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From Social Media to Empathic Artificial Intelligence:

Applying Past Lessons to Future Technologies

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Abstract

Social technologies have profoundly transformed how people communicate with one another. This chapter synthesizes two decades of research on social media and messaging platforms to extract lessons for new forms of social technology, such as empathic artificial intelligence. We propose that prior attempts to identify universal effects of social technology on connection are largely uninformative due to substantial heterogeneity across studies. We highlight and briefly review three key sources of heterogeneity: 1) the type and features of the technology, 2) how it is used, and 3) who is using it. We recommend that future research explicitly consider these sources of heterogeneity to better understand how changes in technology will affect social life—and how they can be better designed to optimize connection.

Keywords: Social technology, social media, empathic artificial intelligence, social connection, messaging, loneliness, well-being

Human social life is rapidly evolving with advances in social technologies. In the past several decades, social technologies—specifically, social media platforms (e.g., Facebook), messaging tools (e.g., WhatsApp), and online communities (e.g., Reddit)—have fundamentally altered how people communicate with one another and maintain relationships. These technologies are increasingly ubiquitous: in 2024, the average Internet user spent 143 minutes on social media each day (Statista, 2024), and 91% of Americans owned a smartphone, compared to 55% one decade earlier (Pew Research Center, 2024).

Understanding the consequences of social technologies is particularly important because today, machines are no longer merely conduits for human interaction—they are becoming interaction partners themselves. One such example is empathic artificial intelligence (AI), which refers to relational agents designed to detect, simulate, and compassionately respond to human emotions (Inzlicht et al., 2024; Perry, 2023). Notably, many of the central questions surrounding empathic AI—e.g., *Can it reduce loneliness? Will it erode in-person interaction? Who benefits and who is harmed?*—echo long-standing debates about the effects of other social technologies. This chapter summarizes key lessons learned from social technologies thus far, in part to provide a roadmap for future investigations into the consequences of empathic AI.

The Promise and Pitfalls of Social Technology

Since their inception, online communication platforms like social media have been associated with both benefits and risks for people's social connectedness. On the one hand, these technologies have improved social life by helping people stay connected across distance (Liu et al., 2016), access emotional support and information (Liu et al., 2018), and find welcoming communities, which may be particularly useful for those from marginalized groups (Gonzales, 2017). On the other hand, they have also diminished the quality of in-person interactions (Leitão et al., 2024; Przybylski & Weinstein, 2013), increased exposure to cyberbullying and distressing

content (Giumetti & Kowalski, 2022), and amplified moral outrage and polarization (Crockett, 2017; Goldenberg & Willer, 2023).

On balance, associations between social technology use and socio-emotional outcomes are small and highly variable across studies. For example, meta-analyses reveal that social media use is weakly linked to greater loneliness ($.05 < r < .17$; Huang, 2017; Liu & Baumeister, 2016; Song et al., 2014; Zhang et al., 2022) and lower psychological well-being ($r \sim -.10$; e.g., lower life satisfaction, higher depression symptoms; Appel et al., 2020; Cunningham et al., 2021; Huang, 2017; Meier & Reinecke, 2021; Orben & Przybylski, 2019). At the same time, social media use is linked to greater social capital—both *bridging* ties that expand social networks ($r = .32$) and *bonding* ties that strengthen strong ties ($r = .26$; Liu et al., 2016). The wide variability in effect sizes across studies reflects not only methodological differences (e.g., flexible analytic approaches, differences in control variables, overreliance on cross-sectional data; Ferguson et al., 2024; Orben et al., 2019; Twenge et al., 2020) but also deeper conceptual issues.

We suggest that the search for universal, aggregate effects of social technology is largely misguided and uninformative (see Kross et al., 2021). Rather than asking whether social technology is inherently beneficial or harmful, it is more productive to ask *when, how,* and *for whom* it promotes or undermines social connection. In what follows, we propose that the effects of social technology, with a focus on social media, on connection depend on at least three sources of heterogeneity: 1) the ***type*** and ***features*** of social technology (e.g., the platform and its affordances), 2) ***how*** the technology is being used (e.g., whether it is complementing or replacing in-person interaction), and 3) ***who*** is using it (e.g., user demographics). In the sections that follow, we briefly synthesize evidence for each of these sources.

Source of Heterogeneity I: Types and Features of the Social Technology

Platform type. To date, meta-analyses typically aggregate across different social technology platforms (Ferguson, 2024; Stoycheff et al., 2017). Though many platforms share certain features (e.g., direct messaging, enabling user-generated content), each platform typically introduces something novel to the digital landscape. For example, Instagram distinguished itself from Facebook by focusing on visual context and aesthetic curation, emphasizing images over text-based updates. As such, platforms vary in design affordances, which shape user norms and experiences—for instance, the expectation for anonymity or for reciprocity (Ellison & Vitak, 2015; Fox & McEwan, 2017).

As just one example of the wide differences across platforms, nationally representative data from the Neely Social Media Index collected in 2023 (Wave 2) asked 1,587 U.S. adults to self-report whether they had meaningful connections on *any social technology* platform in the past month (Fast et al., 2023; Neely Center for Ethics & Technology, 2023). Connection was highest on direct messaging platforms like FaceTime (51.6%), text messaging (49%), and WhatsApp (44.8%), but substantially lower on traditional social media platforms, such as Facebook (32.3%), Snapchat (25.9%), Instagram (21.5%), TikTok (13%), and X/Twitter (8.4%).

This variability in connection experiences across platforms illustrates the danger in treating platforms interchangeably. It is akin to asking whether eating food is good for one's health without considering what one is eating. Different foods have different nutritional profiles and effects, just as distinct platforms create distinct social environments and psychological outcomes. Yet another source of danger is generalizing conclusions from one platform to others. For instance, a disproportionate number of earlier studies on social media have focused on

Facebook, raising questions about the generalizability of their findings to other platforms (Stoycheff et al., 2017).

Platform features. Rather than treating all platforms as equivalent, social technology may be best understood as a constellation of features—such as the communication medium and synchrony of messaging—that shape online interactions. Studying the effects of these features (or elements) helps address the "moving target problem"—the fact that social media evolves more rapidly than researchers can track (Bayer et al., 2020). By focusing on higher-level affordances (e.g., content persistence, presentation flexibility, feedback directedness) rather than platform-specific features, researchers can generate insights that remain relevant even as discrete platforms change or disappear altogether, offering a more enduring contribution to the understanding of social technology effects (DeVito et al., 2017; Ellison & Vitak, 2015).

One key platform feature that shapes connection is the communication medium. Some platforms are primarily text-based (e.g., Twitter, Facebook), whereas others contain richer media such as audio or video (e.g., FaceTime, WhatsApp). The communication medium has been shown to meaningfully influence social connection outcomes. For example, studies find that text-based (vs. voice-based) communication can be dehumanizing, which reduces users' abilities to empathize with each other (Hall & Schmid Mast, 2007; Kraus, 2017; Zaki et al., 2009), facilitates misunderstanding (Kruger et al., 2005), and lowers perception of others' mental capacities (Schroeder & Epley, 2015; Schroeder et al., 2017). Text-based platforms also afford greater anonymity, which can breed aggression, moral outrage, and conflict (Crockett, 2017; Lieberman & Schroeder, 2020). At the same time, compared to speech, text typically takes longer to produce and is easier to edit; thus, communicating via text (versus speech) can increase deliberation, care, and formality in one's messages (Oba & Berger, 2023).

Source of Heterogeneity II: How Social Technology is Used

Beyond structural features of the social technology platform itself, the ways in which it is used can influence felt connection.

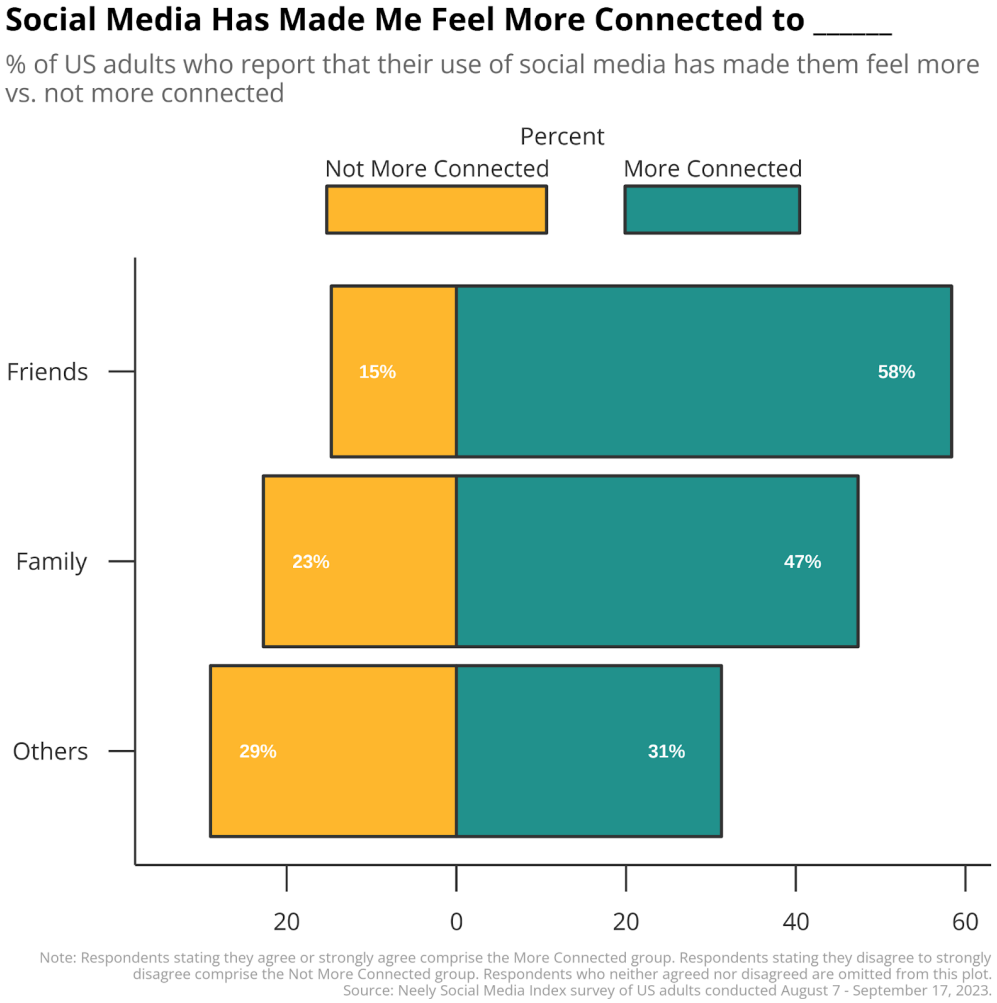
Complementing vs. substituting in-person interaction. One central aspect of social technology use is whether it is intended to complement or substitute for in-person interaction. The former tends to reduce loneliness, but the latter tends to increase it (Nowland et al., 2018; Waytz & Gray, 2018). When online interaction displaces in-person interaction, it can harm well-being and reduce social connection among both adults and adolescents (Clark et al., 2018; Teppers et al., 2014). However, when in-person interaction is difficult or impossible to access—such as during the COVID-19 lockdown—online interaction can provide meaningful support and reduce loneliness (Waytz & Gray, 2018; Yue et al., 2024). Thus, understanding the consequences of social technology requires considering users' broader social networks and their motivations for engaging with these tools.

Mindset. People's core beliefs about the role of social media in their lives—their *social media mindsets*—may have implications for social connection. Those who view social media as something that enhances their lives and that they can control tend to experience greater psychological benefits (Lee & Hancock, 2024). In fact, a study found that believing one has agency over their social media use and seeing it as enhancing rather than harmful is a stronger predictor of perceived social support and psychological distress than the amount, intensity, or type of social media use (Lee & Hancock, 2024).

Do people believe that social media helps them connect with others? In Neely Social Media Index data from 2023, we found that a majority or near-majority of U.S. adults believe that social media helps them feel more connected to friends (58% more connected; 15% not

more connected) and family (47% more connected; 23% not more connected; see Fig 1; Motyl & Schroeder, 2024; Neely Center for Ethics & Technology, 2023). Importantly, people who believed that social media helps them connect—and/or that they are in control of their social media use—also reported greater satisfaction with their social lives (Motyl & Schroeder, 2024). Although the directionality of this link is unclear given the cross-sectional nature of the data, these findings suggest that people's beliefs about the effects of social technologies may play a role in shaping their consequences.

***Fig 1*. U.S adults' beliefs that social media has made them feel more (or less) connected.**



Type of use. Earlier frameworks characterized active social media use (e.g., posting, direct messaging) as more beneficial and passive social media use (e.g., scrolling) as more

harmful (see Verduyn et al., 2015). However, more recent evidence paints an increasingly complex picture. A meta-analysis of 141 studies found that both active and passive social media usage were weakly associated with greater online support, yet had negligible associations with many socio-emotional outcomes, including offline support, loneliness, and social anxiety (Godard & Holtzman, 2024). Again, notable heterogeneity is observed, in part because virtually no two studies define or measure active and passive use in the same way (Meier & Krause, 2022). Further, "active" and "passive" represent broad categories of behaviors and do not capture the nature of the content shared or consumed (Verduyn et al., 2022). This is yet another case in which attending to platforms' affordances—such as the public versus private nature of the online interaction, which influences levels of intimacy and reciprocity (Frison & Eggermont, 2020)—is useful (Ellison & Vitak, 2015; Valkenburg et al., 2022).

Source of Heterogeneity III: Who Uses Social Technology

Finally, the consequences of social technology are shaped by who uses it.

Demographic characteristics. Surprisingly little work has explored how social technology's effects on felt connection vary across demographic groups, and existing findings are generally inconsistent (Meier & Reinecke, 2021). In Neely Social Media Index data from 2023, we found that U.S. adults who were older (60+), more educated, and non-Hispanic White were more likely to report meaningful connections on social media than younger, less educated, and non-White individuals (Motyl, 2024; Neely Center for Ethics & Technology, 2023). Regarding the role of age, adolescents may be particularly vulnerable to the negative consequences of social media use due to unique developmental and neurobiological factors, such as heightened sensitivity to peer evaluation and social exclusion (Orben et al., 2024). Regarding the role of marginalized group membership, although marginalized group members may not reap

as many benefits from social technology overall, it is possible they may have unique needs that social technology could help satisfy. For instance, many people with disabilities or chronic health conditions find support and connection with others who share similar lived experiences (Sweet et al., 2020).

Other individual differences. Personality and mental health also play a role in the effects of social technology. More extraverted and less lonely individuals tend to gain more social capital on social media, whereas socially anxious users who turn to social media to compensate for offline challenges do not accrue the same benefits (Cheng et al., 2019). Other work shows that people higher in neuroticism and depression reported feeling lonelier directly after using social media platforms compared to after not using it (Vaid et al., 2024).

Moving Forward

Lessons learned from two decades of social media research offer a foundation for more productively and systematically studying novel technologies such as empathic AI. Rather than first seeking general effects and only later identifying critical moderators, researchers can begin with a *moderator-first framework*—explicitly examining the contextual, psychological, and design factors that shape outcomes. We encourage researchers to follow the approach we lay out in the current chapter: studying the generalizable features of empathic AI, how it is being used, and who is using it. Because empathic AI systems can be experimentally modified with relative ease—altering platform features such as chatbot response lengths, delays, or models (e.g., Costello et al., 2024; Rubin et al., 2025)—these questions can be tested more directly than in past work on other social technologies. Such an approach enhances generalizability, generating insights that apply across current and emerging technologies. This is essential in a landscape where platforms evolve so quickly that findings tied to any one platform risk becoming obsolete.

One consequential yet largely opaque influence lies in the algorithm of the empathic AI system itself. These algorithms remain, to varying degrees, black boxes. Recent high-profile cases in which teenagers died by suicide after prolonged interactions with AI chatbots have intensified public scrutiny and prompted calls to hold companies accountable for developing algorithms that are safe and transparent (see Roose, 2024). To advance scientific understanding and safeguard user well-being, greater transparency and data-sharing from technology companies are essential—for instance, providing access to anonymized data that can illuminate how specific model features affect users' emotional and social outcomes. Encouragingly, new models of industry-academia collaboration are beginning to emerge, such as the MIT Media Lab's ongoing partnership with OpenAI (2025), which is committed to sharing insights with the public while protecting user privacy.

Given that healthy social relationships are a central component of human health and well-being (Holt-Lunstad, 2021), it is critical that social technologies are designed and used in ways that will enhance—rather than undermine—social connection. By following the principles set out in this chapter, we hope researchers' insights will help to optimize technology for social life, both for pre-existing technologies like social media and emerging technologies like empathic AI.

References

Appel, M., Marker, C., & Gnambs, T. (2020). Are social media ruining our lives? A review of meta-analytic evidence. *Review of General Psychology, 24*(1), 60–74.

Bayer, J. B., Triệu, P., & Ellison, N. B. (2020). Social media elements, ecologies, and effects. *Annual Review of Psychology, 71*(1), 471–497.

Cheng, C., Wang, H. Y., Sigerson, L., & Chau, C. L. (2019). Do the socially rich get richer? A nuanced perspective on social network site use and online social capital accrual. *Psychological Bulletin, 145*(7), 734–764.

Clark, J. L., Algoe, S. B., & Green, M. C. (2018). Social network sites and well-being: The role of social connection. *Current Directions in Psychological Science, 27*(1), 32–37.

Costello, T. H., Pennycook, G., & Rand, D. G. (2024). Durably reducing conspiracy beliefs through dialogues with AI. *Science*, *385*(6714), eadq1814.

Crockett, M. J. (2017). Moral outrage in the digital age. *Nature Human Behaviour, 1*(11), 769–771.

Cunningham, S., Hudson, C. C., & Harkness, K. (2021). Social media and depression symptoms: A meta-analysis. *Research on Child and Adolescent Psychopathology, 49*(2), 241–253.

DeVito, M. A., Birnholtz, J., & Hancock, J. T. (2017). Platforms, people, and perception: Using affordances to understand self-presentation on social media. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing* (pp. 740–754).

Ellison, N. B., & Vitak, J. (2015). Social network site affordances and their relationship to social capital processes. In *The Handbook of the Psychology of Communication Technology* (pp. 203–227).

Fast, N., Schroeder, J., Motyl, M., & Iyer, R. (2023, June 22). Unveiling the Neely Ethics & Technology Indices. *Designing Tomorrow*. https://psychoftech.substack.com/p/unveiling-the-neely-ethics-and-technology

Ferguson, C. J. (2025). Do social media experiments prove a link with mental health: A methodological and meta-analytic review. *Psychology of Popular Media*, *14*(2), 201–206.

Ferguson, C. J., Kaye, L. K., Branley-Bell, D., & Markey, P. (2024). There is no evidence that time spent on social media is correlated with adolescent mental health problems:

Findings from a meta-analysis. *Professional Psychology: Research and Practice, 56*(1), 73–83.

Fox, J., & McEwan, B. (2017). Distinguishing technologies for social interaction: The perceived social affordances of communication channels scale. *Communication Monographs, 84*(3), 298–318.

Frison, E., & Eggermont, S. (2020). Toward an integrated and differential approach to the relationships between loneliness, different types of Facebook use, and adolescents' depressed mood. *Communication Research, 47*(5), 701–728.

Giumetti, G. W., & Kowalski, R. M. (2022). Cyberbullying via social media and well-being. *Current Opinion in Psychology*, *45*, 101314.

Godard, R., & Holtzman, S. (2024). Are active and passive social media use related to mental health, wellbeing, and social support outcomes? A meta-analysis of 141 studies. *Journal of Computer-Mediated Communication, 29*(1), zmad055.

Goldenberg, A., & Willer, R. (2023). Amplification of emotion on social media. *Nature Human Behaviour, 7*(6), 845–846.

Gonzales, A. L. (2017). Disadvantaged minorities' use of the Internet to expand their social networks. *Communication Research, 44*(4), 467–486.

Hall, J. A., & Schmid Mast, M. (2007). Sources of accuracy in the empathic accuracy paradigm. *Emotion, 7*(2), 438–448.

Holt-Lunstad, J. (2021). The major health implications of social connection. *Current Directions in Psychological Science*, *30*(3), 251-259.

Huang, C. (2017). Time spent on social network sites and psychological well-being: A meta-analysis. *Cyberpsychology, Behavior, and Social Networking, 20*(6), 346–354.

Inzlicht, M., Cameron, C. D., D'Cruz, J., & Bloom, P. (2024). In praise of empathic AI. *Trends in Cognitive Sciences*, *28*(2), 89-91.

Kraus, M. W. (2017). Voice-only communication enhances empathic accuracy. *American Psychologist, 72*(7), 644–654.

Kross, E., Verduyn, P., Sheppes, G., Costello, C. K., Jonides, J., & Ybarra, O. (2021). Social media and well-being: Pitfalls, progress, and next steps. *Trends in Cognitive Sciences, 25*(1), 55–66.

Kruger, J., Epley, N., Parker, J., & Ng, Z. W. (2005). Egocentrism over e-mail: Can we communicate as well as we think? *Journal of Personality and Social Psychology, 89*(6), 925–936.

Lee, A. Y., & Hancock, J. T. (2024). Social media mindsets: A new approach to understanding social media use and psychological well-being. *Journal of Computer-Mediated Communication, 29*(1), zmad048.

Leitão, M. R., Proulx, J. D., & Kushlev, K. (2024). Smartphones undermine social connectedness more in men than women: A mini mega-analysis. *Technology, Mind, & Behavior, 5*(1).

Lieberman, A., & Schroeder, J. (2020). Two social lives: How differences between online and offline interaction influence social outcomes. *Current Opinion in Psychology, 31*, 16–21.

Liu, D., Ainsworth, S. E., & Baumeister, R. F. (2016). A meta-analysis of social networking online and social capital. *Review of General Psychology, 20*(4), 369–391.

Liu, D., & Baumeister, R. F. (2016). Social networking online and personality of self-worth: A meta-analysis. *Journal of Research in Personality, 64*, 79–89.

Liu, D., Wright, K. B., & Hu, B. (2018). A meta-analysis of social network site use and social support. *Computers & Education, 127*, 201–213.

Meier, A., & Krause, H. V. (2022). Does passive social media use harm well-being? *Journal of Media Psychology*.

Meier, A., & Reinecke, L. (2021). Computer-mediated communication, social media, and mental health: A conceptual and empirical meta-review. *Communication Research, 48*(8), 1182–1209.

MIT Media Lab & OpenAI. (2025, March 21). *How AI chatbots affect our social and emotional wellbeing.* https://www.media.mit.edu/projects/mit-openai-study/overview/

Motyl, M. (2024). Do people still have meaningful connections on social media? *Designing Tomorrow*. https://psychoftech.substack.com/p/meaningful-connections-on-social-media

Motyl, M., & Schroeder, J. (2024). Alone together? How social technology is influencing human connection and loneliness. *Designing Tomorrow*. https://psychoftech.substack.com/p/social-technology-and-loneliness

Neely Center for Ethics & Technology. (2023, May). USC Neely Social Media Index. University of Southern California. https://neely.usc.edu/usc-marshalls-neely-center-social-media-index/

Nowland, R., Necka, E. A., & Cacioppo, J. T. (2018). Loneliness and social internet use: Pathways to reconnection in a digital world? *Perspectives on Psychological Science, 13*(1), 70–87.

Oba, D., & Berger, J. (2023). How communication mediums shape the message. *Journal of Consumer Psychology, 34*(3), 406–424.

Orben, A., Dienlin, T., & Przybylski, A. K. (2019). Social media's enduring effect on adolescent life satisfaction. *Proceedings of the National Academy of Sciences, 116*(21), 10226–10228.

Orben, A., Meier, A., Dalgleish, T., & Blakemore, S. J. (2024). Mechanisms linking social media use to adolescent mental health vulnerability. *Nature Reviews Psychology, 3*(6), 407–423.

Orben, A., & Przybylski, A. K. (2019). The association between adolescent well-being and digital technology use. *Nature Human Behaviour, 3*(2), 173–182.

Perry, A. (2023). AI will never convey the essence of human empathy. *Nature Human Behaviour*, *7*(11), 1808-1809.

Pew Research Center. (2024, November 13). *Mobile fact sheet*. https://www.pewresearch.org/internet/fact-sheet/mobile/

Roose, K. (2024, October 23). *Can A.I. be blamed for a teen's suicide?* The New York Times. https://www.nytimes.com/2024/10/23/technology/characterai-lawsuit-teen-suicide.html

Rubin, M., Li, J. Z., Zimmerman, F., Ong, D. C., Goldenberg, A., & Perry, A. (2025). Comparing the value of perceived human versus AI-generated empathy. *Nature Human Behaviour*, 1-15.

Schroeder, J., & Epley, N. (2015). The sound of intellect: Speech reveals a thoughtful mind, increasing a job candidate's appeal. *Psychological Science, 26*(6), 877–891.

Schroeder, J., Kardas, M., & Epley, N. (2017). The humanizing voice: Speech reveals, and text conceals, a more thoughtful mind in the midst of disagreement. *Psychological Science, 28*(12), 1745–1762.

Song, H., Zmyslinski-Seelig, A., Kim, J., Drent, A., Victor, A., Omori, K., & Allen, M. (2014). Does Facebook make you lonely? A meta-analysis. *Computers in Human Behavior, 36*, 446–452.

Statista. (2024). *Daily time spent on social networking by internet users worldwide from 2012 to 2024*. https://www.statista.com/statistics/433871/daily-social-media-usage-worldwide/

Stoycheff, E., Liu, J., Wibowo, K. A., & Nanni, D. P. (2017). What have we learned about social media by studying Facebook? A decade in review. *New Media & Society, 19*(6), 968–980.

Teppers, E., Luyckx, K., Klimstra, T. A., & Goossens, L. (2014). Loneliness and Facebook motives in adolescence: A longitudinal inquiry into directionality of effect. *Journal of Adolescence*, *37*(5), 691-699.

Twenge, J. M., Haidt, J., Joiner, T. E., & Campbell, W. K. (2020). Underestimating digital media harm. *Nature Human Behaviour, 4*(4), 346–348.

Vaid, S. S., Kroencke, L., Roshanaei, M., Talaifar, S., Hancock, J. T., Back, M. D., & Harari, G. M. (2024). Variation in social media sensitivity across people and contexts. *Scientific Reports, 14*(1), 6571.

Valkenburg, P. M., van Driel, I. I., & Beyens, I. (2022). The associations of active and passive social media use with well-being: A critical scoping review. *New Media & Society, 24*(2), 530–549.

Verduyn, P., Gugushvili, N., & Kross, E. (2022). Do social networking sites influence well-being? The extended active–passive model. *Current Directions in Psychological Science, 31*(1), 62–68.

Verduyn, P., Lee, D. S., Park, J., Shablack, H., Orvell, A., Bayer, J., & Kross, E. (2015). Passive Facebook usage undermines affective well-being: Experimental and longitudinal evidence. *Journal of Experimental Psychology: General, 144*(2), 480–488.

Waytz, A., & Gray, K. (2018). Does online technology make us more or less sociable? A preliminary review and call for research. *Perspectives on Psychological Science, 13*(4), 473–491.

Yue, Z., Zhang, R., & Xiao, J. (2024). Social media use, perceived social support, and well-being: Evidence from two waves of surveys peri- and post-COVID-19 lockdown. *Journal of Social and Personal Relationships, 41*(5), 1279–1297.

Zaki, J., Bolger, N., & Ochsner, K. (2009). Unpacking the informational bases of empathic accuracy. *Emotion, 9*(4), 478–490.

Zhang, L., Li, C., Zhou, T., Li, Q., & Gu, C. (2022). Social networking site use and loneliness: A meta-analysis. *The Journal of Psychology, 156*(7), 492–511.