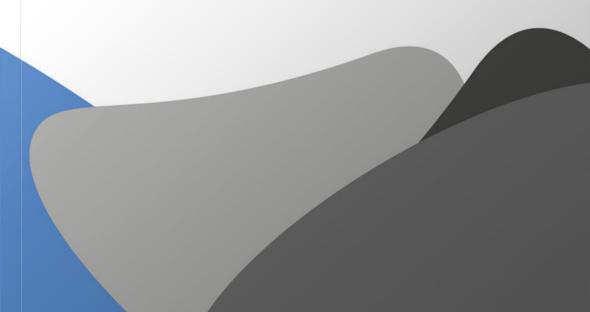




#### Proceedings of the 13th Conference of the Media Psychology Division (DGPs)

Inclusion and Diversity in Media Psychology

André Melzer and Gary Lee Wagener



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#### Inhaltsverzeichnis

André Melzer, Simone Niclou, Robert Harmsen, Anna Kornadt  Welcome Addresses   11	
Keynotes   21	
Livingstone, Sonia, London School of Economics and Political Science (s.livingstone@lse.ac.uk)  How psychological theory and evidence informs emerging international policy on child online safety and child rights: a challenging agenda   2	
Alper, Meryl, Noertheastern University (m.alper@northeastern.edu)  Supporting Mental Health Among Autistic Youth in the Digital Age	24
Journal of Media Psychology (JMP) Special Selection   25	
Game Violence and Moral Distress: The Role of Gaming Experience and Personality-related Factors   27	1
Testing Obtrusiveness and Addressing as Determinants of the Intensity Parasocial Interactions – an Experimental Study   28	of
Pushing towards Privacy: Comparing the Effectiveness of Nudges and Boosts for Encouraging Anonymous Browsing   28	
An Exploratory Study Comparing the Effects of Mixed and Virtual Rea on Plausibility Illusion and Emotional Responses   29	ılity
Position Papers   31	
Technology-Mediated Moral Outrage: A Theoretical View on Intrapersonal, Intergroup, and Network Effects   33	
Habituation and Adaptation to Repeated Media Exposure   34	
Don't worry, they've got help. Diversity within fictional media character perception, engagement, ethical considerations and why representation matters after all.   35	
On the Road to Media PsAIchology? Mapping the potentials and challenges of artificial intelligence for research in media psychology	36

Right-Wing Radicalization – An Integrative Model   38
Accessibility of VR experiences: a brief overview   39
10 things you need to consider when analyzing media effects $\mid$ 40
The State of Evidence in Digital Hate Research: An Umbrella Review   41
Research Reports   43
Social Media 3.0: What Experts Dream of and Users Like! The Evaluation of Mainstream Online Social Networks and Alternative Online Social Network Models by Adolescents and Adults – An Expert-Opinion, Scenario-Based Approach   45
The effect of perceived narrative ambiguity on appreciation   46
The Role of Suspicion in Warranting Offline Characteristics from Online Claims $\mid$ 47
The narrative patterns of collective emotions in the Lithuanian media discourse: examining war in the news $\mid$ 48
Effects of sexism on women's political expression online - Evidence from a preregistered repeated-measure experiment $\mid 48$
Always picture-ready: Adolescents' experiences of social media pressures around body ideals and body projects   49
Online Incel Speech on incels.is: A content analysis   50
Eudaimonic entertainment experiences of TV theme nights and their relationship with political information processing and engagement   51
Many Dimensions of Awe: Virtual Reality and Awe through the Interactivity-as-Demand Model   52
Professional benefits of work-related social media use - a multi-wave study   53
Environmental factors of online hate speech: Results from a national sample of internet users in Germany $\mid$ 54
Symbolism, Purpose, Identities, Relations, Emotions: Unpacking the SPIREs of Sense of (Digital) Place   55
Player Performance and Video Game Entertainment: Why is Low Difficulty So Appealing?   56
#Definitely check on your friend who "decided to rewatch bojack horseman": Character engagement, rewatch motivation and self-compassion   57

The Interplay of Psychological and Communicative Processes in

Do fictional narratives promote self-disclosure?   58
Predictors of Digital Media Ownership and Use in Early Childhood: How Parents' Technology Acceptance and Personality Shape their 0-to 6-Year-Old Children's Media Use   59
Does pretrial publicity predict actual criminal sentences? Evidence from a field study across 128 murder cases.   59
(Cyber) victimization among Czech youth: Comparing experiences of queer and heteros exual adolescents $\;\mid\;60$
"Just Turn Them Off" – Investigating the Effects of a Notification-Disabling Intervention on Objective Smartphone Behavior and Subjective User Experiences   61
Speaking of Science Communication: An Investigation of the Motivations Leading to Engagement with Science Information on Social Media   62
Examining the Impact of Passive and Active Usages of Various Social Media on Subjective Well-Being: Results from Two Experimental Studies. $\mid$ 63
The Power of Others: A Qualitative Mixed-Method Study of Norm Adaption and Norm Adherence on Social Media   64
Privacy Calculus, Privacy Paradox, and Context Collapse: A Replication of Three Key Studies in Communication Privacy Research $\mid$ 65
They approve but they don't act: Promoting sustainable behaviour in explainer videos by using (conflicting) social norm appeals   66
Listen to me!—An Experimental Observation of Channel Choice in Mobile Instant Messaging Within Close Same-Sex Friendships $\mid 67$
How credible is ChatGPT? An experimental comparison of ChatGPT, Alexa, and Wikipedia   68
YouTube Stillbirth Stories to Advocate for Better Obstetric Care   69
Affective social media literacy matters: A cluster randomized controlled trial of the Vibe Check intervention program   70
Effects of Subjective Climate Change Knowledge on Pro-Environmental Behavior and Information Selection   71

Algorithmic Bias in Creative Artificial Intelligence? | 72

"No uninteresting things, only uninterested people": Boredom-Related Factors Behind Situational Online Procrastination  $\mid 73$ 

Digital Inequalities and Online Privacy: Using Bayesian Inference to Investigate Differential Access to Privacy Information as a Possible Cause  $\mid 74$ 

A Gendered View on Media Use Guilty Pleasures | 75

Let's talk about sex - A study on the impact of sexual education on TikTok based on the example of @doktorsex  $\mid$  76

Short But Still Valid: Validating Single-Item Measures for Key Media Psychology Constructs for Experience Sampling Research | 77

What do people watch under adversity? Testing interactions of semantic affinity and coping style using Netflix data donations  $\mid 78$ 

Seeing the world from above: How a virtual overview effect is related to global identity and pro-environmental behaviour  $\mid 79$ 

Digital Emotion Contagion in Online Environments: An Automated Content Analysis of Comments from Self-Transcendent YouTube Videos | 80

Analysing the role of processing fluency in the relationship between attributes of online media and political opinion | 81

Trust Resilience in Pedagogical Agents: Will Anthropomorphism Help Against Trust Decline? | 82

People's Beliefs regarding Phones 'Listening' to Offline Conversations: Comparing results from the United States, the Netherlands, and Poland | 83

Do YouTube influencer videos trigger consumer desires among teenagers? | 84

Effects of subtle and blatant antisemitic and islamophobic hate on ingroups and outgroups: an experimental study | 85

The persuasive effect of user comments on YouTube in moral discourse: Exploring the influence of ideology-matching moral framing and impression motivation in the context of social media | 86

An exploration of university students' perceptions on contextual predictors of cyber-bystanders' responses to cyberbullying on social media  $\mid 87$ 

Gender Diversity in Entertainment Television, Parental Mediation, and Preadolescents' Gender Attitudes and Beliefs: An Experimental Study | 88

Coping with climate change through fiction? Examining the influence of dispositional cognitive avoidance and vigilance on selective exposure to fictional and non-fictional climate narratives | 89

A window to what we miss: Effects of not being included in other users' social media posts on fundamental needs, discrete emotions, and online coping behavior  $\mid$  90

Alexa, Can You Really Help Me? Older Adults' Perspective on the Opportunities and Threats of Intelligent Voice Assistants. | 91

(Don't) Stop Believing: Risk and Protection Factors for Engagement with Online Misinformation and their Influence on Discrimination Sensitivity and Partisan Bias  $\mid$  92

The Dark Factor of Personality, Epistemic Beliefs, and Climate Change Conspiracy Theories | 93

Can You Explain Why You Did Not Recommend Something Else? An Experimental Study on the Effects of Contrastive Explanations and Person-Likeness on Trust in and Understanding of Algorithms | 94

Oh Boy!? Publication and Citation Gaps Among Male and Female Communication Researchers in the DACH region | 95

From Viewer to Patron: Exploring the Associations Between Use Motives, Parasocial Relationships and Donations on Twitch  $\mid$  96

Towards a Typology of Multi-Screening: A Mixed-Methods Study on the Interplay of Psychological Predispositions, Use Motives and Situational Factors | 97

Logging media non-use? A computational assessment of digital disconnection with smartphone logging data | 98

"Here we see it, here we don't!" Focus group discussions of the strengths and vulnerabilities of young adults in detecting and addressing antisemitism online. | 99

Instadrink or #Instadrunk? An Experimental Study Investigating the Impact of Moderate and Extreme Alcohol Posts in Ephemeral Social Media Messages on Offline Alcohol Cognitions.  $\mid 100$ 

Is this antisemitic? Subtle constructions of antisemitism on the social media of young people today.  $\mid 101$ 

Teach me to be fair - An Experimental Study on Fairness, Self Efficacy and Human Involvement in ADM Systems | 102

How big is this gap in literature? A Systematic Literature Review for the development of media competence training against antisemitism on social media  $\mid 103$ 

Uncovering A Dangerous Link? How Right-Wing Ideological Attitude Dimensions and (Ingroup) Threat May Fuel Online Disinformation Sharing  $\mid 104$ 

Trust Me, I'm AI: Examining the Influence of XAI and/or AI-Seal on User Trust and Understanding | 105

Orienting responses and spontaneous eye-blink behavior during video reception  $\mid 106$ 

Virtual world experiences and adolescent psychosocial development: causal pathways and feedback mechanisms  $\phantom{0}|107$ 

The Remote Control Is a Passport: Psychological Richness and Boundary Expansion When Watching International Entertainment | 108

For your eyes only? An eye-tracking experiment investigating microtargeting transparency, visual attention and critical processing | 109

Tell Me Why – Combating Racism on Social Media with Knowledge | 110

Imagine it was you – Empathy as the Key for Reducing Cyberbullying on Social Media | 111

Contextuality of attitudes towards algorithmic decision-making: Validation and testing of a newly developed universal scale for measuring attitudes towards algorithms (ATAS) | 112

Picturing Diversity: Exploring Childrens' Perception of Intergroup Differences | 113

Adolescents' Interactions With People From the Internet and the Quality of Their Offline Friendships  $\mid 114$ 

What's been done and what's next? - A scoping review of mindfulness research in communication and media psychology | 115

Revision of the Inventory for the Assessment of Activation- and Arousal Modulation through Music (IAAM) | 116

Effects of an explicit and implicit narrative salience on the evaluation of stereotypes  $\mid 117$ 

A Measured Response? How Populist Communication on Social Media affects the Reactance to and Support of Pandemic Restrictions and the Moderating Role of Ideological Attitudes | 118

Awe as a constructed emotion in immersive story telling: the effect of priming  $\;\mid\; 119$ 

The Effects of Identifiability and Virtual Agent Interaction Valence on Intergroup Attitudes | 120

The relative impact of in-the-moment, personally meaningful and control virtual reality experiences to hedonic and eudaimonic wellbeing indicators. | 121

Which cues do laypeople use to evaluate the credibility of feigned and actual experts on YouTube?  $\mid$  122

Inspired by the Dark side? Eudaimonic entertainment and the response to Islamic extremists on Instagram | 123

Virtual reality: The future of anti-prejudice endeavours? A review and meta-analysis of experimental evidence | 124

The effect of empathic communication and music sharing on affective bonding to a robot  $\mid 125$ 

Reducing loneliness in mentally healthy seniors through robotic companionship: A randomized controlled trial | 126

Robot-Supported Decision-Making Processes: Effects of Embodiment, Recommendation Timing and Gender  $\mid 127$ 

Talking Like You When Talking With You - An Experimental Study on Users' Communication Style Adaptation to a Voice Assistant's Politeness and Machine-Likeness | 128

De-stigmatizing Cognitive Dissonance Induced by Media Images of Para-Athletes | 129

Something in Common? Brand Personality and the Inclusion of Brands in the Self  $\,\mid\,130$ 

Keep Calm – The Role of Resilience in the Interplay Between Neuroticism and Phubbing  $\mid 131$ 

Beyond the Screen: A Study on the Impact of Smartphone Use and Preventive Interventions in Online Learning Environments | 132

Insights on Young Voters' Social Media Diet within Election Campaigns - A Qualitative Analysis of Political Social Media Content | 133

Exploring the Relationship between Political Orientation, Media Use and Attitudes towards Science and Politics: A Comparative Analysis of German Citizens with Turkish and No Migration Background. | 134

To Thine Own Self Be True (on Social Media): Longitudinal Associations of Emerging Adults' Perceptions of Self-, Peer, and Influencer Authenticity with Depressive Tendencies  $\mid 135$ 

Overcoming communicative ambiguity to strengthen the bond between humans and robots | 136

Understanding the factors that shape adoption of GPTs: A study grounded in UTAUT  $\;\mid\; 137$ 

Explicating the Online Disinhibition Effect | 138

If I'm happy and I know it, I use my smartphone - smartphones as tools for emotion regulation | 139

Podcasts and Parasocial Interaction: Analyzing the Impact of Reception Modality and Listening Styles  $\mid 140$ 

#### Posters | 141

Play the grief away – Positive effects of playing a meaningful video game  $\mid 143$ 

Does a Robotic Co-Worker Threaten Human Status at Work? | 144

Science Popularization in a Polarized Society: How Scientists in the Field of Climate Change Communicate Science and Deal with Potential Negative Feedback | 145

"Female propaganda"? The relationship between threatened masculinity, hostile media perception, and corrective actions  $\mid 146$ 

Peers, Perfect Selfies, and Project Body: How Social Comparison and Self-objectification Explain the Relations between Active Online Self-presentation, Social Norms, and Cosmetic Procedure Perceptions | 147

How Observed Persona–Follower Interactions on Instagram Shape Parasocial Relationships: A Four-Week Online Experiment | 148

The concept of a digital learning workshop to promote media literacy among older people  $\mid 149$ 

Determinants of the use of digital media by older people. A comparative survey on the way to the development of a digital learning workshop | 149

The side-effects of Instagram | 150

Informal learning with social media: An experiment comparing YouTube Videos and Instagram Reels | 151

The influence of interaction mechanism and social error responses on the acceptance of customer service chatbots  $\mid 152$ 

Elaborated Choice or Heuristic Decision? Exploring Users' Media Selection in the Context of Video Streaming Services  $\mid 153$ 

Targeting against disinformation: The effect of microtargeted corrections on the impact of fake news  $\mid 154$ 

Take a deep breath, then check your messages: Experimentally investigating the moderating effect of mindfulness in the interplay of social pressure to be available and messenger users' well-/ill-being | 155

Can news diversification go too far? How different diversification metrics affect tolerance and political participation  $\mid 156$ 

Have you seen Sandra Ciesek's cat on Twitter? Self-Disclosure as Digital Challenges for Trust in Scientists on Social Media  $\mid 157$ 

Social media as sources of sexual knowledge: A compensatory or complementary form of education?  $\mid 158$ 

Coping Flexibility and Online Media Use for Coping | 159

How can digital media contribute to friendship jealousy and conflict among early adolescents?  $\mid 160$ 

Gender Diversity in Online Gaming: The German Version of the Sexism Against Women Gamers Scale (SAWGS) | 161

Believe It or Not: Investigating the Credibility of Voice Assistants Through the Effects of Relationship Types | 162

The Interplay of Mindfulness, Mental Health, Loneliness, and Social Media Use Disorder | 163

Misinformation Correction Cues: Fostering Critical Thinking or Fueling Fake News Fatigue?  $\mid 164$ 

Do robots have the ability to calm down a distressed person by using cognitive reappraisal and empathy? | 165

Differentiating and Characterizing Online Users in Response to Incivility: A Latent Profile Analysis | 166

The Negotiated Media Processing Model: Accounting for adolescents' exposure to different and opposing media messages | 167

Recognizability of Minority Characters Reduces LGBTQ Prejudice: The Mediating Role of Parasocial Friendship and Wishful Identification | 168

"Rolling Minds": a Conversational Media to Promote Intergroup Contact by Countering Racial Misinformation Through Socio-Analytic Processing in Adolescence  $\mid 169$ 

Promoting Digital Competencies of Senior Citizens Evaluation of a Digital Learning Workshop in the BMBF-funded Research Project

DigiKomS | 170

Media Multitasking as an Exploratory (vs. Exploitative) Behavior | 171

Toxicity Beyond Gameplay Boundaries: Examining Satellite Toxicity in Game-based Online Discussions | 171

Social VR Design Features and Experiential Outcomes: Narrative Review and Conceptual Framework for Dyadic Agent Conversations | 172

Artificial roughness: Viewing pattern towards computer-generated and human rough sexualized stimuli  $\mid 173$ 

Using Player-Identified Mechanics to Validate their Existence in Gaming Experiences  $\mid 174$ 

Does the mere belief that a virtual agent can be touched heighten social presence in VR?  $\mid 175$ 

Who watches fail clips? Light and dark personality dispositions to watching the misfortunes of others | 176

Algorithmic Bias and Digital Divide – An Examination of Discrimination Experiences in Human-System Interactions | 177

The association between subtypes of active and passive SNS use and mental health: the moderating role of extraversion and neuroticism | 178

When in Doubt, Lay it Out: Over Vs. Under Communication Accommodation in Human-Robot Interaction | 179

The role of emotions in believing misinformation and fake news | 180

Examing gender-based and sexual orientation-related differences in players' perceptions of their own gameplay experiences. | 181

#### Welcome Addresses

#### Welcome Address by the Organiser of the Conference

Melzer, André, University Luxembourg (andre.melzer@uni.lu)



On behalf of the scientific committee as well as the organisation committee, I welcome you to the 13th biennial Conference of the Media Psychology Division of the German Psychological Society (DGPs) on the Belval Campus of the University of Luxembourg!

We are pleased to see such a large number of international researchers coming together to present a wide range of topics on current issues in media psychology and related fields under the conference theme "Inclusion and Diversity in Media Psychology."

We had a record number of submissions for the different conference formats this year, including posters, research reports, position papers, and the inaugural Journal of Media Psychology (JMP) panel, resulting in a high caliber scientific program.

We are particularly proud and honoured that Sonia Livingstone (London School of Economics and Political Science) and Meryl Alper (Northeastern University) accepted our invitation as keynote speakers. Their presentations with a focus on digital media and disability or regarding the use of interactive media by children and adolescents provide important information for research, policy and stakeholders in our mediatised society.

Two pre-conferences will serve as additional highlights of MediaPsych 2023:

- This year's PhD workshop led by Leonard Reinecke, Sabine Trepte and German Neubaum will again provide valuable insight and support to a select group of researchers beginning their careers in media psychology research.
- Offered for the first time, the theory-building workshop led by Daniel Possler and Adrian Meier focuses on the development and advancement of social science theories as well as practical exercises specifically for early career researchers.

Together with the conference dinner and optional social and communication activities, we are certain that the MediaPsych2023 conference, taking place in the heart of Europe, will be an inspiring resource for all participants.

We are very much looking forward to welcoming you in Luxembourg and wish you an exciting and inspiring conference!

#### Welcome Address by the Vice-rector for Research

Niclou, Simone, University Luxembourg (simone.niclou@uni.lu)



On behalf of the rectorate, it is my great pleasure to welcome you to the University of Luxembourg on the occasion of the 13th biennial Media Psychology conference of the German Psychological Society.

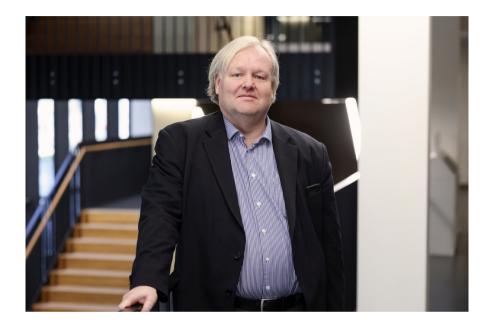
Our university strives to break down the walls between disciplines to maximise interdisciplinary research and the impact of our research on education and society. The societal challenges addressed by this year's conference topics, which include how communication technologies and the media impact young people and persons living with disabilities, are highly relevant and timely. As Vice-Rector for Research, I see the theme of "Inclusion and Diversity in Media Psychology" as a cross-cutting subject through multiple fields and departments, in perfect alignment with our university's three key areas: Digital transformation, Medicine and Health and Sustainable and societal development.

We are happy to bring together on our modern Belval campus close to 200 participants for this event. The organisers have designed an exciting programme for researchers of all career stages, including interactive workshops and excellent keynote speakers.

Thank you for joining us in Luxembourg for MediaPsych 2023, which promises to be inspiring and fruitful. Enjoy the conference and your stay in Luxembourg!

## Welcome Address by the Dean of the Faculty of Humanities, Education and Social Sciences

Harmsen, Robert, University Luxembourg (robert.harmsen@uni.lu)



We are delighted to be able to welcome the 13th conference of the Media Psychology section of the German Psychological Society to the University of Luxembourg. As the Dean of the Faculty of Humanities, Education, and Social Sciences, I am honoured that our Faculty has been chosen to host this prestigious event and wish to acknowledge the work of Professor André Melzer and colleagues here at the Faculty in bringing together the outstanding programme of events that will take place on our Belval campus over these three days.

The theme of the conference, 'Inclusion and Diversity in Media Psychology', could not be more topical. As we move towards increasingly digitalised societies, the challenges of sustaining and building those societies in inclusive terms become ever more pressing. While new technologies undoubtedly open up new and perhaps even unimagined opportunities, they also create the risk of new and deepening digital divides of which we must be acutely aware. Finding the conceptual registers and practical tools to address these challenges concerns us all.

Addressing these issues, we are very pleased to welcome two distinguished keynote speakers who will address the topics of 'Children, Young People, and the Media' and 'The Social and Cultural Impact of Communication Technologies'. After peer review-

ing, the conference will further welcome a record number of 101 accepted oral contributions (research reports), 48 posters, 8 position papers, and 4 contributions by young researchers preparing papers for publication in a leading journal. Prior to the conference, there will also be two pre-conference events – a full-day PhD workshop and a further 'Workshop on Theory Construction' aimed at young researchers.

As a still young university, which is this year celebrating its 20th anniversary, we strive to foster an innovative and interdisciplinary approach to societal challenges. The aims and themes of this conference very much align with this vision, and with our wider responsibilities as universities to provide a forum for critical, evidence-based discussion of evolving societal trends. In this spirit, I have every confidence that your discussions and exchanges over the coming days will be rich in new insights and equally rich in moments of conviviality. Allow me finally to add, for those of you who do not know Luxembourg, that I do hope that you will also, beyond the academic programme, have the opportunity to visit the country, beginning with our unique Belval campus.

## Welcome Address by the Head of Department of Behavioural and Cognitive Sciences

Kornadt, Anna, University Luxembourg (anna.kornadt@uni.lu)



In the name of the Department of Behavioural and Cognitive Sciences, I warmly welcome you to the University of Luxembourg! We are very excited and happy to host the 13th Conference of the Media Psychology Division of DGPs and to welcome you here in Belval.

The Department of Behavioural and Cognitive Sciences here at UL is home to more than 90 researchers, mainly from psychology, economics, and the cognitive sciences. Our research spans different areas, among them cognitive and socio-emotional development, digital behavioural and cognitive assessment, education, psychosocial stress and mental health, as well as issues related to culture, gender, age, and neurodiversity. A broad range of methods are used to address these issues, such as large-scale longitudinal studies, psychophysiological assessments, machine learning approaches, and experimental work, which is conducted at our cutting-edge research laboratories, including for instance a Media and Experimental Lab and a Lab focusing on Human Computer Interaction.

Thus, the topic of the meeting "Inclusion and Diversity in Media Psychology" is reflected in much of the research that is done here, and not the least especially relevant in the multicultural, multilingual environment of Luxembourg. I am sure that this will provide an enriching and stimulating environment for the many exciting presentations

and discussions that are going to take place in the next days. The high number of submitted and accepted presentations, the distinguished keynote speakers, and the multiple opportunities for junior and senior researchers to learn, connect and exchange promises to make MediaPsych 2023 a memorable experience.

I very much thank the local organizers and their team for bringing MediaPsych to Luxembourg, and I thank you very much for coming. I wish you a successful and inspiring conference.

### Keynotes

#### How psychological theory and evidence informs emerging international policy on child online safety and child rights: a challenging agenda

Livingstone, Sonia, London School of Economics and Political Science (s.livingstone@lse.ac.uk)

There is by now a long and rich tradition of research on the psychology of children's engagement with media of all kinds, from cinema to the metaverse, and this provides many insights that could inform policy and practice. But does this research, in fact, reach and inform the national and international organisations with the power to realise children's rights in a digital age? Over past decades, I have been working with lawyers, child rights advocates, regulators and technologists to advance, first, children's online safety and, more recently, children's rights in relation to the digital environment. In this lecture I will reflect on some of the disciplinary, practical and political challenges that impede the optimal design and use of psychological research to benefit children's digital lives, as well as observing some of the success stories.

## Supporting Mental Health Among Autistic Youth in the Digital Age

Alper, Meryl, Noertheastern University (m.alper@northeastern.edu)

Young people's online and offline worlds shape one another in complex ways, both for better and for worse. This is especially true among children and adolescents on the autism spectrum, who may discover unique opportunities for socializing, communicating, and expressing themselves through new media, as well as encounter specific threats to their safety and privacy borne of the internet and mobile devices. This talk, based on the recent book *Kids Across the Spectrums: Growing Up Autistic in the Digital Age* (MIT Press, 2023), focuses on the prospects of digital media (e.g., social media apps, gaming websites, online video) for positively and negatively impacting the mental well-being of autistic youth, with a particular emphasis on their identity, emotional, and social development, drawing on ethnographic research that centers their personal experiences and stories.

# Journal of Media Psychology (JMP) Special Selection

## Game Violence and Moral Distress: The Role of Gaming Experience and Personality-related Factors

Wagener, Gary Lee, University of Luxembourg (gary.wagener@uni.lu)/ Melzer, André, University of Luxembourg (andre.melzer@uni.lu)

Inflicting virtual violence on others violates internalized moral norms of social interaction and therefore usually triggers feelings of moral distress. However, people play and enjoy violent media, especially violent video games (VVG) in which they commit violent acts. In two experimental studies, we tested why people enjoy violent media and whether personality- related factors like the Dark Tetrad (i.e., Machiavellianism, everyday sadism, psychopathy, and narcissism) play a role in it. In Study 1 (N=313, online experiment), watching a violent video game clip or reading a violent text led to greater moral distress than watching a non-violent video. Although Dark Tetrad, VVG preference and moral disengagement were all positively associated, none of these factors moderated moral distress. In Study 2 (N=69, lab experiment), participants either played a violent or a non-violent game version. Again, game violence led to comparably greater moral distress. However, in contrast to Study 1 in which participants only watched violent media, Dark Tetrad now significantly moderated the relationship between condition and moral distress. Participants with low Dark Tetrad expressions experienced significantly greater moral distress in the violent condition. Generally, participants with more gaming experience felt less morally distressed after than inexperienced participants. The present findings corroborate the moral implications of experiencing media violence and the important role of personality-related factors, thus further illustrating the complexity of mechanisms underlying violent media effects.

Media violence / moral distress / Dark Tetrad / moral disengagement / violent video games

## Testing Obtrusiveness and Addressing as Determinants of the Intensity of Parasocial Interactions – an Experimental Study

Schreyer, Tobias, Goethe University of Frankfurt (s9219310@stud.uni-frankfurt.de) / Gleich, Uli, RPTU (gleich@uni-landau.de)

With the Two-Level Model of PSI, Hartmann et al. (2004) intended to overcome some crucial shortcomings in the field of research on parasocial phenomena. However, the model's implications have not been extensively empirically tested yet. Therefore, the aim of this study is to test two central assumptions that can be derived from the model. In a between-subjects experiment with N=128 subjects, the obtrusiveness and addressing of a persona were manipulated using videocall technology and the effects on the intensity of the experienced perceptual-cognitive, affective, and conative parasocial interaction were tested using the PSI-Process Scales. As expected, obtrusiveness proved to be a highly significant factor in predicting the intensity of parasocial interactions. An effect of addressing could not be found. The study partially supports the assumptions of Two-Level Model and the PSI-Process Scales proved to be a valid measure. In addition, videocall technology emerged as an effective and easy to use method for manipulating stimulus material in experimental PSI research.

Media Psychology / Parasocial Interaction / Experiment

## Pushing towards Privacy: Comparing the Effectiveness of Nudges and Boosts for Encouraging Anonymous Browsing

Lux, Alexandria, TU Darmstadt (alexandra.lux@sit.fraunhofer.de) / Dombrowski, Jana, University of Hohenheim (jana.dombrowski@uni-hohenheim.de)

The use of privacy-enhancing technologies (PETs) to protect online privacy is a promising preventive measure. However, many users lack knowledge of their existence and application. This study reports the results of a pre-registered longitudinal online experiment aimed at encouraging users to install and use Tor, a PET providing anonymous browsing. The study compares two interventions: a social norm nudge and an educa-

tional boost, each with positive and negative framing. The data (NT 1 = 1,450; NT 2 = 1,171) were based on a sample representative of German online users. The study finds that framing Tor as a PET (versus a darknet technology) increases users' intention to install and use the browser if they were not aware of Tor before. Boosting is more effective than nudging users' behavioral intention. However, the interventions do not evoke long-term behavioral change.

Privacy / PET / Nudging / Boosting / Darknet

## An Exploratory Study Comparing the Effects of Mixed and Virtual Reality on Plausibility Illusion and Emotional Responses

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Understanding the unique impact of extended reality (XR) technologies, such as virtual reality (VR) and mixed reality (MR), on emotional responses is critical for predicting subsequent user judgments and behaviors towards virtual objects and experiences. Nevertheless, it remains unclear whether and how the differences in the structural affordances of VR and MR (i.e., a sense of presence vs. a sense of an object being in the physical environment) can indeed induce distinct effects. Therefore, the present study aims to elucidate the role of VR and MR technologies on emotional responses through the theoretical lens of plausibility illusion (Psi). Specifically, we predicted that Psi would mediate the effects of XR modality on emotional responses, including arousal and perceived fear, towards a fearful object. In addition, we explored the possible moderating role of object virtuality (i.e., ontological characteristic of virtual objects) in the relationship between XR modality and Psi. Results from a mixed 2 (XR modality: VR vs. MR) × 2 (virtuality: para-authentic vs. artificial) design experiment (N = 100) showed that VR induced a higher sense of Psi than MR, which played a mediating role in amplifying arousal and perceived fear. Although virtuality did not significantly moderate the relationship between XR modality and Psi, conditional effects revealed that the effect of XR modality was stronger with artificial objects than with para-authentic ones. These findings suggest that the differences in the structural affordances of VR and MR can induce distinctive effects on emotional responses. Further implications of the findings are discussed.

mixed reality / virtual reality / virtuality / plausibility illusion / emotional responses

### **Position Papers**

### Technology-Mediated Moral Outrage: A Theoretical View on Intrapersonal, Intergroup, and Network Effects

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Moral outrage as the anger over moral violations has been identified as a powerful tool to provoke societal change. On social media, we see episodes of moral outrage covering a series of pressing societal issues, such as human rights violations (e.g., #MahsaAmini), racism (e.g., #BlackLivesMatter), and gender injustice (e.g., #EqualPay), emerge in real time. Recent scholarly views claim that the power of moral outrage has been extended by emerging network technologies, but not for the good. Some scholars argue that excessively experiencing moral outrage through contemporary communication technologies incites a new culture of punishing and cancelling others and enhances our hostility toward those who hold different moral convictions, thereby fostering societal division and unrest.

In face of these dystopian claims, we still lack scientific knowledge regarding the mechanisms and effects of the phenomenon of moral outrage shared through social media. To provide an initial theory-driven understanding, this contribution presents a preliminary theoretical framework to explain the immediate and long-term effects of technology-mediated moral outrage on human beings' moral systems. By integrating different strands of moral, social, and media psychological as well as communication research, I present a set of partly competing and partly complementing hypotheses that connect multiple levels of analysis in the sense of intrapersonal, intergroup, and network effects over time.

First, I propose that exposure to or expression of moral outrage on social media strengthen users' moral cognitions by (re-)learning the importance and desirability of a certain moral foundation (morality reinforcement hypothesis). Second, a dynamic association is also conceivable: While a moral outrage message on social media might not initially fully reflect one's internal moral system, the mere expression of the message and the social feedback within one's online network may lead to a stronger internalization of the moral cognition over time (self-effect hypothesis). Third, due to psychological exhaustion, the associations between moral outrage experiences on social media and moral cognitions as well as moral judgment abilities may become weaker over time (outrage fatigue hypothesis). In this case, an individual's moral system becomes desensitized using network technologies in the long term. Fourth, following the principles of socialization, it seems possible that being exposed through social media to moral outrage in a recurring form cultivates a general tendency to dehumanize and a habitual desire to punish moral transgressors (dehumanization hypothesis). Fifth, the juxtaposition of forming animosities toward moral dissenters and strengthening one's moral cognitions could even lead to tribalism between moral in-groups and out-groups (moral tribalism hypothesis). Sixth,

in the long term, strengthening one's favoritism for a moral in-group and one's dislike of a moral out-group could also lead to the dissolution of (digital) relationships between moral dissenters. Moral tribalism, fueled through technology-mediated moral outrage, may lead to an increasing disconnection between morally homogeneous clusters within networks (moral fragmentation hypothesis).

The presentation will cover the theoretical underpinnings of these hypotheses as well as suggestions for an empirical research agenda and will hopefully provoke a scholarly debate to systematically uncover the efficacy of network technologies to shape human beings' morality.

Social media / moral outrage / morality / tribalism / hashtag activism / political participation

### Habituation and Adaptation to Repeated Media Exposure

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Digital technologies have become ubiquitous and it is now commonly accepted that we are permanently online and permanently connected. This permanent digital connectivity implies that we are repeatedly exposed to media during the day. This frequent exposure has led to concerns about the potential detrimental impact of digital technologies for our cognitive functioning (e.g., distractibility) as well as our well-being (e.g., life-satisfaction, self-esteem). Despite a growing body of empirical research in this field, there is still a substantial discussion on whether digital media does indeed affect its users, and if so to what extent. Empirical studies, particularly longitudinal studies, typically find "small" effects, leading some researchers to conclude that media effects are likely to be "negligible".

In this position paper, I argue that this lack of effects is partly due to a limited conceptualization of media effects in the current literature. Media effects are typically defined as a "change" or "shift" on a specific outcome on the intra-individual level. However, this conceptualization provides us with a limited understanding of how media effects occur over time after repeated media exposure. In our current digitalized environment, we are repeatedly, if not constantly, exposed to digital media. Thus, to effectively understand and examine media effects we need to conceptualize repeated exposure in our theoretical thinking as well as in our methodological considerations. Importantly, in our current "change or shift"-paradigm, usually linear effects are implied: the more frequent the exposure, the stronger the effect.

This linearity assumption of media effects is, however, highly unlikely, and at the same time limits our understanding of what constitutes a media effect and how it evolves over

time. It is unlikely to expect a linear increase resulting from repeated media exposure because established psychological theories of repeated exposure propose very different effect patterns. Specifically, theories on (hedonic) adaptation, habituation, and learning, all suppose that individual responses to stimuli either decline or stabilize after repeated exposure. A common example is the typical learning curve, with a steep increase at the beginning and a stabilization of the learning effect over time.

I will delineate in this position paper, how these fundamental adaptation, habituation, and learning processes are crucial in understanding the effects of repeated media exposure and how they can help us towards a new and potentially more accurate conceptualization of media effects. Importantly, I argue that such a conceptualization of media effect patterns has not only far-reaching consequences for the theoretical conceptualization of media effects, but also for the conceptualization of future study designs, and the interpretation of existing findings. Because cross-sectional and short-term longitudinal studies only examine a small part of these media effects curves, they may "miss" and thus underestimate existing media effects. By integrating psychological theories on habituation, adaptation and learning with media effect theories, the current paper will thus propose a new view on media effect theories and existing empirical findings in the field.

Media effects / change / habituation / adaptation

#### Don't worry, they've got help. Diversity within fictional media characters, perception, engagement, ethical considerations and why representation matters after all.

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But she is not alone. (Black Widow, Infinity War)

In this position paper the representation of diversity within fictional (fantasy) characters will be discussed. While many studies and papers focus on the portrayal of characters and their diversity, only few looked at factors and aspects which made such portrayals successful (Zerebecki et al. 2023). Reasons for this lack of clarity which portrayal is successful and what successful even means lie within certain aspects of the methodological approaches in this field. Several qualitative studies looked at representations of minorities and give excellent in-depth insights, however, mainly focus on single media pieces and experiences and generalization of findings is rather complicated (Malik et al, 2022). Indeed, the experience and perception of characters are pretty much individual and clearly relate to the characteristics of the audience itself. Thus, the question arises if it is even possible to investigate diversity within character portrayals on a bigger scale and in the

end hopefully develop recommendations for the media industry. To answer this question, I will present several studies on character engagement and its effect. Examples are quantitative studies concerning 1) gender identities, sexual orientation and PoC portrayal within Thor – Love and Thunder and the effects on character trait perception, recognizability and PSR; 2) female and (non)stereotype PoC portrayal within Black Panther – Wakanda Forever and the effect on recognizability, PSR, realness, authenticity and enjoyment of the character from a (non)PoC audience; 3) (least) favorite female character engagement within House of the Dragon and its effects on the female audience; and last but not least 4) qualitative approaches towards the development and inclusion of diversity over the last 4 decades within the Star Wars universe.

I will focus on certain aspects of fictional characters that lead to an increased engagement in the audience and thus, can raise awareness and acceptance of certain (stigmatized) groups (Banas et al., 2020; Wong et al., 2022). In addition, the focus will lie on narratives and storylines of these characters and which role stereotype writing plays. For instance, which amount of stereotypical behavior, attitude and appearance might even be necessary to read a character in a certain way and how overcoming obstacles within the narrative can overwrite exactly those stereotypes (Mittel, 2015) and empower the represented audience as well as educate the non-represented side. In addition, I will discuss if and to what extent certain tests concerning portrayal of diversity (e.g., Bechdel, Vito Russo etc.) work or do not and how important diversity on the media production site is. Last but not least, ethical considerations will be targeted such as the question if I as a white, cis, straight (female) German scientist can or should investigate diversity. In other words: Am I up to this particular murder mission? "Rage and vengeance, anger, loss, regret, they're all tremendous motivators, they really clear the mind, so I'm good to go" (Thor, Infinity War) – and don't worry, I got help.

Character diversity / parasocial relationship / representation / portrayal / narrative / murder mission

# On the Road to Media PsAIchology? Mapping the potentials and challenges of artificial intelligence for research in media psychology

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The recent explosion of large language models (LLMs), such as ChatGPT and GPT4, and tools based on those has led to an increased interest in the development, use, and impact of artificial intelligence (AI) in the media and public discussions as well as within

scientific community. As for other digital technologies, the relationships between science and AI are manifold: AI is 1) the result of scientific research, 2) an object of study, and 3) a tool for researchers. The first type of relationship is most prevalent in the field and computer science and, in the case of LLMs, (computational) linguistics. Since studying the use and effects of media and digital technology is a key defining feature of media psychology, this type of relationship is especially important for our field. Notably, however, the use of AI-based tools also has a special potential for media psychology research. While using AI for discovery (e.g., literature research) and data analysis tasks is a promising avenue across disciplines, for media psychology in particular, emerging AI tools have the potential to transform substantial parts of study design and data collection in various lines of research as they can be used for the creation of stimulus material for experimental studies and the coding or classification of media content. Regarding the former, various generative AI models are able to produce high-quality text material and also images based on relatively simple textual prompts. And while the quality of AIbased text-to-audio and text-to-video tools is not yet comparable to those for text generation or text-to-image, we will likely see significant improvements here in the near future. With regard to content classification, there is some initial work suggesting that LLMs can be used for tasks that traditionally required human coders; and with multimodal LLMs this can be extended to combined text and image classification. Besides having the potential of improving the quality of research, the use of AI tools for study design and data collection can also positively contribute to inclusion and diversity in media psychology. AI tools can reduce barriers such as costs and required skills for the production of high-quality stimulus materials or data collection. Independent of the many potentials that AI tools have for media psychology research, however, there are various challenges that we as researchers need to consider and address. Many of those relate to legal and ethical issues, e.g., regarding data privacy and copyright. An associated problem is that of relying on commercial services which has already proven to be risky for data access. Against this background, the use and support of free and open-source (FOSS) projects is a particularly relevant subject. The position paper will discuss the potentials as well as the challenges of artificial intelligence for research in media psychology, paying special attention to the possible impact on inclusion and diversity in our field. Considering the major impact that AI will likely have, the contribution will also discuss whether we must rethink the general types of relationships between AI and media psychology.

Artificial intelligence / large language models / methods / metascience

# The Interplay of Psychological and Communicative Processes in Right-Wing Radicalization – An Integrative Model

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In many parts of the world, far-right political parties and politicians have gained strength to an extent that seemed unthinkable a few years ago. This is even the case in countries that consider themselves stable democracies. From the AfD in Germany, the Danish People's Party in Denmark, the National Rally in France, the True Finns in Finland, the Lega Nord in Italy, Austria's Freedom Party, and the Golden Dawn in Greece, to mention only a few, parties made it into the parliament that openly advocate a far-right political agenda. As a reaction to this development, there is a growing scholarly interest in right-wing radicalization of individuals and social groups. By right-wing radicalization, we mean the process of increasing acceptance and advocacy of white supremacy, oppressional forms of government and nationalist, anti-semitic, xenophobic, and social darwinist social structures.

Although there is a substantial amount of empirical research on the topic, we are still lacking a theoretical model that integrates psychological and communicative factors in explaining the temporal dynamics of right-wing radicalization. We suggest such a model that focuses especially on the process of radicalization during adulthood. In line with previous psychological models of radicalization, we argue that right-wing radicalization is facilitated by individual predispositions (e.g. authoritarianism), motivationally driven by perceived deprivation of fundamental needs and justified by ideological beliefs. Our model outlines different pathways for how political communication can inform the process of right-wing radicalization. First, far-right communication (especially anti-elitism and anti-immigration) is designed to meet a motivational demand in recipients. It feeds a process that we conceptualize as ideological coping - a psychological means to deal with the experience of relative need deprivation. This coping process involves ingroupenhancement by means of outgroup discrimination and the provision of responsibility to the ruling elites. Second, far-right ideas of inequality and social dominance provide the breeding ground for intergroup aggression and oppression by legitimizing violence and shifting group norms. Political communication is involved in this process of moral distancing. Third, the advocacy of intergroup hostility and aggression by radicalized individuals and social groups is likely to enhance their social alienation in modern societies. This communicative process of identity re-construction is likely to create additional reasons to experience relative need deprivation. In our radicalization model, we include different forms of political communication such as strategic political communication by professional political parties and politicians, active forms of media reception (selection and processing of content) and peer-to-peer forms of communication (e.g. by means of messengers).

We outline the theoretical assumptions of the model, provide exemplary empirical evidence and develop detailed assumptions about the interplay of psychological and communicative drivers in the process of right-wing radicalization.

Political communication / radicalization / far-right ideology / violence / deprivation

#### Accessibility of VR experiences: a brief overview

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Virtual reality (VR) is rapidly expanding, able to provide immersive experiences with high degrees of perceived realism (Slater, Khanna, Mortensen, & Yu, 2009). With VR, content creation knows no limitation but the imagination of creators. VR has been referred to as the empathy machine (Milk, 2015), as high-realism experiences can make users "walk in other's shoes" (Pen et al., 2010; Shin, 2018), emulating colourblindness (iNFINITE Production, 2018), blindness (Middleton & Spinney, 2016), or a different experience of sound (New York Times, 2017).

Ironically, accessibility and inclusiveness of VR content remain poor, with some exceptions such as Moss<sup>TM</sup> where the main character can communicate using American Sign Language (Polyarc, 2018). In the International Classification of Functioning model (World Health Organization, 2001), a person's level of functioning is a dynamic interaction between health conditions, personal factors, and environmental factors. Therefore, disabilities arise when demands from an activity do not meet the capabilities of an individual to perform it. This means that anyone can be in disabling situations: when excessive sunlight makes it impossible to read a screen or when there is too much noise to listen to a voicemail.

The growth of VR calls for universal design driven by VR content creators. With VR, design techniques direct how one interacts and experiences a virtual environment. To maximize human functioning in VR environments, user needs must be defined and stated with consideration of inter-individual motor and physiological differences within human factors constraints. In this regard, design guidelines appeared shortly after computer-based VR (Stanney, Mourant & Kennedy, 1998) and have been since revised (Hale & Stanney, 2014). Similarly, web content accessibility guidelines that are transferable into VR were updated with better consideration (W3C, 2018) by communities of combined expertise, yet they are still work in progress.

To remove VR design-specific environmental factors, several studies coupled sensory substitution devices with VR setups (Maidenbaum & Amedi, 2015; Picinali et al., 2014). Other studies translated interaction techniques like canes into VR (Lecuyer et al., 2003) or designed new interactions using external devices (Colwell et al., 1998; Jansson et al., 1999; Phelan et al., 2015). Now, major companies such as Microsoft® are expressing interest in universal design for VR (Mott et al., 2019) through VR-intrinsic features (Zhao et al., 2019) or with state-of-the-art external devices (Zhao et al., 2018). This short overview shows that even though there is research towards the right direction, with some open-source projects (Zhao et al., 2019), there are no agreed-upon standards when it comes to VR (Mott et al., 2019).

Universal design in VR content through design techniques and interaction mapping goes beyond experiencing content itself. It allows individuals to join new communities. According to WHO, 15% of the population worldwide presents some kind of disability. Affected people would become able to experience new relatable stories, empathize and spread the word, sharing with communities, friends and relatives. Universal design for VR, a democratized story-living medium, fosters social participation and self-determination (Ryan, Huta, & Deci, 2008) directly contributing to well-being (Ng et al., 2012).

Accessibility / inclusivity / virtual reality / well-being / design

### 10 things you need to consider when analyzing media effects

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The bread and butter of media psychologists is the analysis of how media consumption affects their users (Oliver et al., 2019). Is using TikTok detrimental for adolescents? Does communicating on Signal increase social connectedness? Does browsing Instagram stoke envy?

Although there is an abundance of relevant research questions, currently there is a particular focus on the effects of social media use on adolescent well-being (Beyens et al., 2020; Dienlin & Johannes, 2020; Meier & Reinecke, 2020; Orben, 2020). Positions are polarized: While some argue that social media use is the number one driver behind a current adolescent mental health crisis (Haidt, 2023; Twenge, 2017; Twenge et al., 2022), others deny this is the case (Orben et al., 2019; Orben & Przybylski, 2019a, 2019b).

The research question itself is simple and straightforward. Which makes it quite concerning that no consensus can be reached. Why is that?

In my view, one problem is that our current research strategies and priorities are amiss. We need to reconsider our approach. We also need to reevaluate what we consider good research. So far, we got the priorities wrong. We ask questions and test models that are popular with other scientists, but that are irrelevant to the public.

To stimulate further research on this question, in my talk I present 10 practices that need to be implemented in order to advance our understanding of how media consumption affects their users. These ten practices focus on theory, study design, and statistical analyses. They are as follows:

- 1. First focus on measuring, then on explaining
- 2. There are no between-person "effects"
- 3. Get behavioral data on media use
- 4. Dare to single-measure outcomes
- 5. Don't conduct panel studies, go intensive
- 6. Measure how effects unfold over time
- 7. Control for varying and non-varying confounds
- 8. Don't control for mediators and colliders
- 9. Define a SESOI
- 10. Minimal effects might matter

Media effects / media use / social media / well-being

### The State of Evidence in Digital Hate Research: An Umbrella Review

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Social media platforms' unique socio-technical conditions (Brown, 2018; Manata & Spottswood) have led to digital hate (understood as any kind of digitally transmitted malicious expressive conduct performed by and directed against individuals or collectives) emerging as a pivotal challenge for individuals' psychosocial health and modern societies at large. Building reliable knowledge around every facet of digital hate to inform both public discourse and policymakers in a societally advantageous manner can be considered scholarship's core mission. To be effective in this mission, conceptual noise

(e.g., clatters and clamors [Bayer & LaRose, 2018] or horizontal and vertical expansions [Haslam, 2016]) should be avoided as much as possible; arguably, digital hate research has largely failed in this regard as it is plagued by a plethora of definitionally, conceptually, and empirically overlapping phenomena, implying an overwhelming heterogeneity of ostensibly incommensurable facets that obscure overarching patterns, prevent crossconceptual synergies, and, thus, complicate possible policy applications from the outset (see Strippel et al., 2023 for a very recent overview).

To gain a systematic overview of this scholarship, an umbrella review (see Papatheodorou, 2019) constitutes a suitable means to "provide an overall examination of the body of information that is available for a given topic, [...] highlight whether the evidence base around a topic is consistent or contradictory, and to explore the reasons for the findings" (Aromataris et al., 2015, p. 133). This paper will present such an umbrella review concerning digital hate outside of legal discourses. Primary goals are to investigate (a) general characteristics of available reviews with respect to review types, analyzed platforms, respondents, and cultural regions (RQ1a c), (b) definitions and conceptualizations (RQ2), (c) main findings (RQ3), and (d) research gaps (RQ4). We do so by taking up an actor-centered approach that distinguishes between perpetrators, audiences, and targets to determine whether review characteristics, definitions/conceptualizations, key findings, and research gaps converge (or diverge) across this triad.

Based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement (Page et al., 2021), we conducted an extensive literature search on Web of Science to identify all reviews, meta-analyses, or other kinds of syntheses (published by March 2023). According to pre-defined inclusion and exclusion criteria, titles of 406 extracted documents were screened by two trained coders, resulting in 146 documents for abstract screening and, eventually, a final sample of N = 119 reviews. This final sample of reviews was then examined both quantitatively and qualitatively. More specifically, a total of 14 categories were quantitatively analyzed: publication year, method, main concept(s), language scope, number of included papers, age (differentiated between children, adolescents, young adults, and adults), actors (differentiated between perpetrators, audiences, and targets), content, and social media platform. Validity for the quantitative coding was tested via a randomized coding procedure realized by two trained coders (using Krippendorf's  $\alpha \ge .8$  as the criterion). Once sufficient validity for each category was met, a single coder addressed the remaining reviews. The qualitative part included the geographical allocation of the authors, definitions of the main construct(s), main result(s), and research gap(s).

Umbrella review / digital hate / hate speech / cyberbullying / incivility

### **Research Reports**

# Social Media 3.0: What Experts Dream of and Users Like! The Evaluation of Mainstream Online Social Networks and Alternative Online Social Network Models by Adolescents and Adults – An Expert-Opinion, Scenario-Based Approach

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Mainstream online social networks like Facebook and TikTok are often criticized for employing the user-related, advertisement-based revenue model with potentially detrimental consequences. For instance, experts fear that mainstream online social networks are designed to foster excessive use ("Social Networks Use Disorder") because of this revenue model. Additionally, experts draw attention to filtering and recommender systems limiting the diversity of viewpoints provided to users, and biasing – or even radicalizing – individuals' opinions as a consequence ("filter bubble"). Moreover, experts are concerned about companies behind online social networks exploiting users for their data, thereby minimizing privacy ("surveillance capitalism"). Given these fears, experts often propose alternative online social network models, which are publicly debated. However, less is known about individual users' attitudes toward both mainstream online social networks as they are currently designed, as well as alternatives. The present work aimed at closing this knowledge gap.

For the present transdisciplinary work, six semi-structured interviews with three independent researchers and three practitioners from various disciplines were conducted. Based on transcriptions of those interviews by two independent raters and the knowledge derived from them, three scenarios were constructed. Each scenario described a different kind of online social network: One reflected the status quo. Another one presented a platform on which individuals could decide whether to "pay with money" or to "pay with data". The final one described a public-service broadcasting online social network.

Taking into account the privacy-calculus theory, in-depth evaluations of each scenario were assessed from a quota sample of adolescents (N = 1,248; 12-18 years of age, M = 15.08, SD = 1.96 years) and a quota sample of adults (N = 970; 18+ years of age, M = 45.84, SD = 15.44). In addition, exploratory investigations were conducted to examine

the relations of sociodemographic factors and personality with individual differences in those evaluations.

Online Social Networks / Privacy Calculus / Personality / Scenario Construction / Transdisciplinarity

### The effect of perceived narrative ambiguity on appreciation

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Narratives are interpreted by different people in different ways (see Ewoldsen et al., 2022). Perceived narrative ambiguity (PNA) is a psychological construct that describes the extent to which a user perceives that a narrative can be interpreted in multiple ways (see APA, 2015; Currie, 1995). I argue that PNA should motivate deliberative cognitive processes intended to resolve ambiguity by achieving a sufficient level of confidence in one's preferred interpretation (see Ball-Rokeach, 1974; cf. Cacioppo et al., 1996).

Scholars have proposed that appreciation, a eudaimonic media effect, results from positively appraised media use characterized by deliberative cognitive processing (Tamborini et al., 2021). Therefore, I predict that perceived narrative ambiguity will be positively associated with appreciation (H1).

As reactions to ambiguity are idiosyncratic (Ball-Rokeach, 1974), two traits that should influence the effects of PNA are ambiguity tolerance and need for cognition. Ambiguity tolerance describes an individual's dispositional orientation to ambiguity; low AT individuals tend to experience ambiguity as noxious and respond with aversion, whereas high AT individuals will view ambiguity as a desirable challenge (see Furnham & Ribchester, 1995). Need for cognition describes an individual's intrinsic motivation to pursue cognitively effortful activities (see Cacioppo et al., 1996). I predict that the relationship between perceived narrative ambiguity will be positively moderated by ambiguity tolerance and need for cognition (H2).

Participants for this study include n = 369 adult US citizens recruited via Prolific. In a quasi-experimental survey, participants first reported trait need for cognition and ambiguity tolerance. Next, participants named and described a familiar movie that was either ambiguous or unambiguous (randomly assigned). Then, participants responded to measures assessing PNA, appreciation, and moral conflict (control). All closed-ended measures followed a seven-point Likert format and demonstrated appropriate dimensionality and good reliability.

Entertainment / narrative / individual differences / cognitive processing / eudaimonia

### The Role of Suspicion in Warranting Offline Characteristics from Online Claims

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Warranting theory (Walther & Parks, 2002) addresses this connection of the, "self to an on-line presentation" (p. 551), and theorizes the process by which online claims are determined to reflect an offline self is a useful means of understanding this process. However, research into and applying warranting theory has generally operated in a truth-default state, taking online claims as prima facie evidence of an offline self. This research builds on recent work considering and studying the fidelity of online claims to an offline self (Van Der Heide et al., 2022). Leveraging both warranting theory (Walther & Parks, 2022) and truth-default theory (Levine, 2014), this study hypothesizes a serial mediation process between trigger events (i.e., incident suggesting deception), suspicion of the claimant and/or claim, the warranting value of a claim, and the resultant perceptions of the target's offline characteristics.

Hypotheses will be tested using an experiment, using the context of ordering food—via an online delivery app—from either a traditional restaurant or its online-only ghost kitchen (a restaurant using its own kitchen facilities and staff to make food [typically consistent with the in-restaurant menu] only available via delivery Cai et al., 2022]). Participants will be randomly assigned to first see one of three trigger conditions (low, medium, high); and then consider a restaurant's Grubhub profile. Profiles will be digitally altered to hold rating stars (3.7), number of reviews (4), and delivery times (40-50 minutes) consistent; but otherwise depict one of four popular chain restaurants or their ghost kitchen equivalent. Participants will then complete standardized scales for their state and general suspicion, the warranting value of the review, and their perceptions of the restaurant's offline characteristics, as well as their prior experiences with their assigned restaurant and the Grubhub app.

Warranting / perceptions / online-offline / impression formation / ghost kitchens

### The narrative patterns of collective emotions in the Lithuanian media discourse: examining war in the news

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This study aims to identify the prevalent narrative patterns of emotional constructs in the mainstream Lithuanian news media discourse on the war in Ukraine, and their ideological effect on the collective identity in a time of crisis. To achieve this aim, the news media articles within one year from 2022-02-23 to 2023-02-23 were collected from four mainstream media sources in Lithuania: lrt, Delfi, 15min. and Lrytas. The collected data were analysed within the theoretical framework of Critical Discourse Analysis (Fairclough 2013, van Dijk 2015, Wodak 2015) and frame semantics, with the major focus on the co-construction of six basic emotions (i.e., surprise, happiness, sadness, anger, fear and disgust) and their ideological meaning in narrative persuasion. The basic emotions were coded according to 1) explicit uses of sensorimotor references; 2) indirect metaphorical associations; 3) relational categories of self-identity and othering. It has been hypothesized that the mainstream news media discourse in Lithuania has routinized the narrative of war via the active construal of negative emotions (i.e., anger, fear and disgust), and thus legitimised the narrative of violence. This narrative is viewed as a cause of a more fractured social identity and emotional polarization in Lithuanian society in a time of crisis.

War media discourse / basic emotions / collective identity / narrative patterns / content analysis.

#### Effects of sexism on women's political expression online -Evidence from a preregistered repeated-measure experiment

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The invisibility of women in the political arena is an essential issue stemming from gender stereotypes and discrimination. Women overall prefer less visible forms of participation (Bode, 2017). Scholars frequently demand more (non-stereotypical) behavioral models to close such gender gaps. Yet, we argue that the role-model effect does not sim-

ply transplant in the digitally networked space. Research suggests a sexist bias against women who visibly engage in politics, resulting in incivility and harassment. The backlash against female politicians (Rheault et al., 2019) and journalists (Gardiner, 2018) sanctions women's visible political self-disclosure to emphasize politics as a masculine space (Harrison & Munn, 2007). Relying on the theory of normative social behavior (TNSB, Rimal & Real, 2005), we assume the microcosmos of online discussions enforces social rules of political participation. For one, questioning and attacking women in online political discussions displays a descriptive social norm of the medium (Flanagin, 2017). Additionally, such public harassment suggest that women have to expect consequences when voicing their opinions (injunctive norms). Our first research question is whether there is a role-model effect of visible female politicians. Secondly, we ask whether the sexist backlash against visible women in political discussions has a silencing effect on female readers of political news online.

We present a preregistered study (https://osf.io/s79ya/?view\_on-ly=f7cde7241b3d414dac47810c476adea1) investigating the impact of sexist comments under political news postings on social networking sites on female readers' political engagement online (n = 500). We implemented a repeated-measure design using randomized treatment and stimuli presentation using six randomized social media posts from the leading legacy news show in Germany (Tagesschau) and the customary comment sections. Single item measurements were used for all outcomes. A power analysis was conducted as a simulation study, showing sufficient power to detect small average treatment effects under the assumption of limited effect heterogeneity at the stimulus level.

Political discussions / gender gap / sexism / social norms / harassment / online participation

#### Always picture-ready: Adolescents' experiences of social media pressures around body ideals and body projects

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Previous research has demonstrated that both passive and active social media usage may have a detrimental impact on people's body image and satisfaction (Faelens et al., 2021; Fioravanti et al., 2022). Moreover, particularly the editing affordances of social media platforms highlight the apparent malleability inherent to contemporary conceptualizations of bodies as projects (cf. Shilling, 2003). Considering this, it is unsurprising that recent studies found a relation between (selfie) editing and a greater acceptance of – and

a higher intention to undergo – cosmetic procedures (Hermans et al., 2022; Wang et al., 2022).

Whereas many quantitative studies have examined the link between social media usage, body (dis)satisfaction, and (intended) body projects, fewer qualitative projects have been executed. It is particularly important to focus on adolescents as they are both avid users of social media and adolescents' self-concept is particularly vulnerable to external influence; moreover, current adolescents have grown up with an unprecedented normalized view of particular body projects, including cosmetic procedures (Ching & Xu, 2019).

In light of the above, this study explored the question of how Dutch adolescents perceive and negotiate body ideals and body 'projects' encountered on social media. We particularly focused on attitudes towards cosmetic procedures. To answer the research question, 13 focus groups were conducted with a total of 42 adolescents (aged 14-19), across the Netherlands. Participants were recruited at schools and youth councils around the country to account for national and regional differences. Moreover, we included a diverse group of adolescents with different educational attainment levels. Considering the potentially sensitive nature of the study, we recruited friendship groups for our small focus groups (approximately four participants per group). As Allen (2006, p. 164) has argued, focus groups can be helpful when researching sensitive topics as they may "increase the likelihood of people sharing personal experiences".

Adolescents / social media usage / body ideal / body project / qualitative focus groups

#### Online Incel Speech on incels.is: A content analysis

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Theoretical Background: The worldview of involuntarily celibate men (incels) is known to involve a distorted view of reality which can lead to harmful behavior including gendered hate speech. Incels form online communities in which they "often bemoan their lack of a loving relationship with a woman while simultaneously dehumanizing women and calling for misogynistic violence" (Glace et al., 2021, p. 288). However, not all online comments from incels contain misogyny or gendered hate speech, and some of the problematic comments address depression, self-harm, or the reasons why someone became an incel. To get a deeper understanding of the incel phenomenon, it could be better not to only focus on the misogynistic and hateful comments. Thus, this study employed the framing theory (Entman, 1991) to investigate the general comments and the hybrid masculinities model (Glace et al., 2021) to investigate the misogynistic comments from incels.

Research Questions: We wanted to find out about the subjective causes (RQ1) and emotional consequences (RQ2) of being an incel, but also about the verbal behavior including gendered hate speech (RQ3).

Methods: A sample of N=600 thread posts on incels.is was subjected to a quantitative content analysis. A codebook was created based on the state of research on incels, the framing theory (for RQ1 and RQ2), and the hybrid masculinities model (for RQ3). All content categories of the codebook were found to be reliable before application (Gwet's AC1 >.80). To answer the research questions, inferential statistics (e.g., chisquared tests) were employed.

Online incel speech / gendered hate speech / misogyny / sexism / manosphere

#### Eudaimonic entertainment experiences of TV theme nights and their relationship with political information processing and engagement

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The present research extends prior experimental work on political entertainment effects by investigating eudaimonic entertainment experiences in the real-world context of television theme nights through nationally representative surveys. Television theme nights present fictional entertainment on a political issue (e.g., movie) in tandem with information programs (e.g., docu/talk), thereby nudging viewers to stay tuned and get further information. Moreover, co-viewing and substantial market shares of theme nights can encourage interpersonal deliberation. German TV channels are increasingly using this approach to create successful events. But these formats have rarely been scientifically investigated, and if so, from a purely descriptive perspective. Based on the extended dualprocess model of entertainment effects on political information processing and engagement, we asked how fictional entertainment can stimulate interest in factual information about political issues and how this translates into politically relevant outcomes such as information seeking, knowledge gain, interpersonal discussion, and political participation. More specifically, we assumed that feeling moved by and reflective thoughts about the movie represent key factors (for sample hypotheses and research question, see e.g., the preregistration of Study 1, https://t2m.io/Cbh9KC2k).

We conducted three surveys on viewers' experiences concerning two theme nights—about German arms trade and physician-assisted suicide—broadcast by the

German national TV station Das Erste. Moreover, non-viewers' opinions and experiences concerning the theme nights' topics were also included in this study.

Data concerning Theme Night 1 was collected via a German national telephone survey (Study 1; N=905; Mage = 60.53; 45% female) and an online survey (Study 2; N=878; Mage = 36.71, SDage = 15.31; 50% female). For Theme Night 2, data was collected via an online survey (Study 3, N=1,019; Mage = 56.31; 41% female). Material (e.g., measures and details about the content of the theme nights) is provided at OSF (https://t2m.io/Ei47O6mS).

Eudaimonic entertainment / TV theme nights / feeling moved / reflective thoughts / political engagement

### Many Dimensions of Awe: Virtual Reality and Awe through the Interactivity-as-Demand Model

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Awe has been defined as a positive and meaningful reaction to perceptually vast stimuli that transcend our understandings of reality (Keltner & Haidt, 2003). Regarding video games, Possler et al. (2018) suggests that gaming elements can trigger awe as they become more relevant to gameplay, especially when players feel more "in the game," which can influence entertainment outcomes (Possler et al., 2022). Given this framework, playing video games with variable levels of progressive embodiment (Biocca, 1997) could be expected to facilitate awe, given that vast stimuli should be perceived as increasingly more relevant to the player. Additionally, Bowman (2018, 2021) argues that interactive systems place variable cognitive, emotional, physical, and social demands on their users—each of which require attentional processing that could either facilitate or detract from awe elicitation. For example, VR systems require increased cognitive and exertional demands (Lin et al., 2023) that could influence how players engage with awe-inducing stimuli, either by guiding attention towards those stimuli (i.e., making them more prominent and available for cognitive processing) or drawing attention away from them (i.e., physical demands of the VR system itself). The current study thus explores the influence of VR gameplay on perceived demands and subsequent awe elicitation. We will enroll 200 participants from a large private university in the Northeastern United States, randomly assigned to play the space exploration game No Man's Sky on a PlayStation 5 with two levels of progressive embodiment: facing a large television screen (lower) or wearing a PSVR2 (higher), see OSF for experimental details (https://osf.io/ hm47y/?view\_only=c01f6e15ee4d42029494388a87af9f28). After gameplay, participants will complete the video game demand scale (Bowman, 2018, validated for virtual reality in Bowman et al., 2021) and measures of awe in video games (Possler et al., 2022).

Virtual reality / awe / video games / interactivity-as-demand / experimental design

### Professional benefits of work-related social media use - a multi-wave study

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#### **Background**

Professional social media (PSM) platforms like LinkedIn and Xing promise their users better access to contacts, information, and career opportunities. While this claim received some cross-sectional empirical support (e.g., David et a., 2020; Utz, 2016), the degree to which findings reflect media versus selection effects remains unresolved. Building on a social capital perspective (Adler & Kwon, 2002) and weak ties theory (Granovetter, 1973), here we investigate in a five-wave panel study to what extent professional benefits are predicted by PSM use, PSM network structure, and networking behaviour prospectively.

#### **Research Questions**

We predict that networking behaviour predicts professional benefits (ambient awareness, informational benefits, serendipity, and creativity). We also predict that active PSM use, passive PSM use, and adding more weak/absent ties predict professional benefits in the same wave. Finally, we ask whether active PSM use, passive PSM use, and adding more weak/absent ties predict professional benefits in the next wave (controlling for the respective benefit in the same wave).

#### Methods

For this one-year five-wave study, N=463 PSM users were recruited through a panel provider. In each wave, participants report(ed) on their active and passive PSM use, categorize(d) up to 10 recently added PSM contacts according to tie strength, and complete(d) self-report scales assessing their ambient awareness (Levordashka & Utz, 2016), informational benefits (Wickramasinghe, & Weliwitigoda, 2011), serendipity (McCay-

Peet et al., 2015), and creativity (Tierney et al., 1999). In wave 1, they additionally completed a networking behaviour measure (Wolff & Spurk, 2020) and provided socio-demographic information. We will use multilevel regression modeling (random intercepts) for our preregistered analyses (one model per outcome variable). Active and passive PSM use and adding weak/absent ties will be both person-mean centered (level 1) and grand-mean centered (level 2), allowing to distinguish between effects within and between individuals; networking behaviour will be entered at level 2.

Social media / networking / informational benefits / creativity

#### Environmental factors of online hate speech: Results from a national sample of internet users in Germany

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Theoretical Background: Online Hate Speech (OHS) is a societal problem, but current research focuses on perpetrators rather than environmental factors such as reduced restraint in the online environment (toxic online disinhibition; TOD) or mutual respect among communicators on online platforms (horizontal respect; HR). It is also unclear whether the effects of these factors on OHS are amplified by the amount of time communicators spend online (internet use time; IUT). Therefore, we conducted a survey and employed the Action-Theoretical Model of OHS (ATMOHS) to determine which of these perceived environmental factors correlate with OHS. The model builds upon the theories of online disinhibition (Suler, 2004) and social climate (Lewin et al., 1939).

Hypotheses: It was assumed that TOD and IUT are positively correlated with OHS perpetration while HR is negatively correlated (H1). The same pattern was assumed for bystander support of the perpetrators (H2). In contrast, it was assumed that HR and IUT are positively correlated with bystander support of the victims while TOD is negatively correlated (H3).

Methods: Data was collected in a pre-registered online survey among a national quota sample of Internet users in Germany (N = 1,791; Mage = 44.1, 48.3% women). For each of the three hypotheses, a logistic regression was calculated. TOD ( $\alpha$  = .87) was measured with the scale by Udris (2014). HR ( $\alpha$  = .92) was assessed with an adapted and self-translated version of the scale by Eckloff and Mertz (2008), while IUT was measured with a single item (Hinduja & Patchin, 2008). For assessing the criterion variables, participants were shown five different vignettes and asked if and how often they have produced this kind of OHS (perpetrator), supported someone who produced this OHS (perpetrator

support), or supported someone who received this OHS (victim support). The five vignettes were compiled into a scale (all ordinal  $\alpha > .93$ ).

Online Hate Speech / Toxic Online Disinhibition / Horizontal Respect / ATMOHS

#### Symbolism, Purpose, Identities, Relations, Emotions: Unpacking the SPIREs of Sense of (Digital) Place

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The notion of 'Sense of Place' (SoP) originated in cultural geography to distinguish between rote, fact-based recognition of spaces and the more intimate sense of knowing spaces. SoP is the latter, emerging when one forms "affective ties with the material environment" (Tuan, 1974, p. 93) similar to how one might know a person. It has been nascently explored in relation to digital spaces—museum simulations (Turner & Turner, 2016) and videogame re-presentations of actual locales (Bowman et al., 2020) and historical environs (Bowman et al., 2023), accounting for feelings of being-in, visiting intentions, and nostalgia. Little is yet known about the operation and experience of SoP across digital and physical spaces. Further, current conceptualizations most often assume that SoP is positive, when it can decidedly be negative (consider places that induce fear, harbor terrible memories, or promote disgust). Our literature review for the construct identified five SoP dimensions: Symbolism, purpose, identities, relations, and emotions. The current study seeks to unpack the subjective experience of those dimensions in relation to salient mode-specific, valenced places. Participants (N = 200) were U.S. VR users recruited via Prolific.co to complete a survey experiment: "Thinking about Digital and Physical Places." In a 2×2 experiment, they were randomly assigned to identify about a place (modality: digital/physical) of relevance to them (valence: positive/negative). For that identified place, they were asked to name it, describe it, and then respond to five elicitations representing each of the five dimensions. Responses to those five elicitations will be inductively analyzed (per Braun & Clarke, 2006) to generate a hierarchy of main and sub-themes, an initial comparison across conditions, and a corresponding language catalog. That analytical output will serve as the foundation for future efforts to develop and validate a scale to measure SoP dimensions across digital and physical spaces.

Sense of Place / meaning-making / videogames / virtual reality / thematic analysis

### Player Performance and Video Game Entertainment: Why is Low Difficulty So Appealing?

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Video gamers' entertainment experiences have been studied with regard to challenge, performance, and achievement emotions (e.g., Schmierbach et al., 2014). Psychological flow theory suggests that optimal experience will occur when players are neither overnor under-challenged (Csikszentmihalyi, 1988; Sherry, 2004). Similarly, self-determination theory suggests that pleasurable competence experiences will be strongest when mastering nontrivial challenges (Deci & Ryan, 2000; Schmierbach et al., 2014). Empirical findings contradict these propositions (e.g., Klimmt et al., 2009) because easy difficulty was found to be more enjoyable for skilled players than higher levels of challenge.

Two experiments test two potential explanations for these observations: (1) Non-demanding games facilitate relaxation (Wulf et al., 2019). Hence, while the enjoyment of optimal challenges might be based on flow and competence, easy games might be particularly enjoyable due to relaxation (H1). (2) Easy difficulty levels may bore players only after some time (H2) when they have learned the game and can judge their performance, so that hedonic adaptation effects may occur (Frederick & Loewenstein, 1999).

In study 1, N=248 participants (age M=29 years, SD=8 years; 69 females) played Pac-Man for four minutes at one of three randomly assigned difficulty levels – easy (n=79), medium (n=90), or hard (n=79). Subsequently, high scores, the number of 'deaths,' and experiences of flow, competence, relaxation, and enjoyment were measured. Study 2 (N=160, age M=26 years, SD=9 years; 44 females) employed the same stimulus and measures within a 2x2-between-subject design, manipulating the difficulty level (easy vs. medium) and the duration of playing (four vs. seven minutes).

ANOVAs served to compare players' enjoyment between the difficulty levels. Mediation analyses were conducted to investigate whether competence, flow, and relaxation mediated the effect of difficulty levels on enjoyment (i.e., H1). In Study 2, the potential moderating effect of playing time (i.e., H2) was tested in an ANOVA.

Entertainment / Video Games / Difficulty / Flow / Self-Determination Theory

#### #Definitely check on your friend who "decided to rewatch bojack horseman": Character engagement, rewatch motivation and self-compassion

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Introduction: Existing research showed that TV audiences reflect about themselves and learn to accept themselves and cope with various life challenges from audiovisual narratives and included characters. The aim of this study was to understand the reasons behind rewatching eudaimonic shows based on character engagement and the effects it has on self-compassion. A novel concept, measuring a sense of familiarity with aspects of characters' portrayal such as personality, situations, and attitudes is character recognizability which was found to explain para social relationship (PSR) and media engagement (Żerebecki et. al., 2023). PSR on the other hand was found to impact media engagement such as appreciation which in turn influences (re)watch motivations and in addition had impact on well-being in case of eudaimonic entertainment. Hypotheses: H1: PSR increases by character recognizability. H2: Nostalgia increases by a) PSR and b) character recognizability. H3: Appreciation increases by a) nostalgia b) PSR and c) character recognizability. H4: Rewatch motivation increases by a) appreciation, b) nostalgia, c) PSR and d) character recognizability. H5: Self-compassion increases by a) rewatch motivation, b) appreciation, c) nostalgia, d) PSR and e) character recognizability. Methods: We zoomed on the case of "BoJack Horseman," adult animated comedy-drama show, which depicts mental health struggles. After giving consent, participants (N > 250) were asked questions about the show starting with the number of episodes watched and how many times they have watched the whole show. After choosing their favorite character participants answered questions about character recognizability (Zerebecki, 2023), parasocial relationship (Tukachinsky, 2010), rewatch motivations (Oliver & Raney, 2011), appreciation of the show (Oliver & Bartsch, 2010), nostalgia (Sedikides et al, 2015) and selfcompassion (Neff, 2003). Results and discussion will focus on the importance of character engagement for re-watch motivations and resulting well-being concerning eudaimonic shows and movies.

Well-being / eudaimonic entertainment / appreciation / rewatch motivation / PSR

#### Do fictional narratives promote self-disclosure?

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Eudaimonic media entertainment has been found to promote mental health, but the underlying mechanisms behind this effect remain poorly understood. Our project investigates the potential of fictional narratives to promote self-disclosure, a factor known to reduce distress and improve mental well-being. Specifically, we aim to test whether empathizing with a character and the personal relevance of a story facilitate self-disclosure. We hypothesize that when viewers empathize with a character, their memories of their own life experiences are also activated, and the more emotionally charged these memories are, the more likely people are to share their personal experiences with a trusted other. In two previous studies, we found positive associations between empathy with characters and personal relevance, and self-disclosure. However, the correlational design of those studies was a limitation.

To overcome this limitation, we designed a pretest-posttest experimental study with a 2 (empathy: activated vs. deactivated) x (theme: mental health issue 1 vs. 2) design. Participants will be randomly assigned to one of four conditions, and their general tendency for self-disclosure and their actual level of desire to self-disclose will be measured. They will then be instructed to either empathize with the character or complete a secondary task while watching a short film featuring a main character going through an emotional experience related to mental health (e.g. grief, loneliness, burnout). After the film, participants will list their thoughts and emotions and rate the depth of their self-disclosure. We will then assess empathy with the character and personal relevance of the story, and measure the desire to self-disclose again. One week later, we will follow up with participants to see if they discussed any of the listed thoughts with a trusted other.

Our findings will shed light on the underlying mechanisms driving the positive effects of eudaimonic media entertainment on mental health.

Narratives / self-disclosure / empathy / personal relevance / mental health

#### Predictors of Digital Media Ownership and Use in Early Childhood: How Parents' Technology Acceptance and Personality Shape their 0-to 6-Year-Old Children's Media Use

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Based on Ajzen's (1991; 2015) Theory of Planned Behavior and Davis' (2015) Technology Acceptance Model, the parents of children age 0-6 (N=334) were surveyed. The aim of the study was to find out (1) how parental attitudes, motives and personality traits guide the use and joint use of digital media/toys and (2) how parents who allow their children to use digital media/games in early childhood differ from those who refuse to do so. The parents interviewed were approached at playgrounds, in doctor's surgeries, in cribs and kindergartens; participation was voluntary and anonymous. The child's current ownership of digital media and digital toys and their shared use of parental digital media were recorded in detail, as were the parents' motives for allowing their use (Cingel & Krcemar, 2013), the type/frequency of traditional play activities with and without parents, and the child's use of digital games. The parents' ability to empathize and their technoference (McDaniel & Radesky, 2018) were recorded, as well as their assessment of the effects of seven digital media and their attitude towards digital games for children. The data evaluation was carried out using variance analyzes and linear regression analyzes.

Digital media use / early childhood / digital technology acceptance / parent personality / digital games

### Does pretrial publicity predict actual criminal sentences? Evidence from a field study across 128 murder cases.

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Previous research has shown that pretrial publicity (PTP) may affect legal evaluations of criminal cases. Such an effect could threaten the legitimacy of court rulings. However, most studies did not analyze actual legal judgments as they took place in the lab or surveyed non-jury members with regard to single cases in the real world. To fill this gap, we conducted a field study combining data from three databases: First, we used the Federal Court Cases Integrated Database to identify relevant cases and to retrieve additional information such as the sentence. This resulted in N = 128 U.S. federal first-degree mur-

der cases with court rulings in 2015-2017. Second, the Public Access to Court Electronic Records allowed us to match cases with defendants' names. Third, we turned to Lexis-Nexis for obtaining pre-trial press coverage (N = 891 articles after screening). We examined whether (1) the mere level of pretrial publicity (number of news articles) predicted criminal sentences, (2) the severity of the crime (which could affect both, publicity level as well as a criminal sentence) played a role, and (3) whether article contents of the PTP was related to actual sentences. For the latter, we ran automatic text analyses across all news articles and had a subsample of articles content-coded regarding the presentation of the suspect, emotionality, etc. We discuss the implications for both, media practice as well as legal decision-making.

Pretrial publicity / legal decision-making / juror bias

### (Cyber)victimization among Czech youth: Comparing experiences of queer and heterosexual adolescents

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Sexual minorities are among the most vulnerable populations to experience (cyber)victimization (Abreu & Kenny, 2018). Despite continuous efforts to prevent identity-based violence, cyberhate targeting queer identities is on the rise in Europe. Adolescents, whose sexual identity is still forming, are in a particularly difficult position. We will enrich the emerging research on queer adolescents by comparing their victimization experiences to their heterosexual peers.

First, we will investigate adolescents' general online and offline victimization and their overlaps (Sumter et al., 2012). Second, as non-heterosexual identities are often stigmatized, we will focus on cyberhate victimization due to sexual orientation. Cyberhate attacks people because of their group characteristics (Kansok-Dusche et al., 2022) and increasingly appears in spaces where youth encounter it (Machackova et al., 2020). We will explore two forms of cyberhate victimization: direct (i.e., adolescent directly targeted) and vicarious (i.e., adolescent exposed as a bystander). While exposure to cyberhate may especially harm queer adolescents, who may be more vulnerable due to minority stress (Meyer, 2003), it also harms non-minority youth (Keipi et al., 2018). Thus, we will examine whether queer adolescents face more (cyber)victimization, and whether they experience more harm after being exposed to cyberhate than their heterosexual peers.

Our study uses online survey data from 3,040 Czech adolescents aged 11-16 (Mage = 13.47, SD = 1.74; 50.3% male; 80.0% heterosexual, 7.0% homo/bisexual, 13.0% unsure) collected in spring 2021. Quota sampling ensured the sample represents Czech house-

holds with children in terms of SES, geographical region, and municipality size. We will test the differences in offline and online victimization of adolescents who are heterosexual, homo/bisexual, and unsure about their romantic attraction. We will also assess the prevalence of direct and vicarious cyberhate exposure for each group and the differences in the intentionality of exposure, and the magnitude and permanence of negative feelings post-exposure.

Queer adolescents / victimization / cybervictimization / cyberhate exposure / adolescents / sexuality

#### "Just Turn Them Off" – Investigating the Effects of a Notification-Disabling Intervention on Objective Smartphone Behavior and Subjective User Experiences

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In response to the growing public concern about people spending too much time on their smartphones, a common advice is to turn off notifications as this is a prominent device feature that drives smartphone engagement. It has been demonstrated that a higher number of notifications correlates with higher daily screen time and number of phone use sessions. Notifications draw immediate attention to the smartphone and form a source of distraction during daily activities, reducing one's productivity. Furthermore, partly due to the constant possibility of receiving new notifications, individuals have developed a cognitive pre-occupation with their smartphones (i.e., smartphone vigilance). Relatedly, notifications play a key role in the formation of pervasive checking habits (i.e., excessively checking one's phone without any reason). Turning off notifications to combat these negative consequences may thus seem like a sound solution.

However, research is still scarce and inconclusive as to whether the commonly advised strategy of disabling notifications indeed helps the user to feel more in control about their smartphone behavior. For instance, no study has yet looked at the effect of disabling smartphone notifications on objectively measured screen time. In addition, research on the effects of disabling notifications on subjective experiences is also limited. The present study therefore aims to test the effects of disabling notifications on both objective smartphone behavior (daily screen time; number of phone unlocks) and subjective experiences (perceived overuse; perceived control; distraction; productivity; smartphone vigilance; perceived checking habit strength).

To this end, a preregistered two-week intervention study with a Randomized Controlled Trial design (baseline vs. intervention week; treatment vs. control group) was conducted. Participants installed a research app on their phones that continuously logged their smartphone behavior and sent daily surveys including the assessment of the subjective outcome variables. The sample (N=195) was recruited via a student pool and via Prolific.

Push notifications / smartphone logging / subjective experiences / checking habit / online vigilance / intervention / randomized controlled trial

# Speaking of Science Communication: An Investigation of the Motivations Leading to Engagement with Science Information on Social Media

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User engagement with (scientific) information contributes to the dissemination of content and, above all, also influences how users perceive it – for example, by fostering endorsement heuristics through the number of a post's likes (e.g. Taddicken & Krämer, 2021) or influencing perceptions through nasty comments (e.g. Anderson et al., 2014). This circumstance is crucial to understand since it can influence recipients' offline behaviour as was seen during the Covid-19 pandemic (e.g. Haug et al., 2020).

Since specific motivations, like seen in the conformation bias – i.e. preferring attitude-consistent information (e.g. Meppelink et al., 2019) -, change how users perceive, process, and engage with messages (e.g. Winter et al., 2016), the objective of this study is to give further insights into the mechanisms of individual engagement with science-related content online. Therefore, we will systematically manipulate participants' accuracy and defense motivations to examine how users respond to attitude (in-)consistent scientific information on social media depending on their motivational goal of either finding the most accurate information possible or protecting their prior beliefs (see: heuristic systematic model; Chaiken et al., 1996; Chen et al., 1999).

Furthermore, we will manipulate the presence of scientific jargon as it is an essential but also hindering element of scientific communication. On the one hand, it is thought to reduce the processing fluency of recipients, thereby making it less accessible for laypeople (e.g. Bullock et al., 2019). On the other hand, scientific jargon is sometimes necessary given that the use of simplified language can be misleading (Rice & Giles, 2017).

Using a 2 (jargon: present, not present) x 2 (attitude: consistent, inconsistent) x 3 (motivation: accuracy, defence, control) online experiment we will explore the influence of scientific jargon and its impact on the willingness to engage (like, share, comment) with science-related content online and shaping messages' credibility assessment.

Science communication / social media / jargon / motivation / online engagement

# Examining the Impact of Passive and Active Usages of Various Social Media on Subjective Well-Being: Results from Two Experimental Studies.

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Can social media make us unhappy? This issue is on everyone's mind, from citizens to policymakers. However, meta-analyses did not support this presumed dramatic impact (Appel et al., 2020). Moving beyond general usage, the Passive-Active Model (Verduyn et al., 2017) proposed that passive social media usage leads to upward comparisons and envy, decreasing well-being. Conversely, active social media usage increases social support, improving well-being. Although valuable, this model has been tested mainly through correlational studies applied to Facebook. It is therefore unclear if the Passive-Active Model is generalizable to all social media.

Two experiments were conducted to examine the effects of passive and active usages of Facebook, Instagram, and Twitter on well-being.

Participants first completed well-being measures. Then, they were randomly assigned to either passively or actively use one platform (Facebook vs. Instagram vs. Twitter) for 10 minutes (Experiment 1) or 20 minutes (Experiment 2). Finally, they responded to the same measures.

Well-being was measured through life satisfaction and affects. Upward social comparison, benign and malicious envy, and social support were also assessed. In Experiment 2, the valence and topics of surfing were monitored.

Study 1 was conducted among 244 users (52% male, Mage = 29.84 years, about 40 participants per group), and Study 2 among 169 users (19% male, Mage = 19.91 years, about 30 participants per group).

The results will be discussed with regard to methodological and theoretical considerations to provide new research perspectives on how social media usage affects well-being.

Social media / well-being / Facebook / Instagram / Twitter

# The Power of Others: A Qualitative Mixed-Method Study of Norm Adaption and Norm Adherence on Social Media

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On social network sites (SNS), users are constantly exposed to other people's behavior. Risky practices such as the sharing of intimate information, but also undesirable behaviors such as incivility seem to propagate via SNS. Social influence research offers a theoretical lens to explain such contagion effects. Via perceptions of descriptive (what others do) and injunctive norms (what others approve of), users learn the appropriate code of conduct. Although the comparatively strong effect of prevalent behaviors of others on individual user behavior on social media has been shown in previous research, the psychological mechanisms underlying such processes received less attention. Particularly on social media, norm inference may be reinforced by algorithmic curation and popularity cues such as likes, shares, and comments. Yet, how and when people perceive and process such cues remains unclear. It is likely that normative cues are initially processed cognitively, but less is known about their impact on habitualized decision-making afterwards. Thus, an in-depth theoretical account and differentiation of a) how users adapt to prevailing norms on SNS, and b) how norms continuously drive user behavior is missing.

Focusing on self-disclosure as focal behavior, we explored initial norm adaptation and continuous norm adherence in a qualitative mixed-method study. Forty participants were asked to either browse a novel (mock-up, but functional and realistic) SNS or their favorite SNS. While using these platforms freely, we recorded participant's screens and tracked their eye-movements. After 15 minutes, we combined this approach with a think-aloud protocol. Afterwards, we conducted follow-up interviews to gain thick descriptions and reflections of their previous browsing experience as well as past use experiences using the critical incident technique. The analysis drew from Grounded Theory Method, using constant comparison between screen-recordings, eye-tracking data, and the transcriptions of the think-aloud protocols and interviews.

Social norms / social media / self-disclosure / qualitative study / mixed-methods

#### Privacy Calculus, Privacy Paradox, and Context Collapse: A Replication of Three Key Studies in Communication Privacy Research

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With the emergence of social network sites (SNS), privacy has become a staple research topic in communication science. By now, thousands of studies have investigated how privacy concerns relate to users' privacy protection behaviors and self-disclosure on SNSs. Despite such a large body of work, little attention is dedicated to the replicability of individual findings. To this day, the privacy literature only includes few, rather conceptual than exact replication studies. Yet, scientific claims can only be trusted if studies repeated under the same conditions lead to the same results. To fill this gap, this preregistered study replicated three key studies that are representative of three prominent research lines in the work on privacy on SNSs: Krasnova et al.'s (2010) investigation of the privacy calculus, Dienlin and Trepte's (2015) study on the privacy paradox, and Vitak's (2012) analysis of the impact of the context collapse. We therefore conducted a survey study with n = 797 (80% power for detecting small effect sizes) which included all three studies' items. The first goal was to conduct exact replications, i.e., estimate the same structural equation models outlined in the original papers. We assessed the replication success of individual paths by checking whether the original effect size was included in the 95% confidence interval of the replication. Second, we tested whether the analytical robustness of the findings held across meaningful modifications of the models (e.g., inclusion of previously omitted paths, alternative specification of measurement models). Finally, given that all three studies investigated the relationship between privacy concerns and privacy behavior, we explored the robustness of this relationship across a variety of conceptual (e.g., different operationalizations) and analytical decisions (e.g., inclusion of covariates, subset analyses).

Privacy / self-disclosure / social network sites / replication

#### They approve but they don't act: Promoting sustainable behaviour in explainer videos by using (conflicting) social norm appeals

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To motivate sustainable behaviour, social norm appeals (SNAs) have proven successful when individuals learn that the majority engages in the behaviour (descriptive SNA, DSNA) or that there is majority approval (injunctive SNA, ISNA). However, when the behaviour is not prevalent, minority DSNA run the risk of backfire effects. In this case, majority ISNAs could be used instead of minority DSNAs. Nevertheless, they can be counterproductive if majority ISNAs do not match salient descriptive minority norms (Smith et al., 2022). To counteract this, ISNAs might be combined with dynamic DSNAs: The majority has a positive attitude, and more and more people start acting accordingly. However, studies investigating dynamic DSNAs did not address this social norm conflict and vice versa. Furthermore, most studies use text stimuli, but a video might facilitate effects (Rhodes et al., 2020). Moreover, it is not clear what role characteristics play in determining whether minority DSNAs are effective or backfire (Carfora et al., 2022; de Groot et al., 2022). Different DSNAs appear to have greater impact on individuals with weak than strong personal norms. However, those studies did not include (majority) ISNAs which might have stronger effects.

This fundamental research investigates how SNAs can be used within explainer videos to promote sustainable minority behaviour and if there are differences depending on personal norms. We will conduct a two-wave study because measuring moderators/covariates before the stimulus may lead to priming effects, while measurement afterwards may be influenced by it (N=1400). In the first survey, perceived social norms, personal norms, environmental concern, behavioural intentions, and pre-attitudes are measured. Two weeks later, respondents participate in a 3 (DSNA: static vs. dynamic vs. absent) × 2 (ISNA: present vs. absent) between-subjects experiment. They will watch an explainer video about voluntary carbon offsets including different SNAs before persuasive outcomes are measured again.

https://osf.io/87y6t/?view\_only=bb647eae503446d5b03aa58e777214fe

Social norm / social norm appeals / experiment / persuasion / minority behaviour

#### Listen to me!—An Experimental Observation of Channel Choice in Mobile Instant Messaging Within Close Same-Sex Friendships

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Communication is important in relationships and for intimacy (Trenholm & Jensen, 2008). Hereby, it is thought that intimate conversations might indicate a person's investment (Shackelford & Buss, 1996) with several studies suggesting that self-disclosure and intimacy are more important in female same-sex friendships (SSF; e. g., Dindia & Allen, 1992; Shackelford & Buss, 1996; Shaffer Hand & Furman, 2009).

As nowadays communication also occurs via Mobile Instant Messaging (MIM; e. g., WhatsApp)—which offers different communication channels—this study observed intimate MIM communication. Thereby, a research gap regarding voice messages (VMs) was addressed by assuming that VMs might be suitable for natural, authentic intimacy—especially for high-intimate conversations. Also, VMs might have higher importance in female SSF.

Central research questions were:

- RQ1: Are VM and TM use related to intimate communication?
- RQ2: Do sex differences in same-sex communication via TM and VM use exist?

This laboratory study investigated channel choice and sex differences in a 2 (Sex: male, female) x 2 (Intimacy: low, medium, high) mixed design. Intimacy served as within-subject factor. Based on short vignettes, describing differently intimate scenarios (low vs. medium vs. high) of a close SSF, participants first indicated in which channel their SSF would tell them about it (TM/VM). Then they had to select the channel in which they would reply (TM/VM). Further, they had to indicate the general probability of using TM and VM for such intimate content (visual analogue scale; 1 = very unlikely to 101 = very likely). After all scenarios were processed, they had to send the respective message in their previously chosen channel. Further friendship-relevant data was collected during the whole process (e.g., closeness, Aron et al., 1992; intimate disclosure; Ackermann et al., 2018). Afterwards, the left MIM messages were transcribed and analyzed regarding linguistic markers (e. g., word count).

Mobile instant messaging / smartphone / sex differences / voice message / text message / channel choice

### How credible is ChatGPT? An experimental comparison of ChatGPT, Alexa, and Wikipedia

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Theoretical background: Language models such as ChatGPT have recently improved considerably. However, these models currently often "hallucinate," that is, they make up information. Prior research has shown that people perceive information as more credible and that people are less able to distinguish between high and low-accuracy information when it is read by a voice assistant vs. presented as a search engine snippet (Gaiser & Utz, in press). The underlying processes are, however, unclear. Elaborate processing of auditive (vs. written) information might be lower, or the dialogic nature of talking with an agent might trigger (para)social processes, thereby increasing perceived credibility. ChatGPT provides written text but shares the dialogic style with voice assistants.

Overall Research question: How are credibility judgments and identifying low-accuracy information affected by the medium? What are the underlying processes?

H1: Perceived information credibility is higher when information is received from Alexa compared to Wikipedia.

RQ1: Is there a difference in perceived information credibility between receiving information from ChatGPT and receiving information from a) Alexa b) Wikipedia?

H2: The differences in perceived information credibility between low and high-accuracy information are higher when individuals receive information from Wikipedia compared to Alexa. Further RQs: Do social presence, social attraction, elaborate processing, and perceived enjoyment mediate the effects of the medium on credibility?

Methodological approach: A preregistered online experiment (aim: n = 600) with a 3 (medium: ChatGPT vs. Alexa vs. Wikipedia) x 2 (accuracy: low vs. high) x 2 (set: counterbalancing answers with low/high accuracy)-between-subjects design will be conducted in May 2023. Participants read/listen to answers to six questions and judge the per-

ceived credibility after each presentation. At the end, perceived social presence, enjoyment, processing effort, and social attraction (only for Alexa and ChatGPT) are assessed.

Credibility / smart speaker / ChatGPT / information processing / social presence

### YouTube Stillbirth Stories to Advocate for Better Obstetric Care

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#### Theoretical background

Pregnancy loss is both common and traumatic. Stillbirth, or death of a baby in-utero after 20 weeks gestation, occurs in approximately 1 in 160 pregnancies (Hoyert & Gregory, 2016). Some parents are starting to use social media to talk about their pregnancy loss. Sharing traumatic birth stories – though usually studied in the context of a traumatic live birth – can be healing and transform the trauma into a more positive experience for parents (Colton, 2004). The act of creating and sharing memories of the baby can reduce the negative psychological impact of stillbirth (Crawley et al., 2013). However, many bereaved parents find it difficult to share their story due to the stigma that surrounds stillbirth (Pollock et al., 2020). Stories about stillbirth are often silenced, as communities tell bereaved parents they should not talk about their stillborn baby, as this makes others uncomfortable (Pollock et al., 2020). As a result, many of the pregnancy loss stories shared online are a form of activism, actively fighting the stigma associated with pregnancy loss (Andalibi & Forte, 2018).

#### Research question

How are women and other birthing people intentionally or unintentionally advocating for their own obstetric care and treatment in stillbirth birth stories shared online?

#### Methodological approach

In March 2023, the top 100 videos deemed most relevant by the YouTube algorithm using the keywords 'stillbirth story' were assessed. Nineteen videos met the inclusion criteria and were included in the analysis and transcribed verbatim. To analyze the data, we conducted a thematic analysis of the transcripts following Braun and Clarke's (2012) guidelines, whereby recurring themes that emerged from the transcripts were identified

and related to each other. This study was exempt from ethical approval due to the public nature of the data.

Health communication / stillbirth / online birth stories / social media advocacy

## Affective social media literacy matters: A cluster randomized controlled trial of the Vibe Check intervention program

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Social media literacy [SML] is assumed to empower adolescents in their interactions with positivity biased social media content (i.e., idealized and curated depictions of appearance and lifestyle). In this respect, interventions have been set up that teach adolescents the needed SML skills. A few studies have tested the effectiveness of SML interventions on this positivity bias. One intervention seemed effective in increasing SML and reducing harmful effects of idealized content on body image, one was only effective among girls and another one was not effective. These inconsistent results may have occurred because they all focused on transmitting cognitive SML aspects (i.e., critical thinking). Yet, as recent research showed that affective SML (i.e., adaptive emotion regulation) has more potential to mitigate negative positivity bias effects, interventions should be designed that focus on both.

Therefore, this study aimed to design a SML intervention that, for the first time, focuses on affective SML in addition to cognitive SML. We also aimed to test the effectiveness of this intervention in increasing SML skills (i.e., cognitive and affective), well-being (i.e., body-esteem, FOMO, social well-being) and digital flourishing.

Towards this end, we developed together with professional stakeholders the Vibe Check intervention. This intervention is based on social-emotional development programs to help adolescents recognize and express the emotions they experience when interacting with positivity bias social media content, and it teaches them strategies to adaptively deal with these emotions. To test its effectiveness, we conducted a cluster-randomized controlled trial. With block randomization, schools were assigned to the base intervention condition, the full intervention condition with influencer endorsements, and the control condition. Students from the first grade (12-14 years) completed assessments on three occasions: baseline, one-week post base-line and three-weeks post base-

line. Analyses will compare outcomes from pre- to post-intervention (within-person) and between control and intervention conditions (between-person).

Social media literacy / intervention / emotions / adolescents / cluster-randomized controlled trial

### Effects of Subjective Climate Change Knowledge on Pro-Environmental Behavior and Information Selection

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People are often expected to make informed decisions. However, research suggests that it is the self-perception of one's knowledge—not the actual knowledge itself—that predicts whether a person performs a specific behavior. In the present study, we apply these findings onto the domain of climate change. We hypothesize that higher subjective knowledge increases the adoption of pro-environmental behaviors (H1). As a second research goal, we investigate competing hypotheses on how subjective knowledge influences information selection in media systems as well as the cognitive effort invested into processing this information. On the one hand, higher subjective knowledge might decrease the likelihood of seeking new information (H2a) as well as the cognitive effort invested (H3a), since individuals might perceive their information needs fulfilled. On the other hand, higher subjective knowledge might increase the willingness to seek new information (H2b) and the invested cognitive effort (H3b), through being attributed to one's climate change related self-schema.

We will test the hypotheses in a between-subjects online experiment with one factor. We will manipulate subjective knowledge through providing fake feedback in a climate change knowledge test. Pro-environmental behavior will be measured through assessing whether participants decide to donate to an environmental organization and to sign a climate change related petition. To measure information selection, it will be assessed whether participants choose a news article on climate change when being presented with a selection of articles from different domains. Subsequently, all participants will be required to read the same article about climate change. Depth of processing will be assessed via self-disclosure, reading time, and participants' performance in a surprise memory test. Uncovering effects of subjective knowledge will help to further theorize the causal sequence between metacognition such as subjective knowledge and subsequent (media related) actions as well as the design of educational interventions on climate change.

Subjective knowledge / information search / information processing / climate change

#### Algorithmic Bias in Creative Artificial Intelligence?

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According to the machine heuristic, humans often perceive technology, like artificial intelligence (AI) to be objective and unbiased. In contrast, decisions of AI used in various contexts are prone to algorithmic bias: a systematic bias in outputs of algorithms, which leads to a benefit or disadvantage of groups or individuals. It occurs due to bias in society that results in biased data the AI is trained with. We focus on potential algorithmic bias in creative AI, a phenomenon, which has received a lot of attention in recent months. AI is now able to generate creative content like pictures and stories from short textual prompts given by users (e.g., ChatGPT, DALL-E2, or Midjourney). While critics highlight the potential danger of algorithmic bias in these frequently used creative tools, programmers could also take precautions to increase equality and diversity in AI-generated content. However, scientific reports, and systematic analyses on how AI-generated creative content reflects bias are scarce. Hence, we first address the question whether content generated by creative AI is impacted by an algorithmic bias. We conduct content analyses to detect effects of algorithmic bias in several AI systems and for different types of discrimination (e.g., gender discrimination, race discrimination). In addition, we consider reactions to algorithmic bias in creative AI. Users' reaction to creative content is influenced by artist information and a lack of mental capacities attributed to AI. In other fields of application, the source (human or AI) of discrimination has been shown to influence perceived objectivity and moral outrage. In a second study, we examine the effect of artist information on users' perception of creative content, and on their response, when they learn that the content is biased or diversified, in a 2 (artist information: human vs. AI) x 2 (content: biased vs. diverse) design.

Artificial intelligence / algorithmic bias / creative AI / machine heuristic

## "No uninteresting things, only uninterested people": Boredom-Related Factors Behind Situational Online Prograstination

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This paper investigates the relationships between situational online procrastination and boredom. Procrastination is the unnecessary postponing of tasks although it will not be more beneficial than the long-term goals (Klingsieck, 2013). The Internet enables attractive alternatives to task completion and thus procrastination (Meier et al., 2016). Boredom proneness is a strong predictor of using the Internet for procrastination (Sümer & Büttner, 2022). However, the behavioural aspect of online procrastination is understudied. In Study 1, we examined the predictors of online state procrastination and state boredom. Previous research suggests that boredom is a consequence of attentional difficulties (Hunter & Eastwood, 2018). Notifications are one source of inattention as they induce task-irrelevant multitasking (Deng, 2020). Hence, we hypothesised that being exposed to notifications would increase boredom, and that state boredom would increase state procrastination. We did an online, 2 (aversive text vs. pleasant text) x 2 (notifications present vs. notifications absent) between-subjects study where participants read a text. Afterwards, we used a task-delay paradigm to measure procrastination: Participants were informed that the text they read was the first part of a longer text and that they would have to read the second part. They could decide whether they wanted to work on the text immediately or whether they wanted to watch a short, funny video first. We used two measures of state procrastination: First, the behavioural decision (video first vs. text first); second, the strength of the motivation behind the decision (on a 9-point rating scale). In Study 2, we used the same procrastination paradigm in a lab experiment where the participants underwent either a boring or interesting version of a reading task at the end of which their performance would be evaluated to win a reward. This paper provides the first insights about the boredom-related causes of online state procrastination.

Online procrastination / state procrastination / boredom / attention

## Digital Inequalities and Online Privacy: Using Bayesian Inference to Investigate Differential Access to Privacy Information as a Possible Cause

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Digital inequalities (DIs) are social inequalities transferred to the online world and describe systematic differences in internet users' behaviors, skills, and experienced outcomes. Caused by sociodemographic factors, DIs have, for instance, been found regarding people's online privacy skills, knowledge, and behaviors. As an example, education is positively while age is negatively related to internet users' privacy literacy and protective efforts. Because legal approaches like the GDPR still shift responsibility for privacy-management primarily onto the users, it is essential to understand which factors contribute to digital inequalities in internet users' privacy behaviors. Therefore, we investigate DIs among two factors that are important for privacy protection, that is privacy literacy (i.e., factual protection knowledge) and privacy self-efficacy (i.e., confidence about one's protection abilities). Because people can have access to privacy information as part of schoolbased media literacy education programs, due to personal privacy-management experiences, due to their media diet, and probably also through their professional and social environment, we argue that this access to privacy information is also shaped by sociodemographic factors. According to the homophily principle, people tend to be embedded in social networks characterized by, for example, a common sociodemographic background which might also affect people's access to privacy information. Therefore, the present work pursues the questions how the sociodemographic variables age, sex, education, and migration background are related to internet users' access to privacy information, privacy literacy, and privacy self-efficacy and whether access to privacy information is an important avenue for people to gain both literacy and self-efficacy. To analyze our assumptions, we collected a representative sample of the German population (N = 3981). We will use a Bayesian structural equation model to overcome limitations of frequentist inference. Altogether, the current work offers an important analysis of the potential reasons for DIs in the realm of online privacy.

Online privacy / privacy literacy / digital inequalities / Bayesian inference

#### A Gendered View on Media Use Guilty Pleasures

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The term guilty pleasure is used heavily in public and academic discourse when discussing media habits. As a self-conscious moral emotion, guilt arises when people fail to follow internal and social norms. Media use is often perceived as hedonic behavior driven by a desire for immediate pleasure; however, as such pleasure can be considered ""bad behavior"" lacking long-term benefits, people may term many media use behaviors as guilty pleasures. Although men and women experience guilt differently when consuming media, research tapping into what media content is attributed to be a guilty pleasure by different people remains limited. In this preregistered study, we explore which media content people label as guilty pleasure and test whether the term is used in a gendered way (https://osf.io/6r4qd/?view\_only=cfb2a1cb882746bf86f3f8bed282395b).

A mixed-methods survey was fielded using a panel company to reach a representative Dutch adult sample and completed by 1863 participants. Participants named their own guilty pleasure in terms of media use or a typical media guilty pleasure when they did not have one themselves (additional option: not knowing the term). Finally, participants rated the named content on a scale from 1 (mainly for women) to 10 (mainly for men). Four hypotheses were tested, namely (H1) women are more likely to report personal media-related guilty pleasures, (H2) content named as a personal guilty pleasure is perceived as being more ""for women,"" and (H3) this is similarly true for typical guilty pleasures. We further expected that the gendered nature is more pronounced for typical guilty pleasures (H4). Open-ended survey responses were analyzed to identify content commonly associated with personal and typical guilty pleasures. The codebook includes categories for type/genre, platform, and specific titles. This mixed-method approach contributed to a deeper understanding of media guilty pleasures and first insights on whether there is a gendered view on guilty pleasures.

Guilty pleasure / entertainment / gender / reception mode

## Let's talk about sex - A study on the impact of sexual education on TikTok based on the example of @doktorsex

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In the field of sexual education, social media in particular play an important role for adolescents and young adults. The central goal of sexuality education is to promote sexual health knowledge in a target group-specific manner, to dispel false assumptions, and to educate about sexual myths and misconceptions (Dutt & Manjula, 2017). Traditional sexuality education in schools mostly deals with risk prevention topics. In contrast, fears, uncertainties and problems that adolescents and young adults have with regard to their sexual health are often neglected (Döring, 2021). Online sex education is increasingly addressing these aspects, with TikTok in particular enjoying great popularity among teenagers and young adults (Duggan, 2022; Zhu et. al., 2019). With over 918,000 followers (as of April 2023), the TikTok channel @doktorsex is one of the best-known social media sex education services in the German-speaking countries. This paper examines the impact of @doktorsex use on sexual health knowledge, sexual self-efficacy, and sexual shame experience. In addition, the influence of experiencing suspense while viewing @doktorsex content on health knowledge and sexual self-efficacy is considered. We assume the following:

Hypothesis 1: The more frequently teens and young adults view @doktorsex content on TikTok, the higher their

- 1. a) sexual health knowledge.
- 2. b) sexual self-efficacy.

Hypothesis 2: The frequency of reception of @doktorsex on TikTok is associated with higher experience of suspense, which in turn is associated with

- 1. a) higher knowledge about sexual topics.
- 2. b) higher sexual self-efficacy.

Hypothesis 3: The more frequently teens and young adults view @doctorsex content on TikTok, the lower their sense of sexual shame.

To examine the hypotheses, we conducted an online survey with n = 465 participants recruited via the TikTok channel @doktorsex. The collected data were subsequently transformed into a structural equation model and analyzed by using the statistical software RStudio.

TikTok / online sexual education / sexual self-efficacy / sexual shame / sexual health knowledge

#### Short But Still Valid: Validating Single-Item Measures for Key Media Psychology Constructs for Experience Sampling Research

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With the deeper integration of digital media into everyday life, media psychologists' interest in experience sampling methods (ESMs) has increased. In ESM designs, participants are sent several, short surveys per day, asking them about current/recent experiences. ESM's advantages include being able to assess situational factors and minimize recall problems. Yet, ESM also has disadvantages, most importantly, their intrusiveness in participants' daily lives and the effort required. To reduce effort and increase compliance, constructs are often assessed with one item in ESM studies. Single-item measures, however, are frequently criticized for having lower reliability and validity than multi-item measures. ESM-specific method literature recommends to use only measures that were validated for ESM to guarantee validity. However, there are nearly no validated single-item measures for ESM available. This research project aims to validate one-item measures for key communication science/media psychological constructs.

The project consists of 5 studies. First, we surveyed scholars to identify key constructs for ESM for media psychology/communication science. Based on this, we selected 17 constructs including, for example, online vigilance, entertainment experiences, and heuristic and systematic processing. In a second study, we established the definitional correspondence and comprehensibility of items to identify best-fitting single-items per construct (N = 106, content-related validity evidence, preregistration: https://osf.io/uxs63/?view\_only=2f1a1b235b7b4ccb9c27be4e368579da). In a third study, we recruited 400 participants via Prolific and asked them about four recent media use situations to test whether the selected single-item measures correlate with the full scales and with other constructs as expected (evidence regarding relationships with criteria, prereg-

istration: https://osf.io/9a4rc/?view\_only=5cef436c0aba46cfa417e61a0b88f0f6). In a fourth study, we will develop several vignettes per construct in order to test the single-item measures' situational variability as this is a key requirement for situational measures. The final study will include testing the single-item measures in an ESM study. We will present the results of at least Study 1-4.

Experience sampling / validation / single-items / measurement

## What do people watch under adversity? Testing interactions of semantic affinity and coping style using Netflix data donations

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Mood management theory (MMT, Zillmann, 1988) proposes that people use media to cope with stress. When a specific stressor occurs, such as conflict at work, MMT predicts that the similarity of subsequently selected media content with the stressor—semantic affinity—should be low to improve mood (Carpentier, 2020). As such, MMT characterizes media use as a form of avoidance coping, oriented away from the stressor. Approach coping, in contrast, refers to coping efforts oriented towards the stressor (Roth & Cohen, 1986). Applied to media selection, this suggests that rather than avoiding semantic affinity, media users with a tendency for approach coping may choose content that portrays the stressor (Stevens & Dillman Carpentier, 2017). Previous MMT research, however, has largely neglected individual differences in coping styles. Following the MMT perspective, we thus propose a negative relationship between adversity in a specific life domain and selecting media content from that life domain (H1). Extending previous MMT research, we further assume that this relationship is moderated by coping style, with (a) approach coping inversing it and (b) avoidance coping strengthening it (H2).

Methodologically, we improve low external validity of previous research by combining 15 days of diary survey data (n = 123 participants) with Netflix data donations (n = 2,132 titles). We computationally match Netflix titles with IMDb descriptions and classify prevalence of different life domains (e.g., family, work) through zero-shot classification (Yin et al., 2019), manual content analysis, and genres (Kim & Oliver, 2011). Then,

we regress topic prevalence on self-reported levels of daily adversity in these life domains and include self-reported trait coping style as a moderator.

We expect our results to serve as an example of applying computational methods and data donations in entertainment research and give further insight into the role of media selection for coping with everyday adversity.

Coping / entertainment / data donations / mood management / diary study

### Seeing the world from above: How a virtual overview effect is related to global identity and pro-environmental behaviour

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Global environmental crises such as climate change require globally concerted action. Referring to Social Identity Theory, various scholars repeatedly argued that a global identity (i.e., identification with all humanity as inclusive ingroup and concern for people all over the world) can motivate such action for the benefit of all humanity. Indeed, prior research found that global identity is positively related to people's pro-environmental behaviour. However, little is known about how to strengthen global identity.

Based on qualitative research on astronauts' experiences termed overview effect, we hypothesised that a virtual reality (VR) simulation of viewing Earth from outer space elicits awe (i.e., an experience of extraordinary vastness associated with feeling moved, amazed, and humble). We further assumed that the simulation makes a global identity more salient, and through increased global identity, motivates pro-environmental behaviour. To test the uniqueness of the overview effect on global identity, we compared the VR simulation to music, which has also been found to elicit awe in prior research. We exploratively asked whether the effects of the VR simulation on global identity salience and pro-environmental behaviour are stronger compared to music (i.e., stronger main effect) and intensified by music (i.e., interaction effect).

Based on an a priori power analysis, we conducted a pre-registered laboratory experiment with a convenience sample in Germany (N=128), using a 2 (VR: yes vs. no) x 2 (music: yes vs. no) between-participant design. We assessed awe twofold with an experi-

ence scale and an affect scale, both adapted from prior research. Global identity was measured with the Identification With All Humanity Scale. Moreover, to measure pro-environmental behaviour, we asked participants whether they wanted to sign a (fictitious) petition asking the government to prioritize the Paris climate agreement.

Virtual reality / overview effect / awe / global identity / pro-environmental behaviour

#### Digital Emotion Contagion in Online Environments: An Automated Content Analysis of Comments from Self-Transcendent YouTube Videos

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Self-transcendent emotions (STEs) such as admiration, hope, or gratitude have many beneficial effects on media users and can be elicited by media content (Oliver et al., 2021)—including online videos (e.g., Dale et al., 2017). Digital emotion contagion literature suggests that viewers' emotional responses to online content can converge with those expressed by others (e.g., in video comments) (Goldenberg & Gross, 2020), potentially creating a positive, reinforcing environment. While user comments were indeed found to affect viewers' responses to STE-inducing videos (Krämer et al., 2021), research on the comments themselves is sparse (Oliver et al., 2021). As STEs stimulate a need to share the experience (Ji et al., 2019), it seems likely that users would report video-induced STE responses in the comments. Hence, we expect a high congruence between specific STEs expressed in the video and those expressed in the comments (H1). Moreover, viewers may like or reply to comments, which increases comments' visibility and potential impact. As viewers identify mostly with commentators that express emotions in line with STE-inducing videos (Krämer et al., 2021), we expect congruent comments to receive more engagement (H2).

This study examines 53,433 English language top-level comments from 86 videos coded for STE elicitors by Dale et al. (2017). We automatically coded STEs expressed in these comments using the STE-dictionary (Ji & Raney, 2020) and EmoRoBERTa (Ghostal, 2021)—a transformer model (Vaswani et al., 2017) trained on the GoEmotions dataset (Demszky et al., 2020). Our gold standard validation (n = 200 comments coded by two coders) demonstrated better reliability for the transformer (Agreement .82–.95) than the dictionary (Agreement .71–.92).

In our analysis, we will correlate the proportion of scenes depicting an elicitor (coded by Dale et al. [2017]) with the proportion of comments expressing that emotion (H1) and test the influence of content-comment congruence on engagement (H2).

Self-transcendent emotions / emotion contagion / online videos / user comments / computational methods

## Analysing the role of processing fluency in the relationship between attributes of online media and political opinion

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Attributes of online media (AOM) like personalized environments and repetition of content are assumed to be related to opinion formation and potentially extremization and polarization. In this context, processing fluency and its effects on judgments, like the repetition-induced truth effect, have often been discussed as mechanisms behind these relations. However, to our knowledge, previous research has not specifically examined the mediating role of processing fluency and related judgments in the association between AOM and general attitudes toward a politically relevant topic. The present work aims to close this gap.

In the first experiment, the effect of personalization will be explored as a between-subjects factor (3 levels). To this end, participants will be presented with a majority of statements that are either congruent or incongruent with their previously assessed attitudes towards the use of autonomous weapons, or neutral regarding the topic. The time spent processing each statement will be recorded as a measure of processing fluency, and participants will be asked to judge how true, familiar, likeable, and trustworthy they perceive each statement to be. Thus, processing fluency and judgment type (judgment of truth, trust, likeability, and familiarity) are assessed as within mediator variables. Participants' opinions on the topic will be assessed after the experimental manipulation, again. In a second experiment, the effect of repetition will be examined using the same experimental design. Here, participants will be presented with statements they will be previously exposed to and "new" statements. For this set of statements, the majority of "old" statements will be either in favour of or against the use of autonomous weapons. In the control condition, for pro, contra, and neutral statements, the same amount of "old" and "new" statements will be presented.

To analyse the serial mediation in each experiment, we plan to use multilevel structural equation modelling.

Fluency/political opinion/repetition-induced truth effect/personalization/online environments

### Trust Resilience in Pedagogical Agents: Will Anthropomorphism Help Against Trust Decline?

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Automated agents are becoming more important in all areas of life, including learning and teaching. Thus, for optimal technology-mediated interaction with such automated agents, trust becomes important, especially appropriate calibration of trust. However, it is still unclear, if human-automation trust is similar to human-human trust (media-equation hypothesis) or if certain biases may prompt unique trust dynamics between humans and automated agents (unique agent hypothesis).

This study contributes to this discussion by tracking trust calibration regarding human and automated agents in a learning task. We hypothesize that trust declines as agent reliability declines (trust calibration) and that anthropomorphism (human-like qualities) should buffer against this decline in line with the unique agent hypothesis. This has already been investigated in other contexts (e.g., de Visser et al., 2016) but not yet in the context of language learning. Context may play a role because this buffering effect of anthropomorphism has not been conclusively demonstrated in previous studies.

In a conceptual replication of de Visser et al. (2016), n = 30 participants repeatedly guess the meaning of foreign words in a 4x4 within-subject design, that is, with the help of pedagogical agents varying in anthropomorphism (human, robot, smart speaker, and computer) that give recommendations systematically decreasing in reliability over time (from 100%, 67.5%, 50%, to 0%). In each of the 96 trials, participants (1) guess alone, (2) get an agent's recommendation, and (3) make their final decision. At each step, participants judge their self-confidence and rate their trust in the agent. The final decision (3) is also a measure of behavioral trust. Behavioral and judgment data are analysed via mixed-effects models and ANOVAs. Trust calibration would be indicated by declining trust with declining reliability. The unique agent hypothesis would be supported by an interaction of anthropomorphism and reliability regarding trust.

Trust in technology / anthropomorphism / artificial intelligence / language learning / pedagogical agent

#### People's Beliefs regarding Phones 'Listening' to Offline Conversations: Comparing results from the United States, the Netherlands, and Poland

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The surveillance effect is the phenomenon by which people believe that their electronic devices (e.g., smartphones, smart speakers) are listening in to their offline conversations, resulting in this information then being used for personalized communication. Though companies state that they are not engaging in such practices to target consumers with relevant advertisements, previous literature offers various explanations for why people might feel surveilled by corporations. One potential explanation is the confirmation bias: people are more likely to notice an online advertisement if it is about a service or brand they recently discussed with a family member or friend. Guided by the Dataveillance Framework, we will examine media users' beliefs and factors that predict when they are more likely to believe that their devices are listening.

After IRB approval and preregistering the study, we are now in the process of data collection with an online survey in the U.S., the Netherlands, and Poland. The U.S. and Europe are chosen based on their regulatory differences related to privacy. Additionally, Eastern European countries have undergone a recent transition from states with extensive state surveillance practices and limited guarantees of human rights to states embracing the European human-rights standards and enshrining a more robust body of human-rights guarantees in their constitutional orders. This may impact individual expectations and experiences of surveillance.

The current research will advance our theoretical understanding of the omnipresence of surveillance and privacy issues in the media landscape. Furthermore, gaining insights in the surveillance effect is vital to combat consumers' false beliefs regarding digital advertising. It highlights the role of transparency regulations and literacy programs in it and shows the potential regulators have in correcting false and contributing to forming correct beliefs.

Surveillance effect / privacy / dataveillance framework / international survey

### Do YouTube influencer videos trigger consumer desires among teenagers?

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Previous research has shown that brands and materialistic values are present in 9 out of 10 YouTube influencer videos (authors, under review). Based on these figures as well as those on the vast popularity of YouTube influencers among teenagers, combined with insights from prior research revealing that exposure to traditional commercial media increases youth's desire for advertised products as well as their level of materialism, we were inspired to investigate the following research question: Does teenagers' exposure to YouTube influencer videos predict their advertised product desire and materialism?

Within this study, we focus on young teenagers between the ages of 12 and 15 years old because they are in a formative stage as consumers (Valkenburg & Piotrowski, 2017). To examine the causal relationships between teenagers' exposure to YouTube influencer videos, advertised product desire, and materialism we will conduct a two-wave panel study and analyze our data by means of cross-lagged panel models using structural equation modeling. All participants are to be recruited through a representative online panel. The first wave of data was collected in February/March 2023 and contains 458 valid responses. All teenagers who provided valid responses will be recontacted for the second round of data collection in May/June 2023.

To test our hypotheses, we will examine the valence and significance of the lagged effect of teenagers' exposure to YouTube influencer videos at Time 1 on advertised product desire at Time 2 (H1), of exposure at Time 1 on materialism at Time 2 (H2), and of advertised product desire at Time 1 on materialism at Time 2 (H3). Hypotheses 2 and 3 will be tested for the overall construct of materialism as well as for the underlying dimensions of material centrality (H2a/H3a), material happiness (H2b/H3b), and material success (H2c/H3c).

You Tube influencers / teenagers / advertised product desire / materialism / longitudinal survey

## Effects of subtle and blatant antisemitic and islamophobic hate on ingroups and outgroups: an experimental study

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Even though exposure to online hate has been identified by current scholarship as one of the main threats in the cyberworld (Waquas, Salminen, Jung, Almerekhi, & Jansen, 2019), little has been done so far to understand the effects of online hate on media users. Ethnic and religious minorities can count as the most understudied target groups of online hate (Waquas et al., 2019) even though they appear to be among the most frequently attacked (Hawdon et al., 2017).

Some studies have shown that exposure to hate has harmful effects on those who experience it, especially the members of the groups being attacked (ingroup-members; see Boeckmann et al., 2002; Leets, 2001; Leets & Giles, 1997; Subrahmanyam and Šmahel, 2011). Among the effects of online hate on media users are short- and medium-term emotional effects, including dysthymic feelings, confusion, reduced well-being (Keipi et al., 2017; Tynes et al., 2004; Tynes, 2006), and reduced trust (Näsi et al., 2015). Online hate also breeds further hateful discourse online – unless media users cope with the initial expression of hate by employing problem-focused coping strategies. At the same time, online hate comes in different shapes and can be blatant versus subtle (Ben-David & Matamoros-Fernandes, 2016). These differences are likely to have different effects on different media users.

In the current study, we were interested in the differential effects of blatant versus subtle hate messages on ingroup versus outgroup members of hate target groups. It comprised two between-subjects experiments in which individuals were confronted with either antisemitic Twitter comments in Study 1 (N = 81) or islamophobic ones in Study 2 (N = 67). IV1 hate explicitness distinguished blatant from subtle hate expression; IV2 religious membership differentiated ingroup and outgroup members. Outcome variables were well-being, self-esteem and coping. Data were subjected to analyses of variance.

Hate speech / hate speech effects / religious groups / islamophobia / antisemitism

#### The persuasive effect of user comments on YouTube in moral discourse: Exploring the influence of ideology-matching moral framing and impression motivation in the context of social media

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The new social media landscape influences the way individuals interact with information on moral topics and make moral judgements. Here, comments may affect individuals' interpretation of information concerning the moral debate (Winter & Krämer, 2016). Research explaining the psychological processes of moral decision making emphasizes the significance of using messages containing moral arguments (Feinberg & Willer, 2015). Matching moral arguments to the target group's dispositions can influence the persuasiveness of said message (Feinberg & Willer, 2013). Therefore, using ideology-matching moral framing may be a powerful strategy for promoting opinion change (Hoover et al., 2018). This is especially relevant in social media where processes of social influence take place and, in accordance with the Heuristic-Systematic Model (Chaiken et al., 1996), an impression-motivated mode of information processing is promoted. This desire to make a good impression leads to individuals orienting themselves towards the majority opinion shown in comments and shifting their attitudes.

The aim of this study is to explore how individuals form attitudes when presented with comments containing moral arguments. We hypothesize that people adjust their attitudes to align with the perceived majority opinion conveyed through comments, particularly when being impression motivated. This persuasive effect is likely to be enhanced if moral arguments within comments match a person's political or moral beliefs.

In two pre-registered experiments ( $N=314,\,N=1015$ ) we utilized a 2x2x2 between-subjects design where participants were shown a YouTube video with accompanying comments, after which they gave their opinion on the topic. We manipulated the inclusion of moral arguments within the comments (harm vs. authority), their valence (positive vs. negative) and the participants' motivational states (high vs. low impression motivation). With this study we intend to advance research on the relevance of moral discussions in social media by examining aspects of moral psychology from a media psychological perspective.

Social media / You Tube / user comments / moral framing / persuasion

#### An exploration of university students' perceptions on contextual predictors of cyber-bystanders' responses to cyberbullying on social media

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Along with the increasing penetration of information and communication technologies around the world, the phenomenon of cyberbullying has begun to receive increasing attention from scholars and the public. When occurring in a group setting, the different actors involved in cyberbullying incidents include: the perpetrator, the target and the cyber-bystanders. Although indirectly involved, previous research has shown that cyber-bystanders inevitably play an important role in the development of cyberbullying incidents by 'ignoring' the incident, 'helping' the target and 'joining' the perpetrator.

In the present studies, we explored students' perceptions about how contextual factors may be related to cyber-bystanders' tendencies to 'ignore', 'help', or 'join' via a mixed qualitative and quantitative approach. Thus, our studies contribute to deepening existing knowledge of cyber-bystander behaviour and may lead to further insights for the design of future cyberbullying intervention and prevention programmes.

In a pilot study (n = 14), semi-structured interviews conducted through Zoom Video-conferencing were used to qualitatively explore potential contextual predictors of cyber-bystanders' reactions. All interview transcripts were analysed thematically and the articulated contextual predictors formed the basis for generating a sufficient number of statements used in our subsequent main study. Participants (n = 40) sorted and thereby explicitly judged 31 statements such as "cyber-bystander anonymity" or "cyber-bystander cyber-victim relationship" according to the Q sort method and were interviewed about this procedure. Q sort judgements were analysed quantitatively to inform relative importance of contextual predictors. Interviews were transcribed and analysed qualitatively to validate participants' responses.

Cyberbullying / bystanders / social media / contextual predictors / Q method

#### Gender Diversity in Entertainment Television, Parental Mediation, and Preadolescents' Gender Attitudes and Beliefs: An Experimental Study

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From birth, socialization agents explicitly and implicitly communicate gender stereotypical beliefs on appearances, traits, occupations and activities. Once internalized, they might limit children's interests, and create gendered beliefs and attitudes. This may not only constrain competence development, and personal and career aspirations, but also induce low tolerance toward gender nonconforming behaviors. In this vein, media scholars have predominantly examined the presence of stereotypical gender portrayals in minor's entertainment media, and their adverse effects on gender attitudes and beliefs. Subsequently, mediation studies have focused on parents' efforts to mitigate them. Recent research does, however, show that entertainment programs for preadolescents increasingly include gender diverse and counterstereotypical depictions. Little is known about their impact, but research on other media types for younger children shows positive findings. Moreover, such diverse representations change the role of parental mediation from countering to supporting the portrayals, which may reinforce their beneficial effects.

We aim to advance the literature by investigating the effects of a positive transgender representation in entertainment television and parental mediation on preadolescents' gender attitudes and beliefs. Additionally, we aim to examine the moderating role of identification and similarity with a transgender media character, and gender identity constructs.

We conducted a mixed-design experimental study with 75 mother-child (9-13 years) dyads at their homes. For the pretest, they each completed a questionnaire regarding gender attitudes and parental mediation. For the posttest (2-3 weeks later), participants were first exposed to a storyline of 4eVeR, a Flemish fictional youth television series. The combined scenes resembled an episode, and showed a positive representation of a transgender boy who is new at school. Dyads were randomly divided into two conditions: (1) no parental mediation: mother and child watched the 'episode' separately; (2) parental mediation: they watched it together. Afterwards, participants completed a questionnaire on gender attitudes and the 'episode'.

Entertainment television / gender attitudes and beliefs / parental mediation / preadolescents / gender diversity

#### Coping with climate change through fiction? Examining the influence of dispositional cognitive avoidance and vigilance on selective exposure to fictional and non-fictional climate narratives

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Climate change threatens the lives of many people and poses great uncertainty for the future of humankind (IPCC, 2022). Although the issue increasingly permeates public discourse, individuals might avoid climate change related information to avoid negative emotions (Stoknes, 2014; Yang & Kahlor, 2013). The avoidance or seeking out of climate change information is likely to be influenced by individual differences in dispositional coping with threats (i.e., vigilance and cognitive avoidance, Krohne & Hock, 2011). Cognitive avoidance results if emotional arousal in response to a threat is perceived as non-manageable. Particularly for individuals high in dispositional cognitive avoidance, fictional narratives (Climate Fiction or Cli-Fi; Andersen, 2020) might present a preferable approach to climate change issues: The simulations afforded by fictional narratives allow to explore emotionally extreme scenarios at an aesthetic distance and in a safe and controlled manner (Mar & Oatley, 2008; Oatley, 1999).

We will present the results of an experiment in which we investigate the moderating role of dispositional coping modes (Krohne & Egloff, 2005) for selective exposure towards fictional versus non-fictional climate narratives. In a media choice scenario, participants will be presented with various synopses of fictional and non-fictional narratives on climate change or another topic that is less likely to be perceived as threatening (e.g., historic narratives). Results will be discussed in the light of theories of narrative fiction and individual differences in selective exposure towards climate change related information.

Fiction / selective exposure / coping / climate change / narrative

# A window to what we miss: Effects of not being included in other users' social media posts on fundamental needs, discrete emotions, and online coping behavior

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From an evolutionary perspective, the experience of social exclusion—defined as feeling apart from others physically or emotionally—is highly aversive. In recent years, media psychologists demonstrated that social media platforms can be experienced as a source of exclusion as well. Most research in this field focused on exclusion experiences on Facebook, such as lacking Likes or comments on text-based status updates. Extending previous work, the present manuscript examines the experience of not being included in pictures posted by other users. Moreover, addressing a recently formulated research gap, it distinguishes two reasons for not engaging in the group activity being displayed: (a) not being invited (i.e., other-exclusion) and (b) voluntarily choosing not to participate (i.e., self-exclusion). This aims to test whether individuals who isolate themselves still feel apart from others when stumbling upon the digital footprint of their decision or whether their agency in this situation mitigates the negative consequences. Thus, the present manuscript provides two theoretical contributions: Transferring the temporal need-threat model—which specifies individuals' psychological reactions and coping behaviors—to a largely understudied exclusion experience and integrating a potential boundary condition. This leads to the following research problems: (1) To what extent does not being included in other users' social media posts (i.e., either due to self- or other-exclusion) threaten individuals' fundamental needs and affect their discrete emotions? (2) What online coping behaviors (i.e., prosocial, antisocial, withdrawal) do users perform after experiencing self- versus other-exclusion, and how effective are they in restoring needs and regulating emotions? A pre-registered vignette experiment (N = 348; see https://t1p.de/t91br for more details) was conducted to test specific hypotheses and research questions. We manipulated interpersonal experience on three levels (inclusion; self-exclusion; other-exclusion), tracked participants' behavioral responses to the pretested social media post, and measured their psychological reactions both pre- and post-coping.

Social exclusion / social media / neet threat / emotions / coping

## Alexa, Can You Really Help Me? Older Adults' Perspective on the Opportunities and Threats of Intelligent Voice Assistants.

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New technologies such as voice assistants are constantly being developed to assist in everyday life, but not all age groups are reached equally. Older adults in particular tend to be left behind for a variety of reasons and do not possess or acquire the skills to interact with new technologies (Vines et al., 2015). This contradicts the assumption that it is precisely this target group that could benefit tremendously from advancing technologies which can facilitate tasks that become more difficult with age. For instance, due to the employment of natural language, speech-based voice assistants do not need a complex user interface to contact loved ones or to retrieve information from the internet. To investigate the reasons why many older adults do not (want to) use a voice assistant, although they could help them maintain their independence, semi-structured interviews were conducted with 19 adults between 65 and 86 years. The interviews included a brief demonstration of an Alexa voice assistant and questions about the participants' expectations and preferences regarding a voice assistant. This was followed by a (wizard-of-oz operated) interaction, with a speech assistant, that helped with conducting an everyday task. After the interviewees evaluated the interaction, a vignette describing a scenario was read aloud in which the voice assistant appears to be eavesdropping and the participants were asked about their perception of this scenario. In addition, their understanding of the functionality of a voice assistant was assessed. The aim was to gain insights into older adults' expectations and preferences, evaluation, concerns, and technical understanding regarding voice assistants.

Older adults / intelligent voice assistants / human-computer interaction / acceptance / privacy concerns

#### (Don't) Stop Believing: Risk and Protection Factors for Engagement with Online Misinformation and their Influence on Discrimination Sensitivity and Partisan Bias

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Prior misinformation research often lacks comparisons with the processing of true information and specifically focuses on the dangers of right-wing or conservative misinformation. However, it is not yet clear whether rightists are generally more susceptible to misinformation (e.g., Arendt et al., 2019) or whether vulnerability increases with extremity on both sides of the political spectrum. Against this background, the goal of this research is to provide a more comprehensive view on the factors that promote or inhibit engagement with online (mis)information across the political spectrum. For this purpose, we differentiate between discrimination sensitivity (the ability to discern true from false information) and partisan bias (the tendency to prefer belief-congruent over belief-incongruent information, regardless of message veracity; Batailler et al., 2022). As pre-registered hypotheses, we assume that political extremity, right-wing orientation, dark triad personality traits and the use of social networking sites and instant messengers for news decrease discrimination sensitivity and increase partisan bias. As protection factors, we expect that cognitive abilities, media literacy, intellectual humility, and need for cognition increase discrimination sensitivity, with the latter two also reducing partisan bias.

We employ an online experiment (N = 992) in which people rate 16 news posts with regard to perceived credibility, likelihood of further reading and sharing. The news posts vary according to the within-subject factors message veracity (true vs. false) and political leaning (left vs. right). According to participants' political orientation, the stories can be classified as belief-congruent and belief-incongruent. On the basis of hits (true news regarded as true) and false alarms (false news regarded as true) in the categories of belief-congruent and incongruent articles, discrimination sensitivities and partisan biases for perceived credibility, selective exposure and sharing can be calculated. Results will pro-

vide a more nuanced view on risk and protection factors in the processing of political (mis)information.

Misinformation / credibility / news / confirmation bias / social media

### The Dark Factor of Personality, Epistemic Beliefs, and Climate Change Conspiracy Theories

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Climate change presents one of the most pressing global issues and calls for immediate action on a political, economic, and individual level. Despite overwhelming evidence for climate change, some individuals endorse conspiratorial ideas about it that downplay or deny its existence. We focus on the role of individual perspectives on the nature of knowledge and knowing (epistemic beliefs) to explain susceptibility for climate change conspiracy theories. A strong faith in intuition for facts, a low need for evidence, and a strong conviction that truth is political have been referred to as post-truth epistemic beliefs. Prior research has shown that post-truth epistemic beliefs are rooted in a general aversive personality disposition, the Dark Factor of Personality (D), which is considered to be the core of all dark personality traits. Further, there is evidence that the nexus of D and post-truth epistemic beliefs predicts the endorsement of conspiracy theories about COVID-19. We propose a mediation model that includes D as a predictor of post-truth epistemic beliefs, and an increased endorsement of climate change conspiracy theories as a consequence. An online study will be conducted assessing individuals' Dark Factor of Personality and epistemic beliefs using well established self-report measures with a response format ranging from strongly disagree (1) to strongly agree (7). The items measuring belief in conspiracy theories about climate change will be based on existing measures and popular conspiracy theories circulating at the time of assessment. The items will be answered on a 7-point scale from not at all likely (1) to extremely likely (7). Based on an analysis with G\*Power (r = 0.10,  $\alpha$  = .05 and 1- $\beta$  = .95), we will aim for 350 participants to account for potential exclusions. For the main analyses, we will use PROCESS version 3.4.1 for SPSS.

Conspiracy theories / climate change / epistemic beliefs / dark traits

#### Can You Explain Why You Did Not Recommend Something Else? An Experimental Study on the Effects of Contrastive Explanations and Person-Likeness on Trust in and Understanding of Algorithms

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Artificial Intelligence-based systems become increasingly ubiquitous but stay opaque to most users. For instance, when using recommender systems, people are confronted with outcomes which the system evaluated as suitable for the inquiry without an understanding how this inquiry was processed. In this contest, explainable AI approaches (XAI) aim to increase users' understanding of and trust in these systems by presenting explanations on how an algorithm comes to a conclusion (Gunning et al., 2019; Samek et al., 2019; Shin, 2021). Two different but increasingly used explanation types are comparative and contrastive explanations. A comparative explanation describes why a decision was made, for instance because the input shared a certain number of attributes with the chosen outcome (k-nearest neighbor algorithm; e.g., Taunk et al., 2019). Contrastive explanations (also known as counterfactual explanations, e.g., Byrne, 2019; Guidotti et al., 2019; Verma et al., 2020) explain which changes in the input would have led to a different classification. Moreover, there is a trend of equipping technological systems with human-like features (e.g., voice, language, social roles) to enhance the system's personlikeness which may also affect people's understanding and trust (e.g., Edlund et al., 2008; van Pinxteren et al., 2020).

Against this background, this preregistered study aims to investigate the effects and interplay of explanation type and person-likeness on understanding of and trust in an algorithm-based system and its output. In an empirical study with a 2 (contrastive vs. comparative explanation) x 2 (self-referencing vs. neutral formulation) between-subject design and a no explanation-baseline condition, 762 participants interacted with an online breakfast recipe recommender system. The breakfast guide gave either a contrastive,

a comparative, or no explanation and referred to itself either with "I" or as "the system". Effects on participants' factual and perceived understanding and their trust in the breakfast guide's skills and sincerity were measured.

Human-machine interaction / algorithms / artificial intelligence / explainable AI / contrastive explanation / person-likeness / trust / understanding

## Oh Boy!? Publication and Citation Gaps Among Male and Female Communication Researchers in the DACH region

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Women make up for 50% of members in the German National Association "DGPuK", however they experience less recognition in the form of publications, citations, awards, invited authorships, and other acknowledgments of the scholarly "reward system" (Trepte & Loths, 2020). Articles with a male first author were cited an average of 18 times, those with a female first author 13 times (Knobloch-Westerwick & Glynn, 2013). In the German journal "Medien- and Kommunikationswissenschaft" among the ten most cited individuals in German-language communication studies, only one is a woman (Potthoff & Kopp, 2013). And, in international communication journals, only 30% of publications are published by female authors from Germany, although we can observe gender parity in North America (Trepte & Loths, 2020). That said, we are currently unable to make any reliable statement about the citation gap for scientists from the DACH region, since no studies are available that include both English- and German publications. To further disentangle the publication and citation gaps in the DACH region, we ask:

- RQ1: Is a gender (a) publication and (b) citation gap detectable among authors affiliated in German-speaking DACH countries?
- RQ2: Does the proportion of (a) published and (b) cited female and male authors from the DACH region differ in English- and German-language journals?
- RQ3: How does the proportion of female authors change over time?

To answer these questions, we will examine articles from a total of 90 communication science journals (85 international and 5 German-language) from the year 2000 onwards. The data will be collected automatically via API of the open online catalogue platforms Scite (2023) and OpenAlex (2023). We will assign countries by affiliation and corre-

sponding country code, gender will be determined using the service Gender API (2023). The data will be analysed descriptively (RQ1), using t-tests (RQ2) and mixed effect models (RQ3).

Diversity / Gender / Academia / Citation Gap

#### From Viewer to Patron: Exploring the Associations Between Use Motives, Parasocial Relationships and Donations on Twitch

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With its interactive live streams, the streaming platform Twitch allows for immediacy and enables users to simultaneously watch a stream, interact with peers and streamers. Through these co-interactions (Bründl et al., 2022), users can actively participate in streams. First, using the chat to communicate with other viewers and the streamer can establish co-interactions which predict enjoyment (Wulf et al., 2020) and parasocial interaction (Wulf et al., 2021). Second, Twitch has implemented a monetization feature that enables users to donate to streamers (Johnson & Woodcock, 2019). In exchange, streamers often publicly address users and cheer for their donation during the live stream. Prior studies illustrate that social motives can explain such co-interactions (Hilvert-Bruce et al., 2018) which establish bonds between users and streamers or Twitch channels (see Bründl et al., 2022). It is, however, unclear which processes, aside of use motivations, lead to donations as a form of co-interaction.

We suppose that the intention to financially support streamers via donations is the result of multiple situational features and psychological effects of social participation that have not yet been investigated. In an online survey among Twitch users (N=662), we empirically investigated the associations between use motives (H1: social interaction, H2: entertainment), streaming characteristics (H3: time spent on Twitch, H4: stream size) and parasocial relationships (H5) with intentions to make donations. Participants were recruited via ten Twitch-related gaming communities on Reddit. The questionnaire was based on a retrospective classification of Twitch usage. All variables were assessed via self-report measures.

We calculated one structural equation model to account for all assumed relations.

At the conference, we will present model fit parameters and the particular impact of the assessed predictors. We will discuss these findings in light of the potential of co-interactive media elements and the simultaneous structure of entertaining media for future research.

Twitch/streaming/co-interaction/parasocial relationships/digital patronage

#### Towards a Typology of Multi-Screening: A Mixed-Methods Study on the Interplay of Psychological Predispositions, Use Motives and Situational Factors

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Multi-screening, i.e. the simultaneous and task-related consumption of TV content and smartphone or online interaction (Dias & Teixeira-Botelho, 2014), is a demanding media use behavior. Research has predominantly focused on negative aspects of multi-screening: On a cognitive dimension, multi-screening is associated with problems due to the attentional split between two tasks and thus leads to lower task performance (Ran & Yamamoto, 2019) and stress (Reinecke et al., 2017). Additionally, multi-screening can serve as a coping strategy (Shin & Kemps, 2020) and can positively (Kim et al., 2020) or negatively (Park et al., 2019) influence enjoyment. These conflicting results are hardly comparable as multi-screening lacks a generalizable definition and operationalization.

To tackle this issue, we suggest to understand multi-screening as a media use behavior that is influenced by psychological predispositions (H1), motivations for use (H2) and situational factors emerging from the usage process (RQ1: environment of use, RQ2: consumed media content, RQ3: usage triggers). Based on these assumptions, the present study aims to identify a typology of multi-screening users in entertaining media environments (RQ4).

In an explanatory sequential mixed-method model, the influence of psychological and motivational factors on multi-screening was examined through an online survey (N=1932). Participants were recruited via Reddit channels designed to discuss TV shows. Using latent profile analysis and additional regression analyses, we detected user profiles. Subsequently, these profiles were examined in greater depth with qualitative interviews (N=20). Through the introspective elicitation interview technique, the process of multi-screen usage was described and evaluated concerning its situational elements.

At the conference, we will present and integrate the results of both studies in a typology of multi-screening users. This typology will be discussed and evaluated, specifically

regarding the quantitative data analysis as well as its potential for systematizing and operationalizing media multitasking and its many applications.

Media multitasking / multi-screening / mixed methods / psychological predispositions / situational factors

### Logging media non-use? A computational assessment of digital disconnection with smartphone logging data

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Digital disconnection, the temporary restriction of digital media use, has been proposed as an avenue to achieve digital well-being (Vanden Abeele et al., 2022). Yet, whether subjective disconnection needs and motivations translate into tangible disconnection behavior remains unclear (Nassen et al., 2022; Radtke et al., 2022). Furthermore, self-reports have been criticized as imprecise or biased measurements of media use behavior (Mahalingham et al., 2023; Parry et al., 2021). Using unobtrusive observational data such as smartphone usage logs to complement self-reports has been proposed to reduce validity concerns with self-reports (e.g., Stier et al., 2020). Here, we aim to address if and how self-reported digital disconnection is meaningfully associated with logged digital media (non-)use and self-reported screentime.

To address this question, we conducted a two-week experience sampling study with five questionnaires per day among N = 178 Android users who filled out 7,823 situational questionnaires and shared their smartphone use metadata during the sampling period (app name, app use duration, and screentime). Self-reported digital disconnection was measured at different levels of media engagement based on the CMC taxonomy by Meier & Reinecke (2021), i.e., device, application, feature, interaction, and message content. This data was linked with self-reported screentime and logged smartphone use metadata. To identify disconnection in the logging data, we compare person-specific deviation from baseline screentime and app usage in (a) intervals reported by respondents to contain disconnection with (b) intervals without disconnection.

Generalizations from our logging data are limited to Android smartphones, due to technical restrictions on logging and participant burden. Uncovering whether self-reported disconnection is associated with actual reduced usage as captured by logging data will help to clarify the nature of previous research on digital disconnection, which overwhelmingly relied on self-reports. Our study has important implications for digital well-being research and the psychological understanding of digital disconnection.

Logging / computational communication science / well-being / digital disconnection

## "Here we see it, here we don't!" Focus group discussions of the strengths and vulnerabilities of young adults in detecting and addressing antisemitism online.

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Online expressions of antisemitic hate perpetuate social cleavages, shape how Jewish individuals are seen, and contribute to exclusionary attitudes in society (Lee & Jang, 2010; Neubaum & Krämer, 2016). Some populations are more vulnerable to this than others: 18- to 24-year-olds are exposed to online hate more than any other age group; and Jewish individuals are highly likely to be exposed to antisemitism (Geschke et al., 2019).

This is especially disconcerting for young media users, as social media occupy a central part of their lives (Michikyan et al., 2015) and their identities and cognitive representations of cultural difference are still fluid (Kroger et al., 2010; Orth, Maes & Schmitt, 2015). Social media create risky laboratories for young adults' identity formation and intercultural competences (Thomas, Briggs, Hart, & Kerrigan, 2017; Vogelsang, 2014). Even though some research exists on young adults' coping with cyberbullying (Sticca et al., 2015) and hate speech (Wachs et al., 2019), their vulnerabilities and strengths in the context of antisemitic hate discourse online has hardly been systematically studied.

Using focus group methodology, the present study explores how confident young adults feel about recognizing and responding to antisemitism online. Nine focus group

discussions were conducted with N=49 emerging adults (n=5 Jewish; n=44 non-Jewish) between the ages of 18 and 30, living in Germany. To facilitate discussion, stimuli with screenshots of preselected antisemitic social media discourses were shown. The focus group guide was designed to help uncover the cognitive, emotional, and behavioral coping strategies young adults use in relation to antisemitic hate online. Participants' competences and vulnerabilities were then carved out by means of an inductive coding procedure including open, selective and axial coding (Charmaz, 2006).

Focus group research / online antisemitism / young adults / media competences / addressing online antisemitism

#### Instadrink or #Instadrunk? An Experimental Study Investigating the Impact of Moderate and Extreme Alcohol Posts in Ephemeral Social Media Messages on Offline Alcohol Cognitions.

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Alcohol (mis)use remains a significant public health issue, especially among college students. Extending research on alcohol-related social media effects, this study investigates the short-term causal impact of exposure to online alcohol posts on offline alcohol cognitions. This study addresses an important research gap by focusing on a relatively new and understudied type of alcohol post: ephemeral posts. With the rise of ephemeral messages which self-delete after a set period (e.g., Instagram Stories, Snapchat), people are exposed to a wider variety of alcohol posts including moderate (e.g., someone enjoying a glass of wine) as well as more extreme ones (e.g., depictions of negative consequences including someone vomiting, being intoxicated). Their impact on alcohol cognitions remains unstudied.

Guided by Bandura's Social Cognitive Theory (Bandura, 2001), we hypothesize that exposure to moderate references will reinforce positive alcohol-related attitudes through stronger positive and weaker negative alcohol-related outcome expectations (H1), whereas exposure to extreme references will result in more negative attitudes through weaker positive and stronger negative outcome expectations (H2). Moreover, following the Differential Susceptibility to Media Effects Model (Valkenburg & Peter, 2013), we explore whether individuals' level of alcohol consumption moderates these effects (RQ1).

To address our hypotheses and research questions, we conducted a between-subjects design (type of alcohol-post: none vs moderate vs extreme) among 361 emerging adults (Mage = 23.32; SD = 2.50). Participants were exposed to a range of ephemeral messages from two fictitious peers of the same gender. These materials were created by the first author to increase internal validity and were extensively pretested to guarantee equal likeability of the peers and moderate or extreme ratings of the alcohol pictures. Level of alcohol use, alcohol-related attitudes and alcohol-related outcome expectations were measured with validated scales. Overall, this study significantly deepens our understanding of the impact of alcohol posts in an evolving media landscape.

Social media / alcohol posts / ephemeral messages / experiment

### Is this antisemitic? Subtle constructions of antisemitism on the social media of young people today.

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Antisemitic hate continues to create ideological divides at the intersections of society and technology, perpetuating hate online (Wachs et al., 2019), and shaping exclusionary attitudes in society (Neubaum & Krämer, 2016). Jewish individuals are highly likely to experience antisemitic hate online, with ensuing mental health consequences, including feelings of anxiety and worries about future harassment (Anti-Defamation League, 2022).

Online manifestations of antisemitism encompass a wide range of radical and subtle forms, including conspiracy theories, Holocaust denial or glorification, and Israel defamation. The tactics used to spread antisemitic hate online are often implicit and camouflaged (Schwarz-Friesel, 2019), allude censorship by media outlets (Gagliardone, 2019), and hinder media users' recognition of antisemitic statements (Schwarz-Friesel, 2019). Additionally, user-centered analyses are missing. While 18- to 24-year-olds are confronted with hateful comments online more than any other age group (Geschke et al., 2019), we know little about the types of antisemitic arguments they see in their social networks (Waquas et al., 2019).

The current study systematically analyzes the types and interactive constructions of antisemitism that young individuals are confronted with in their day-to-day media diet. 47 individuals between 18 and 30 years of age (partly Jewish) were asked to keep diaries of their social media activity. A sample of 1.100 social media threads were logged,

encompassing a total 60.000 posts. Qualitative Content Analysis was used to determine the presence and type of antisemitism, the intensity of antisemitic hate speech, and the justifications used to support antisemitic claims. Furthermore, the user-centered analysis connects the characteristics of the users with the types of social media content they are confronted with, thus mapping out the discursive "bubbles" in which different types of users operate and the kinds of antisemitic narratives they are exposed to. Our results will be used toward antisemitism-focused media-competence trainings for young individuals.

Media diaries / content analysis / user-centered analyses / online antisemitism / young adults / media competence / addressing online antisemitism

#### Teach me to be fair - An Experimental Study on Fairness, Self Efficacy and Human Involvement in ADM Systems

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Algorithmic Decision Making systems (ADMs) are becoming ubiquitous, posing new threats for society by using opaque processes making them hard to assess and control.

Especially lay people struggle to understand the complex functionality of ADMs and are therefore often subject to misconceptions by believing ADMs to be objective while in fact they can be highly biased. This overconfidence in the system's recommendation carries the risk of unreflectively adopting suggested decisions, thereby unknowingly fostering existing biases.

In the present work, a job candidate selection scenario was designed to confront lay people without a background in machine learning algorithms with discriminatory algorithmic recommendations. This experimental mixed-design study (N=59) explores whether different levels of human involvement in algorithmic decision-making, i.e. believing to be contributing to the learning process of the ADM (being in-the-loop) or merely receiving recommendations (being out-of-the-loop, between subjects factor)), influences actual decision adoption, perceived self-efficacy as well as perceptions of the ADM regarding ethicality, objectivity, and performance. Additionally, we explored the application of fairness dimensions to ADM systems and reasons for corrective behavior in questionnaires and semi-structured interviews after the experiment.

The study consisted of a pre-assessment of the constructs "Attitudes towards Algorithms", "Algorithmic Self Efficacy" and "Dimensions of Fairness", the interaction with the biased ADM system, a post assessment of the constructs, and a qualitative interview used to gain a deeper understanding of participants' fairness evaluations. During the interaction phase, participants "out-of-the-loop" were only able to rate the fairness of the four decision cases, having been told that the evaluation could potentially lead to a revision by the software team. Participants "in-the-loop" additionally had the opportunity to rerank the job applicants to add to the training data set of the algorithm, thereby having higher control over the outcome as well as future performance of the ADM.

Algorithmic decision making systems / algorithmic fairness / algorithmic self efficacy / artificial intelligence ethics / fairness dimensions / fairness perception / human-in-the-loop / machine learning perception / responsible AI

#### How big is this gap in literature? A Systematic Literature Review for the development of media competence training against antisemitism on social media

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The importance of education as a response to online antisemitism is emphasized especially at the political level (Antisemitism Commissioner 2022; Independent Expert Group on Anti-Semitism, 2017). However, this importance is not yet evident in educational practice (Bernstein, Grimm & Müller, 2022), and what constitutes successful education against anti-Semitism has not yet been empirically studied (Bauer, 2020).

Although there are many educational interventions regarding antisemitism, little is known about whether these interventions are effective, under what conditions they are effective, and for whom they are effective (Bauer, 2020). Specifically with regards to online antisemitism, there are many challenges to consider: (1) Antisemitism is a multidimensional construct that appears in countless manifestations backed up by a multitude of subtle arguments (Schwarz-Friesel, 2019). (2) Antisemitism is like a chameleon that adapts to new discourses, with historical sentiments appearing in ever newer clothes on social media (Becker, 2021). (3) Technological affordances of social media facilitate the

spread of antisemitic hate and hamper responding (Hübscher & Mehring, 2022). In the current study, we aimed at a systematic overview of existing trainings in this context.

To conduct the review, we followed PRISMA guidelines (Page et al., 2021) and analyzed the results of the search query "antisemitism AND (education OR training OR intervention)" (in English and German) in five different scientific databases – leading to a sample of N=2.663 publications. An iterative coding process was used to systematically review the trainings, considering target groups, fields of education, definitions of antisemitism, applications to social media, training approach, significance of Jewish perspectives, connection to other forms of discrimination, and effectiveness of training on a specific outcome.

That anti-Semitism on social media is perceived as the greatest threat to Jewish life in Europe (Zick et al., 2017; FRA, 2018) demonstrates the great importance of developing successful training.

Antisemitism / social media / training / systematic literature review

## Uncovering A Dangerous Link? How Right-Wing Ideological Attitude Dimensions and (Ingroup) Threat May Fuel Online Disinformation Sharing

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The COVID-19 pandemic has highlighted right-wing authoritarianism (RWA) and social dominance orientation (SDO) as risk factors for susceptibility to online disinformation (Klebba & Winter, 2023), which often features vilification of an outgroup and emphasis on ingroup positions. Notwithstanding the widespread dissemination of disinformation with this pattern, the factors contributing to the receptivity of specific groups to such content remain equivocal. To unravel a possible link between sharing disinformation (containing derogatory migration narratives), right-wing ideological attitudes, and the ingroup vs. outgroup paradigm, this study builds upon the dual-process motivational model of ideology and prejudice (DPM) by Duckitt & Sibley (2009), which centers on RWA and SDO and their relation to ingroup-threat. Utilizing the DPM regarding the preferred content of individuals high in RWA or SDO, we posit that RWA exhibits a stronger correlation with pro-ingroup attitudes and may be receptive to content that accentuates the necessity of implementing measures to homeland security and preserving normative values and traditions. In contrast, SDO demonstrates a stronger association with anti-outgroup attitudes and may be susceptible to content highlighting groupbased hierarchies and (superior) group status denigrating the outgroup. Given that RWA is responsive to symbolic threats while SDO is responsive to realistic threats, it follows that exposure to an ingroup threat encompassing both dimensions is likely to increase the dissemination of disinformation containing either pro-ingroup or anti-outgroup attitudes. To test our hypotheses, we will conduct a quota-based online experiment. We want to vary verified news and disinformation to be either for or against migration, splitting up the contra category in either promoting pro-ingroup or anti-outgroup attitudes of migration as within factors to measure the sharing intention of those disinformation over verified news. This research allows us to classify disinformation that individuals high in RWA or SDO, who may feel threatened, are more prone to share.

Disinformation / selective sharing / RWA / SDO / threat / migration

#### Trust Me, I'm AI: Examining the Influence of XAI and/ or AI-Seal on User Trust and Understanding

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In recent years, artificial intelligence (AI) has become increasingly relevant and is being applied in numerous areas. Due to the rapid development, the performance of the algorithms is already so advanced, even experts are not always able to comprehend the actions (Kaplan, 2017). However, since the majority of AI-users do not have detailed knowledge about AI, their perception of AI-systems is primarily that of a black-box, resulting in mistrust and reduced acceptance of AI in society (von Eschenbach, 2021). To address this issue, the concept of explainable artificial intelligence (XAI) has been proposed as a method to provide insights into the often hidden logic of algorithms, using explanations to increase understanding and trust in AI-systems (Das & Rad, 2020). Additionally, the

AI-Seal has been introduced as a certification measure to ensure safe and reliable AI applications. However, both methods, apart from promising advantages, still have downsides, such as overly complex explanations causing mistrust (Papenmeier et al., 2019) or the potential for blind trust in the AI-Seal (Kloker et al., 2022). Therefore, the question arises as to whether a combination of both XAI and AI-Seal can potentially maximize benefits while minimizing the disadvantages, considering the different ways of processing XAI and an AI-Seal. Additionally, previous AI-research has largely overlooked human-related factors which could play a crucial role in increasing understanding and trust in AI. Thus, this online-experiment (N = 436) used a 2 (XAI vs. no XAI) x 2 (AI-Seal vs. no AI-Seal) between-subject design in which participants interacted with an AI-system, to analyze the effectiveness of XAI, AI-Seal, or a combination of both in increasing understanding and trust in AI, while also considering the influence of human-related factors such as a persons' need for cognition and the propensity to trust in technology.

Artificial intelligence / explainable-AI / trust / understanding / AI-seal

## Orienting responses and spontaneous eye-blink behavior during video reception

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From a process perspective, the observation of attentional processes during media use allows for deeper insights into the emergence of media reception phenomena (Fahr & Früh, 2018; Liebold et al., 2017). Consequently, media scholars often consider attention processes in their modeling. For example, the Limited Capacity Model of Motivated Mediated Message Processing (LC4MP; Lang, 2000) includes orienting responses (OR; Sokolov, 1963) as one determinant for the processing of media stimuli. ORs are observable via characteristic psychophysiological and behavioral changes, such as skin conductance responses, a transient decrease in heart rate, or oculomotor reactions (Bradley et al., 2011; Bradley et al., 2012). Apart from gaze behavior, research has also addressed spontaneous eye-blinks as another vision-related behavior.

Blink occurrence is influenced by both top-down and bottom-up mechanisms (Brych, 2022; Brych & Händel, 2020; Murali & Händel, 2021). Research suggests that blink inhibition can indicate subjective relevance of media content (Shultz et al., 2011) and engagement with media stimuli (Ranti et al., 2020). During the use of video games, ORs can lead to blink inhibition after unexpected inconsistencies in the game (Liebold et al., 2017). In the present study, we further investigate if (a) blink inhibition occurs after unexpected auditory stimuli during video reception, and if (b) there is a characteristic OR pattern with response decrement, response recovery, and dishabituation (Barry, 2009).

Thirty-two participants (71.9% female, age M = 22.3, SD = 2.5) watched a 20 minutes long excerpt from a wildlife documentary. Fifteen sound stimuli were presented during the video, with the tenth sound differing in sound pitch (440 vs. 660 Hz, counterbalanced). Five different versions of presentation times were created, with random interstimulus intervals between 40 and 80 seconds.

Synchronized recordings of ECG, EDA, and face videos allowed for the stimulus-locked extraction of cardiac response curves, skin conductance responses, and eye-blink behavior.

Attention / observational methods / process perspective / psychophysiology

## Virtual world experiences and adolescent psychosocial development: causal pathways and feedback mechanisms

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The virtual world has become a vital factor in youth development. In current society, most young people have been growing up with technology, deeply integrating their daily lives into the virtual world. Previous research tends to adopt technical perspectives and barely considers users' perceptions, which makes the psychosocial development path of ""digital natives"" in the virtual world not fully comprehended.

This study employs psychosocial development theory and ecological systems theory to synthesize the research framework. We will facilitate the mixed methods design to investigate the effects of virtual world experiences on the psychosocial development of adolescents. First, we will conduct a pilot study and qualitative interviews to understand this population and adjust our quantitative questionnaire. Then, a large-scale survey will be undertaken to respond to the causal path between virtual world experience and adolescents' psychosocial development. According to the research outcomes, we will develop interventions for youth positive developmental outcomes in the digital society.

The research will provide empirical evidence of the influence of virtual world experiences on youth developmental outcomes. Accordingly, this study will explore the perceived virtual world experience of adolescents and the interactions between the virtual world and their physical world. The research results and the reasons behind the phenomena will extend our understanding of the microsystem in ecological theory and identity in psychosocial development theory in the virtual world.

Virtual world experience / psychosocial development / neo-ecological systems theory / youth development

#### The Remote Control Is a Passport: Psychological Richness and Boundary Expansion When Watching International Entertainment

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Psychological richness refers to novel experiences that elicit new or complex mental states (Besser & Oishi, 2020). Richness was proposed as a third dimension of psychological well-being, after hedonia and eudaimonia (Oishi & Westgate, 2022), and can characterize media-related motivations and effects (Wirz et al., 2022). Accounting for richness goes beyond a pleasure/meaning dichotomy, which is important when media provide challenging growth experiences. For example, while television and film titles from one's home country are typically familiar, equivalent media from foreign countries can present a range of novel, unfamiliar experiences that can expand the audience's point of view. In this study, we examine whether individuals with stronger motivations to consume psychologically rich media feel more immersion and growth when consuming international entertainment. Experiences presented in media narratives can produce temporary expansion of boundaries of the self (TEBOTS; Slater et al., 2014), i.e., vicarious satisfaction of intrinsic needs. We expect this immersive process to be greater for international content, especially among those seeking richness. A desire for novel media should facilitate more satisfaction from cross-cultural media. This boundary expansion is expected, in turn, to produce more psychologically rich experiences for viewers. A quasi-experiment conducted in summer 2023 with students at two American universities will measure boundary expansion from, and audience responses to, recent exposure to either international or domestic video entertainment. A sample size of N = 352 is needed to detect a main effect of d = .30 between participants assigned to report on international versus domestic videos. We will test the interaction between condition and psychologically rich entertainment motivations (Author, 2023) on boundary expansion (Johnson et al., 2016) and subsequent psychologically rich experiences (Author, 2023). We will also juxtapose findings with hedonic and eudaimonic motivations (Oliver & Raney, 2011) and experiences (Oliver & Bartsch, 2010) and explore openness and other traits.

International and domestic entertainment / psychological richness / temporarily expanding the boundaries of the self (TEBOTS) / boundary expansion

## For your eyes only? An eye-tracking experiment investigating microtargeting transparency, visual attention and critical processing

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The largest part of communication between voters and politicians happens online, more specifically on social networking sites (Giasson et al., 2019). A prime example of this is political microtargeting (Kruikemeier et al., 2016). However, according to experts and researchers alike, the risks, for both users and society as a whole, of this strategy might not outweigh the benefits (Zuiderveen Borgesius et al., 2018). One solution for this, in line with the Digital Services Act, is the use of disclosure labels to improve transparency and make users aware that the content space is bought and the content is targeted at them by a political party.

In this preregistered one factor between-subjects eye-tracking lab experiment we investigated if a targeting disclosure (vs. a sponsored disclosure) that is designed to provide users with more information about the political microtargeting taking place on a platform (Instagram), leads to more visual attention to the disclosure and if this, subsequently leads to increases in users' critical processing of the ad. Moreover, we investigate a potential mediating effect of visual attention to the ad on the direct effect of visual attention to the disclosure on critical processing of the ad.

We conducted an a priori power analysis, given our resources we aimed to gather 150 participants. While simulating our model using a power of 90% and an alpha level of .05, we set our smallest effect size of interest at  $\beta=|.26|$  and do not interpret results with effect sizes below that. In order to improve ecological validity while our participants were in a lab, we exposed participants to a scrollable timeline containing five posts from Dutch news outlets, a local hotel/restaurant, a local university and one ad from a Dutch political party containing a sponsored disclosure (control condition) or a targeting disclosure (experimental condition).

Microtargeting / transparency / eye-tracking / disclosures

## Tell Me Why – Combating Racism on Social Media with Knowledge

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Social media come with a wide range of valuable benefits ranging from social exchange to entertainment (Bayer et al., 2020; Trepte, 2021). Nevertheless, more and more negative content such as racist comments are distributed via social media as well (Matamoros-Fernández & Farkas, 2021). This has serious consequences for individuals who are facing racist comments and racial discrimination, such as decreased well-being, depressive symptoms, and anxiety (Cano et al., 2021; Layug, et al., 2022; McCready et al., 2021; Tao & Fisher, 2022; Ybarra et al., 2011). Currently, there is a lack of sophisticated approaches for supporting users in dealing with racial discrimination online. We address this challenge by applying innovative technology (i.e. a virtual learning companion; VLC) that can support users when dealing with toxic content on social media in realtime. With this premise, we investigate the impact of a VLC in the form of an add-on component that guides and informs users of critical content and its implications directly when they encounter it in their social media environment. We argue that the VLC can help raising users' awareness for the severe consequences of racial discrimination and increase their knowledge associated with racism on social media. This can be a first step toward the long-term elimination of racial discrimination online. We assume that users supported by the VLC show better results in behavioral tasks related to racism (i.e. a quiz on racism, identifying racism in social media postings, and reporting a social media posting consisting of racism) than users not supported. Furthermore, we investigate whether the impact of the VLC is influenced by users' social media literacy and own experiences with racism. Our hypotheses are analyzed quantitively using data collected in schools with N = 100 students aged from 13 to 16 years (M = 13.45, SD = .62).

Everyday racism / social media / knowledge of racism / knowledge transfer / virtual learning companion

## Imagine it was you – Empathy as the Key for Reducing Cyberbullying on Social Media

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Cyberbullying is a predominant challenge in the context of social media. It is a behavior "performed through electronic or digital media by individuals or groups that repeatedly communicates hostile or aggressive messages intended to inflict harm or discomfort on others" (Tokunaga, 2010; p. 278). Consequences of cyberbullying can include negative emotional states, somatic complaints, or even suicidal thoughts (Hellfeldt et al., 2020; Herge et al., 2015; Kim et al., 2019; Wigderson & Lynch, 2013; Zaborskis et al., 2019). Strikingly, perpetrators and other users facing cyberbullying (e.g., bystanders) are not fully aware about these consequences and may have difficulties to empathize with the victims. Therefore, users' ability to take another person's perspective and understand their pain must be strengthened. We argue that this perspective-taking can help to raise mutual awareness and reduce the occurrence of cyberbullying. In this light, we aim to increase users' empathy by means of an empathy training, guided by a virtual learning companion (VLC) within users' social media environment in which they typically encounter cyberbullying. This VLC acts like a knowledgeable peer (instead of an unknown expert) and trains users' affective and cognitive empathy via messenger-based communication by providing concrete definitions, examples, and tips around cyberbullying. This training conducted by the VLC should contribute to increase users' empathy and, in the longterm, reduce cyberbullying on social media. More precisely, we assume that users taking the empathy training show lower intentions to be a perpetrator in the future, higher levels of affective and cognitive empathy, higher intentions to help a victim, and less intentions to reinforce a bully compared to adolescents not taking the empathy training. In order to test our hypotheses, we conduct quantitative analyses using data collected in schools with N = 125 students aged from 11 to 14 years (M = 12.25, SD = .52).

Empathy / social media / cyberbullying / adolescents / virtual learning companion

# Contextuality of attitudes towards algorithmic decision-making: Validation and testing of a newly developed universal scale for measuring attitudes towards algorithms (ATAS)

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The development of algorithmic recommendation software and algorithmic decisionmaking (ADM) has been widely accepted in several fields, from simple recommendation systems in online shops to complex advisory systems in healthcare or criminal justice. While ADM enthusiasts argue that human decision-making could greatly benefit from applying such systems (Lindebaum et al., 2020), research has shown that people do not always appreciate algorithmic advice (Dietvorst et al., 2015). To actually benefit from these powerful tools (e.g. Brzezicki et al., 2020;), it is crucial to understand why and when people do or do not adopt algorithmic advice. Drawing from the Technology Acceptance Model by Davis (1985), we identified attitudes towards algorithms to be a key predictor for the adoption of such systems and effects like algorithm appreciation (Logg et al., 2019) or aversion (Dietvorst et al., 2015). Based on previous research, we hypothesize that attitudes towards algorithms is a dynamic construct influenced by higher-level individual characteristics and contextual factors (Hou & Jung, 2021; Mahmud et al., 2022). As a first step to test this theory, we developed the Attitudes towards Algorithms Scale (ATAS) based on data from two studies (ntotal = 270). In the next step, we validate the scale and test its capability by manipulating contextual factors of an ADM application scenario in a 2x3 between-subject design online study. We used framing and vignettes to describe an application scenario in which a person gets in contact with a hospital that utilizes a comprehensive ADM system. We manipulated criticality of the ADM implementation (how severe are the consequences of an ADM decision) and cruciality for the individual (how much a person is personally affected by an ADM decision) to slightly alter the context. We hypothesize that these alterations affect participants' attitudes towards algorithms and thus result in different ratings on the ATAS subscales.

Algorithmic decision-making / scale development / contextuality

## Picturing Diversity: Exploring Childrens' Perception of Intergroup Differences

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Asking someone where they are from or remarking on how well they speak a certain language may seem harmless at first glance. However, the repeated experience of such incidents, whether intentional or unintentional, embedded in the daily lives of marginalized groups (i.e., everyday racism, Essed, 1991), is not only hurtful but may have serious consequences such as social exclusion (Rutland & Killen, 2015). Reflecting on these incidents includes addressing the process of "othering." This phenomenon refers to stereotyping people as "others", deviating from the "norm" of society, making them feel that they do not actually belong to the same group (Rohleder, 2014). Since stereotypes are learned early in life, the present study investigates how visual markers affect children's perceptions of intergroup differences. For this purpose, stickers were designed with cartoon characters that vary systematically by (i) gender, (ii) racial and ethnic diversity, and (iii) the character's t-shirt (plain vs. pattern) as a transient marker (see Kiss et al., 2021). Participants (aged 6 to 10 years) are asked to categorize the characters into any number of groups (see Gedeon et al., 2020). To examine the criteria according to which participants sort the characters, the sorting of the stickers and the explanation for it are analyzed by means of qualitative content analysis (Mayring, 2010). Additionally, the characters are rated on a 4-point scale from 1 (no way) to 4 (yes, definitely). Following Gedeon et al. (2020), three items measure cultural distance, consisting of the factors language, eating habits, and music (e.g., "This child eats the same food as I do."). Three self-derived items address stereotypes related to anti-Black racism, anti-Asian racism, and anti-Muslim racism (e.g., "This child is particularly good at math."). Based on the results, recommendations for a mobile interactive intervention are discussed that helps children to challenge the social "norm".

Stereotypes / children / social categorization / cultural distance / interactive ebook

## Adolescents' Interactions With People From the Internet and the Quality of Their Offline Friendships

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In this preregistered study, we examine how adolescents' online communication with people they know only from the internet impacts the quality of their offline friendships. According to the displacement hypothesis, communicating online displaces adolescents' time with their existing friends and thus negatively impacts the quality of existing friendships (Kraut et al., 1998; Nie, 2001). On the other hand, the stimulation hypothesis presumes that much of adolescents' online communication is with their friends and helps deepen existing friendships (Bryant et al., 2006; Valkenburg & Peter, 2007). We propose that the stimulation effect can also occur because of online communication with new people met on the internet. A significant portion of adolescents who communicated with someone new on the internet also met the person offline (Smahel et al., 2020). Thus, online communication may instigate the formation of new offline friendships, which may then contribute to the overall quality of adolescents' offline friendships. We expect that online communication with new people negatively impacts the quality of adolescents' offline friendships (displacement hypothesis) directly. Yet, it also indirectly stimulates offline friendship quality through the formation of new offline friendships.

We will use longitudinal online survey data collected in four waves (six months apart) between May 2021 and December 2022. The sample includes 3,087 Czech adolescents in T1 (age 11-16, M = 13.47, SD = 1.74; 50.3% male) and 1,060 in T4 (age 12-18, M = 14.41, SD = 1.64; 50.8% male). Quota sampling ensured the T1 sample represents Czech households with children in terms of SES, geographical region, and municipality size. We will use a random intercept cross-lagged panel model (Hamaker et al., 2015) to test the longitudinal effects between three variables: the frequency of adolescents' online communication with people they met online, their in-person meetings with these people, and their self-reported offline friendship quality.

Online communication / adolescence / displacement hypothesis / stimulation hypothesis / offline friendship quality

# What's been done and what's next? - A scoping review of mindfulness research in communication and media psychology

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Mindfulness can be defined as a certain quality of consciousness, that is attention to internal and external experiences in the present moment, and a specific quality of this attention, defined as curious, accepting, and with purpose (Kabat-Zinn, 1990). Particularly, the fields of psychology and neuroscience have started to intensively study the concept and have investigated its role in numerous processes (van Dam et al., 2018). This rise in research can be attributed to a) the growing knowledge of mindfulness' beneficial effects on mental and physical health (Khoury et al., 2015), b) the increase in validated methods of cultivating and thus improving mindfulness and c) the fact that mindfulness has been more and more detached from its religious Buddhist background.

There are numerous potential areas of application for the concept of mindfulness in communication and media psychology some of which have already been explored. Research for instance shows that mindfulness plays a role in the use of mobile and social media, is associated with mobile phone multitasking, and moderates the processing of media content.

What is missing, however, is an overview of the research questions and topics in which the concept has been used so far. Therefore, we conducted a scoping review, mapping 197 systematically searched studies published in peer-reviewed journals that deal with media psychology/communication and that include the concept of mindfulness. We performed a content analysis of – among others – research topics, disciplines, understanding of the concept of mindfulness, and the position of mindfulness in the research model. In addition to presenting the results of this scoping review, we will elaborate on the potential of integrating mindfulness in studying media use and communication and will link it to widely used theories as well as to different research domains such as political communication or entertainment research.

Mindfulness / scoping review

## Revision of the Inventory for the Assessment of Activation- and Arousal Modulation through Music (IAAM)

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Media, especially music, can be effectively used for emotion regulation (ER) in everyday life (North et al., 2004; Saarikallio, 2011). Most of the existing questionnaires measuring (ER) through music are neither sufficiently theoretically grounded nor test-theoretically evaluated (e.g., Saarikallio, 2008; Greb et al., 2017), except for the Inventory for the Assessment of Activation- and Arousal modulation through Music (IAAM) (von Georgi et al., 2006; von Georgi, 2013). Its five dimensions, relaxation (RX), cognitive problem solving (CP), reduction of negative activation (RA), fun stimulation (FS) and arousal modulation (AM), are related to different neurophysiological systems described by Gray & McNaughton (2003). RA is explained by differences in the sensitivity of the fight-flight-freezing system (FFFS), CP and RX are influenced by the sensitivity of the behavioral inhibition system (BIS), and RX and FS are linked to the behavioral approach system (BAS). Thus, these three dimensions can be explained by two higher order factors. AM is an independent factor (von Georgi et al., 2006) and is explained by the filter hypothesis (e.g. Carlsson et al., 2001).

Since 2006 the IAAM has been used in different samples (e.g. psychiatry, adolescents) with different psychological questions (e.g. health, personality), but has not yet been evaluated from a test theory perspective. The aim of this study is therefore to evaluate the IAAM using KTT and IRT.

Three random samples per 1000 subjects were taken without replacement from the existing and pooled samples. Study A tests the described factorial structure. Study B tests the model fit of the scales using IRT. The results of the CFA and IRT models are used to revise the scales. The revised scales and the factorial structure are tested by CFA (Study C). With the revised version, a first theory-based and test-theoretically evaluated questionnaire for measuring ER through music is available.

Emotion regulation / use of music in everyday life

#### Effects of an explicit and implicit narrative salience on the evaluation of stereotypes

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Stereotypes about mental disorders can lead to public stigma (Scherr, 2019). A strategy to combat stigma is a direct contact (Rüsch et al., 2005), which can lead to cognitive dissonance and the re-evaluation of stereotypes (Rothbart & John, 1985). Therefore, the salience of group categories is necessary (Brown & Hewstone, 2005).

Likewise, indirect contact via media is considered helpful. Accordingly, we assume that an explicit narrative salience about a mental disorder leads to stronger evaluation of stereotypes (H1). One mechanism behind the effect of narratives on stereotype reduction is empathy (Oatley, 2016). We assume that an implicit narrative salience leads to less empathy (H2). Few studies have investigated an empathic response as initiating process for parasocial interaction (PSI). Following, we postulate that empathy leads to an increase of PSI (Cummins & cui, 2014) (H3). Studies investigating the Parasocial Contact Hypothesis (PCH) often only consider the valence of the PSI without quality characteristics (Banas et al., 2020). We therefore examine whether the expected quality of contact (EoCQ) to an outgroup is pronounced by a stronger PSI (H5). The evaluation of generalized outgroup assumptions is related to the EoCQ to outgroup members (Schäfer et al., 2022). We extend these findings and assume that higher EoCQ lead to a decrease of stereotypes (H4). Following we assume that PSI predicts the EoCQ, which in turn leads to a decrease of stereotypes (H6).

In an online experiment, participants (N = 95) were randomly assigned to one of two experimental conditions: They completed a questionnaire before and after watching the movie Silver Linings Playbook, manipulated to either frame an explicit or implicit narrative salience of a mediated contact to a person with a mental disorder. We conducted a multilevel path analysis with groups and predictor variables as fixed effects on one level and the subject variability as random effect on another one.

Stereotypes / evaluation / expectation / mediated contact / salience

# A Measured Response? How Populist Communication on Social Media affects the Reactance to and Support of Pandemic Restrictions and the Moderating Role of Ideological Attitudes

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This study examines the effect of populist communication regarding the reactance and opposition to pandemic restrictions among individuals with varying ideological attitudes. While political opposition to COVID-19 restrictions is associated with the consumption of right-wing media, the factors that contribute to the susceptibility of these messages are unclear. Drawing on media effects research and taking into account the role of attitudinal congruence, we assume that people who hold certain ideological attitudes might be more susceptible to populist critique of measures on (social) media. The tendency to share COVID-19 disinformation, as well as both rule-breaking and reactance to anti-COVID-19 measures relate to Social Dominance Orientation (SDO). While the subdimensions of SDO and Right-Wing Authoritarianism (RWA) contribute differently to the reactance to and support for government restrictions, the extent to which populist communication contributes to the rejection of measures is unclear.

We therefore want to investigate, how populist criticism of anti-pandemic measures interacts with (1) populist attitudes, as well as with the subdimensions of (2) SDO and (3) RWA to facilitate or attenuate the effect on the reactance and support pandemic restrictions.

We have conducted an online experiment in Germany. Participants reported their populist attitudes, SDO, and RWA. They were then assigned to one of two conditions and read a corresponding social media post on Facebook (imbued with populist rhetoric or not), criticizing measures and referencing a news article regarding possible measures to mitigate a future outbreak of the mpox virus. Thereafter, participants read the article itself. Finally, the participants indicated their reactance to and support of government responses (i.e., restricting movement). To test our hypotheses, we conducted moderated regression analyses, with populist attitudes and subfactors of SDO and RWA as mod-

erators, using participants' reactance to and acceptance of restrictions as a criterion and populist communication as our predictor.

Social dominance orientation / right-wing authoritarianism / populist attitudes / political communication / (media) populism

## Awe as a constructed emotion in immersive storytelling: the effect of priming

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#### **Background**

Awe experiences are characterized by feelings of perceived vastness and need for accommodation (Keltner & Haidt, 2003): they occur when we perceive something that seems too big to fit into what we know, so it expands or rearranges our pattern of thoughts. This suggests that awe is sensitive to interindividual differences, making it difficult to define, capture, or prompt. Yet, despite its potential to be transformative, with perspective shifts creating long-lasting changes (Stepanova et al., 2019), awe lacks attention from cognitive media theories (Sari, 2019). As storytellers now leverage the immersive capability of virtual reality (VR) to prompt awe, combining a powerful medium with an already strong emotional experience, they are creating the capacity for supercharged experiences. For this reason, this study aims at understanding how awe is constructed in VR settings, based on the Constructed Emotions Theory (Barrett, 2014), by testing the contribution of priming on the emotional appraisal of VR experiences.

#### Method

Participants (N=38) were recruited using volunteer communities and social media. Measures: Physiological data (heart-rate variability and electrodermal activity), duration perception, and self-reports (PANAS + eight awe-related items) were used to measure awe. Based on Chirico et al. (2018), additional items measured awe, perceived vastness, and need for accommodation. Four VR experiences were used: 2 awe-inducing and 2 calm-inducing.

#### **Procedure**

The study used a mixed design with priming as a between-participants comparison and experience as a within-participants comparison. Priming was done informing half of the group that they would experience 4 awe-inducing (vs. 4 calm-inducing) experiences.

Participants underwent three baseline sessions (one outside VR and two in VR) to assess duration perception skills and physiological data under neutral settings. After each of the four experiences, participants completed the adapted PANAS. Finally, participants provided demographics, VR user experience, and English proficiency as potential mediators of emotion construction.

Emotion / awe / virtual reality / storytelling

## The Effects of Identifiability and Virtual Agent Interaction Valence on Intergroup Attitudes

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The social identity model of deindividuation effects (SIDE) suggested that personal identifiability in digital spaces can influence interpersonal and intergroup behavior.

Based on the argument, heightened identifiability may influence individuals' prosocial behavior when embodying a personalized actual-self avatar in VR. This study first empirically tests how identifiability during virtual interactions with outgroup members can influence intergroup perceptions. Additionally, the intergroup contact theory suggests that positive contact with outgroup members can facilitate positive intergroup attitudes. More empirical evidence is needed to test if positive contact with a human-like virtual agent can improve intergroup perceptions. Based on the assumption that people can elicit psychological responses similar to human interactions when interacting with computers, it is reasonable to assume that positive and negative interactions with a human-like virtual agent of an outgroup identity can influence intergroup attitudes. A 2 (identifiability: high vs. low) x 2 (virtual agent interaction valence: positive vs. negative) between-subjects experiment was conducted (N = 171) in a Virtual Reality (VR) simulation. Participants assumed the role of a restaurant service staff and interacted with a virtual agent of an outgroup racial identity during the simulation. In the identifiability condition, participants were assigned to either embody a personalized avatar mapped with their actual faces or a non-personalized avatar with pre-determined facial features. In the intergroup interaction valence condition, dialogues with the virtual agent were programmed to involve either positive or negative interactions. Participants interact with the virtual agent via choices presented in text boxes. Empathy and attitudes towards racially outgroup members were measured during both pre- and post-study questionnaire.

Identifiability / virtual reality / intergroup contact / virtual interaction / avatars

## The relative impact of in-the-moment, personally meaningful and control virtual reality experiences to hedonic and eudaimonic wellbeing indicators.

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Background: Virtual reality (VR) has received great attention as a possible positive technology tool for promoting wellbeing. Despite promising results, the evidence base to date consists of studies using disparate outcome measures, populations, time points and methodologies. Furthermore, many studies report the use of VR within a wider intervention. This has led to an evidence base which demonstrates the utility and usability of VR technologies for promoting wellbeing. Yet less is understood about what aspects of the VR experience bring about these outcomes. Furthermore, there is a bias towards nature based hedonic promoting environments which neglects the possible benefits of promoting eudaimonic states through interaction with VR.

Research Questions:

- What type of VR experience creates the highest positive impact on hedonic and eudaimonic wellbeing measures.
- Are different VR experiences more beneficial depending on what facet of wellbeing one wishes to positively impact.
- Are the experimental VR conditions more effective than both VR and non-VR controls.
- Do the experimental VR conditions create positive change from baseline to postexposure.

Method: A between-within subjects design with four conditions. Participants will complete baseline measures of positive and negative affect and meaning in life, followed by a condition specific activity and finally post exposure measures. Condition 1: Participants will experience 3 nature based VR environments, designed to encourage in-themoment hedonic states. Condition 2: Participants will go to 3 locations in Google Earth VR associated with prompts to tap into participants' sense of self and identity. Condi-

tion 3: Three VR control environments designed to contain the typically engaging aspects of VR (e.g. 3-D interactable objects ect) without promoting hedonic or eudaimonic states. Condition 4: A non-VR control activity absent of hedonic or eudaimonic elements. These conditions allow for comparisons between different methods of VR well-being promotion, and whether these are impactful compared to controls.

VR / wellbeing / positive technology

## Which cues do laypeople use to evaluate the credibility of feigned and actual experts on YouTube?

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As the Covid-19 pandemic demonstrated, social media plays an instrumental role in disseminating and discussing scientific information. Given that most viewed content concerning Covid-19 was created by users rather than official sources, it is not surprising that a concoction of true and false information spread on YouTube (e.g. D'Souza et al., 2020; Li et al., 2020). Specifically on YouTube, numerous feigned experts who highlighted their expertise (as, e.g., medical doctors) disseminated disinformation. This circumstance highlights the need to better understand to what extent laypeople are able to distinguish between true and false information and which cues are used to make this decision. Even though credibility cues have been extensively analysed in text-based material, there is almost no knowledge on how credibility judgements of videos are formed.

We will present an exploratory study modelled after the "thin slices" approach (Ambady & Rosenthal, 1992, 1993) employed in nonverbal behavior research. We present short video sequences of real and feigned scientific experts in order to identify which (non)verbal behaviours and additional cues affect recipients' trust and credibility assessment of (seemingly) scientific content on YouTube.

The exploratory procedure encompasses the following steps:

- 1. 940 Participants rate a random selection of 235 thin slices from YouTube videos showing real and feigned experts presenting information on Covid-19.
- 2. The thin slices that are rated as most and least trustworthy as well as credible are selected to be presented in qualitative interviews. This is used to receive first hints on relevant cues that determine trustworthiness and credibility.

- 3. Based on the interviews and relevant literature, a codebook is compiled by which all thin slices will be coded.
- 4. By means of regression analyses, it is determined which cues are most important predictors of trust and credibility judgements.

Credibility / trust / You Tube / thin slices / disinformation

## Inspired by the Dark side? Eudaimonic entertainment and the response to Islamic extremists on Instagram

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Instagram is a popular platform for young people in Germany and worldwide, but it is also used by extremists to spread their propaganda. Research has shown that Islamic extremists use Instagram to present their message in an entertaining way, employing cues found in meaning-oriented eudaimonic entertainment (Oliver & Raney, 2011), such as elicitors of self-transcending emotions and references to human connectedness. Eudaimonic entertainment can motivate prosocial behavior (Bartsch et al., 2016) but also reduce the rejection of violence through perceptions of meaningfulness (Bartsch & Mares, 2014).

In this study, we examined the effects of this ""dark inspiration"" (Frischlich, 2021, p. 555) on the engagement with extremist online content. We predicted that recipients which had seen propaganda including (vs. excluding) elicitors of self-transcending emotions would report more meaningful affect and larger intentions to engage with the posts, the extremist account, and the group behind.

We tested these assumptions by means of a pre-registered online experiment with German 584 crowd-coders. Participants were randomly assigned to read either three Islamic extremists' online posts that included elicitors of the self-transcending emotion hope or a control post. All propaganda posts were adapted from real material to a fictious organization ("Salafist youth Germany") used in prior work (Reinemann et al., 2019) and lamented the suffering of the Muslim community through discrimination and enmity of non-believers but only the self-transcending posts did also transport hope for a brighter future and fighting successes. In the control condition, participants saw posts from the fictitious "young weather observers Germany". After the posts, participants rated their

meaningful affect, how they would respond to the post and the account and the attractiveness of the group behind the posts before being fully debriefed and rewarded.

Media effects / entertainment / eudaimonic / propaganda / Islamic extremism / experiment

## Virtual reality: The future of anti-prejudice endeavours? A review and meta-analysis of experimental evidence

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To this day, many people show a strong inclination to discriminate against supposed 'outsiders' based on actual or perceived characteristics (such as ethnicity, gender, or sexual orientation). In turn, several minority groups remain marginalized within modernday society, experiencing tremendous hardships that range from daily-life ostracism to de-facto hate crimes. In order to combat these issues, psychological scholars have developed numerous strategies aimed at alleviating biased preconceptions and discriminatory behaviors towards disadvantaged social groups—such as intergroup contact interventions and mental perspective-taking. In a disheartening conclusion, however, a recent meta-analysis revealed that the success of such endeavors is often limited, both in terms of effect size and duration. Along these lines, researchers and practitioners have recently directed their attention towards new technologies that might serve to tackle outgroup biases in a more effective manner. Importantly, this has involved virtual reality (VR), an invention designed to fully immerse users in lifelike virtual environments. As VR may facilitate both highly visceral perspective-taking experiences as well as fully customizable intergroup contact, it has been proposed as a valuable tool against many forms of outgroup bias, including racism, ableism, and transphobia. Yet, with the respective literature growing quite rapidly, a synthesis of extant findings seems much needed. Aggregating 127 effects from 40 experiments (total N = 3,794), our preregistered meta-analysis examines the potential advantage of VR-based anti-prejudice interventions, comparing them to both no-message control groups and non-VR interventions. Our work is complemented by extensive moderation analyses, which scrutinize the impact of several theoretically deduced moderators, such as the type of outcome measure or treatment duration. Lastly, we focus on potential issues of publication bias. Based on the obtained results, we discuss future directions for this timely research field.

Virtual reality / prejudice / intervention / attitudes / outgroup bias / meta-analysis

## The effect of empathic communication and music sharing on affective bonding to a robot

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A key issue in Human Robot Interaction (HRI) is understanding the factors that allow humans to interact with robots intuitively and naturally, eventually bonding with them socially and emotionally. Importantly, how humans perceive robots greatly influences interaction, such that how they are treated and approached depends on whether they are seen as peers or tools. To better understand the mechanisms underlying the development of social and affective bonds between humans and robots, the Theory of Affective Bonding (TAB) has been proposed, describing 4 psychological factors (Relevance, Emotion-enhanced realism, Attributed humanness and Task-aligned affordances), expected to play a significant role on socially-relevant HRI.

This study examines how the different factors proposed by the TAB are contributing to bonding with a social robot in a context where the behavior of the robot varies in terms of empathic communication (empathic vs. non-empathic), and shared social activities (sharing music recommendations vs. non-sharing). The current study aims to evaluate the extent to which empathic communication, shared social activities and TAB factors influence affective bonding between participants and robots.

Participants were recruited via educational institutions and the author's social media. The study consisted of three 1min. interactive videos of the robots, followed by questionnaires measuring affective bonding, the TAB factors, and other relevant demographic and psychological variables known to be relevant in HRI (Loneliness). Each participant had 3 video-interactions with the robot and were randomly assigned to one of 4 conditions in a 2 (Empathy) by 2 (Music sharing) design. This repeated-measures design allows us to examine how participant's reactions develop over the 3 sessions. Moreover, this study also employed conditional analysis statistics to evaluate the extent to which the different TAB factors mediated the effect of the experimental manipulations of empathy and music sharing on affective bonding.

HRI/empathic communication / shared activities / affective bonding

#### Reducing loneliness in mentally healthy seniors through robotic companionship: A randomized controlled trial

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The World Health Organization (WHO) recognizes loneliness (subjective dissatisfaction with the current level of socialization) as risk factor leading to negative outcomes on health, and well-being. This situation is particularly dire for elderly worldwide, of whom 20-34% reports feeling lonely. This is aggravated by increasingly longer life-spans, an growing amounts of elderly individuals, and a decrease in personnel and resources available to take care of their physical, mental and social needs. Considering this, the WHO points out the urgency of developing evidence-based interventions to address loneliness. The present project was defined to evaluate the effects of interaction with a social robot (Alice) designed to provide companionship and a socialization opportunity to users. Effects are measured in terms of self-reported loneliness, physical and mental health, subjective well-being and quality of life. Additionally, we examine whether hormonal function (cortisol and oxytocin), is also affected by these interactions. This study also seeks to evaluate the Theory of Affective Bonding (TAB), proposed to explain how affective bonds develop between people and media characters as social robots. For this study, participants older than 65, physically and mentally well-preserved, and without significant health concerns were recruited from Dutch elderly care institutions. Each was randomly assigned a robot (https://www.alicecares.nl) or tablet version of Alice and received a separate introductory session to demonstrate Alice's functions. The study consisted of three 30min chats over 1 week. Standardized questionnaires measuring the variables of interest were administered before the introduction and after the last session. Hormonal changes are evaluated through saliva samples collected before and after each interaction. Results are analyzed in a mixed within- (Before- vs. After- sessions) -between factors (Robot vs. tablet) design, and an exit interview is conducted after the last session to obtain additional information about the participant's experience and impressions.

HRI / loneliness / social robotics / healthcare

## Robot-Supported Decision-Making Processes: Effects of Embodiment, Recommendation Timing and Gender

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With the rise of elaborated AI-systems the application of these technologies in decisionmaking processes broaden and robot-supported decisions will be a crucial part of future workplaces. However, with the use of robotic advice problems like overtrust (Ullrich, Butz & Diefenbach, 2021) or algorithmic aversion (Mahmud et al., 2022) might occur, which inhibit the advantages of robot-supported decisions. Therefore, it is necessary to investigate important characteristics that affect human decision making. Prior research demonstrated that the timing of robotic advice effects how humans make use of this advice (Straßmann et al., 2020). As the embodiment of robotic systems has an important role on interaction variables, we assume that an embodied robot with a physical body has a stronger effect on in the decision-making process than a voice assistant without one. Moreover, it was found that men and women perceive and trust robotic systems differently (Gallimore et al., 2019). Accordingly, this work investigates the influence of the users' gender in robot-supported decision-making. In an online experiment with a 2x2 between-subject design (N = 288 participants (143 women, 142 men and 3 non-binary)), two video-recorded robot systems presented a decision task and their recommendations for the decision. The decision task and associated recommendation was either presented by a physically embodied robot (Pepper) or an embodied speech-assistant (Alexa). Moreover, the time at which the recommendation was presented varied: The robotic system either presented its recommendation together with the decision task or first presented the task, then gave the user the chance to state their own opinion and then the robotic recommendation was presented. In a questionnaire, participants rated the robotic system, the decision-making process, and their decision. The study results give valuable insights on psychological effects in robot-supported decision-making and thereby deliver design recommendations for the use of robotic support systems.

Robot-supported decision-making / gender effects / decision process / robot / speech assistant

# Talking Like You When Talking With You - An Experimental Study on Users' Communication Style Adaptation to a Voice Assistant's Politeness and Machine-Likeness

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Voice assistants are increasingly entering people's lives. Being operated via voice commands makes them easy to use but also fosters human's treatment of them as social entities. In human-human interaction, people tend to adapt their (non-)verbal behavior to their interlocutor. As voice assistants can trigger social reactions, the question arises whether and to what extent users adapt to the communication style of a voice assistant and how long this adaptation lasts. Considering previous research, the adaptation could have a grounding function to ensure efficient communication with the current communication partner (Clark & Brennan, 1991) or be based on priming effects, potentially enduring and influencing subsequent interactions (Pickering & Garrod, 2004). As an interaction partner's perceived communication skills can influence people's communication style, and the degree of the interaction partner's perceived sociability may affect how much we aspire a communication success, perceived competence and sociability are considered as influencing factors. In a pre-registered experimental lab study, 133 participants interacted with a voice assistant whose communication style varied regarding politeness (high vs. low) and machine-likeness (machine-like vs. natural). The study encompassed three parts: 1) The voice assistant guided the participants through a recipe they had to follow with requisites, intended to expose them to the voice assistant's communication style. 2) To measure communication behavior in an interaction, the voice assistant interviewed the participants about their dietary constraints and preferences. 3) Participants' communication behavior in an interaction with another person was measured by letting them repeat the recipe to an imagined person. Afterwards, participants filled in questionnaires about competence and sociability. Via video-recordings of the three parts, participants' communication style could be analyzed based on a deductively developed coding scheme. A MANOVA was computed to answer the main hypotheses while mediation analyses investigated the effect of competence and sociability on the adaptation.

Voice assistant/human-machine communication/communication adaptation/politeness/machine-likeness

## De-stigmatizing Cognitive Dissonance Induced by Media Images of Para-Athletes

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In articles about para-athletes, their visual images inconsistent with attributes of the prototypes regarding athletes with disabilities (AWDs) may trigger uncomfortable dissonance. This prompts dissonance-resolving reappraisals of inconsistent cognitions and the processing of the interdependence frame (Goethals et al., 2020) that indicates mutually beneficial relationships and understanding between people with and without disabilities (Brannon & Gawronski, 2018). Cognitive dissonance (Festinger, 1957) in multimodal information settings has focused on the effects of cognitive (in)consistency between visual image and text body (Powell et al., 2015) or between the public's prior attitude and the news article (Powell et al., 2021) but not between the public's prior attitude and visual images. The investigation comprises RQ1) Which attributes of visual images of AWDs in news articles are inconsistent with the public's prototypes of AWDs and induce psychological discomfort of dissonance? and RQ2) Does psychological discomfort strengthen the positive impacts of the interdependence frame on the public's attitude toward PWDs? A web-based experiment, using a 2 (para-athlete images: prototypical vs. unprototypical) × 2 (text: interdependence frame vs. control) between-subject design, was conducted among Japanese participants (n = 200) who had no disabilities and had viewed media images of AWDs. Before exposure, they completed open-ended questions measuring prototypes of AWDs and of their images. They were exposed to randomly chosen prototypical/unprototypical images of AWDs and questioned about perceived consistency with the prototypes and psychological discomfort of dissonance using a 5-point semantic differential scale. Then, they read an article with the previous image and texts with or without the interdependence frame. After reading, cognitive and affective attitudes toward people with disabilities were measured using a 5-point Likert scale. Morphological and hierarchical cluster analysis will extract attributes defining the prototypes. After assessing the measurement model, multi-group mean and covariance structure analysis will illustrate the differences across the image conditions.

Cognitive dissonance / cognitive inconsistency / people with disabilities / multimodal communication / destigmatization

#### Something in Common? Brand Personality and the Inclusion of Brands in the Self

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Brand personality is associated with different advertising effects, e.g. brand loyalty (Kuenzel & Halliday, 2010). Unlike the Big Five of human personality, various studies showed that the dimensional structure of brand personality seems to be less robust (Aaker et al., 2001; Geuens et al., 2009). One explanation for this is the selection of different target brands and items across studies, as certain brand personality traits seem to be unsuitable for describing specific brand categories (Caprara et al., 2001). Studies have shown that people integrate characteristics of preferred brands into their own self-concept (Inclusion of Others in the Self-IOS) (Trump & Brucks, 2012). Since some brand personality traits are suitable to characterize both people and a broad range of brands, others are not. Therefore, the present study investigated whether the inclusion of brands in the self is limited to only specific brand personality dimensions.

In an online survey, 261 participants first rated their agreement with 20 traits for themselves and a preferred brand. Next, the traits were successively represented and participants had to indicate via keystroke as quickly as possible whether the presented traits describe themselves or not. If the cognitive representations of the self and the brand overlap, traits that apply to the brand but not to the self should be more difficult to access, and vice versa. Therefore, we expected higher reaction times and more frequent errors for traits that were rated differently for the self and the brand. Reaction time and error frequency served as implicit indicators of IOS. In addition, IOS was explicitly measured using the IOS scale (A. Aron et al., 1992). By analyzing the correlation with the implicit IOS measures, we aim to verify whether self-report measures are appropriate for measuring IOS of nonhuman entities.

Brand personality / inclusion of others in the self / personality congruence / self-brand over-lap

## Keep Calm – The Role of Resilience in the Interplay Between Neuroticism and Phubbing

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Phubbing, derived from ""telephone"" and ""snubbing"", refers to the phenomenon of looking at one's smartphone in a social interaction instead of paying attention to the other person (Chotpitayasunondh & Douglas, 2018). Phubbing most often occurs when people use social media via their smartphones. This behavior can have negative consequences for both the person who is phubbing (phubber) and the person/environment that is being phubbed (phubee), for instance in the context of romantic relationships (Roberts & David, 2016), job performance (Roberts & David, 2020), or relationships between parents and children (Xie & Xie, 2020). Furthermore, phubbing is associated with an increased incidence of depressive symptoms, anxiety (Elhai et al., 2017), and problematic smartphone use (Sun & Samp, 2021). However, with social media and smartphones ubiquitous in daily life, the complete elimination of this phenomenon may be an unattainable goal. Therefore, we want to find ways to at least reduce phubbing frequency and its negative effects of phubbing.

Research has already shown that individuals prone to neuroticism are more likely to be a phubber (Parmaksiz, 2021). In contrast, higher resilience is related to less problematic social media use (Hou et al., 2017; Mu et al., 2020) and might play an important role in the context of social media-related phubbing. In this light, we want to find out whether resilience can help to reduce neurotic persons' phubbing tendency. Therefore, we analyze data of N = 474 participants between the ages of 18 and 87 (M = 30.92, SD = 3.45). From the results of mediation analyses with neuroticism as independent and phubbing as dependent variable, and resilience as a mediator, we will derive recommendations for action to reduce the occurrences and negative effects of social media-related phubbing, especially for people prone to neuroticism.

Phubbing / social media / smartphone / neuroticism / resilience

#### Beyond the Screen: A Study on the Impact of Smartphone Use and Preventive Interventions in Online Learning Environments

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The distraction of smartphones in terms of problematic smartphone use creates new challenges for lectures. Problematic smartphone use is influenced by a variety of factors like lower conscientiousness, openness, emotional stability(Hussain et al., 2017; Horwood & Anglim, 2018; Giridharan, 2021) and higher scores in the domain of neuroticism (Horwood & Anglim, 2018), anxiety disorders and time spent on the smartphone (Giridharan, 2021). Problematic smartphone usage behavior has consequences for mental (Elhai et al., 2016) as well as physical and psychological health and social problems (Ding & Li, 2017). These consequences affect learning processes, and the participation in and focus on courses (Kaysi et al., 2021). Due to the Covid-19 nationwide lockdowns, the simultaneous use of multiple devices has further increased, causing an ever-growing drain on direct attention (Monge Roffarello & De Russis 2021). This study investigated the trend of smartphone use during online university classes by manipulating preventive instructions and using different digital nudges in order to reduce smartphone use. Furthermore, a possible relation between the respective effectiveness of preventive instructions and the learning types according to Fleming's VARK learning type test was investigated. Three questionnaires were completed over a period of three weeks starting with N = 82 students, only 34 students completed all questionnaires. Five students further conducted qualitative interviews. All participants were assigned to one of three conditions: 1) the active (removing the smartphone) or 2) passive (Grayscale mode) intervention or 3) the control group. The study investigated general smartphone use, reasons for smartphone use as well as smartphone use during courses. The effects of preventive measures on smartphone use, academic performance, and attention during the online course as well as possible effects of the learning type on the motivation to carry out preventive measures were also evaluated.

Smartphone use / online learning / digital distractions / digital nudges / learning types

#### Insights on Young Voters' Social Media Diet within Election Campaigns - A Qualitative Analysis of Political Social Media Content

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Within democracies the influence of new media on political reasoning and even elections is important to understand. Especially for younger citizens social media are channels to receive political information and news. While research showed that the usage of online media and social media can enhance political engagement and activate people to vote, there are also potential threats towards a balanced and well-informed information reception. The algorithm-based spreading of information might lead to a restricted media diet even though the overall consumption of news is the same or even increases. So called "filter bubbles" might occur, meaning that people only get information representing specific topics and opinions, that confirm their existing mindset. This could either concern organic, unpaid content, or paid content that is targeted towards people with specific attributes. Also, the usage of "dark ads", meaning advertising that is only distributed to a certain audience is especially critical within a political context as potentially polarizing statements can hardly be challenged by others. Revelations about the potential of highly personalized targeting, so-called online political microtargeting (OPM), led to research regarding the effects of different targeting attributes, like personality traits and existing attitudes (e.g., Zarouali et al., 2020). However, research on actual targeting within political campaign settings is still rare. Therefore, as part of a multi-method research project surrounding the Northrhine-westfalian state election in 2022, we gathered data donations of young voters (N = 98). This study focuses on the political content, users were exposed to on social media, which was gathered within a longitudinal survey at four time points before and after the election. Using a qualitative content analysis approach focusing on political topics, we aim to analyse whether there are signs of microtargeted campaigning in young voters' political social media diets.

Social media / political communication / content analysis

# Exploring the Relationship between Political Orientation, Media Use and Attitudes towards Science and Politics: A Comparative Analysis of German Citizens with Turkish and No Migration Background.

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Individuals of Turkish origin show a slightly above-average tendency to consume content in their native language (SVR Policy Brief, 2021). The fact that Turkish migrants in Germany are more inclined to consume content in their native language could be due to their social identity. According to social identity theory, self-perceived belonging to a social group affects social perceptions and attitudes (Tajfel, 1978). Thus, we aim to analyze how the migration background and degree of social identity affects media use. Another aspect that influences media use is that people often choose media channels in accordance with their political orientations which leads to certain political and worldviews being reinforced (Sunstein, 2001). Furthermore, media consumption has been shown to be a predictor of trust in science (Huber et al. 2019) and political orientation has been found to influence science skepticism (Meier & Krämer, 2022). Moreover, there is a relationship between media use and political disenchantment (Pöttker, 1996). Given this theoretical background the underlying research question is whether Germans with and without a Turkish migration background differ in their political orientations, and whether these political tendencies can explain certain media consumption behaviors, that are in turn related to specific societal views and attitudes towards science. Using an online survey, this study will gather data from Germans with and without a Turkish migration background (N = 250). Participants will be asked about their social identity, political orientation, use of media, skepticism about science and their political disenchantment. The data will be calculated by using a path model to reveal the relationships between variables. Additionally, the two groups, which differ in whether they have a migration background, are compared by conducting a Manova. Altogether, this comparative study will contribute to research regarding political orientation, media reception, and worldviews amongst Germans with and without a Turkish migration background.

Social identity / political orientation / media reception / science skepticism

#### To Thine Own Self Be True (on Social Media): Longitudinal Associations of Emerging Adults' Perceptions of Self-, Peer, and Influencer Authenticity with Depressive Tendencies

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A primary motivational pull for youths' social media activities is to satisfy self-presentation needs (see Hollenbaugh, 2021). Unlike in public debates where idealized self-presentation often takes center stage, authenticity typically serves as a positive buzzword for promoting new applications or features (Salisbury & Pooley, 2017), partially given that authentic self-presentation is known as a solid predictor of well-being (both online [Twomey & O'Reilly, 2017] and offline [Sutton, 2020]).

Based on a subjective (rather than objectivistic; see Jongman-Sereno & Leary, 2019) definition of social media authenticity and well-established theoretical approaches explaining intra- and interpersonal benefits of self-authenticity (i.e., self-determination, meaning-making, social exchange theory, and social penetration theory) and ambiguous effects of perceived authenticity in others (i.e., emotional contagion and different kinds of social comparisons), this study addresses crucial research gaps by examining how emerging adults' self-perceived social media authenticity (H1, with negative prediction being assumed) and their perceptions of online authenticity among their peers (RQ1a) and influencers (RQ1b) they follow relate to depressive tendencies over time.

Methodologically, we address the frequently bemoaned lack of longitudinal research and non-student samples (e.g., Valkenburg, 2022) by using two-wave panel data (with an approximately four-month interval between surveys) from a heterogeneous sample of emerging adults from [COUNTRY] (NT1 = 978 after applying several data quality checks; NT2 = 415). Given that this study was part of a comprehensive survey, short versions or high-loading items of established scales were implemented to avoid response fatigue while minimizing losses in measurement quality. In addition to standard demographics (age, gender, education), we followed recent calls from scholars arguing that true authenticity effects need to be isolated from related self-relevant evaluations (Rivera et al., 2019) by accounting for participants' perceptions of positive and negative feedback to their self-presentation on social media. Statistical analysis was conducted via measurement invariant over-time structural equation modeling.

Authenticity / self-presentation / social media, peers / influencers / depressive tendencies

#### Overcoming communicative ambiguity to strengthen the bond between humans and robots

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Social relationships between humans and social robots are crucial for effective communication and collaboration. The current project studies how social communication and relationships between robots and humans develop as two sides of the same coin: bonding results in better communication and better communication enhances affective bonding. Integrating both perspectives, our theoretical framework combines the Theory of Affective Bonding from a media-psychological perspective (emphasizing human processing) with the Theory of Identity, Reference, and Perspective from a linguistics perspective (e.g., overcoming ambiguity) to optimally program social robots for communicative purposes. For example, the same word can have different meanings (e.g., bank) and different words are used to refer to the same (e.g., flat, apartment). Likewise, humans use various non-verbal cues to coordinate conversation (e.g., eye blinking as turn-taking cue). The research question is how to achieve the natural feel of human conversation through fabricated non-human cues to develop autonomously functioning robots for human-robot communication.

We examined how participants (both children and adults) develop communication and bonding over time through playing a game together at festivals. The game has been developed such that the robot and participant need to find common ground in searching for differences between pictures and increase their mutual understanding (cf. 'Spot the difference', a shared memory game). To test assumptions, we applied a between-subjects repeated measures experimental design in which communicative cues were varied through two factors (Factor 1: Rational Speech Act Model vs. ChatGPT; Factor 2: fabricated explicit turn-taking cues vs. intuitive implicit turn-taking). Participants played the game with the robot over 6 different sessions. Observational audio-visual data were collected during gameplay, whereas questionnaires (e.g., dimensions of bonding, understanding) were taken beforehand, after the first trial, and afterwards. This long-term design allows to study mutual language understanding and human-robot bonding over time, which is unique in the field.

Human-robot communication / computational linguistics / mutual understanding / affective bonding / field experiment

## Understanding the factors that shape adoption of GPTs: A study grounded in UTAUT

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The generative pre-trained transformers (GPT) developed by OpenAI is an emergent technology that can score in the 90th percentile on various university-level exams, could replace nearly half of all worker tasks in Western societies (Eloundou et al., 2023; OpenAI, 2023). It is therefore of interest to understand what factors could positively affect the acceptance and usage of such technologies for organizations and individuals seeking to enhance productivity and learning outcomes.

The Unified Theory of Acceptance and Use of Technology (UTAUT) has been successful in explaining the acceptance and use of a wide variety of emergent technologies by diverse groups of users (Venkatesh et al., 2016). UTAUT includes four constructs that affect the behavioral intention to adopt and the actual usage of technology (Venkatesh et al., 2003). These four constructs are: performance expectancy, the perceived benefit to user; effort expectancy, perceived ease of use of the technology; social influence, the extent to the opinion of important others influence users to use a technology; and facilitating conditions, perceived availability of resources and support to user about a technology (Venkatesh et al., 2012).

This research seeks to answer the following question: "What perceptions and attitudes influence the behavioral intention to adopt GPTs?" Perceptions not only refers to the above mentioned four constructs but also to other constructs that have emerged from research grounded into UTAUT and research on the topic of AI acceptance and usage, such as hedonic motivation, habit, perceived intelligence and anthropomorphism, and AI literacy (Long & Magerko, 2020; Moussawi et al., 2020; Venkatesh et al., 2012). Data is collected through a questionnaire and quantitatively analyzed. This allows the research to validate the applicability of UTAUT to the context of GPTs and measure the influence of several other constructs on the behavioral intention to adopt the technology.

UTAUT/ChatGPT/Behavioral intention/perceptions/attitudes

#### **Explicating the Online Disinhibition Effect**

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In online contexts with reduced social cues, people behave more disinhibited (Joinson, 2001). Specifically, the Online Disinhibition Effect (ODE) describes behavior under the condition of lowered psychological restrains (Suler, 2004). There are however conceptual as well as operational issues (Cheug et al. 2020). Particularly, the difference of antecedents, the experience of disinhibition and the outcomes of disihibition are often not distinguished (Stuart & Scott, 2021; Nesi et al. 2018). Hence the goal of this study is to explicate the ODE with regard to its antecedents, i.e. features and affordances, the experience of disinhibition, i.e. "self-perceptions of psychological and behavioral change in the online as compared to the offline environment."" (Stuart & Scott, p.9, 2021) and outcomes, i.e. benign and toxic disinhibition.

Furthemore, the description of the influencing factors to this effect, such as dissociative anonymity and invisibility, only take into account social but not technical anonymity. Found effects concerning different types of anonymity on disinhibition are inconclusive (e.g. Clark-Gordon et al., 2019; Lapidot-Lefler & Barak, 2015, 2012).

Thus, we ask: To what extend is the effect of the perceived affordances of SNSs on benign and toxic outcomes of disinhibition mediated by self-perceptions of psychological and behavioral change?

Through applying structural equation modeling, we analyze data of a sample representative of German social media users with regard to age and gender (49.94% female, 0.40% diverse) of the age between 13 and 92 years old (M = 37.03). Demographics are distributed equally for each experimental group (N=6031; n1=1003; n2=1001; n3=1009; n4=1007; n5=1006; n6= 1005). Participants were randomly assigned to one of six conditions that assumed different types of anonymity. In each condition, a fictitious social networking site was presented to the participant and their perception of the context and the impact of the site's affordances on their disinhibition were assessed through self-report.

Online Disinhibition, anonymity, social network sites, darknet

#### If I'm happy and I know it, I use my smartphone smartphones as tools for emotion regulation

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A distinct human feature is our ability to create and use tools to simplify everyday life, and technology can be seen as one of these tools. Smartphones are no exception and can be described as ""digital companions"" that provide us with help, guidance, and distraction, gratifying a variety of needs (Carolus et al., 2019). They are also a practical tool for organization and information gathering. Furthermore, previous research has found that smartphones can provide a means for emotion regulation (Gross, 2015; Smith et al., 2022). The Mood Management Theory (Zillmann & Bryant, 1985) and the selective exposure self- and affect management (SESAM) model (Knobloch-Westerwick, 2015) provide insight into how technology users aim to induce and maintain desirable emotions or flee and distract from undesirable emotions, as well as the strategies they use.

Our study aims to investigate whether smartphone usage affects emotion regulation and which apps are used when experiencing certain emotions. Specifically, we are interested in whether smartphones are used more to maintain desirable emotions or to flee from undesirable emotions. We also explore whether underlying tendencies towards emotion regulation strategies affect the smartphone's role in regulating emotions.

In a between-subject experimental approach, we recruited 122 participants who watched either a happy or sad video to induce an emotional state and then either interacted with their smartphone or were not allowed to interact with it. In the ""usage"" group, participants were free to interact with the device as they wished, and we assessed the type of usage via surveys. Additionally, we queried their affective state and underlying tendencies towards emotion regulation strategies.

Smartphones / emotion regulation / digital companions

## Podcasts and Parasocial Interaction: Analyzing the Impact of Reception Modality and Listening Styles

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This study investigates the impact of podcast modality and listening profiles on parasocial interaction (PSI) with podcast hosts. PSI is a phenomenon where individuals develop feelings of intimacy and friendship with media personas, despite the absence of any reciprocal relationship (Liebers & Schramm, 2017). Listening styles, on the other hand, describe how individuals listen to and interpret communication (Bodie et al., 2013). Given the increased popularity of podcasts, it is important to understand how different listening styles and reception modalities influence PSI. Previous research has identified various factors that influence PSI in podcasts, including usage motives (Schlütz & Hedder, 2021), media use patterns (Tobin & Guadagno, 2022), and individual listening styles (Vickery & Ventrano, 2021). This study builds on these findings by exploring the role of modality and listening styles in PSI with podcast hosts.

The research questions for this study are focused on understanding the relationship between PSI and reception modality (H1), listening styles (H2), and episode reception duration (H3). In addition, the study aims to explore the role of familiarity with podcast hosts (H4) on the PSI.

The study employs a randomized experimental design with two groups (audio vs. video). Participants (N=199) either listened to or watched an episode of a professional podcast that was both released as an audio and video podcast. Participants complete a questionnaire on demographics, their media usage and their listening style profile (LSP-R; Bodie et al. 2013; 6 items on a 7-point Likert scale). They then listen/watch a 50-minute podcast episode. Afterwards, participants complete a recall test and rate one of the hosts on the PSI scale (Schramm & Hartmann, 2019, 96 statements, 5-point Likert scale).

Data analysis includes descriptive statistics for demographics and general media use, as well as linear and multiple regression and Pearson correlation to test the hypotheses.

Parasocial interaction / parasocial relationship / listenting style profiles / podcasts

### **Posters**

## Play the grief away – Positive effects of playing a meaningful video game

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Video games have become an integral part of society and have shown to have positive effects on mood (Russoniello et al., 2009), emotions and emotion regulation (Villani et al., 2018), depressive symptoms (Kowal et al., 2021), and general well-being (Granic et al., 2014). Also, prior research has shown potential positive effects on mood improvement for casual video games (e.g., Rieger et al., 2015; Russoniello et al., 2009). Therefore, the current lab study was conducted to test the effects on people's affective state in the context of a meaningful video game (Gris) that deals with self-growth and healing after a traumatic event. It was hypothesized that playing the game leads to both mood improvement (i.e., reduced negative affect and increased positive affect in the pre-post PANAS [Watson et al., 1988]) as well as increased parasympathetic activity that indicates greater physiological relaxation (i.e., increased heart rate variability – HRV). Due to its immersive nature and its strong emotional themes, it was furthermore hypothesized that the extent of players' reported pre-test depressive symptoms moderate the positive effects on mood (García Catalán et al., 2021; Vasilikaris, 2022). During the experiment, participants (N = 64) provided demographic information and answered their current affective state via PANAS before playing Gris for 20 minutes. Right after gameplay, participants rated the PANAS items again. HRV (indices: the root mean square of successive differences, high-frequency power [RMSSD], and the ratio between low-frequency [LF/HF] and high-frequency power [HF]) was assessed pre, during, and after gameplay. The results of the current study will be presented at the conference. The findings not only extend the general evidence base on the potentially beneficial role of video games and human-computer interaction, but in particular may illustrate the positive effects of meaningful video games on mental health and well-being.

Video games / heart rate variability / mood improvement / depression / mental health

### Does a Robotic Co-Worker Threaten Human Status at Work?

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Robots are used in the workplace to increase efficiency (Goštautaite et al., 2019) and safety (Borenstein, 2011) and to assist humans (Broman & Finckenberg-Broman, 2017). The amount of robots is constantly increasing, and their qualities are also changing: There are no longer just mechanical robots that take on monotonous tasks but also robots equipped with artificial intelligence, becoming more capable of learning, remembering, discerning, judgment-making, and displaying agency (Frick, 2015). However, in user acceptance studies, modern entities expressing agency or experience evoked higher eeriness than those without such mental abilities (Appel et al., 2020; Taylor et al., 2020), and humans felt threatened by machines with human-like agentic abilities (e.g., Ferrari et al., 2016; Stein et al., 2019). Due to the increasing number of sophisticated robots equipped with artificial intelligence at workplaces, I was interested in how this sense of threat in response to robots' mental superiority influences the willingness to interact with machines in a work-related context.

Following interpersonal literature, I transferred the variable status threat from work-place contexts to human-machine interaction and drew parallels to the threat to human uniqueness variable (Stein et al., 2019). I expected that humans feel status-threatened by a sophisticated machine presented as a co-worker and primary contributor to a particular work-relevant task. A higher status threat was expected to decrease the willingness to interact with the machine. Participants received manipulated performance feedback after each of the five rounds in which they and the machine solved verbal-creative tasks requiring human-like mental capabilities to solve (Gray et al., 2007). In Experiment 1, participants collaborated with the robot NAO (N1 = 104, Wizard-of-Oz). Afterward, I tested the generalizability of the findings in a subsequent online study (N2 = 589) simulating an artificial intelligence without embodiment as the participant's co-worker. Its perceived usefulness served as an additional variable.

User acceptance / human-robot interaction / status threat / workplace / perceived usefulness

### Science Popularization in a Polarized Society: How Scientists in the Field of Climate Change Communicate Science and Deal with Potential Negative Feedback

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Science popularization is essential for scientists (Cerrato et al., 2018). Online media has become the preferred mode of communication, especially for younger scientists (Besley et al., 2018). At the same time, online hostility against scientists and science popularizers increases, particularly among those who belong to marginalized groups (Houlden et al., 2022; Veletsianos et al., 2018) or work on controversial topics like climate change (Branford et al., 2019; Nogrady, 2021). This not only affects the personal lives of these individuals as it may result in feelings of anger, fear, and decreased well-being (Wachs et al., 2022) but also has wider implications for the scientific community. Online hostility against scientists is potentially undermining the scientific endeavor for truth (Branford et al., 2019) and has the potential to silence certain scholars or topics (Celuch et al., 2022; Nölleke et al., 2023).

Scientists in the field of climate change are facing growing populism and anti-science sentiment (Mede & Schäfer, 2020; Merkley, 2020). Empirical investigations into their coping with online hostility are scarce. Understanding how scientists deal with online hostility and develop strategies to handle it is important, especially since science communication about climate change continues to be an integral part of stopping or mitigating Anthropocene climate change.

Using qualitative content analysis of guideline interviews with scientists in the area of environmental change, we answer the following questions with a special focus on gender: What motivates scientists working on climate change to engage with the public and what do they expect? What reactions do these scientists get to their science communication activities? Finally, the study seeks to understand how scientists handle negative feedback, how it affects their personal well-being and their work, and what strategies they use to deal with it.

Hostility / science communication / climate change / well-being / coping

#### "Female propaganda"? The relationship between threatened masculinity, hostile media perception, and corrective actions

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Social and political developments have reinforced egalitarian values in many societies around the world, yet gender-based struggles remain highly prevalent—both off- and online. Importantly, it appears as though even supposedly neutral or factual online content concerning gender issues can swiftly turn into the focus of heated debate. Research on hostile media perception (HMP; Vallone et al., 1985) offers a possible explanation, suggesting that those highly involved with a controversial issue or experiencing intergroup threat tend to perceive any news coverage on the respective subject as slanted or even hostile. In turn, the corrective action hypothesis (Rojas, 2010) presumes that such beliefs about the injustice of news media coverage lead to defensive responses: Concerned recipients are expected to show a strong desire to derogate the credibility of the respective content and to take corrective action. Notably, digital media enable their audiences to carry out such counteractions with ease, e.g., in the form of dislikes or written comments.

With regard to gender issues, however, research on HMP and corrective actions remains sparse. Therefore, the current study explored perceptions of media bias in the context of a gender-related news article, with special focus on potential corrective actions. Additionally, we investigated whether the hypothesized effects depended on the mental activation of participants' gender-related social identity. To this end, we experimentally induced masculinity (vs. no) threat in 198 male participants, before presenting them with a news article about feminist issues. Based on a moderated mediation model, we further looked at the impact of dispositional factors (conformity to masculine norms and narcissistic superiority) and the alleged news source. The full set of hypotheses and analysis methods can be found in the preregistration (see https://aspredicted.org/SRG\_TQC).

Hostile Media / gender stereotype / masculinity / gender-related issue / corrective action

### Peers, Perfect Selfies, and Project Body: How Social Comparison and Self-objectification Explain the Relations between Active Online Self-presentation, Social Norms, and Cosmetic Procedure Perceptions

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Today's technological affordances have revolutionized opportunities for self-presentation: editing applications allow users to enhance their appearance through one-click beautify functions, and these idealized images can subsequently be disseminated via highly visual social media platforms. Previous studies have investigated how these active online self-presentation behaviours relate to users' body image perceptions (especially facial satisfaction seems saliant here, cf. Tiggemann et al., 2020), and even cosmetic surgery acceptance and intention (cf. Hermans et al., 2022). Yet, existing research has often explored these media effects in isolation, generally neglecting the social context in which beauty standards and appearance practices are negotiated. As demonstrated by scholars in this field (e.g., Piazzesi & Lavoie Mongrain, 2020), however, it is highly important to consider this context in which peer influences and norms are crucial (Sociocultural Theory; Tiggemann, 2012). Furthermore, more nuanced investigations of underlying mechanisms explaining the relations between particular social media usage and effects on body image is needed (e.g., Veldhuis, 2020).

Thereto, this study investigates how active online self-presentation and social norms relate to women's facial satisfaction and cosmetic procedure acceptance and intention. Furthermore, we explore if these relations are explained by variations in users' self-objectification, and whether they particularly pertain to those who engage in upward appearance comparison with other women online to a higher extent.

To analyse the proposed relations, we conducted a cross-sectional survey among young adult women (N=138; Mage=22.45, SDage=1.58). Key variables were active self-presentation (i.e., selfie editing and posting), perceived social norms towards cosmetic procedures, facial satisfaction, and cosmetic procedure acceptance and intentions. Furthermore, we tested the moderating effect of upward social comparison with other women's appearances encountered online, as well as the mediating role of self-objectification. Results and implications in both domains of media effects research and media literacy interventions will be discussed at the conference.

Active self-presentation / social norm / social comparison / self-objectification / cosmetic procedures / body image / facial satisfaction

### How Observed Persona-Follower Interactions on Instagram Shape Parasocial Relationships: A Four-Week Online Experiment

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Since social media enable two-way interactions between online personae (e.g., influencers) and their audiences, scholars have raised doubts about the one-sided nature of parasocial relationships (PSRs) in this context. However, evidence shows that most users still only experience interactions with social media celebrities as unilateral, even if they might sporadically see the persona in question reply to other users. This study examines the potential impact of persona-follower interactions on the strength of observers' PSRs, based on a longitudinal experiment with high external validity. Student participants were randomly assigned to one of two conditions, both of which were instructed to visit the (self-created) Instagram profile of an online persona every day for four weeks (Nt1 = 113; Nt2 = 65). In the observed interaction condition, the persona's frequently uploaded Instagram posts contained visible interactions (i.e., comments, likes) with other followers, while the no interactions condition lacked such information. Participants themselves were not allowed to interact with the persona for reasons of standardization — and to maintain the unilateral nature of parasocial experiences. Based on our theoretical considerations, we expected stronger PSRs after the four-week period in the group with observed interactions than in the group without (H1). Also, as PSRs have been shown to be more pronounced among women than among men, a similar difference was anticipated in our study (H2). Lastly, several interpersonal perceptions were measured both at the beginning and the end of the observation phase, namely identification, perceived similarity, likability, and authenticity of the online persona. For all of these concepts, a stronger increase over time was presumed for the observed interaction condition (H3).

Parasocial relationship / Instagram / longitudinal design / identification / authenticity

## The concept of a digital learning workshop to promote media literacy among older people

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In the BMBF-funded research project DigiKomS (short for "Digital Competencies for Senior citizens"), a digital learning workshop was developed to promote digital media skills for people aged 70 and over. This learning workshop was designed based on the pedagogically established learning concept of the learning workshop ("Lernwerkstatt"), Ajzen's Theory of Planned Behavior, the Media Competence Model of Groeben and insights from a quantitative study on determinants of the use of digital media by older people conducted in our research project. The following questions were asked: What thematic components must a learning workshop include that takes into account the everyday media use of over-70s? What is the structure of a digital learning workshop that is intended to teach media skills in an age-appropriate manner? How can collaborative learning succeed in the learning workshop despite the heterogeneity of this target group? The basic principles of geragogy, which enable older people to lead a self-determined life and promote age-appropriate learning behavior, were then combined with impulses from media education. The special feature of the resulting digital learning workshop is that knowledge is not only imparted about media, but is also taught by using media. In the course of the aging of our society, educational opportunities for the digitization of pensioners are becoming increasingly important. The success of the use of a digital learning workshop for the digitization of older people was proven by the DigikomS project, thus expanding the portfolio of funding opportunities for digital media competency and literacy in adult education.

Learning workshop / Theory of Planned Behavior / media competence / adult education

# Determinants of the use of digital media by older people. A comparative survey on the way to the development of a digital learning workshop

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The eighth ageing report of the Federal German government" states that digitization offers many opportunities for older people to be able to lead an independent and self-re-

liant life for as long as possible. However, older people often rate digital media as overwhelming and challenging. Using Ajzen's Theory of Planned Behavior, the project aims to analyze the media usage behavior, media use intentions and their determinants among people aged 70 and over. The BMBF-funded research project DigiKomS (short for "Digital Competencies for Senior Citizens") aims to develop, test and evaluate a digital learning workshop ("Lernwerkstatt") for older people. The following questions arise: Which determinants (in terms of the Theory of Planned Behavior) influence the intention of older people to use digital media (more frequently), compared to younger people? How can a digital learning workshop be designed to promote the use of digital media? Based on the results of a qualitative interview study (N=21 elderly people), a quantitative crosssectional study (N=215, of which 108 were between 30 and 55 years old, 107 aged 70 and over) was conducted to assess the strength of the determinants of media choice and behavior. The Theory of Planned Behavior proves to be an adequate basis for modelling digital media use of older people and thus also for the conceptualization of a digital learning workshop for older people. Important media-psychological implications from the promotion of digital media use by older people are highlighted.

Digitalization / media competence / adult education / Theory of Planned Behavior / learning workshop

#### The side-effects of Instagram

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Instagram, the constantly growing image-based social platform can negatively affect body image, life satisfaction and self-esteem. In addition, its use has been linked to eating disorders. Two online studies tested the effects of Instagram on self-esteem and affect, with a particular focus on eating symptomatology. In Study 1, a total of 307 adult women saw Instagram posts showing overweight women in bathing suits with either body-positive or body-negative comments that were manufactured. The results indicated a negative correlation between Instagram use and trait self-esteem. However, the emotional valence of comments had no significant effect on the reported state self-esteem after seeing the posts. In contrast, reported eating disorder severity was positively related to negative emotional responses to the posts, whereas it was negatively related to positive affect. Low trait self-esteem, more eating disorder symptoms and a negative body image predicted low state self-esteem, but Instagram use or the emotional response to the posts did not. Overall, the results of Study 1 suggest that the impact Instagram can have on

women depends more on the characteristics of the users who are exposed to the content, rather than the content itself.

But how do men respond to body-positive or body-negative comments to Instagram pictures of overweight men? To date, only few studies have addressed the impact of Instagram on male users. Therefore, a second online survey with an adult male sample (N=104) tested the relationship between Instagram use, social comparison, self-esteem, body image, and the emotional response to made-up Instagram posts and comments. As in Study 1, participants indicated their eating disorder symptomatology. Instagram posts showed overweight men in bathing suits together with either body-positive or body-negative comments. Does the pattern of results found in Study 1 also apply to men? The data analysis has not yet been completed.

Instagram / self-esteem / emotional state / body image / gender

## Informal learning with social media: An experiment comparing YouTube Videos and Instagram Reels

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Theoretical background: Social media such as YouTube, Instagram, or TikTok offer opportunities for informal and incidental learning, especially of procedural information. The instructors in these videos often are peers (vs. experts/teachers); the videos, thus, provide an opportunity for social learning from similar others. Most prior research, only assessed attitude or self-reported learning rather than knowledge tests as dependent variable. There is also not much work systematically comparing platforms beyond discussing their different affordances. We fill this gap by comparing learning with YouTube videos and Instagram Reels. People usually search for How-To videos on YouTube, whereas they often stumble upon Instagram Reels. Reels are also shorter and faster, and it is not possible to change the playback speed, increasing the cognitive load and making it more complicated to process the information. These disadvantages could, however, be at least partly compensated by a positive attitude towards learning with Instagram Reels.

Research question: What is the influence of the social media platform (YouTube vs. Instagram) and the attitudes toward learning with the respective social media platform on learning? H1: Participants have a more positive attitude towards learning with YouTube than towards learning with Instagram Reels. H2: Participants learn more by watching a YouTube video than from watching an Instagram Reel. H3: Attitudes towards learning with the respective platform are positively associated with learning.

Methodological approach: A preregistered online experiment (n = 135) with 2 conditions was conducted in December 2022. Participants either watched a short YouTube video or an Instagram Reel on baking Christmas cookies. After watching the video, they answered a knowledge test consisting of 10 multiple-choice questions. The attitude toward learning with YouTube and Instagram was assessed with five 7-point semantic differentials ( $\alpha$ s = .82 and .85 for YouTube and Instagram Reels, respectively). Hypotheses were tested with a regression analysis.

Informal learning / You Tube / Instagram / knowledge

## The influence of interaction mechanism and social error responses on the acceptance of customer service chatbots

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As improvements in artificial intelligence will continue to drive the proliferation of chatbots, it is crucial to systematically investigate how users perceive and evaluate them. Chatbots are automated agents that interact with users via natural language (Shawar & Atwell, 2007). Free-text interactions with chatbots often cause users to abandon conversations (Klopfenstein et al., 2017). Structuring elements like buttons might clarify dialogues but can negatively affect perceived humanness (Diederich et al., 2019). Adequate error responses from chatbots can prevent users from abandoning conversations (Benner et al., 2021). In this study, we use actual chatbot interactions to examine how interaction mechanism and social error responses, i.e., offering an apology, influence users' (a) warmth and (b) competence perceptions, (c) satisfaction, (d) intention to use, and (e) emotional connection with the company.

According to the CASA paradigm and social response theory, humans apply the same rules in interactions with machines as they do with other humans. Chatbots provide social cues that elicit social responses. The more social cues a chatbot presents, the more likely humans are to act socially toward it (Nass & Moon, 2000). Thus, we expected users to perceive free-text (vs. button) interactions and social (vs. neutral) error responses as more human-like, leading to higher scores on (a)-(e) (H1, H2). Moreover, we expected the effect of social error responses on all outcomes to be stronger in the free-text interaction conditions (H3). In addition, we expected warmth and competence to mediate the effects of free-text interaction and social error response on (c)-(e) (H4, H5).

A preregistered online experiment with a 2 (interaction mechanism: buttons vs. freetext) x 2 (error response: neutral vs. social) between-subjects design was conducted in October 2022 (N=416). We asked participants to solve customer service tasks using a state-of-the-art chatbot. Participants then completed a questionnaire containing outcomes and sociodemographic variables.

Artificial intelligence / chatbot / interaction mechanism / error response / user acceptance

# Elaborated Choice or Heuristic Decision? Exploring Users' Media Selection in the Context of Video Streaming Services

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With the worldwide success of on-demand video streaming services, audiences have gained increasingly wide access to diverse types of media content. To assist users in this high-choice context, popular streaming services typically offer a plethora of tools and functions aimed at guiding users' media selection processes. While this may, in theory, facilitate more elaborated decisions, it seems equally likely that the vast amount of available information might cause "choice fatigue," prompting users to fall back on heuristics for fast (yet possibly suboptimal) decision-making. Whereas both positions appear theoretically sound, a literature review did not yield any empirical research examining the connection between streaming services' unique functionalities and the associated media selection behavior. To tackle this research gap, an exploratory survey study was conducted, focusing on the three leading streaming services in Germany (Netflix, Amazon Prime, Disney+). Based on our own content analysis of these services that provided a list of relevant features—such as menu structure, user interface, content information panels, etc.—a questionnaire was created and disseminated among student participants (N = 120). Apart from our core questions about their own use of the identified features, we also inquired participants about perceptions of usefulness, decision times, general streaming preferences, and potentially missing features. Taken together, the study not only provides insights into the interplay between the features of a highly popular media environment and associated media selection behaviors, but also serves to offer implications for the optimization of streaming services.

Media selection / video streaming / user behavior / decision-making

# Targeting against disinformation: The effect of microtargeted corrections on the impact of fake news

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Disinformation – intentionally distributed inaccurate information (Lazer et al., 2018) – can be regarded as a threat to democracy (Zimmermann & Kohring, 2020). Research shows that correcting disinformation helps minimize its effects such as diminishing trust in politics (Zimmermann & Kohring, 2020). However, completely eradicating the effects of disinformation is hard, even with a correction (Walter & Tukachinsky, 2019). Therefore, the question arises how corrections can be made more effective.

Microtargeting – specifically tailoring a message to match the recipient's characteristics, such as gender or age – typically seen as a questionable tool for political campaigning (Bodo, Helberger, & de Vreese, 2017), might be a novel method for this purpose. Against this background, the present study examines whether targeted corrections are more effective than non-targeted corrections.

In an experiment with a 2x4 between-subjects design, participants were presented with a Facebook post mockup, showing one of two disinformation stories (donating blood after getting vaccinated vs. crystal meth in schoolyards). Then they were presented with one of four corrections (targeted correction regarding the participants living area vs. targeted correction regarding the participants political orientation vs. non-targeted correction vs. no correction). Participants were asked to indicate the accuracy of the post, the credibility of the fake-news source and the correction messenger and the likeliness of them sharing and liking the post. Participants were also asked to fill out a conspiracy mentality questionnaire.

We analyze (1) whether corrections have an effect, (2) whether targeted corrections are more effective than generic corrections, and (3) whether conspiracy mentality moderates these effects. The results of the presented study can help counteract disinformation and present a way to protect democratic societies.

Microtargeting / disinformation / fake news / social media / debunking

### Take a deep breath, then check your messages: Experimentally investigating the moderating effect of mindfulness in the interplay of social pressure to be available and messenger users' well-/ill-being

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Previous research has shown that using mobile messenger services (e.g., WhatsApp) can both positively and negatively affect users' mental health. According to the Integrative Model of Mobile Media Use and Need Experiences (IM<sup>3</sup>UNE), these differential effects can be explained by conceptualizing the satisfaction and frustration of users' fundamental needs for autonomy, competence, and relatedness as underlying mechanisms. Moreover, by focusing on users' personality traits (e.g., mindfulness) as an important boundary condition, the IM<sup>3</sup>UNE further specifies when and for whom either beneficial or detrimental effects occur. The present study aims to transfer the assumptions of the model to a specific demand associated with messenger use: Social pressure to be available, defined as the perceived obligation to answer messages and calls quickly. Following previous research, we assume that especially mindfulness serves as an important buffering mechanism in two respects: (1) It helps appraise social pressure as a non-stressor, which in turn decreases the susceptibility to experiencing need frustration and low need satisfaction; (2) It weakens the negative effects of need frustration and low need satisfaction on well-/ill-being. To causally test both health-promoting effects, we conducted a pre-registered experiment among university students with a 2 (social pressure as between-factor: low vs. high) × 2 (mindfulness as within-factor: pre- vs. post-intervention) mixed design. Whereas social pressure was manipulated using vignettes (i.e., WhatsApp screenshots), mindfulness was cultivated over a period of four weeks using the meditation app 7Mind (see https://t1p.de/o6thi for more details). This also allows us to test the extent to which interventions that are relatively easy to implement in everyday life can help individuals to use mobile communication in a way that promotes mental health.

Well-being / mobile communication / self-determination theory / coping / salutogenesis

# Can news diversification go too far? How different diversification metrics affect tolerance and political participation

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News recommender systems (NRSs) could take on an important democratic function; e.g. by facilitating tolerance towards others' opinions or political participation through increased exposure diversity (Helberger, 2019). However, while various democratically informed news diversification metrics that could help increase exposure diversity have been proposed (e.g. Vrijenhoek et al., 2021), their effects remain largely unexplored.

Drawing on two metrics suggested by Vrijenhoek et al. (2021), our study therefore tests how 1) the inclusion vs exclusion of minority voices as an active agent ('alternative voices metric') and 2) the presence vs absence of emotional language ('activation metric') affect news engagement and democratic deliberation:

RQ1: How do different diversification metrics during a concrete information search scenario affect a) tolerance b) political efficacy, c) intended political participation and d) general news engagement among readers?

We will carry out a pre-registered 2 (activation metric) x 3 (alternative voices metric) between subjects experiment where we expose participants to diversified news feeds with five pre-tested articles on the topic. Depending on the condition, the news feeds consist of 20 or 80% of articles with emotional language and 0, 40, or 80% of articles that include transgenders (our context-relevant minority) as an active agent.

Our results will provide insights into the conditions where increased exposure diversity can facilitate democratic deliberation or cause backfire effects (e.g. decreased engagement). Moreover, the experimental conditions can be mapped onto different types of democratic NRS (Helberger, 2019), which enables us to test whether their effects align with their normative goals.

News recommender systems / exposure diversity / tolerance / political participation / democratic theory

#### Have you seen Sandra Ciesek's cat on Twitter? Self-Disclosure as Digital Challenges for Trust in Scientists on Social Media

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It is already apparent that the peaks of trust in science caused by the Covid-19 pandemic are slowly moving back toward the long-term mean (Weisskopf et al., 2022). However, the pandemic demonstrated the importance of trust in science since it influenced the pandemics' course (Bromme, 2022) and revealed the power of direct communication between scientists and the public (Szczuka et al., 2021). Thereby, social media offers scientists the opportunity to present and showcase themselves, their research, and their daily lives.

With a view to better understanding the effects of direct communication from scientists to the public, we examine how personal and professional self-disclosure (adapted from Kim & Song, 2016) affects trust in scientists and the information they disseminate on social media. Hence affective- and competence-related perceptions of scientists are differentiated and gender-specific stereotypes (Fiske & Dupree, 2014) are considered.

Previous research shows that defending scientific knowledge rather than building relationships with the public (Dudo & Besley, 2016) and stereotype-reinforcing portrayals of competent but socially incompatible scientists (Losh, 2010), have contributed to rather negative stereotypical perceptions, which presumably reduce trust in science. However, prior research also suggests that sharing self-disclosing information on social media has the potential to mitigate negative stereotypical perceptions toward scientists (Jarreau et al., 2019) and lead to the attribution of affective competencies (integrity and benevolence) (Buldu, 2006).

Since Twitter is known to be an interactive channel for science communication (Liang et al., 2014) and provides space for self-disclosure that can influence users' perceptions (Utz, 2015) we specifically focus on this platform. Using a 3 (self-disclosure: professional, personal, none) x 2 (scientists' gender: female, male) within-subject design, we will systematically manipulate scientists' Twitter profiles and the feed shown to the participants. The results allow for the derivation of recommendations for science communicators on social media.

Self-Disclosure / Trust in Scientists / Twitter / Stereotypes

## Social media as sources of sexual knowledge: A compensatory or complementary form of education?

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Recent research has shown that information about sexuality is omnipresent in social media. At the same time, it is well-documented that a significant part of this information is shared and/or created by laypeople and that misinformation is highly prevalent. Given the ubiquity of sexual knowledge in social media and its potential reach among younger generations, it is of pivotal relevance to uncover the relative importance of these technologies as venues for sex education. Since sexuality represents a very intimate and sensitive domain in people's lives, social media could function as suitable tools to exchange sexual knowledge among those who have difficulties to talk about these topics in the offline world. Corresponding empirical evidence about the compensatory or complementary functions of social media in the context of sex education could help to identify target groups and to tailor messages to those in order to create more effective educational messages.

The present study is intended to identify for whom social media are complementary sources and for whom they are compensatory sources of sex education (RQ1), assess users' subjective benefits of sex education through social media (RQ2), and uncover under which circumstances these platforms can be most effective for sexual education (RQ3).

To address these questions, we conducted a cross-sectional survey. Our sample consisted of 1,219 subjects who were representative of social media users in terms of age and gender (49.3% male; 50.4% female; M = 41.1, SD = 14.47 years). We measured subjects' (1) frequency of social media use, (2) passive and active exposure to sexual knowledge in social media, (3) personal sources of sex education, (4) perceived suitability of social media as sources for sex education (5) perceived effects of social media on one's sexual

knowledge, as well as personal dispositions such as (6) sexual communication apprehension, and (7) sex positivity.

Sex education / sexual communication / social media

#### Coping Flexibility and Online Media Use for Coping

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Online media have emerged as a primary way to cope with stress. They offer the opportunity to pursue various coping strategies (e.g., social support, distraction, information seeking). Research on their effectiveness for decreasing stress, however, yielded mixed results. This necessitates a closer examination of individual differences which may make some people more susceptible to the detrimental effects of using online media for coping, and others more prone to benefit from the flexibility of online coping tools (OCTs) such as online games and smartphones.

Coping flexibility (CF) has emerged as a key personality trait facilitating effective coping. It involves using different coping strategies in variable and adaptive ways and responding flexibly to stressful situations. Still, CF has rarely been addressed in research on coping using media. Thus, investigating how flexible individuals utilize online media in the coping process may provide important insight into the adaptive uses of online media. Moreover, coping flexibility might be one key individual boundary condition that helps explain inconclusive findings.

We expect that CF is positively associated with using a higher number of coping strategies per OCT (H1, i.e., using smartphones not only for information seeking but also for social support seeking and distraction) and explore this association for different OCTs (i.e., smartphones, social media, games, RQ1/2). Next, we hypothesize that the relationship between the use of OCTs and emotional well-being and stress is moderated by CF (H2/3) such that for individuals high in coping flexibility using online media for coping promotes well-being whereas those low in coping flexibility benefit to a lesser degree.

To address these preregistered research questions and hypotheses (https://osf.io/yundx), we will run regression analyses on data collected from undergraduate students in a cross-sectional survey. Moreover, longitudinal analyses will be conducted on data of a second survey wave.

Coping flexibility / online media / coping

## How can digital media contribute to friendship jealousy and conflict among early adolescents?

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#### Introduction

Early adolescents' friendships play a significant role in their emotional and social development, providing support and enhancing interpersonal skills. ). Early adolescents are especially vulnerable to friendship jealousy, because of their young age and their limited friendship experiences. Jealousy in friendships can arise when individuals compare themselves to others, observe their friend interacting with other friends, or feel that their friend is giving more attention to someone else than them.

The advent of digital media and social media platforms has transformed the way adolescents experience and maintain their friendships. Very few studies have described how digital media have impacted friendship jealousy and friendship conflict among early adolescents. Consequently, the specific types of digital media content and behaviors that elicit jealousy and conflict within adolescents are poorly understood. The aim of this study is to investigate how digital media can cause jealousy within adolescents' friendships.

#### Research Questions

- RQ1: How do adolescents perceive the role of digital media in eliciting friendship jealousy?
- RQ2: How do adolescents perceive that friendship conflict is caused by digital media?

#### Methods

We have conducted nine focus groups with a total of 51 students between 13 and 16 years old (Mage = 14.35; SDage = 0.74). in the Dutch-speaking community of Belgium. Utilizing a semi-structured questionnaire, we explored the participants' perspectives on the frustrations associated with social media or technology and the role of digital media in causing jealousy and conflict among friends.

The focus group conversations were recorded, transcribed, and subsequently analyzed using a thematic inductive approach with the help of NVivo 12 software. This process involved multiple steps, including initial familiarization with the content of the conver-

sations, open coding of four focus groups, creation of a coding scheme, coding of the remaining focus groups, and evaluation of the coding scheme's quality and data fit.

Early adolescents / friendship / friendship jealousy / friendship conflict / adolescence

### Gender Diversity in Online Gaming: The German Version of the Sexism Against Women Gamers Scale (SAWGS)

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#### Theoretical Background

Almost 50% of gamers now identify as female (Newzoo, 2022). However, the "video game culture" (Shaw, 2010) is still not an inclusive place, yet dominated by masculine ideology and discourses (e.g., Blackburn & Scharrer, 2019; Fox & Tang, 2014). Women gamers still represent a marginalized group (e.g., Cote, 2017, Kaye & Pennington, 2016) and sexism, discrimination, and harassment happen frequently in gaming contexts (Fox & Tang, 2017; Ruvalcaba et al., 2018; Tang et al., 2020). Combating such incidents is amongst the most important tasks of game developers, the industry, and the gaming community. Researchers can contribute to this fight by providing data on the forms, causes, and consequences of sexism and discrimination in gaming contexts.

#### **Research Questions**

The Sexism Against Women Gamers Scale (SAWGS) is an 8-item instrument that was recently introduced to measure sexism in online gaming. In contrast to general sexism scales, it takes the particular characteristics of in-game interactions into account. The reliability and validity of English and Spanish versions of this instrument have already been approved in previous studies (anonymized, 2023). The current study aimed to examine the psychometric properties of a newly developed German version of the SAWGS, thus enhancing the international applicability of the instrument.

#### Methodological Approach

An online survey among 518 German gamers was conducted (290 men and 228 women; age range: 18-58 years, M=30.88, SD=8.47). Factor analysis was carried out to examine the internal structure of the SAWGS. Reliability was evaluated based on Cronbach's Alpha and McDonald's Omega. To verify the instrument's external validity, associations with relevant variables such as gender, sexist attitudes, and personality traits were examined. Further, we investigated how SAWGS scores were related to the agreement to punish perpetrators and to the tendency to trivialize sexist incidents in online gaming contexts.

Gender / Online Communication / Quantitative Methodology / Game Studies / Virtual Communities

### Believe It or Not: Investigating the Credibility of Voice Assistants Through the Effects of Relationship Types

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With the fast advancements in speech recognition, natural language processing, and speech synthesis, voice assistants such as Alexa, Google Assistant, and Cortana have become an integral part of our lives. Voice assistants (VAs) can perform simple commands such as switching off lights, setting up alarms, or playing music, but they can also have short conversations with users and provide appropriate answers to complex questions as source information. With the increasing capabilities of voice assistants in recent times, it raises questions about how users relate to them. In human-human relationships, people are highly motivated to establish and maintain long-lasting interpersonal connections. This desire for connection with others is a central driver of most human behavior (Baumeister & Leary, 1995). The nature of our social relationships is closely tied to both power dynamics (e.g., symmetrical or asymmetrical forms) and the level of closeness we share with others (Knobloch & Solomon, 2002; Zitek & Tiedens, 2012). Power and relational closeness are not only manifested in human-to-human relationships, but also in communication with non-biological actors such as VAs. People might transfer the characteristics they have learned over time in interpersonal relationships which also affect power hierarchy and relational closeness to smart devices. In this exploratory study, we investigate what kind of relationships people have with VAs (RQ1) and how the type of relationships (symmetrical or asymmetrical) affects users' credibility judgments toward them (RQ2). We conducted an online survey and recruited participants via online sampling (N = 393). Participants responded to a questionnaire consisting of credibility, sense of power, relational closeness, and socio-demographic information.

Voice assistant / human-VA relationship / credibility / power dynamics / social roles

#### The Interplay of Mindfulness, Mental Health, Loneliness, and Social Media Use Disorder

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#### Theoretical Background

The addictive use of social media ('social media use disorder', SMUD) has been associated with several risk factors (e.g., Wegmann & Brand, 2019). The I-PACE model (Brand et al., 2016, 2019) suggests that social cognitions (e.g., loneliness) and mental problems (e.g., depression and anxiety) predispose individuals to an escapist, addictive use of media technologies. In the current study, we examined whether mindfulness can be considered a protective factor against SMUD.

Mindfulness, defined "as intentionally focusing one's attention on experiences occurring in the present moment in a nonjudgmental or accepting way" (Baer et al., 2017, p. 2898), has been shown to be related to lower levels of depression and anxiety (e.g., Bajaj et al., 2016), less loneliness (e.g., Jin et al., 2020), and more life satisfaction (e.g., Bajaj & Pande, 2016). Further, mindfulness-based intervention programs have been developed to treat mental problems and addictions (e.g. Blanck et al., 2018; Garland & Howard, 2018).

#### **Research Questions**

Against the background of the existing literature and the assumptions of the I-PACE model, we hypothesized that mindfulness is directly and indirectly (via reducing depression/anxiety and loneliness) associated with lower levels of SMUD.

#### Methodological Approach

In total, 929 social media users (mean age: 43.11 years; 459 females, 469 males, 1 diverse) participated in an online survey, conducted in cooperation with a professional German survey research institute. SMUD severity (van den Eijnden et al., 2016), mindfulness

(Osman et al., 2016), depression/anxiety (Kroenke et al., 2009), and loneliness (Hughes et al., 2004) were measured with established scales. To test the hypotheses, structural equation modeling using R (lavaan package) was performed. We used the WLSMV-estimator, which is suitable for categorical variables and robust against non-normality. Model fit was evaluated based on established criteria (Hu & Bentler, 1999). Indirect model paths were tested following the Monte Carlo approach.

Social Media Use Disorder / Mindfulness / Mental Health / Loneliness / Survey Research

# Misinformation Correction Cues: Fostering Critical Thinking or Fueling Fake News Fatigue?

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In this study, we investigate the complex relationship between exposure to misinformation correction cues, fake news fatigue, and an individual's motivation to engage in critical thinking. The limited capacity model of motivated mediated message processing (LC4MP) posits that people have finite cognitive resources for processing media messages (Lang, 2006). Grounded in this theory, we hypothesize that fake news fatigue may lead to a depletion of cognitive resources, thereby affecting one's critical thinking motivation. As such, we explore individual and contextual factors that may influence this process.

Critical thinking about online information is an important media literacy skill that includes actively engaging with information, questioning its credibility, and judging its accuracy (Machete & Turpin, 2020). With the rise of deepfake AI-generated images, the challenge of discerning real from manipulated content has become increasingly complex, making media literacy skills even more essential (Ahmed, 2021). In this study, we evaluate differences in media literacy correction strategies including prebunking and debunking, and how processing of these cues may vary based on emotional context.

We use a 2 x 3 between-subjects experiment using a Qualtrics panel of adults (N = 400) to test the circumstances in which exposure to news with deepfake images that vary in emotional context (2: humor x fear) and correction cues (3: none, prebunking, debunking) affect fake news fatigue (i.e., overexposure, redundancy, exhaustion, tedium) (So et al., 2017) and critical thinking motivation (Arke & Primack, 2009). Additionally, our survey includes questions about cognitive and socio-affective drivers of message reception (Ecker et al. 2022). We test five theory-driven hypotheses informed by the LC4PM regarding the interaction and main effects of stimuli, which were created and pre-tested in a media psychology lab. Results from this study have implications for me-

dia literacy interventions and further analysis of fake news fatigue as a multidimensional concept.

Experiment / LC4MP / media literacy / misinformation

### Do robots have the ability to calm down a distressed person by using cognitive reappraisal and empathy?

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With the advancements in technology, social (assistive) robots are becoming a valuable resource in the (mental) health care sector. Here, it is important that robots have the capability to react appropriately to human emotions. One aspect of this is the ability to comfort a distressed person. Previous research has shown that robots are able to improve mood and reduce negative emotions in humans (Baecker et al., 2020; Chen et al., 2020; Crossman et al., 2018). However, little research has focused on verbal communication, and acute stress situations. Within human-human interaction, interpersonal emotion regulation (IER) strategies, for example cognitive reappraisal and empathy, can be used to reduce distress in another person (Niven et al., 2009). Therefore, the question arises as to whether social robots are also capable of using IER strategies, such as cognitive reappraisal or empathy, to reduce human distress. To answer this question a laboratory experiment with a one-factorial between-subject design varying the IER strategy (cognitive reappraisal, empathy, control) will be employed. In the experiment, the participant will be put in a stressful environment, using an adaption of the Trier Social Stress Test (Kirchbaum et al., 1993). Before and during the test, the robot will interact with participant and attempt to reduce their distress using one of the two IER strategies. In the control condition, the robot will also interact with the participant, but use no IER strategy. To evaluate the effect of each strategy, physiological stress levels will be assessed by measuring heart rate variability before during and after the stress test. Additionally, self-report stress questionnaires will be used to assess psychological stress. The findings will contribute to the understanding of the emotion regulation capabilities of social robots, and furthermore, give implications for the design of social assistive robot in (mental) health care settings.

Human-robot interaction / interpersonal emotion regulation / Trier Social Stress Test / cogntive reappraisal / empathy

## Differentiating and Characterizing Online Users in Response to Incivility: A Latent Profile Analysis

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Hateful and uncivil online content has been linked to various negative outcomes on personal and societal levels including disrupting political discourse and inhibiting online participation. Observers' reactions to incivility can shape the way people conduct themselves, for example through confronting perpetrators, supporting victims of incivility or even participating in incivility themselves. Thus, observers play a crucial role in the spread (or reduction) of uncivil and hateful content.

Problem behaviour theory (Jessor & Jessor, 1977), states that problematic behaviours are contingent upon each other and, as research on harmful online behaviour corroborates, are linked with one another. Past approaches have demonstrated, with regard to climate change or pandemic denial, that latent profile/class analyses are of great use in the identification of groups of people by means of people's topic-related attitudes and behaviours.

In this study, we investigate whether there are different profiles of users with regard to online incivility and how these profiles may differ demographically and psychologically. Specifically, we report findings of a latent profile analysis in which profiles were created based on online users' patterns of exposure and reactions to uncivil and hateful content (e.g. defend victims against incivility, participate in incivility) as well as their media use, using a large-scale international dataset (N = 5031). Subsequently, we investigated how these subgroups are characterised by varying social attitudes and psychological dispositions (e.g. social dominance orientation, propensity to feel empathy).

By uncovering profiles of user behaviour, this study provides the first empirical attempt to classify and understand groups of users based on their reactions towards, and participation in uncivil online content, while taking social and psychological factors into account. Understanding how people interact with incivility online, by identifying groups of users who are similar in several behaviors or attitudes, can benefit preventive research and potentially reduce uncivil content in the future.

Incivility / online hate / online behavior / latent profile analysis

# The Negotiated Media Processing Model: Accounting for adolescents' exposure to different and opposing media messages

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Today's social media landscape is highly complex with adolescents encountering multiple, and sometimes contradictory, messages simultaneously, leading to a need for a more active perspective on media effects. The current cross-sectional study aims to introduce the Negotiated Media Processing Model which takes into account the complex interplay of exposure to contradictory messages and the resonance of such messages among users. Specifically, the current study focuses on appearance messages and their association with adolescent body image. Results showed that idealized and counter-idealized content were, respectively, positively and negatively related to body dissatisfaction. Body dissatisfaction was lowest when adolescents are exposed to both idealized and counteridealized content in a balanced manner, but increases when idealized content outweighs counter-idealized content, particularly. Interestingly, social resonance, or the extent to which media messages resonate with the social context (i.e., peer conversations), does not moderate these relationships. Overall, these findings provide a foundational understanding of how adolescents' media consumption patterns can shape their body image, and highlight the need for media effects research to account for the complexities of adolescents' media diet.

Adolescents / social media / body image / resonance / diverse messages

### Recognizability of Minority Characters Reduces LGBTQ Prejudice: The Mediating Role of Parasocial Friendship and Wishful Identification

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Previous research largely supports the notion that viewers' perceived similarity with characters enhances media engagement. However, viewers might find it difficult to see surface similarities between themselves and a minority character if they themselves do not belong to the same minority. Hence, in this study we replace the concept of perceived similarity with the concept of recognizability as a predictor of media engagement with minority characters. Recognizability captures viewers' ability to recognize themselves in deeper level characteristics such as the character's personality, attitudes, or social surroundings. More specifically, we examine whether perceived recognizability of a LGBTQ character influences the parasocial friendship and wishful identification felt for the LGBTQ character, and whether parasocial friendship and wishful identification influence one's attitudes towards the LGBTQ community. Based on a representative sample of US residents (n = 247), it may be concluded that the recognizability of a LGBTQ character has both a direct and indirect effect on prejudice reduction.

Media effects / diversity attitudes / media engagement / recognizability / LGBTQ prejudice

### "Rolling Minds": a Conversational Media to Promote Intergroup Contact by Countering Racial Misinformation Through Socio-Analytic Processing in Adolescence

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The present study focuses on the neglected phenomenon of the so-called racial hoaxes, which are misleading news in which the protagonist is negatively described in relation to ethnicity. In particular, this work aims to test a conversational web-app called "Rolling Minds" designed to promote awareness among adolescents about the risk that racial hoaxes foster anti-immigrant attitudes and discrimination. The intervention procedure has been designed from the well- established literature on media biases' reflection, integrated with the studies on 'mediated intergroup contact where the observation of the person belonging to the outgroup is crucial for prejudice reduction. The study intervention involved 144 adolescents (Mage= 13.7) and it points out how contact intention measured significantly increases after the intervention. In particular, the results show that increasing individual propensity to engage in analytical reasoning leads to a significant increase in performance at the reading of racial hoaxes, as well as improved performance at news re-writing. Moreover, as performance in news re-writing improves, contact intention at the end of the socio-analytic intervention also increases. Overall, these results attest how the promotion of social cognitive processes through the "Rolling Minds" conversational approach it is possible to imagine a civic use of the media contrasting discriminatory behaviors, potentially associated with racial disinformation.

Racial misinformation / conversational media / analytical reasoning / mediated intergroup contact / adolescent media intervention

### Promoting Digital Competencies of Senior Citizens Evaluation of a Digital Learning Workshop in the BMBF-funded Research Project DigiKomS

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Digital media offer the possibility, especially in old age, to remain independent longer and to maintain social relationships, for example, despite any limitations relating to mobility, health and/or age. Hence, digital competencies are becoming increasingly important for older adults to participate fully in society. In the BMBF-funded research project "Digital Competencies for Senior citizens" (XXX), a digital learning workshop was developed to promote digital media competencies and skills for citizens aged 70 and over (e.g. smartphones, tablets). This learning workshop was designed based on the pedagogically established learning concept of the learning workshop, Ajzen's Theory of Planned Behavior, the Media Competence Model of Groeben and insights from a qualitative and quantitative study of media usage and its antecedents. The present study first evaluates the effectiveness of the developed digital learning workshop (DLW) using a formative approach, and then sub-sequently using a summative approach, with a sample size of n=55 and n=77 senior citizens, respectively. After initial positive effects regarding the increase in media literacy and the reduction of fears, changes and optimizations were made to the DLW, resulting in significantly improved attitudes towards digital media. Participants demonstrated increased knowledge and competencies, less fear, and greater self-efficacy in using digital me-dia. Furthermore, the changes achieved in individuals through the DLW were able to improve their intention to use digital media in the future. This DLW was evaluated as effective means of promoting digital competencies among senior citizens. Limitations of the study and implications for the further development of the DLW are discussed.

Digital competencies / senior citizens / lifelong learning / learning workshop / Theory of Planned Behavior

#### Media Multitasking as an Exploratory (vs. Exploitative) Behavior

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Media multitasking, defined as media consumption of more than one item or stream of content concurrently, is generally considered as rapid media task-switching resulting from informative distractions, insufficient cognitive control, and motivational sensation seeking. Recent theoretical work suggests that media multitasking might emerge from media multitaskers' behavioral exploration (vs. exploitation) incentives. However, this theorizing currently lacks direct empirical evidence. In a pre-registered experiment, and using a computational behavioral modeling approach, our study estimated individual differences in exploratory tendencies in a multi-armed bandit task. Together with measures of media multitasking and curiosity, we show a positive relationship between people's trait-level tendencies of exploration and their media multitasking behaviors and a positive association between media multitasking and thrill-seeking curiosity, thus providing initial empirical support for the exploration-exploitation model of media multitasking.

Exploration-exploitation / foraging / media multitasking / computational modeling / open science

# **Toxicity Beyond Gameplay Boundaries: Examining Satellite Toxicity in Game-based Online Discussions**

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Many online game communities now extend to satellite platforms such as Reddit to discuss and share knowledge about the game. Prior research indicated that toxicity is more prevalent in competitive games than in cooperative games due to designed magnified social rivalry and higher stakes and consequently normalized by the cyclical nature of toxicity. Social cognitive theory argues that human actions are contextually enacted with reference to the relevant social environment and prior behavioural acquisition. Experiencing toxicity may thus increase the likelihood that an individual subsequently perpetrates

toxicity within the same game. However, it is unclear whether higher prevalence of toxicity in competitive games is similar in external game communities. The current study seeks to examine the extent of toxic prevalence within game-based online discussions on Reddit. Online discussion data (N=138148) over a continuous two-week period was obtained from four game-based subreddits (two cooperative, two competitive) on Reddit, and scored for toxicity using Perspective API, a machine learning model for toxicity detection. Findings suggest that competitive game subreddits have a higher prevalence of toxicity compared to cooperative game subreddits, echoing prior gameplay-focused findings. These patterns of toxic prevalence were still significant when considering user-control (upvoted vs. downvoted messages on Reddit), suggesting that satellite communities for competitive games may also be more tolerant of toxicity in communication.

Toxicity / social interaction / game communities / multiplayer games

### Social VR Design Features and Experiential Outcomes: Narrative Review and Conceptual Framework for Dyadic Agent Conversations

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The application of virtual reality to the study of conversation and social interaction is a relatively new field of study. While the affordances of VR in the domain compared to traditional methods are promising, the current state of the field is plagued by a lack of methodological standards and shared understanding of how design features of the immersive experience impact participants. In order to address this, this paper proposes a conceptual framework for the relationships between design features and experiential outcomes, along with expectations for how those features interact with each other. Based on the results of a narrative review drawing from diverse fields, this conceptual framework focuses on dyadic conversations with agents. The experiential outcomes chosen include presence & engagement, psychological discomfort, and simulator sickness. The relevant design features contained in the framework include scenario agency, visual fidelity, agent automation, and environmental context. We conclude by discussing the findings of the review and framework, such as the multimodal nature of social VR be-

ing highlighted, and the importance of environmental context, and lastly provide recommendations for future research in social VR.

Social VR / virtual reality / agent / conversation study / narrative review

# Artificial roughness: Viewing pattern towards computer-generated and human rough sexualized stimuli

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While sexually explicit material until now primarily depicted humans performing sexualized scenes, technology also affects who and what is displayed in pornography. Recently, algorithms have been increasingly used to produce computer-generated (CG) sexualized content. While CG-stimuli provide a platform to express, explore and act out sexual desires, they tend to show more hyper-sexualized bodies and more physically intense practices (Saunders, 2019). A preliminary study by Szczuka and Molitor (Under Review) gives reason to believe that, at least in reflexive moments, people evaluate sexualized computer-generated and human rough materials differently. The study demonstrated that people preferred computer-generated over human content for rough sexually explicit stimuli. The authors discuss this as a kind of protective mechanism. By preferring CG over human stimuli, users could protect themselves from irritating or even guiltladen observations, because no real people were put in situations that were potentially unpleasant for them when the materials were created. Accordingly, users thus avoided being confronted with authentic, negative, human emotional expressions. To better understand the effect, the present study investigates the viewing pattern towards CG and human rough and gentle sexualized material in an eye tracking study (N = 162). One of the main hypotheses argues that in the rough condition, more visual attention is shared with the artificial head in comparison to the human one (as this can prevent oneself from being confronted with negative stimuli). Moreover, we investigate whether this effect is different for men and women (because women might feel a stronger connection to another woman). Other relevant metrics include time spent looking at the body, revisits and time spent looking at the background. The tension between the dehumanization

of humans and the humanization of technology in the context of sexualized representations offers a highly relevant and yet unaddressed research gap.

Digitalized Sexuality / Computer-generated pornography / humanization / dehumanization / sexually in HCI / roughness

# Using Player-Identified Mechanics to Validate their Existence in Gaming Experiences

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Dynamic systems theory suggests that the brain can change based on the demands of the environment surrounding it, even digital game environments (for review, see Eden et al., 2018). But research on cognitive effects of games is often based on broad, player or non-player, or genre-specific effects that can encompass many different kinds of gameplay (see Arsenault, 2009). But today, even the same game can often be played in various ways. Dale et al. (2020) reviews of how far the industry has moved from traditional genres, advocating for a shift away from traditional genre effects studies. Research today still lacks specification of the content the players engage with and the creators decide on, that leads to cognitive effects.

To explore content, researchers need to consider game mechanics, or creator-developed rules about how the player interacts with the game environment. Removed for Anonymity identified five common and distinct mechanics, demonstrating that one, the setback punishment mechanic (returning to an earlier point in the game upon failure), associates with episodic memory. An important next step is to demonstrate that players can understand these mechanic descriptions. We asked: can participants identify games that use them (RQ1), agree on their presence in popular games (RQ2), and create mechanic profiles for popular games (RQ3).

Survey participants (18+ who play digital games for at least 30 minutes weekly) will be asked to identify games that use the setback punishment, spatial navigation (creator includes a map and requires players to use it), object tracking (game designer includes fast-moving objects players target), invincibility (little or no punishment after failure), and casual gameplay (short levels that can be started and stopped easily). They will identify these mechanics in popular digital games and applications, including identifying when there are multiple mechanics present, and indicate their familiarity with the games.

Game mechanics / cognitive effects / setback punishment

## Does the mere belief that a virtual agent can be touched heighten social presence in VR?

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Social VR applications are becoming more widespread. A hallmark of social VR is the sensation of social presence, i.e., users' sensation of being physically co-located with another virtual agent. A factor that seems to determine social presence, and at the same time is heavily examined as an additional sensory channel that might soon be afforded by consumer-grade VR technology, is touch or haptic feedback. Initial studies have shown that social touch (e.g., experiencing a vibration upon being touched by a virtual agent) enhances users' sensation of social presence. Even just sensing that the other can physically affect the joined environment, e.g., by haptically sensing the other's footsteps, enhances social presence. The present study tested the hypothesis that simply believing that the other could be touched, or would be able to touch the user, heightens social presence. To test this, we developed a new "haptic illusion" VR application in which student participants met another social agent in a virtual room. We manipulated, in a pre-registered and sufficiently powered between-subjects experiment, whether participants believed they could touch the other agent (experimental condition) in the virtual environment or not (control), even if they users never received direct haptic feedback from the agent. The haptic illusion-induction was done by placing participants in the experimental condition at a virtual table, which was synched with a real physical table in the lab setting. In the control condition, there was no actual table that could be touched. We tested if users' sensation that they could touch the virtual table extended to a general assumption that they could also touch, and be touched, by the then entering virtual agent. Using existing standardized self-report measures, we tested effects of this haptic illusion manipulation on social presence, and explored effects on perceived animacy, normative commitment, and positive and negative affect.

Virtual reality/social presence/touch/agent/social VR

# Who watches fail clips? Light and dark personality dispositions to watching the misfortunes of others

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Background: Fail clips are videos that show people inadvertently failing to do something (Döring & Mohseni, 2019) and are a popular genre on social media (Hallinan et al., 2021) with millions of viewers (e.g., FailArmy on YouTube). I consider fail clips to be the media genre that most explicitly involves the experience of schadenfreude, the pleasure at the misfortunes of others (van Dijk & Ouwerkerk, 2014). The question arises whether laughing at others' misfortunes is rather a dark and malicious pleasure that mainly serves the self-enhancement of the observer via social downward comparison (Wills, 1981), or a light and naïve pleasure that is just fun and does mean no harm to anyone. Clues to this question can be provided by looking at the personality of fail clip users, which has not yet been studied.

Research question: Which personality traits are associated with frequent use and enjoyment of fail clips?

I assume that fail clip use corresponds with traits related to schadenfreude identified in past research (psychopathy, Machiavellianism, belief in a just world, social comparison orientation). Importantly, I add the perspective of humor styles that have been neglected in this context so far. Based on humor theories, I hypothesize that fail clip use corresponds with certain humor styles that can be differentiated into a) lighter and b) darker styles (Ruch et al., 2018), namely a) aggressive humor (Martin et al., 2003) that involves disparagement of others and b) benevolent humor (Ruch & Heintz, 2016) that includes a benevolent view on one's own and others' failures.

Methodological approach: In an online survey, the 1) frequency and 2) enjoyment of fail clip use are investigated. The above-mentioned personality traits and humor styles, gender, and age serve as predictors. The sample will consist of N = 500, representative of Germany.

Fail clips / personality / Schadenfreude / humor / emotion

# Algorithmic Bias and Digital Divide – An Examination of Discrimination Experiences in Human-System Interactions

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Technological systems, especially social robots in public spaces, need to interact with a diverse audience as citizens differ, e.g., in gender, educations, beliefs, and experiences with different technologies. However, a wide array of technological systems do not yet have the ability to cater for this human diversity, as evidenced by cases of algorithmic bias (e.g., a decreased usability of various systems for people of colour (Hankerson et al., 2016). At the same time, an inclusion of all audiences is imperative when deploying new technologies to avoid creating a digital divide between citizens who are affected by algorithmic bias and those who are not, as such a digital divide might have dire consequences for public life (Singh & Singh, 2021). The inclusion of diverse user audiences is an interdisciplinary challenge that has, so far, been neglected. Through the lens of media psychology, it is especially relevant to examine the influence that individuals' diversity characteristics might have on the experience of algorithmic bias, and how these biased experiences could force individuals into self-selection and consequently cause digital divide. Additionally, when facing situations of algorithmic bias, do humans detect discriminations and how do they attribute a failed interaction to the system or themselves?

Addressing these questions, focus groups with Ruhr area citizens are conducted. Participants' diversity features and attitudes towards technological systems are captured and put into context of their individual experiences with algorithmic bias. Additionally, scenarios of algorithmic bias are be discussed to learn how citizens interpret these scenarios, to capture their attribution of blame and learn of possible coping strategies. Finally, participants are asked to picture a utopian and dystopian scenario in which a social robot is deployed in a public library to examine possible biases and fears of discrimination.

Social robots / algorithmic bias / digital divide / focus groups

#### The association between subtypes of active and passive SNS use and mental health: the moderating role of extraversion and neuroticism

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#### **Background**

The question of how social networking sites (SNS) impact mental health has sparked heated debate among scholars and the public. According to the extended active-passive model of SNS use (EAPM), the effect of SNS use depends on how people use SNS. The EAPM distinguishes between subtypes of active and passive use and argues that especially when active use is targeted (e.g., direct messages, comments) and friendly will it enhance mental health. Moreover, regarding passive use, the EAPM assumes that especially when content pertains to the success of others and is highly self-relevant to a user will it diminish users' mental health. Finally, the EAPM also posits that usage types and user characteristics interact with each other when impacting mental health. In this regard, initial evidence suggests that the personality traits of neuroticism and extraversion may play a role in the relationship between (subtypes of) SNS use and mental health. We aim to shed light on the relationship between subtypes of SNS use and mental

health. Specifically, based on the EAPM, we formulate the following research questions:

- 1. Does targeted friendly active use of SNS predict mental health positively?
- 2. Does passive exposure to self-relevant content depicting others' success on SNS predict mental health negatively?
- 3. Does extraversion moderate the relationship between targeted Friendly active use of SNS and mental health?
- 4. Does neuroticism moderate the relationship between passive exposure to self-relevant content depicting others' success on SNS and mental health?

#### Method

We are running an online cross-sectional study and recruiting participants using a convenience sampling technique. To measure subtypes of active and passive use, we developed a 20-item questionnaire. Mental health is measured by the DASS questionnaire and the satisfaction with life scale. We will analyze the data using structural equation modelling.

Social networking sites use / the extended active-passive model / mental health / personality traits

#### When in Doubt, Lay it Out: Over Vs. Under Communication Accommodation in Human-Robot Interaction

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What happens when a social robot attempts to accommodate its communicative behavior towards the human interlocutor? Though research is sparse, there is evidence to suggest people form impressions and accommodate towards social robots. We replicated and extended Gasiorek and Giles (2015) for the current study. Their study examined inferred motives (helpful and good intentions) as the potential predictor of the outcomes of this accommodation. The present experiment seeks to expand understanding of how people evaluate social robots when they (the social robots) engage in cases of over- and under- accommodation during interactions by applying the Stereotype Content Model.

If a communication adjustment is regarded as being positively motivated by warmth and competence, it should be perceived as being more accommodating (i.e., more correctly adjusted) than if it is perceived as being negatively driven (lack of warmth or competence). As a result, evaluations of the speaker (in this case, a social robot) should be predicted by the listener's perceptions of accommodation.

Following Gasiorek and Giles (2015), we offer the following research questions and hypotheses:

- RQ: Are the relationships between the stereotype content model (warmth and competence) and (a) evaluation of communication and (b) evaluation of the speaker mediated by the perceived appropriateness of communication accommodation?
- H1: The social robot in the overaccommodative communication condition will be
  perceived as (a) more warm and competent and (b) more accommodative than the
  social robot in the underaccommodative communication condition.
- H2: The social robot in the overaccommodative communication condition will be evaluated more positively (evaluation of communication and evaluation of the speaker) than the social robot in the underaccommodative communication condition.

Data has been collected and analyzed using an experiment patterned after Gasiorek and Giles (2015). The presentation will include the full results and discuss the findings regarding the implications for CAT and social robots.

Communication accommodation theory / robots / experiment / stereotype content model

### The role of emotions in believing misinformation and fake news

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Fake news, misinformation and conspiracy theories are major issues on the political and public agendas. Although the term 'fake news' to refer to misinformation may seem to have entered mainstream vocabulary fairly recently, the phenomenon itself is not new. Only in the past years, fake news and misinformation take a more prominent place in people's everyday lives and raise concerns about how people navigate today's news information, in particular by using social media platforms. For many social-media users, it appears difficult to distinguish real news from fake news. This raises the question why one would believe such a fake news message or misinformation as being real and attribute real-world information value to it?

Whereas fake news, misinformation and conspiracy theories have meanwhile been widely studied, the role of emotional responsiveness to such messages is as yet unclear. Results thus far brought important insights in, for example, specific message features of fake news (e.g., more sensational and emotional language than regular news, source cues (e.g., a high number of Facebook likes), and the role of individual differences in people's susceptibility to fake news or conspiracy theories (e.g., uncertainty, familiarity). Less is understood, however, how emotions may directly influence the believability of fake news.

Based on emotion psychology and recent neuropsychological insights, we aim to explain why people tend to take fake news for real through the role of emotional responsiveness 'coloring' a message as more real than a non-emotional one. We tested our ideas by distinguishing emotions at three levels in a between-subjects experimental design: 1) emotional versus non-emotional language in fake-news; 2) users' emotional and non-emotional state prior to reading the fake news; and 3) users' actual emotional response

to the fake news message. Dependent variables were perceived realism and information value, including political orientation as a control variable.

Misinformation / fake news / emotions / perceived realism / experiment

# Examing gender-based and sexual orientation-related differences in players' perceptions of their own gameplay experiences.

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There is now general consensus that the psychological experience of video game entertainment is best understood as a highly complex, subjective, multidimensional phenomenon. In an effort to capture this complexity, we previously developed a 10-component model of the player experience based on the results of a systematic scoping review and thematic synthesis of gaming-specific theories. More recently, to determine whether our conceptualisation resonated with players, we conducted an online survey with 400 players, in which participants were asked to rate the importance of each component for their typical gameplay experiences. While the results generally supported our conceptualisation, research indicates that a player's individual characteristics can play an important role in shaping their gameplay experiences. For instance, scholars have demonstrated that minority-group players may avoid or feel pressure to adhere to certain ways of playing games (Austin, 2020; McLean & Griffiths, 2019) and tend to be poorly- and/or underrepresented in games (Shaw et al., 2019; Waddell et al., 2022). It is thus possible that players may value the 10 components of the gameplay experience differently based on their individual characteristics. To investigate this further, the current study uses data gathered from our online survey and examines whether players' perceptions of the 10 components vary on the basis of (a) their gender identity and (b) their sexual orientation. Data for this study consists of player ratings of component importance, which were assessed using 10 researcher-developed items, with each providing the name of one component ("gaming-independent player characteristics") and a short description of that component ("my individual characteristics (e.g., my age, gender, ethnicity, sexuality, personality, etc.)"). Participants responded to each item using a 10-point Likert-type scale, with response options ranging from 1 (Not at all important) to 10 (Extremely important). Data are analysed using a series of one-way ANOVAs.

Video games / player experience / gender identity / sexual orientation / online survey