• •

What Are You Swiping For?

Exploring User Assessments of Algorithms-Based Recommendations on Online Dating Platforms

Dr Fumi Kurihara University of Münster ZDI Digital Innovation Talk October 21, 2025





Who Am I?





INSTITUT DE HAUTES ÉTUDES INTERNATIONALES ET DU DÉVELOPPEMENT **GRADUATE INSTITUTE** OF INTERNATIONAL AND **DEVELOPMENT STUDIES**



and Digital Business

















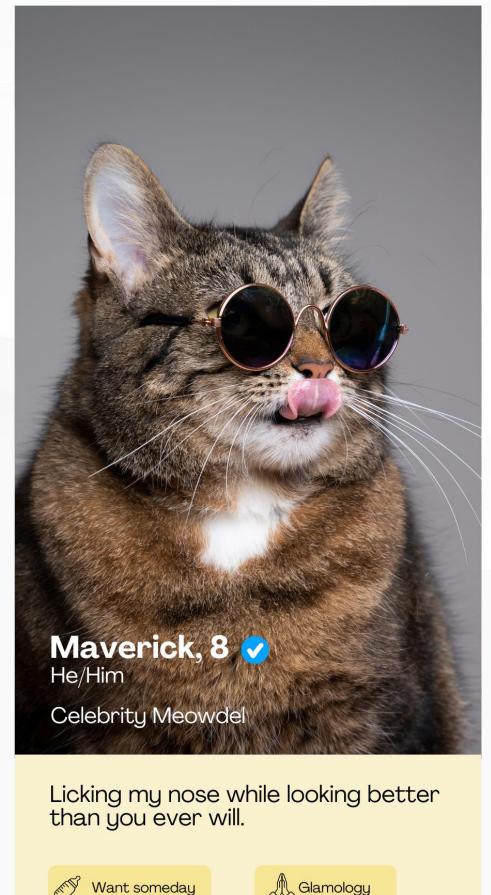


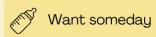
Translating between humans and human needs

Translating between humans, human needs and technologies

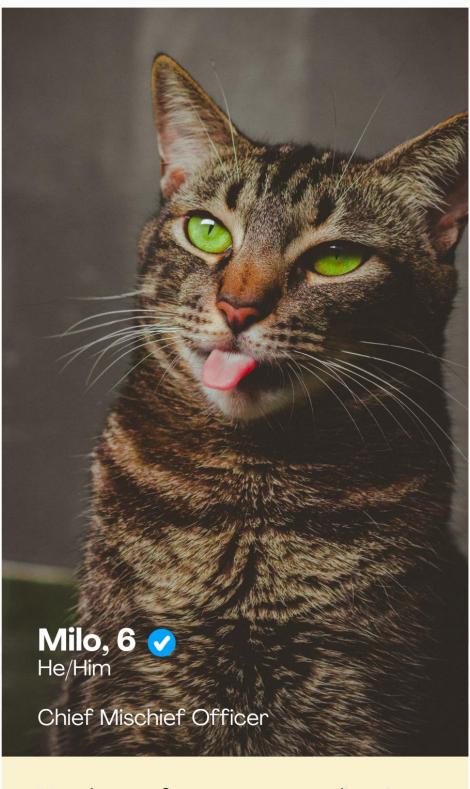
If we are teaching machines to understand us, shouldn't we first understand ourselves?

Why did you like or dislike someone's profile?





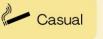


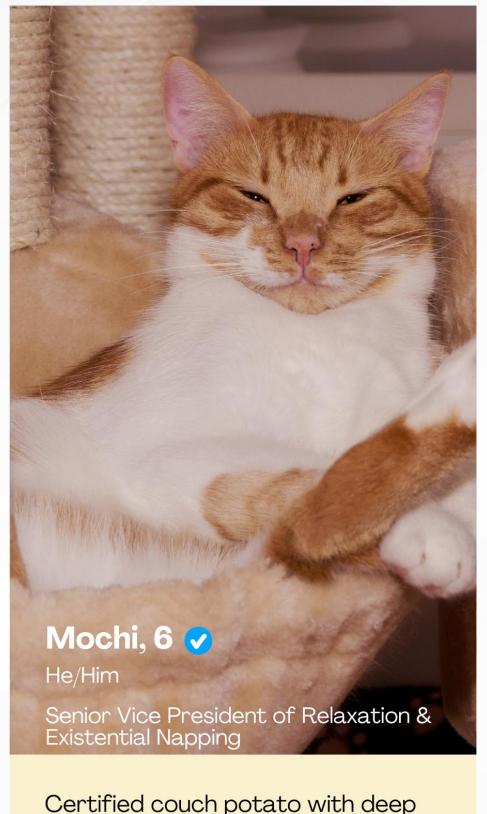


Handsome face, zero coordination.









Certified couch potato with deep thoughts about life.



Spotify connected







Online matching platforms – What are they?

1-sided



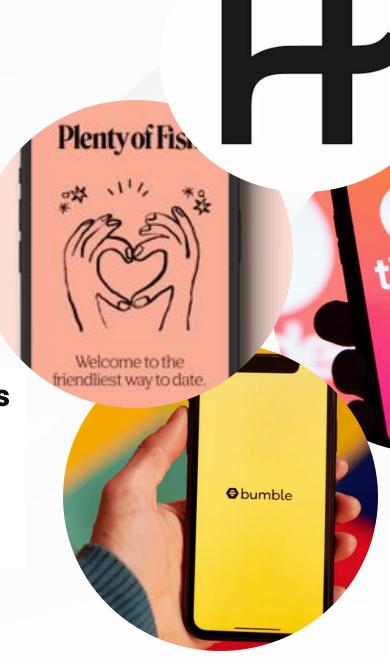


2-sided



Drivers - riders

- Locations
- Ratings
- Availability



User A - User B

- Information provided on user profiles
- Profiles users like



Freelancers - clients

- Freelancers' skills and ratings
- Project requirements

User inputs =
Proxies for user
preferences

What we know...

Two-sided matching platforms have a **mismatch problem**

- Freelancers: Try to improve their scores by varying project types and contract lengths; preserve their scores by engaging with platform clients outside the platforms¹
- Dating platform users: Adapt their profile content, change their swiping ratio, confuse the algorithms²

User assessments of algorithmic outcomes influenced by users' level of trust and awareness of the algorithms³



If users have a better understanding of algorithms' functioning, they are more likely to consider outcomes as fair and adjust their behaviour more effectively

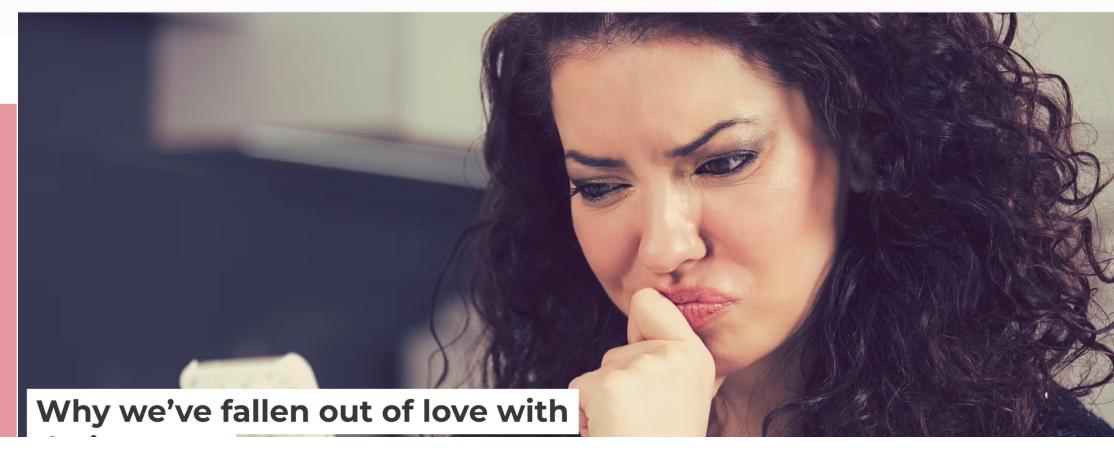


What information are users inputting, and which information is most relevant for the algorithms?

'It's quite soul-destroying': how we fell out of love with dating apps







Business | Swiped out

Why people have fallen out of love with dating apps

Tinder and Bumble are struggling as singles refuse to pay up





r/dating_advice • 10mo ago East-Assistance-1588

Frustration with Dating Apps – Is Anyone Else Feeling This Way?

Hey everyone,

I wanted to vent a little about my experience v Scheitern Sie nie mehr an schlechter y profiles I swip Übersetzung... i to work for me

I find myself asking: Are these apps really des through a cycle of frustration?

I've noticed that many p finally connect with som

FINANCIAL TIMES

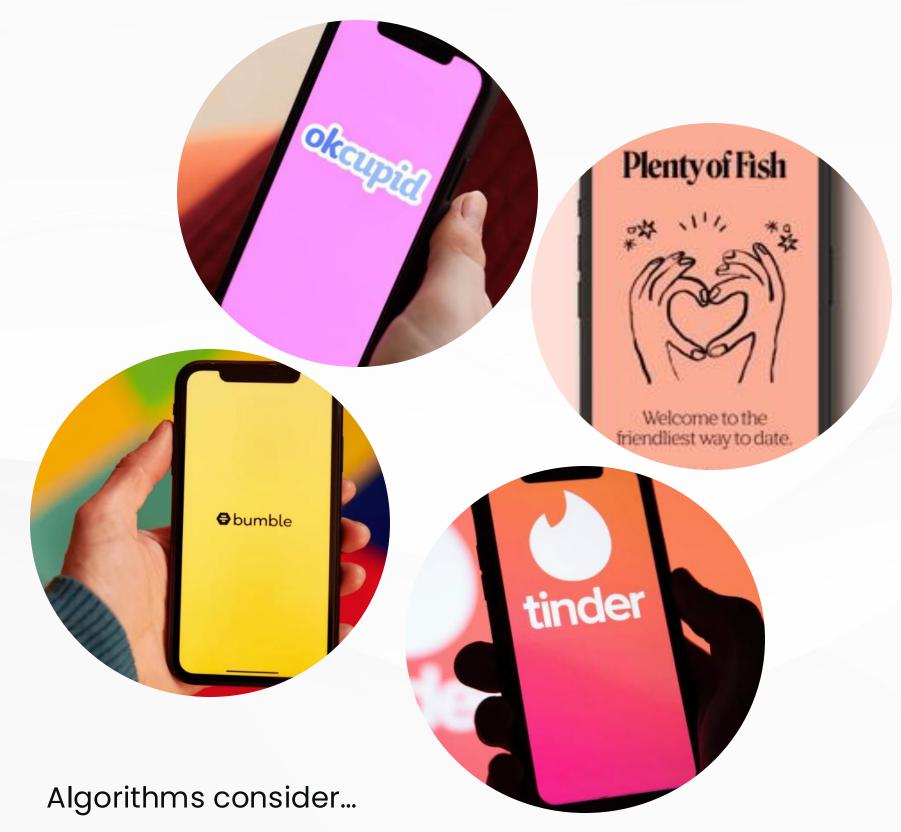
Dating apps get personal to counter fatigue among Gen Z

FINANCIAL TIMES

type of people keep pop HOME WORLD US COMPANIES TECH MARKETS CLIMATE OPINION LEX WORK & CAREERS LIFE & ARTS HTSI

Has anyone done any re psychological compatibi more thoughtful approach

How we fell out of love with dating apps



- > Information users put on their own profiles
- > Users' swiping decisions

Swiping is **proxy** for user preferences which guide the algorithms in generating suitable profiles

Literature on featurelevel assessments





- Photos (physical attractiveness) vs. texts (social attractiveness)¹
- Warranting signals²
- Photos & texts play different roles when used in combination³

BUT...

- Only look at one or two headshots & employ similar text descriptions for all users
- Third party media absent
- Assume users have common objectives (i.e., looking for romantic partners)⁴

RQ: How do users assess other user profiles on online dating platforms?

Methodology

Case Context



Combined market share of 53%1

Data Collection + Analysis

- 80 narrative interviews with users of Tinder and Bumble
- Interviews analysed through interpretive analysis; open coding to identify narratives in which interviewees
 described their assessments of other user profiles
- Initial categorisation of user assessments based on user motives did not work → Restructured into two
 assessment patterns

User profile features visible to other users	Tinder	Bumble
Name	Х	Х
Age	Х	Х
Location (geography)	Х	X
Photos (max. allowed)	X (9)	X (6)
Short bio (max. characters)	X (500)	X (300)
Prompts (max. allowed)	X	X (3)
Interests/Tags (max. allowed)	X (5)	X (5)
Spotify	Х	X
Instagram handle/Instagram photos	X	X

Note: New features have been added since the interviews were conducted.

The table lists features available between 2021 and 2022.

Algorithms consider following factors of other user profile: age, content and length of bios, photos, location, and ethnicity²

Findings

Features







Two assessment patterns





Levels of "consciousness" vary!

Single feature

Single-feature + conscious

<u>Photos</u>: Based on purely primal level

"It's normally the first two pictures. So, you look at the face, and if you like already whatever you see, it's right [swipe right], and if you don't like it, then it's left. It's like when you pick clothes: either you like it, or you don't." (INT74, 27, male-straight)

Single-feature + conscious

Photos: Form a deeper sense of person's personality or character through photos

"I don't know how to describe it. But I think people in photos, even if you don't write anything, by the photos that you take and your facial expression in those photos and stuff, I think your body language shows a lot about a person to a certain extent. So, I think also from there, that's the first criterion. That's something that just you feel like when you watch someone in the street and it freaks you out, or it's someone that you're kind of attracted to and you think you would get along. Of course, first impressions matter to a certain extent, but I think that's quite a strong first filter. Sometimes you don't have to read someone's profile to know that. It's just like... you already know." (INT28, 24, male-straight)

Single-feature + less conscious

Photos: Unable to specify what exactly they liked in the photos

"It's about first impressions... it's definitely, I mean, in real life, it's kind of the same: you get a first impression within the same amount of time. So, it's like the second that then you get a kind of feeling of, like, 'Okay, what is that person like?' So it's about that, I guess. And it's not even about similar looks. I think it's more about similar lifestyles? Similar interests? It's really hard to tell." (INT34, 28, male-straight)

Multi-feature

Multi-feature + conscious

Photos + Texts: Gain a more comprehensive impression of the person behind profiles

"I have to say it's the picture [and] the biography, but not necessarily in the sense that everything which is displayed is what I read, but I tried to kind of see between the lines of, 'Who is this person? Does he have friendly eyes?' For me, it's very important to have some charisma and not only go for looks but truly kind of figure out, 'Do I feel something more than just what the profile maybe says?' I also really enjoy a humorous man, so if there's a joke hidden in the profile, that's something I really find attractive." (INT9, 31, female-straight)

Multi-feature + conscious

Music: Pendulum swinger

"Their music can play a big role. Not everyone has it. But there are people that I was like, 'Maybe yes, maybe not,' and then they had a lot of music, and I figured... like, there was this guy who had all of the songs, literally, that I liked. And I was like, 'Okay, let's just swipe right.'" (INT43, 27, female-straight)

Multi-feature + less conscious

<u>Photos + Texts</u>: Unable to specify what

"To be honest, I don't know. I know that I swipe for people right for the people that I felt like I could have a connection with, but I don't know why exactly. From time to time, it was a funny bio, from time to time it was a funny picture. I don't really know. It's not like I swipe if there is a guy with blue eyes or whatever. It's just really feeling-based on picture-bio combo... It's more on the feeling of the moment... It's not really something that you can describe. It's really like, 'This person looks like I can have a connection with them. I feel like I could like it.' I cannot really describe it." (INT42, 26, female-straight)

So What?



Data ≠ Truth

A swipe is not a clean preference signal, but a messy human moment.

→ Is achieving "optimal matches" even possible?

Time to rethink dating platform identity?

Business model paradox: success = user loss

Possible redefinition: from matching to understanding the self → Design for reflection?



You can't anticipate what others like about you

Curious users may want to ask their matches what attracted them.

Adopt greater mindfulness and intentionality when swiping

When do I go on the platforms?

How am I swiping or messaging?

Am I consistent in how I behave online?

Maybe the future of matching isn't about finding the perfect partners, but about understanding ourselves.

Maverick, 8 🗸 Celebrity Meowdel Licking my nose while looking better than you ever will. Glamology Want someday



Arigato ©



So...
What are you swiping for?

As data scientists...

... how can you design algorithms that accurately translate user preferences?

... how can you design systems that don't just predict user behaviour but help people reflect on their behaviour?

... how can you design systems that allow people to understand the implications of their behaviour on algorithmic outcomes?

References

- Abel, C., Pei, L., Larson, I., Olgado, B., & Turner, B. (2022). "Tinder Will Know You Are A 6": Users' Perceptions of Algorithms on Tinder. Proceedings of the 55th Hawaii International Conference on Systems Science, Hawaii.
- Alhabash, S., Hales, K., Baek, J., & Oh, H. (2014). Effects of Race, Visual Anonymity, and Social Category Salience on Online Dating Outcomes. Computers in Human Behavior, 35, 22-32.
- Appel, M., Hutmacher, F., Politt, T., & Stein, J. (2023). Swipe Right? Using Beauty Filters in Male Tinder Profiles Reduces Women's Evaluations of Trustworthiness but Increases Physical Attractiveness and Dating Intention. Computers in Human Behavior, 148, 107871.
- Brand, R., & DeShong, H. (2012). What is Beautiful is Good, Even Online: Correlations Between Photo Attractiveness and Text Attractiveness in Men's Online Dating Profiles. Computers in Human Behavior, 28, 166-170.
- Burrell, J. (2016). How the Machine 'Thinks': Understanding Opacity in Machine Learning Algorithms. Big Data & Society, 3(1), 1-12.
- Charmaz, K. (2006). Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis. Sage Publications, Los Angeles.
- Corbin, J., & Strauss, A. (2008). Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory (3rd ed.). Thousand Oaks, California.
- Cram, A., Wiener, M., Taradfar, M., & Benlian, A. (2022). Examining the Impact of Algorithmic Control on Uber Drivers' Technostress. Journal of Management Information Systems, 39(2), 426-453.
- Curry, D. (2024). Dating App Revenue and Usage Statistics (2024). Retrieved November 10, 2024 from https://www.businessofapps.com/data/dating-app-market/.
- Dai, M., & Robbins, R. (2021). Exploring the Influences of Profile Perceptions and Different Pick-Up Lines on Dating Outcomes on Tinder: An Online Experiment. Computers in Human Behavior, 117, 1-9.
- David, G., & Cambre, C. (2016). Screened Intimacies: Tinder and the Swipe Logic. Social Media & Society, 1-11.
- de Vries, D. (2016). Meeting Expectations: The Effects of Expectations on Self-Esteem Following the Construction of a Dating Profile. Computers in Human Behavior, 62, 44-50.
- Eastwick, P., & Finkel, E. (2008). Sex Differences in Mate Preferences Revisited: Do People Know What They Initially Desire in A Romantic Partner? Journal of Personality and Social Psychology, 94(2), 245–264.

References (cont.)

- Fink, L., Ilany-Tzur, N., Yam, H., & Sokhina, S. (2023). Do Women and Women Click Differently? Mobile Devices Mitigate Gender Differences in Online Dating. Information & Management, 60(2), 103750.
- Finkel, E., Eastwick, P., Karney, B., Reis, H., & Sprecher, S. (2012). Online Dating: A Critical Analysis From the Perspective of Psychological Science. Psychological Science in the Public Interest, 13(1), 3-66.
- Frolovichev, S. (2023). Apparatus and Method For Coordinating the Matching and Initial Communications Between Individuals in a Dating Application. (U.S. Patent No. 2023/0018386 A1). U.S. Patent and Trademark Office.
- Gavin, J., Rees-Evans, D., Duckett, A., & Brosnan, M. (2019). The Attractiveness, Trustworthiness and Desirability of Autistic Males' Online Dating Profiles. Computers in Human Behavior, 98, 189-195.
- Hitsch, G.J., Hortaçsu, A., & Ariely, D. (2010). What Makes You Click? —Mate Preferences in Online Dating. Quantitative Marketing and Economics, 8(4), 393–427.
- Huang, S., Hancock, J., & Tong, S. (2022). Folk Theories of Online Dating Exploring People's Beliefs About the Online Dating Process and Online Dating Platforms. Social Media & Society, 1-12.
- Iqbal, M. (2024) Tinder Revenue and Usage Statistics (2024). Retrieved on November 10, 2024 from https://www.businessofapps.com/data/tinder-statistics/.
- Jung, J., Lim, H., Lee, D., & Kim, C. (2021). The Secret to Finding a Match: A Field Experiment on Choice Capacity Design in an Online Dating Platform. Information Systems Research, 1-16.
- Karahanna, E., Xu, S., Xu, Y., & Zhang, N. (2018). The Needs-Affordances-Features Perspective For the Use of Social Media. MIS Quarterly, 42(3), 737-756.
- Kadolkar, A., & Stark, L. (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. International Journal of Communication, 10, 3758-3784.
- Kuesters, I. (2009). Narrative Interviews: Grundlagen und Anwendungen (2 ed.). VS Verlag für Sozialwissenschaften Wiesbaden.
- Lo, S., Hsieh, A., & Chiu, Y. (2013). Contradictory Deceptive Behavior in Online Dating. Computers in Human Behavior, 29, 1755-1762.

References (cont.)

- Miller, B., & Behm-Morawitz, E. (2016). "Masculine Guys Only": The Effects of Femmephobic Mobile Dating Application Profiles on Partner Selection for Men Who Have Sex with Men. Computers in Human Behavior, 62, 176-185.
- Moore, E. (2023). Al Entering the Dating Pool is a Bleak Prospect. Retrieved on July 30, 2024 from https://www.ft.com/content/12977678-846b-4b0d-bfc1-3af09e3784ae.
- Myers, M. (1997). Qualitative Research in Information Systems. MIS Quarterly, 21(2), 241-242.
- Nader, K., & Lee, M. (2022). Folk Theories and User Strategies on Dating Apps: How Users Understand and Manage Their Experience with Algorithmic Matchmaking. iConference 2022, 445-458.
- Pasquale, F. (2016). The Black Box Society: The Secret Algorithms That Control Money and Information. Harvard University Press, Cambridge.
- Paul, A., & Ahmed, S. (2023). Computed Compatibility: Examining User Perceptions of AI and Matchmaking Algorithms. Behaviour & Information Technology, 43(5), 1002-1015.
- Pizzato, L., T. Rej, T. Chung, Koprinska, I., & Kay, J. (2010). RECON: A Reciprocal Recommender for Online Dating. Proceedings of the ACM Conference on Recommender Systems, Barcelona, Spain.
- Rad, S., Carrico, T., Hoskins, K., Stone, J., & Badeen, J. (2019). Matching Process and Method. (U.S. Patent No. 10,203,854 B2). U.S. Patent and Trademark Office.
- Rahman, H. (2024). The Invisible Cage: Workers' Reactivity to Opaque Algorithmic Evaluations. Administrative Science Quarterly, 66(4), 945-988.
- Rosenblat, A., & Stark, L., (2016). Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. International Journal of Communication, 10, 3758-3784.
- Sharabi, L. (2022). Finding Love on a First Data: Matching Algorithms in Online Dating. Harvard Data Science Review, 4(1), 1-11.
- Shen, H., Dang, C., & Zhang, X. (2024). Mr. Right or Mr. Best: The Role of Information Under Preference Mismatch in Online Dating. Information Systems Research, 1-17.

References (cont.)

- Sritharan, R., Heilpern, K., Wilbur, C., & Gawronski, B. (2009). I Think I Like You: Spontaneous and Deliberate Evaluations of Potential Romantic Partners in an Online Dating Context. European Journal of Social Psychology, 40(6), 1062-1077.
- Stelmaszak, M., Möhlmann, M., & Sørensen, C. (2025). When Algorithms Delegate to Humans: Exploring Human-Algorithm Interaction at Uber. MIS Quarterly, 49(1), 305-330.
- Timmermans, E., & De Caluwé, E. (2017). Development and Validation of the Tinder Motives Scale (TMS). Computers in Human Behavior 70, 341-350.
- Tong, S., Hancock, J., & Slatcher, R. (2016). Online Dating System Design and Relational Decision Making: Choice, Algorithms, and Control. Personal Relationships, 23, 645-662.
- van der Zanden, T., Schouten, A., & Krahmer, E. (2019). Impression Formation on Online Dating Sites: Effects of Language Errors in Profile Texts on Perceptions of Profile Owners' Attractiveness. Journal of Social and Personal Relationships, 37(3), 1-21.
- van Zoonen, W., Sivunen, A., & Treem, J. (2024). Algorithmic Management of Crowdworkers: Implications for Workers' Identity, Belonging, and Meaningfulness of Work. Computers in Human Behavior, 152, 108089.
- Wotipka, C., & High, A. (2016). An Idealized Self or the Real Me? Predicting Attraction to Online Dating Profiles Using Selective Self-Presentation and Warranting. Communication Monographs, 1-22.