to observe vloggers' practices in detail within YouTube (Yin, 2009). Two popular UK vloggers were selected as subjects: Zoe Sugg (beauty vlogger), and Daniel Middleton (game vlogger). Both vloggers already reached over 10 million subscribers in 2017, which can reflect their high audience engagement (Ferchaud et al, 2018). Furthermore, by using the YouTube Data Tool developed by Rieder (2015), metadata of these vloggers' channels up until 15 Jan 2022, including view count, comment count, and like count were retrieved. These metrics, according to YouTube (2022) can all indicate relative high audience engagement obtained by these two vloggers, making them a suitable case for this research (Table 1).

Table 1: Vlogger Channel Metadata (up until 15 Jan 2022)

Vlogger	Channel Names	Subscribers	View Count	Average Likes	Average Comments
Zoe Sugg	Zoella	10.9 million	1.1 billion	121,483	3,410
	Zoe Sugg	4.93 million	946 million	58,734	1,205
Daniel Middleton	DanTDM	25.9 million	18.5 billion	66,622	12,303
	DanTDM Shorts	78, 800	65.9 million	31,937	2,425
	MoreTDM	3.26 million	580 million	36,867	9,197
	DanTDM Live	1.42 million	156 million	22,169	2,678

The current stage of the study collected 2881 videos uploaded by the vloggers on their two channels (*Zoella* and *DanTDM*) before August 2017 and categorised them based on their topics. In each category, one video close to the beginning of each upload year was selected for final samples (N=126). Analysing the current data can explore how context affects vloggers' AEBs during that period in which vloggers' audience engagement has already been built, opening future opportunities for comparing the results to those from later video data that will be collected when the research progresses.

Based on the feature of vlogs and the exiting literature, the research currently focuses on three key contexts:

- Vlogger context: the situation of vloggers who may affect the content (Yarosh et al, 2016).
- Audience context: the situation of audiences, towards which vloggers may tailor their production since audiences' consumption is key for content popularity (Pires, Masanet, and Scolari, 2019).
- Environmental context: the situation of the environment that may affect (vlog) content produced (Lena, 2006; Snelson, 2015)

The study focuses on these contexts' effects on two AEBs mentioned: interaction and self-disclosure.

A thematic analysis was used first to identify interaction and self-disclosure in the content. Second, the content was re-evaluated with the identified AEBs to observe how those three contexts may affect the AEBs.

3. Results and discussion

3.1 Vlogger and audience context

For vlogger context, the results show that vloggers' AEBs can be conditioned by vloggers' *personal experience* and *social characteristics*. *Personal experience* refers to what the vloggers were experiencing behind the production. For example, both vloggers show their life activities in videos as self-disclosure. It can be argued that their experience during those activities decided whether or which parts of the activities were disclosed. *Social characteristics* includes vloggers' interests and hobbies. For example, the results show that it drove both vloggers to disclose their interests such as Sugg talking about her most/least favourite food, and Middleton talking about his favourite games.

For audience context, the results show that *audience experience* and *interests* can also condition vloggers' AEBs. *Audience experience* relates to vloggers' awareness of their viewers' experience. For example, by knowing some viewers have similar skin issues as hers (through Twitter), Sugg made a video disclosing her skin problems, as self-disclosure. Similarly, by knowing some viewers are more experienced players than him, Middleton asks for advice in some gameplay videos, as interaction. *Audience interests* links to viewers' interests in specific content. For instance, both vloggers have made specific videos due to viewers' requests that could be driven by viewers' interests. This implies the effect of audience interests on interaction.

Overall, the results propose that vlogger context affects AEBs by conditioning vloggers' decisions of making content according to their personal experience and social characteristics. Audience context conditions AEBs by driving vloggers to make content based on their audience experience and interests. The results regarding vlogger and audience context not only link to exiting research in which context of human entities can alter online media content (Nardi et al, 2004; Yarosh et al, 2016), but also propose the effect of vlogger and audience context on AEBs.

3.2 Environmental context

The results found that both social and physical environments can affect vloggers' AEBs. *Social environment* refers to social activities such as public and popular events (e.g., festivals), leading vloggers to make specific content and resulting in AEBs. For example, because of Easter, Sugg uploaded an Easter DIY video, in which she also encourages viewers to share with her their DIYs, as a form of interaction. Similarly, because of a gaming event, Middleton shared a video showing him visiting the event as self-disclosure.

Physical environment mainly refers to locations of the vlog production that affect AEBs. Location was found to affect self-disclosure. For instance, both vloggers made videos disclosing their vlog production rooms to the viewers or their activities in some places. Without the locations, vloggers would not have obtained specific experience and shown them as self-disclosure.

So, overall, environmental context affects vloggers' AEBs through altering vloggers' consideration of making videos based on their physical and social environment during the production process. The effects of the social environment on human communication and media production have been indicated in previous research (e.g., Clark, 1996; Lena, 2006). However, the results in this paper further propose its effects on vloggers' AEBs in the content. Location is also considered critical in vlog production (Snelson, 2015). However, the current results further propose the effects of physical environment on vloggers' AEBs in their content in addition to its effect on the content itself.

4. Conclusion

The initial results argue that vlogger, audience, and environmental context affect vloggers' AEBs via contextual factors within each context. The research highlights the importance of vlogging context for AEBs. It contributes to further understanding of vloggers' AEBs by considering the role of context in addition to content. It provides a new angle to evaluate vloggers' and social media producers' practices for building audiences.

There are also limitations. First, currently, the study analysed videos uploaded up until 2017. The current results already propose the important effects of context on vloggers' AEBs. However, more video samples will be involved when the research progresses for results comparison. Second, other vloggers and AEBs will be analysed. Third, although the results demonstrate the effect of context on vloggers' AEBs, due to the qualitative nature, the results may not be able to indicate the levels or frequencies regarding the effect of contextual factors on vloggers' AEBs. For example, how many times did social environmental context affect vloggers' AEBs, or how effective the vlogger context is in comparison to audience context. Future research could consider comparing these factors.

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Late Submissions

Dissemination of Fake News on Social Media: A Demographic Analysis of Audience Involvement

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Abstract: Social media users continue to threaten privacy with the spread of fake news thus impacting people negatively. This study seeks not just to reveal the predominant demography of Nigerians who spread false information, but also to access how the decision to verify and share such information is made. The cluster and systematic sampling method were used to select respondents from selected geopolitical zones in Nigeria. The study revealed that adults between ages 21-35 and 36 – 50 spread misinformation on social media platforms, and those in the latter age range would not verify before sharing on *Whatsapp* and *Facebook*. It recommends that the public needs to be educated on information verification, and the government and concerned organisations need to enforce laws necessary to discourage the spread of misinformation.

Keywords: social media, fake news, demography, misinformation, and verification

1. Introduction

Information technology has paved way for the creation of content and easy sharing of information from one source to another within seconds (Fasanya, et al, 2018). Newly invented information technologies increase abilities and open more possibilities for all humans, especially for the purpose of communication through sharing of messages. In the process of engaging in online interactions and discussions, users are forced to forward information that they deem relevant and vital to other people on their network. This is usually meant for the purpose of educating, sharing common interest, and creating awareness. Information technology allows for such sharing capability within the internet environment, which include social media, blogs, videos, websites, podcasts, etc. Social media applications like *Facebook*, *Instagram*, *Twitter*, *Whatsapp* among others are the most used internet platforms, mainly for the purpose of instant communication. Hence, they have not only become tools for increased citizens' active online participations but have also become platforms for the spread of hate speeches, misinformation and/or fake news (Dunu 2018, p. 6). Such activities, which are known to be common with political issues, have distorted the electoral system in several countries. Politicians have consistently used the social media platforms to attack the integrity of their opponents by spreading lies about them thereby gaining the upper hand in the electoral process (Igwebuikwe, Ebuka and Chimuanya, Lily, 2021). The after effect of such actions could distort the political system. A major negative impact is that incompetent politicians who lack the required knowledge to address the pressing problems of the nation at the state and federal levels could occupy political offices. In addition, the spread of fake news is likely to continue to limit the opportunity of good and credible politicians from ever coming into power. It means that only the unqualified politicians, who gain popularity by damaging their opponents' reputation using fake news, will have their way in politics thereby delaying the progress and restricting the development of the nation. Governments in certain parts of the world, including Nigeria are already seeking ways to reduce the impact of this menace that has become part of governance.

Previous studies by Finkel, et al (2019); Wilson and Umar (2019); Baum, Lazer, and Mele, (2017) have discussed the role of selected social media sites and educational status in the spread of fake news. Other research in this area also revolve around phenomenon of fake news, risk to society worldwide, and solutions to the spread of fake news among other research (Roozenbeek and Linden, 2018; Dentith, 2017; Egelhofer, 2019). Therefore, this study examined the demography descriptions of persons likely to be mostly involved in the dissemination of false information on social media, the rate at which they disseminate fake news, the nature of the stories they frequently forward and willingness or ability to verify social media contents, before dissemination. Results of this study would assist relevant stakeholders in regulating online contents by guiding them to make informed decisions.

The specific objectives are to:

- examine the use of social media in disseminating fake news; and
- investigate the role of Nigerian audiences by demography in the dissemination of fake news on social media

2. Literature Review

2.1 Fake News Dissemination on Social Media.

Social media is a global village involving several participants; this environment allows information to be shared from one person to another at the speed of light. It allows people to contribute and express their opinions on various issues with ease. It is known for minimum restriction on information sharing, low cost, and very easy access. The platform could be regarded as the home of hate speech, malice, and fake news, because common people can create their own content, which in many cases are not entirely true. Fake news is defined as cautious spread of false information in the form of news articles and stories with the intent of destroying an image. According to (Gentzkow, 2017) it is news articles that are intentionally and verifiably false, and could mislead readers. This expresses the fact that fake news could be news articles published and are set on being false. The spread of false information has become synonymous with the term fake news (Cooke, 2017).

In contemporary modern age, social media platforms have become major sources of information, people almost no longer refer to traditional media to confirm information. Indeed, some information found in the traditional media originates from the social media. The urge to search for news on social media is almost like an addiction. People are ready to feed this addiction by publishing fake news stories and post on social media, mostly to generate a high flow of online traffic. So many social media users are quick to believe what they watch or hear without much thought. This has become very convenient for people who use this flaw to spread fake news on social media, knowing that social media users are unlikely to confirm the information received. People used this high flow of traffic to create wealth for themselves. Since the audience is very convincing, they go on to share the information from one social media platform to another.

Fake news can spread faster than real news (Langin, 2018). It has a wider coverage and wider audience (Vousoughi, 2018). Fake news uses a lot of devices and tools to attract audience. In the case of social media, catchy headlines and captions are used to attract audience's attention. Social media articles use many exaggerated titles to sell their fake news.

2.2 Role of the Nigerian Audience in the Dissemination of Fake News

The presence of Nigerians on the internet is quite large. As at 2019, 113.3 million Nigerians use the internet (Statista, 2019). A section of this population includes users of the social media who constitute a major part of active internet users in Nigeria. This is prompted by easy access to electronic devices and internet connection at a relatively affordable rate. On the social media platforms, some Nigerians have more than one account. Thus, it could be said that the Nigerian audience have an established presence on social media which enables the rapid spread of information. Propagandists and people with different purposes take advantage of this quick circulation of information to spread fake news. Social media is the major carrier of fake news. The new information age has created a vital surrounding with loads of information, a large part of which is reliable, with the more significant chunk unverifiable.

According to Ogbette (2019), it was discovered that in Nigeria most people do not always confirm the source of a piece of information before believing and sharing it. In some cases, such information may turn out to be fake. This could be tied to the overwhelming amount of information on the internet (BBC, 2019). The average Nigerian social media user is presented with a lot of information every day. This user has other things to attend to and therefore has limited or no time to confirm every information he receives. As such, the user would likely spread information he deems important without proper confirmation. With a sense of protection and care for loved ones and friends, he forwards the fake news to them. They in turn forward it to family and friends who continue the cycle until it becomes common knowledge. The messages also contain instructions, which could be slightly coercive. These instructions state the benefits of spreading the messages and the consequences of not doing so. This encourages the average user to help in spreading fake news. The urgency some of these messages present also make some people to immediately respond and take whatever action presented. Audiences are required to forward the received message to others around them.

Regarding trending societal issues that are yet to be resolved by the appropriate authorities, fake news spreads faster. Fake news showing the brevity of the issue, a statement made by a public figure on the issue, or regarding a proposed solution gets to the audience easily as they are anxious to be informed about such an issue and for a resolution to be made.

2.3 Demography analysis of audience participation in the dissemination of fake news

Examining the categories of participants in the dissemination of fake news is germane in addressing the problems that comes with it. Although, there are other factors encouraging the creation and dissemination of fake news, it becomes significant for researchers to address the part each of the contributing factors play. This will enable the necessary organisations or regulatory bodies focus their efforts on the most relevant factors in seeking to ameliorate the issue. Several authors have examined the role of gender, age, income and educational status in the dissemination of political fake news online in America. Results show that, while the probability of sharing fake news is high in males, older people are more likely to share political fake news than younger people (Woodcook, 2019). In another study, Guess, Nagler and Tucker (2019) examine the effects of misinformation/fake news in political campaign and stressed that people over 65 years share nearly seven times as many articles from fake news domain than the younger generation.

There are pressing societal issues that seem to enhance this habit, one of which is level of literacy. With the high rate of illiteracy in Nigeria, more Nigerians are likely to spread fake news. The educational system of the country, especially the public sector, stands on wobbly legs. This results in a crop of citizens who are less critical in their thinking and citizens who lack the know-how for debunking fake news. Thus, if the illiteracy rate in Nigeria persists without a revamp of the education sector, the spread of fake news would only continue and possibly grow wider creating a threat to democracy (Lee, 2019). There are however further threats based on the results generated by Goyanes and Lavin (2018), who notes that most men and older people share political fake news. This could be linked to younger people's pressing desire for self-actualisation in areas of finance, career, academics, and family, which leaves them with little time to think of other sectors of society like history, culture, and politics. The same cannot be said of the older people who have spent most of their lives in self-actualisation and now they want a level playing ground for their children, the younger generation. As such they are interested in the affairs that make society work and one of these is politics and governance. This unwavering interest of older people makes them more susceptible to the antics of those who spread fake news. The older people want to be kept abreast of political situations and they also want to believe that they play a part in making the situation better. So, when they receive information, fake news or not, they most likely forward it to other like-minded older people as a contribution to the development of political situation in the society.

Also because of the generic make-up of women, their interest is on soft news like entertainment, sports, tourism, healthcare, and culture (Getz and Page, 2016). Men, however, are more interested in hard news like politics. It could be said that women are more interested in lifestyle than men instead of talking about soft news and hard news. Thus, men are more active in the political sector either verbally or in some other way, contributing to the majority of those interested in politics. As the social media is also a platform where fake news is spread, these men come in contact with fake news and as such help in the dissemination of such news. Thus, "detecting fake news at their early stages, in order to effectively avoid further risks and damages, is crucial" (Zhao, et al, 2018).

3. Theoretical Framework

Media Intrusion theory emphasized the consistent intrusion of the mass media in the political system especially during elections. Although the 'Media intrusion theory' specifically focused on the role of the television media in influencing or framing public opinion in the issues of politics, the social media serves as the most influential media in channeling political issues in this present generation. The social media intrusion in the political system are motivated by Nigerian politicians for personal gains.

The case of disseminating false information about political opponent further emphasizes how the political system continues to engage the most effective and influential media to attain political advantage. The social media platforms have encouraged 'many elicit leaders who do not necessarily hold political positions hold obvious political power, but may work behind the scene serving the interest of the social group they lead or represent' (Folarin 2005, p.187).

Thus, the social media platform has been taken advantage of as an anonymous medium to spread fake news usually to the advantage of the sender of these messages thereby disruption social order and activities alike.

Social media platforms have consistently been used by people hiding behind fake user-names and identity to manipulate the society, promote their ideologies and attract followers and get online recognition for diverse personal reasons, one of which is to make money. In the process, online users are desperate and spread false information, which tend to attract the attention of many. Such intrusion using the social media platform distort the peace of the society and leave audiences confused about what to believe and what to disregard.

4. Data and Methods

Data analyzed in this study were collected, from different locations in Nigeria. Data was gathered using a questionnaire containing relevant questions to understand the demography of Nigerians who are responsible for spreading fake news on social media platforms. The questionnaire was designed by the researchers to investigate the role of Nigerian audiences by demography in the dissemination of fake news on social media and examined how respondents use social media in disseminating fake news online. The questions contained in the questionnaire was not adopted but generated by the researchers as guided by the research questions.

In selecting respondents for the research, the researchers randomly selected a state each from the six cosmopolitan regions in Nigeria. However, only five states were finally used for the research, because, one of the geopolitical zones was not considered cosmopolitan at the time of this research. Thus, no state was selected from the North-East region because no cosmopolitan state exists in that region. In some other regions only one was selected because only one cosmopolitan state exists there. After all the above considerations, the study selected a total of five (Cross River, Delta, Edo, Enugu, FCT, Kano, Lagos, Oyo and Rivers) states from each region to participate in the survey.

Furthermore, in order to select the sample size (respondents) to participate in the process, from each state, the researcher employed the Yamane formula, 1957, (Singh and Masuku, 2014) which is considered one of the appropriate formula used in selecting sample size in social science research.

$$n = \frac{N}{1 + N(e)^2}$$

N= Total number of population of 8 states

n= error margin (0.05)

e = 400

STATES AND SAMPLES FROM EACH STATE

Cross River = 25, Delta = 36, Edo = 27, Enugu = 28, FCT = 23, Kano = 84, Lagos = 80, Oyo = 50, Rivers = 47

A total number of 400 copies of questionnaire were administered to residents in the eight states but 367 were returned.

5. Results

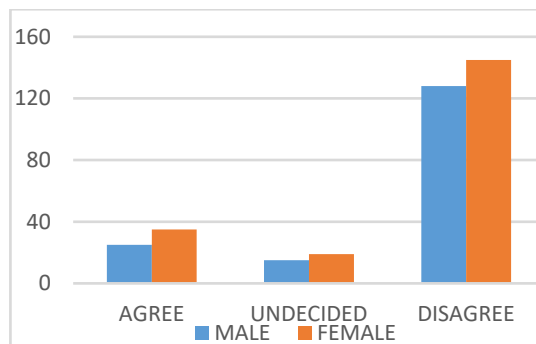


Chart 1a: Dissemination of fake news on social media by gender

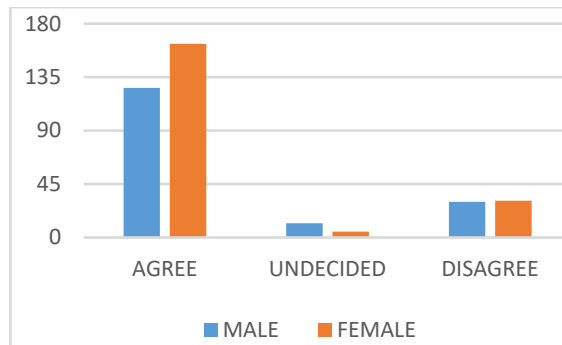


Chart 1b: Frequent Social media usage by gender

Source: Authors computation using SPSS

The column Chart 1a shows the rate at which the female and male gender spread fake news on social media. Although from the sample collected, a few number of the respondents are not heavily involved in the spread of fake news on social media. However, considering that there are few respondents who spread unverified information online, the female gender seems to be more active in the dissemination of fake news or unverified information on social media as compared to the male gender. The female gender spends more time on the social media platforms compare to the male gender as shown in Chart 1b. This explains the reason for the result in Chart 1a, which shows that they spread more fake news on social media than their male counterpart.

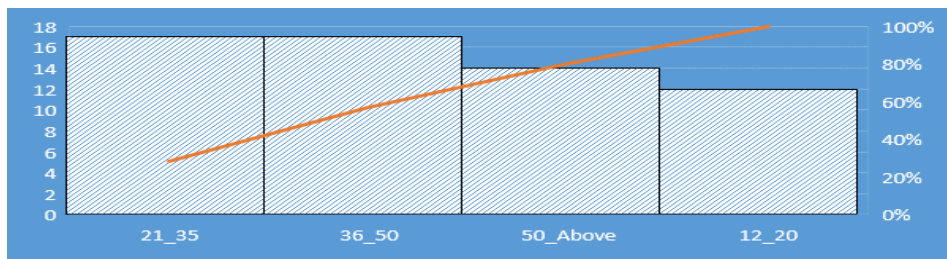


Chart 2: Dissemination of fake news on social media by age category

Source: Authors compute using SPSS and Excel

Chart 2 shows that the act of disseminating fake news on social media is mostly done by Nigerians between the ages of 21-35 and 36 – 50. The 21-35 and 36-50 age categories represents Nigerians in their middle age. Young people and teenagers are more concerned with having conversations and interacting with their peers through the exchange of pictures, videos etc. as they do not have the time to read and forward long messages that have been forwarded to their social media platforms. The reason young people do not forward fake news is because they are interested in the conversations, topics that inspire a sense of belonging and meaning to their life (Meijer 2007, p.96-116).

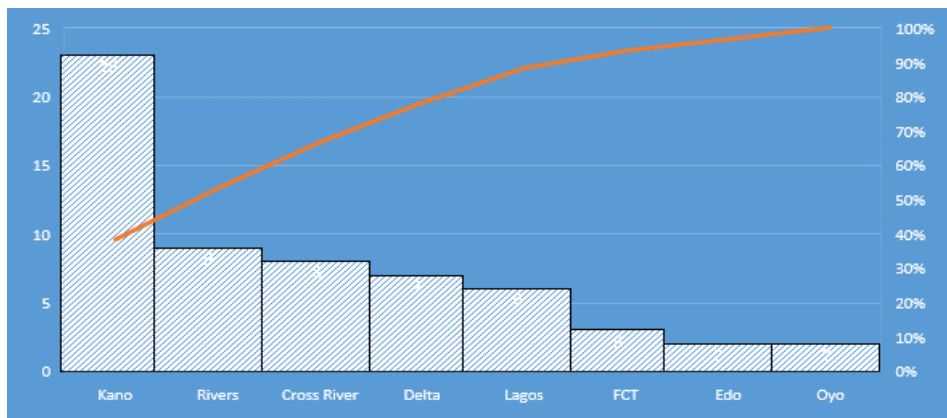


Chart 3: Dissemination of fake news on social media by location (Nigerian states)

Source: Authors compute using SPSS and excel

Residents in Kano disseminate news identified to be false to a large extent as compared to respondents based in other locations examined namely; Rives, Cross River, Delta, Lagos, FCT, Edo and Oyo in Chart 3. Kano state is in the Northern part of Nigeria and known to be one of the states affected by terrorist attacks more frequently than other regions examined. Considering this ample information, they have faced security issues. Therefore, there is a tendency that they circulate information that deals with security alerts and threats to one another to ensure daily security from possible terrorists’ attacks or community danger. Based on the fact that the nature of terrorist attacks bring fear, residents in affected geographical zones in Nigeria are least likely to have the time or place to verify social media information forwarded to them before sharing to other social media users on their individual platforms.

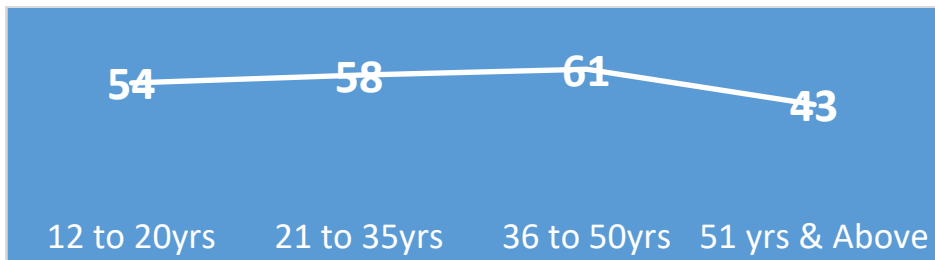


Chart 4: Respondents act of verifying information before spreading on social media by age category

Source: Authors compute using SPSS

Considering that it is currently difficult to avoid the creation of fake news by the numerous social media users, chart 4 addressed the age category that seem to verify information before forwarding to other social media users. Even though the age categories between 21 - 35 and 36-50 ages as identified in chart 2 as responsible in the spread of fake news, only respondents between the ages of 36-50 verify most of these contents before deciding to forward or not. Knowing that the more matured adults are likely to understand the implication of a message, they are naturally more likely to check the credibility of an information before making the decision to disseminate the message.

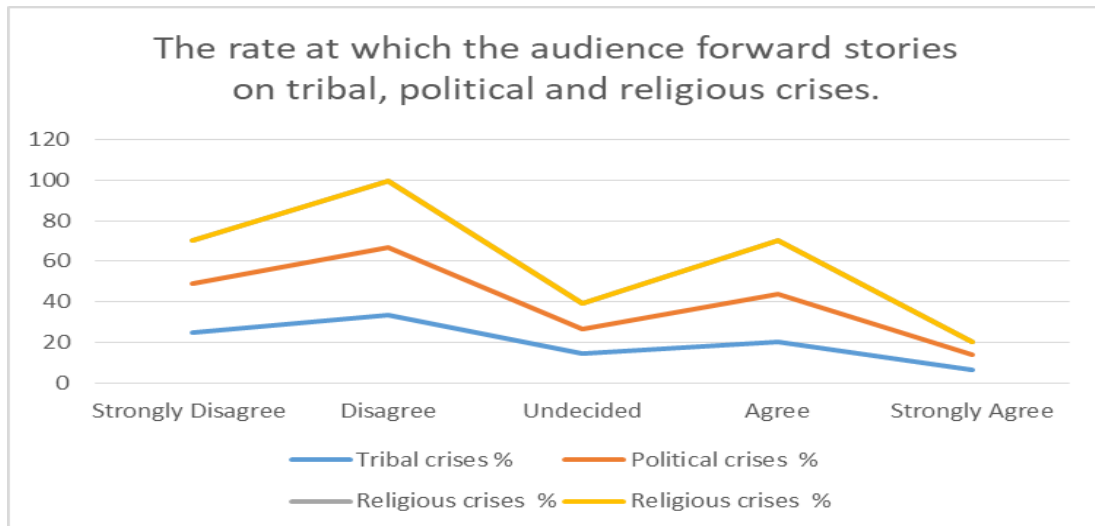


Chart 5: The rate at which the audience forward stories on tribal, political, and religious crises

Source: Authors compute using SPSS

Generally, of the 367 respondents, most of the audience do not forward crises related stories. However, in Chart 5, when compared to other crises examined, stories on religious crises were forwarded more on social media. Nigerians are sensitive about religious related stories, especially because the growing crises in the northern part of the country, were said to be based on the misapplication of certain religious principles.

6. Discussion

No doubt, the competition and desperation that surround the nature of Nigerian politics will continue to provide more platforms that condone the distribution of fake news on the internet. Already, Zhao, et al, (2018.) outlined the alarming number of blogs and social media handles that are solely channeled towards the spread of false information. The rate at which such blogs and webpages are being created is on the increase as more users seek avenues to make money online. It is further motivated by audience willingness to draw traffic to their pages. This is also motivated by the attempt to get rich as poverty continues to increase in the Nigerian environment. There is a possibility that the few younger generation will continue to engage in creating false contents for financial benefits to avoid poverty.

However, it is important to know that the federal government is making efforts to regulate the use of social media in Nigeria to curb the spread of fake news. Lai Mohammed in 2017, stressed that Fake news misrepresents society, leading to unadorned consequences on individual and national systems, such effects include: amplifying tension, building fear and increasing doubt among people and politicians (The *Premium Times* 2017). It is also of necessity for the federal government to understand the above-mentioned difficulties that could stand as a barrier. Therefore, detecting these sites and their owners is paramount. Unfortunately, the Nigerian Information Technology system is not close to being equipped to handle these problems. Hence, an important issue of concern is, how do we regulate social media platforms? While Nigeria is on a long journey to answering this question, proper education based on the demography data of Nigerian audience responsible for the dissemination of fake news is paramount.

Keeping in mind that these same politicians are major sponsors of those who create these profiles to spread false information about their opponents in order to be seen as the better candidate during an electoral process, the regulation of the platforms by politicians themselves is disturbing. Therefore, the action of the federal government is seen as an intention to use these, yet to be established regulations as tools in politics to attack future political opponents and political party rival.

Owing to the facts generated from the field that: majority of the category of audience are within the ages of 21-36, result confirms that several of these people are in most cases used by politicians to do their dirty work with the aim of attaining political advantage over their opponents. Beyond the education of Nigerians involved in the act, it is pertinent to give them a sense of belonging and fulfillment by providing a credible source of income and a conducive environment for them to sustain themselves, financially. Matured adults in the Nigerian society continue to be vulnerable to these politicians because of their poor state of life, imposed by the political elites. These problems could be far from being over considering these obvious militating obstacles.

7. Conclusion and Recommendations

The avid dissemination of fake news in Nigeria is likely to increase as people see it as a fast money making venture created by political elites in the country to have an edge over their opponents during political elections. The existence of increased poverty rate further makes the unethical role attractive to younger generations who are eager to become financially independent.

In order to address the issue of demography distribution of Nigerians involved in the spread of fake news (young adults), the study provides an overview of the general behavior of Nigerians in this regard. Data generated could serve as a guide to resolving the problem by geopolitical zones. Problems specific to each zone with regards to the spread of fake news can be adequately addressed with the output and recommendations provided by this research. Resolutions to the problems generated by misinformation becomes possible with the knowledge of Nigerian demographical involvement especially by location, age, and gender thus, the study recommends the following:

- The federal government and relevant organisations should collate research papers/materials particular to demography analysis on the dissemination of fake news in Nigeria and use results to identify the specific role of Nigerians in the dissemination of fake news based on the demography. This action will enable them to identify these categories of persons so that the educational plans can be channeled appropriately. Through this process, they can achieve the aim of creating awareness on the implications of spreading fake news.
- Since the political system is also involved in the creation and spread of fake news, it is necessary for journalists to begin to engage in proper investigations to expose this act in politicians. Considering their

professionalism in the field of 'investigative journalism', they should engage the relevant professionals such as programmers, IT practitioner to understand how and why people create blogs and other platforms for the sole aim of spreading false information. Such exposure will not only restrain Nigerians employed to do politicians' dirty jobs, but it would also inform Nigerians of the importance of verifying online information.

- Appropriate government arms should propose and pass into law the necessary bills that punish whoever propagates fake news.

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Ecological Products and the role of Influencers and Greenfluencers in their Promotion

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Abstract: Ecological themes are becoming a new phenomenon of the 21st century. More and more people are aware of social responsibility and the impact of their behavior on the environment. The aim of this paper is to analyze green energy in the offer of electricity providers. The analysis deals with the involvement of influencers and greenfluencers in the campaigns of electricity providers. It is the influencers and greenfluencers that can reach the right target group that has an ecological mindset. The question is whether the involvement of influencers and greenfluencers in green energy campaigns is effective. The aim of the paper is to find out how effective are green energy campaigns in Slovakia on the basis of an analysis. To do that, the paper used the social media measurement and reporting tool Zoomsphere.

Keywords: ecological electricity, ecological products, facebook, greenfluencers, influencers, influence of greenfluencers, instagram

1. The power of influencers on social networks

Nowadays, it is increasingly difficult to promote broader social issues affecting many people other than through social media. Instagram is one of the most widespread social platforms not only in the world but also in Slovakia. On Instagram, people have a well-thought-out communication strategy and are digital literate. To keep up-to-date and get a daily dose of news, Instagram users follow influencers who provide them with content that is relevant to them. Influencers and their involvement in digital campaigns is a matter of course today, and what is more, even the world outside Instagram is learning to perceive influencers as a relevant source of information.

Companies aware of their social responsibility in terms of environmental impact wishing to communicate their environmental message to their customers often turn to influencers, in particular greenfluencers, to establish a long-term collaboration to mutual satisfaction.

There are several initiatives on Instagram today that are not indifferent to life and environmental issues. In Slovakia, these include the Platforma udržateľnosti, activists Michal Sabo and Natália Pažická, Sandra Sviteková from Dejepis Inak and, for example, the popular Slovak snowboarder and mother Baša Številová.

According to Piatrov (2019), social sites are the 21st century phenomenon. „They have formed the possibilities of creating content, spreading it, getting information practically at the moment of its creations, but they also transformed themselves into fully functional communication channels.”

Users are spending more and more time on social networks, and developers are constantly coming up with innovations (Záuškova, 2019).

1.1 Influencers and ecological topics

The essence of every influencer's work is to establish two-way communication with their audience (followers) and then keep it up (make it targeted and personalized). This is something that companies find difficult doing on social networks (Aujeský, 2019). After all, no one wants to chat with a large company, because it is clear that it is a member of a social media team who replies. With influencers, however, fans/ followers communicate with a real person whom they feel they know and look up to. Brands can use this very personal communication channel (influencer) to their advantage and get their message through to people who would normally be immune to the classic form of advertising.

However, ecology and the environment are hotly debated topics not only in Slovakia, but also all over the world. The environmental issues should reach as many people as possible. These should be communicated in a language of masses - activities of influencers on Instagram. Using influencers, brands can thus establish themselves as socially responsible players who care about the future of everyone on the planet (influencers

would be seen as such, too). The environmental issues and sustainable behavior are hot trends of today and many brands follow suit not only in their communication strategy but also in their actions (Young, 2018).

Graphic design also plays an important role in communication. It is obvious that influencers must use graphically interesting elements that will be interesting for the observer. *“Graphics design finds its implementation in a wide range of social life spheres. It constitutes the basis of printed media, as are books, daily prints, magazines. It also finds itself in advertisements and marketing, where it helps businesses to build up their identity, save money, increase the value of the products, services, or even the value of the business entity, organization, or institution itself (Jurišová 2020).”*

It is important that businesses constantly innovate their products. Without innovation, companies would not advance. Organic products are also innovations in the company. A sign of innovation is a new added value to a product or service, the introduction of new technology, organizational change, or corporate culture (Kusá, 2017).

Záuškova (2017) states that the aim of green marketing is to develop and promote products that seek to minimize negative environmental impacts and increase their quality.

1.1. Green marketing trend

Green marketing is already a relatively widespread technical term and is a set of several practices that aim to increase the value of a brand, goods or service related to environmental aspects and social responsibility. Topics such as zero waste, upcycling and recycling of used things are becoming an important part of the lives of companies and people. Today, companies are trying to pack goods in recycled paper, they warn in the body of the e-mail that attachments are not unnecessarily printed on paper, and cloud stores such as Dropbox are gaining popularity precisely because of their carbon footprint by forwarding large files not in the e-mail body but via a direct line download from the web. A current initiative in Slovakia is, for example, the backup of PET bottles and cans.

The trend of sustainability has gradually spread among the world's influencers among local opinion leaders, and by applying green themes, they will gain a competitive advantage and, in particular, easier social acceptance. These topics are important for our work and in the article we will try to clarify their importance in combination with a large brand of electricity supplier in western Slovakia - ZSE Energia a.s.

2. Aim and methodology

The aim of the paper is to find out how effective are green energy campaigns in Slovakia on the basis of an analysis. To do that, the paper used the social media measurement and reporting tool Zoomsphere. The tool allows for the analysis of the following:

- increase in the number of followers,
- average number of interactions,
- interactions by days,
- interactions by hours,
- hashtag use,
- post success report
- success of celebrities in the campaign on Instagram.

Data was analyzed from January 1, 2021 to December 31, 2021.

3. Green energy communication strategy in a digital environment

The term "green energy" is gaining prominence not only in Slovakia but also across Europe. Green energy means electricity that is produced from renewable sources. Green energy is also provided by electricity suppliers in Slovakia. There are three large electricity suppliers in Slovakia, namely ZSE Energia a.s., SSE a.s. and Východoslovenská energetika a.s. ZSE defines green energy as energy that is produced from 100% renewable sources. However, ZSE is not able to deliver this energy to the customers, even though they pay for it.

All three companies promote green energy on their websites. The Internet is a place where clients look for eco-friendly products. Companies should promote and raise awareness of their green products so that information

reaches widest audience possible. The paper analyzes communication tools of the three energy suppliers focusing only on green energy communication strategy. The results of the survey are outlined in the table below.

Table 1: Promotion of green energy

Company	Information on the website	Facebook	Instagram	Youtube	Working with greenfluencers	Working with influencers
ZSE Energia a.s.	Yes	Yes	Yes	Yes	Yes	Yes
SSE a.s.	Yes	Yes	No	No	No	No
Východoslovenská energetika a.s.	Yes	No	No	No	No	No

The table shows that ZSE Energia a.s. uses all the tools outlined above to communicate its green energy strategy. SSE a.s., uses two out of five, and Východoslovenská energetika a.s. does not use any of the above tools to promote its green energy strategy (even though it informs about its eco-efforts on its website). ZSE Energia a.s. is the only company of the three to share the number of customers using green energy. At the beginning of 2022, 85,000 households used the company's green energy (Slovenské domácnosti majú..., 2021). Other companies did not share this information. We can only assume that it is through active communication of ZSE Energia a.s. the number of customers using this energy is increasing. The next part of the paper analyses ZSE Energia a.s.'s communication regarding its green products.

3.1 The role of influencers and greenfluencers in the green energy communication strategy of ZSE Energia a.s.

ZSE Energia a.s. implements green energy communication strategy on several online platforms. It could be said that they have become a leader in raising awareness of green energy in Slovakia. The following section focuses on the analysis of online tools used in the green energy communication strategy.

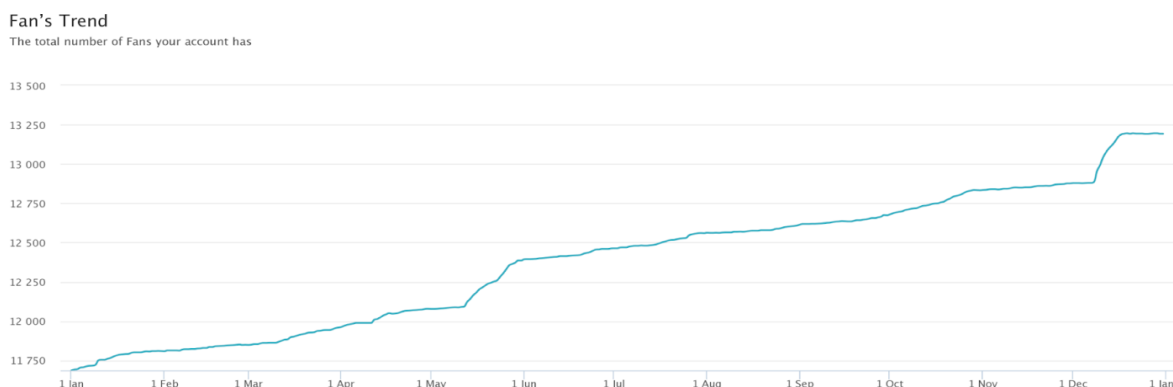


Figure 1: The increase in the number of followers of the ZSE's Facebook page from 1 January 2021 to 31 December 2021

Source: Zoomsphere, 2/2022

ZSE Energia a.s. recorded an increase in the number of fans on the social network Facebook in one year as it gained 1,510 fans in 2021, which represents an increase of 13% compared to the base. This year, ZSE has been promoting green energy more actively. The figure below shows how people reacted to its green products. In 2021, ZSE added a total of 117 posts, which, inter alia, also addressed green energy. The most popular posts related to competitions. Of the ten most popular posts, three posts focused on social media competition.

ZSE Energia a.s. uses Instagram as the main communication channel for the promotion of green energy. This profile was created in March 2021, and mainly focuses on and promotes green energy. Some posts are promoted on the profile by well-known influencers and greenfluencers. The profile has a total of 531 followers (as of February 20, 2022).

Top Hashtags
Your most used Instagram tags

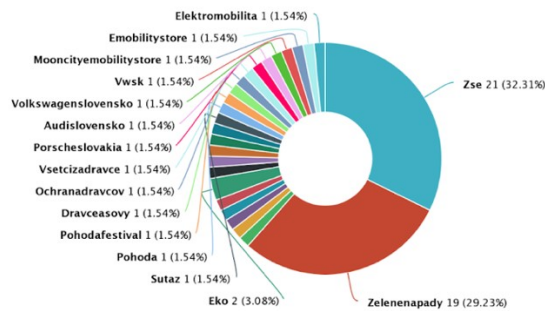


Figure 2: Most used instagram tags

Source: Zoomsphere, 2/2022

The figure shows that the second most used tag is "zelenenapady (green ideas)", which refer to organic products or green energy. By doing so, ZSE Energia a.s. wants to draw the attention of the fans to the values of the company.

Most Engaging Hashtags by Interactions
The tags that are generating the most interactions in your account

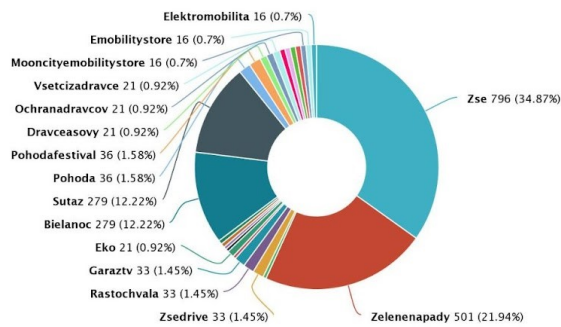


Figure 3: The Tags that are generating the most interactions on Instagram account

Source: Zoomsphere, 2/2022

The second figure shows the interaction of the tags. The "ZSE" tag generated the largest interaction, followed by the tag "zelenenapady (green ideas)". This shows that environmental topics really work on Instagram and make up a significant proportion of profile interactions. ZSE Energia a.s. cooperates with influencers and greenfluencers in the promotion of green energy and green ideas. The paper further analyzes whether involvement of influencers and greenfluencers makes a difference and how these influencers and greenfluencers interact with the profile of ZSE Energia a. s.

Table 2: Aim and reach infectors

Name	No. of followers	Topics	Influencer/greenfluencer
Natália Pažická	45,6 K	sustainable fashion climate	Greenfluencer
Baša Številová	35,3 K	sport motherhood	Influencer
Michal Sabo	54,4 K	climate green policy	Greenfluencer

Name	No. of followers	Topics	Influencer/greenfluencer
Platforma Udržateľnosti	12,5 K	sustainable fashion SWAP	Greenfluencer
Sandra of Dejepis Inak	59,1 K	history EKO history	Influencer

Source: Zoomsphere, 2/2022

ZSE Energia a.s. advertises its activities in the field of ecology, green topics and green energy on the social network Instagram @zse_sk. To promote these these topics, ZSE addressed five influencers and greenfluencers known for promoting green ideas, green topics and green energy.

Table 3: Performance of individual posts on the Instagram account zse_sk

Name	No. of posts	Number of likes under posts	The highest number of unique likes
Natália Pažická	6	577	173
Baša Številová	5	452	208
Michal Sabo	2	162	95
Platforma Udržateľnosti	5	1,601	550
Sandra of Dejepis Inak	3	1,695	990
SPOLU	21	4,487	-

Source: Zoomsphere, 2/2022

The table above shows that posts with influencers and greenfluencers are popular on Instagram. Since these people are active on Instagram, their involvement in the campaign was a step in the right direction. Influencers and greenfluencers also promoted green energy topics on their own profiles using @zse_sk.

Table 4: Engagement of individual posts on the profiles of influencers and greenfluencers using zse_sk

Name	No. of posts	Number of likes under posts	The highest number of unique likes
Natália Pažická	1	1,170	1,170
Baša Številová	0	0	0
Michal Sabo	3	2,633	1,020
Platforma Udržateľnosti	1	161	161
Sandra of Dejepis Inak	0	0	0
In total	5	4,166	-

Source: Zoomsphere, 2/2022

From the table above it follows that as part of the collaboration, influencers and greenfluencers are required to add a post with a @zse_sk tag on their Instagram profiles. These posts were highly popular. The posts targeted environmental topics and green energy.

3.2 Unified visual style of communication

The website where ZSE promotes its green energy activities is www.zse.sk/zelena-elektrina. At this link, the user will find all the necessary information and details of the service, prices and available sources of green energy and can also place an order or request to be contacted by the seller. The visual goes hand-in-hand with the eco-topic - shades of green with hand-drawn icons explaining the service. The same visual style was chosen for Instagram and Facebook posts, where this visual style is even more noticeable than on the web.

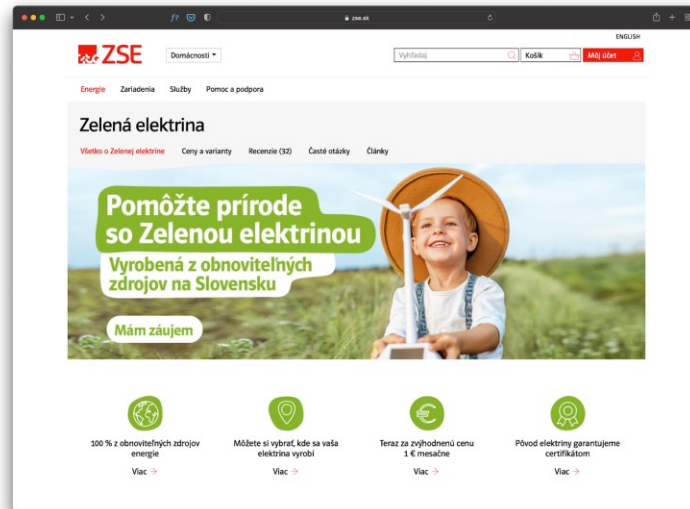


Figure 4: Web ZSE green energy

Source: www.zse.sk/zelena-elektrina

The Instagram account therefore matches the visual of the main page. The links are of a bright green color, they are distinctive and always use a photo of the influencer for greater credibility.

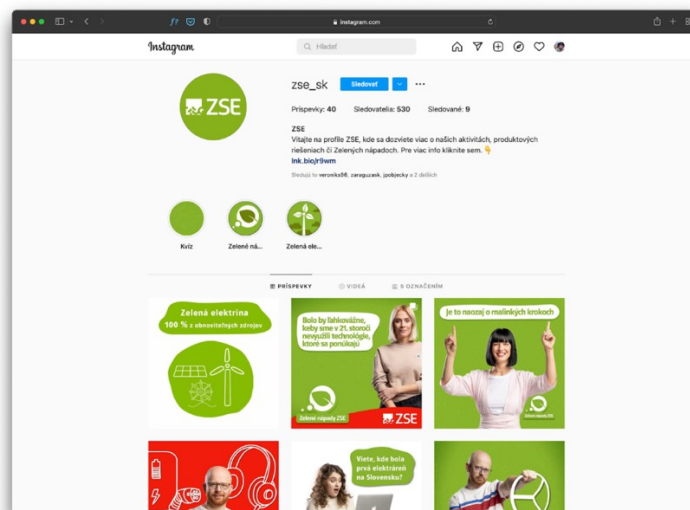


Figure 5: Instagram account ZSE green energy

Source https://www.instagram.com/zse_sk/

The individual posts have a uniform design – this guarantees good visibility on the profiles of influencers involved. However, influencers usually share this content only in their Instagram stories which disappear from the feed and profile after 24 hours. This content is not stored in the main feed or specific albums.

The website <https://www.setri.sk> has the same visual as ZSE's website. This portal acts as a hub for all video and audio content that is created for and around the initiative and also provides an overview of all actors involved. It also features podcasts which can be played via Spotify, Apple Podcasts and Google Podcasts, and video interviews embedded from the YouTube channel Skupina ZSE with 1.85 thousand subscribers (data as of 28 February 2022).



Figure 6: Topics addressed by influencers and fan reactions to the content

Source https://www.instagram.com/zse_sk/

Credibility of communication is key for every influencer. If influencers, and especially greenfluencers, are clear about their opinions and live by them, too, they become ambassadors of topics and issues and thus gain the favor of people outside the digital environment of social networks (Klementis, 2019).

Credibility also lies in the selection of topics. Each influencer addresses specific topics in their content. A great example is Baša Številová. For some time, she has been updating her fans about the construction of her house in Banský Studenec. This construction is, of course, in absolute compliance with the valid territorial and environmental requirements and standards of the municipality, which can often be difficult to meet. Baša has been addressing this topic for more than two years, people are drawn in to "experience this story for themselves" even though house building is a very personal issue. However, in ZSE, Baša has gained an important partner and a major player in the field of green energy. Thanks to Baša, ZSE assumed a position of a strong player. Without Baša, this position would be unachievable for ZSE. Baša Številová's fans root strongly for this collaboration, they continue to support the project and it seems they have no problem accepting this form of cooperation.



Figure 7: Project of a family house by Baša Številova in Banský Studenec

Source <https://www.instagram.com/p/COSQ2SWHU-k/>

4. Conclusion

The big and important issues have always needed big and important personalities to back them up. These issues today include, inter alia, environment and related problems. The personalities capable of addressing these issues and bringing them to common people are Internet personalities, in particular influencers and greenfluencers. Thanks to the collaboration of large brands such as ZSE with people successful on social networks such as Michal Sabo, Natália Pažická, Sandra Sviteková or Baša Številová it is easy to find really effective solutions to environmental problems. The positive reaction of fans in the form of likes and comments shows that this form of communication pays off today and represents a new and effective element in the green marketing communication strategy.

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