

Mobile Phones and Relationships

An STS Research Paper
presented to the faculty of the
School of Engineering and Applied Science
University of Virginia

by

Jacobo Pacheco

March 28, 2020

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

Signed: _____

Approved: _____ Date _____
Peter Norton, Department of Engineering and Society

Mobile Phones and Relationships

Wireless technology surrounds us. According to the Cellular Telecommunications Industry Association, “there are more than 400 million connections in America, equal to 1.2 wireless devices for every person in the country,” and “the number of smartphones in active use grew 31% from 2014 to 2017” (CTIA 2019). Such connectivity suggests we are closer to friends and family than ever before, but how true is this? A quick YouTube or Google search reveals recommendations to put phones down to connect deeply with love ones. As smartphones proliferate, will they isolate or unite us? Phones have transformed human interaction. AT&T’s old slogan was “Reach out and touch someone” (Jago, 2015), suggesting that telecom enhances personal relationships. However, Thomas Insel, a psychiatrist and neuroscientist, contends that smartphones can diminish attention span, impair relationships, and harm mental health (Insel, 2018). Some groups argue that phones are essential for relationships, while others contend that phones impair our interpersonal skills and are highly addictive. Critics and defenders of phones as a medium of interpersonal relationships advance their respective agendas through claims of the social connection and mental health effects of phone usage.

Review of Research

Przybylski and Weinstein (2012) concluded that the mere presence of a phone interferes with feelings of closeness and connection and impair conversations. They found a strong mind-to-phone connection. “Phubbing” is a new term for snubbing others through mobile phone distractions. David and Roberts (2017) concluded that phubbed individuals perceive social exclusion that leads them to seek attention from their phones, so as to feel included. They found

that phones serve as substitutes for actual interpersonal skills. Furthermore, David and Roberts (2017) stated, “although the stated purpose of technology like smartphones is to help us connect with others, in this particular instance, it does not. Ironically, the very technology that was designed to bring humans closer together has isolated us from these very same people.”

Xie and Xie (2020) studied the connection between parental phubbing and depression in late childhood and adolescence. They ran two studies, one with 530 Chinese students and one with 293, and concluded that parental phubbing was associated with students’ depression. Family norms can regulate mobile phone use to reduce phubbing. These results, as well as Przybylski’s and Weinstein’s, indicate that phubbing hinders interpersonal relationships and must be actively regulated.

Chotpitayasunondh & Douglas (2016) examined the psychological antecedents and consequences of phubbing behavior. They examined how Internet addiction, fear of missing out, self-control, and smartphone addiction contributed to phubbing. They concluded that the first three predicted smartphone addiction, which then predicted the extent to which people phub. Therefore, these findings suggest that phubbing is an essential factor in modern communication and correlates with smartphone addiction. Roberts & David (2016) investigated partner phubbing, Pphubbing, by running two studies: one to measure the behavior, and the other to assess a sample of 145 adults with the measure. They concluded that Pphubbing harms relationship satisfaction, which indirectly impacted life satisfaction and depression. This research suggests that phubbing is not exclusive to friendships and platonic relationships.

Davies et al. (2017) investigated the tension between the use of Facebook and the quality of interpersonal communication. They found that Facebook users are primarily driven by the need to belong and to engage in self-presentation. They concluded “Facebook is not a sufficient

substitute to interpersonal communication, as it tends to degrade the quality of interpersonal relationships.” This contention becomes more pertinent knowing that, according to Clement (2020), 98% of Facebook access it through a mobile phone; 79% access it only via mobile phone. If Facebook degrades the quality of interpersonal relationships, (Davies et al., 2017) and most users access Facebook through their phones, phones degrade interpersonal relationships.

Sharabi, Roaché, and Pusateri (2019) evaluated textual relationships and reasons for restricting communication. A textual relationship is one on which intimacy is primarily sustained through text messaging. Sharabi, Roaché, and Pusateri (2019) concluded that the quality of participants’ face-to-face relationships surpassed that of their textual relationships and quality diminished for participants in long-term textual relationships. Although text messaging can foster a relationship in the long term to face-to-face relationships are stronger.

Phones enable several mediums of communications and thereby, several types of interpersonal relationships. Goodman-Deane et al. (2016) explored the relationship between communication technology and well-being, particularly its effect on personal relationships. They considered whether the effect varies between types of communication technology, and the nature of the personal relationship. They concluded that richer communication methods, such as face-to-face communication and phone or video calls, are positively associated with overall satisfaction with relationships. Conversely, text messaging and instant messaging were negatively associated.

Dwyer et al. (2017) investigated how smartphone usage undermines the enjoyment of face-to-face social interactions. Participants were randomly assigned to keep or put away their phones on a table during a meal. They found that diners whose phone was at hand felt more distracted, diminishing their enjoyment of time with friends or family. In a second study, they

concluded that participants felt more distracted and reported lower enjoyment during in-person interactions while they used their phones. This research suggests that although phones can connect us to others across the globe, they may undermine the benefits we derive from face-to-face interactions.

Telecommunication and Connecting the World

Phone manufacturers, such as Apple, Samsung, Huawei, and Telecommunication companies defend phones by displaying how much more connected users are with them and how much larger their potential social network becomes. The International Telecommunication Union (ITU) is committed to the coordination of telecommunication operations and services throughout the world. ITU contends it is “committed to connecting the world.” Furthermore, ITU notes that in 2018 “51.2 percent of the global population, or 3.9 billion people” are using the internet (ICT Statistics 2018). According to CTIA, 93 percent of surveyed consumers believe wireless messaging is a trusted communications environment and 89 percent of people always have their smartphone within arm’s reach (CTIA 2019).

Phone manufacturers leverage Psychological Marketing by advertising how much better users’ lives can be with their devices and how much more connected they can be. When Apple released its Facetime feature they depicted keeping in touch with significant others, old friends, and family members. Marketing Schools argues that the psychological response Apple attempts to elicit is, “Tenderness and Longing: You see individuals using their camera phones to reconnect with loved ones and it elicits feelings of warmth and longing to see old friends” (How to Market, n.d.). Suggesting that if people desire to stay connected with loved ones, then they should seek an iPhone.

Social Connection & Social Media

Advocates assert that mobile phones enable them to connect to a broader network of people around the world through social media. Comscore describes themselves as “a trusted partner for planning, transacting and evaluating media across platforms” (*Comscore | About*, 2020). During Comscore’s 2018 Global Digital Future in Focus, they provided a snapshot of desktop, smartphone, and tablet usage around the globe (*Global Digital*, 2018). Key findings from the thirteen countries analyzed were: mobile users consume more than two times the minutes vs. desktop users, smartphones are the dominant platform compared to desktop and tablets in terms of total minutes, and apps accounted for over 80% of mobile time with multimedia, social networking, and instant messages capturing more than half of all digital time. In all 13 countries, either Facebook, Facebook Messenger, or WhatsApp were in the top 5 apps by reach in 2018. Since Facebook acquired WhatsApp in 2014 for \$21.8 billion (Deutsch, 2020), it is Facebook that reins in the top 5 apps by reach. During Facebook’s 1st communities’ summit in 2017, Mark Zuckerberg stated he started Facebook to connect his college; he never thought that he would be the one to connect the world. During this summit, Zuckerberg announced Facebook’s new mission, “bring the world closer together.” He stated that this would be accomplished by building meaningful communities and giving them more support through new Facebook tools and software (Zuckerberg, 2017).

UC San Diego’s University Communications and Public Affairs division asserts that social media should be used for connecting; Universities should be connecting with students and alumni to promote and further the University. Although they argue that social media’s power does not end at just connecting but can go further by utilizing engagement, they state, “It’s all

about engagement. Instead of broadcasting information to an audience, social media enables us to connect and converse” (Social Media 101). They assert that Facebook can be used to have conversations and to create forums for discussions with the community, suggesting that social media can and should be used to create communities that bring the world closer together.

Authenticity, Mental Health and Social Media

Critics agree that phones enable social media and thereby give users’ the potential for more connections. However, they assert that these connections lack authenticity, are not genuine relationships and are more harmful than beneficial. Newport Academy, a therapy program for adolescents with mental health or addiction issues, asserts that the proliferation of social media and cellphone usage decreases teen’s face-to-face interactions. Therefore, authentic connections and real-time communication become difficult (Phubbing, 2018). Jean M. Twenge is a Professor of Psychology at San Diego State University. In Twenge’s book *iGen: Why Today’s Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy—and Completely Unprepared for Adulthood*, she states “Social-networking sites like Facebook promise to connect us to friends. But the portrait of iGen teens emerging from the data is one of a lonely, dislocated generation.” She defines iGen as those born between 1995 and 2012. Twenge asserts that even though iGen’s grew up with phones and are constantly connected, they are experiencing psychological distress and an increase in depression. Dr. Twenge contributes this to iGen’s increased use of social media to relentlessly document all their gatherings. She argues that those not invited are well aware of it and experience an increase in loneliness and exclusion. Furthermore, Dr. Twenge argues that cyberbullying is a significant relationship issue brought on by the rise in mobile phones. The Organization for Social and Media Safety asserts that 88% of

social media-using teens have witnessed other people being mean online, with approximately 34% of students report experiencing cyberbullying. Furthermore, they assert that teens using social media more than 5 hours daily are 70% more likely to have suicidal thoughts than those who report one hour of daily use (OFSMS, n.d.).

Due to the mass of the telecommunication companies and their associations, critics of phones are marginalized. Only semi-organized groups emerge, such as Simon Sinek and his followers. Sinek and his videos are widely referenced online. His most popular videos have from 47k to 11M views. They include titles such as “How Do Cell Phones Impact our Relationships,” “Addiction to Technology is Ruining Lives,” and “This is Why [Millennials] Don’t Succeed” Sinek compares alcohol abuse to cell phones. He contends that notifications on our phones trigger the release of dopamine, the neurotransmitter responsible for pleasure. Hence many people check for notifications frequently because a lack of notifications can cause stress, many people carry their phone in their hands and put it on a table nearby (AEALearningOnlineLive 2015). According to Sinek, such practices damage interpersonal relationships. He warns that in a meeting a phone on the table, signals that others present are not the most important people to the phone user. Sinek states that real relationships are formed during downtimes, in meetings and classes, that are now being filled with phone browsing. His advice for cell phones and relationships is to put the phone away completely to show someone you care.

Addiction and Phones

During an interview with NowThis News Time Cook, the CEO of Apple, stated that “we’ve never built our business on wanting people to use their phone all day long. We do not want that. We want you to have a great life” (NowThis, 2018). Critics argue that such statements

are a facade and that mobile phones are engineered to be addictive. Such an addiction, like many others, creates strains in romantic relationships and friendships. Phone users who feel addicted can turn to Net Addiction Anon. Net Addiction Anon claims that internet addiction due to cell phones turns family dinners into silent rituals, causes people on the street to collide, and leads people who claim not to be addicted to take the device everywhere (Peck 2019). Net Addiction Anon claims that tech companies purposefully addict users for profit. Its members “work together... to inform, connect and educate families and individuals who may be suffering with addiction, specifically to digital devices and the internet” (Peck 2019).

Healthline argues that cell phone addiction has alarming similarities to behavioral addictions like compulsive gambling, a recognized addiction in the Diagnostic and Statistical Manual of Mental Disorders (Stanborough, 2019). Healthline argues these similarities between the two: loss of control, persistence, tolerance, withdrawal, and relapse. Healthline asserts that dopamine, the feel-good chemical, is released during social interactions and phones can simulate these interactions. Therefore, people become accustomed to constantly checking them. They continue by arguing that mobile application programmers are expecting this effect and will deliberately make notifications unpredictable to motivated users to check the app continually.

Phubbing: Phone Snubbing

Critics assert that a significant consequence of phone addiction is phubbing: the act of snubbing someone with a phone. Critics argue that phubbing is a clear example of how technology, specifically phones, is negatively affecting social skills for both teens and adults by disrupting their ability to be present with the people around them. Furthermore, critics argue that to improve relationships, people should decrease or limiting phone usage, to the point of even

creating phone-free zones. Newport Academy asserts that phubbing is one of the most common symptoms of cell phone addiction in teens (Phubbing, 2018). Newport Academy defines phubbing as glancing at a phone during a conversation, checking the phone when conversation stalls, and interrupting a real-life conversation to answer a phone. Newport Academy agrees that phubbing can have an extremely negative effect on relationships and can result in a decrease in marital satisfaction. Newport Academy argues that technology and interpersonal communication are often a poor match, that conversations without smartphones are higher in quality and empathy. They recommend five ways to stop phubbing: set consequences for phone use, create no-phone zones, turn off notifications, excuse oneself if phone use is required, and let others know how phubbing makes you feel.

Fatherly describes themselves as a digital space designed to empower men to raise great kids and lead more fulfilling adult lives. Jeremy Brown, a writer for Fatherly, argues that phubbing is more than just being addicted to social media or checking emails; it is also about denying love ones time in favor of connecting with your screen (Brown, 2018). Brown agrees with claims that the behavior facilitates relationship dissatisfaction by creating an emotional distance between romantic partners. Additionally, Brown asserts that when device usage becomes secretive, it is the beginning of real trouble for the relationship. Brown, similar to Newport Academy, believes a solution for phubbing is to create no-phone zones so that one can engage wholeheartedly with their partner.

Dating Applications, Relationships and Phones

Defenders of phones and relationships contend that dating applications, such as Tinder, Bumble, Hinge, OkCupid, are transforming the dating atmosphere by giving power back to users

and revolutionizing relationships. Veronica Hanks, a writer for Thrive Global, agrees with these claims and asserts four significant reasons: dating apps help people decide faster, online dating apps allow you to decide your own pace, dating apps provide a global platform, and dating apps make the process simpler. Hanks agrees that phones connect us to the world by arguing that the apps enable dating on an international level and thereby eliminating geolocation barriers and increasing the pool of options. Hanks (2019) states, “In other words, one can also say that dating platforms are bringing people from all around the world closer. Tinder promotes this belief with the beginning of their mission statement, “Tinder makes being single more fun and rewarding by connecting people who may not have otherwise met in real life” (Tinder: Our Mission, 2020). OkCupid expresses similar beliefs with their mission statement, “we’re dedicated to helping people find love and happiness through meaningful connections” (OkCupid, 2017). Both companies assert that their apps create real, authentic, meaningful relationships that can span the world. Hinge takes this authenticity to heart with their application’s motto: “...we built an app that’s designed to be deleted” (Hinge | Mission, 2020)—suggesting that their mobile app, through smartphones, create long-lasting relationships.

Conclusion

Phone manufacturers and social media companies believe phones are not only connecting us to our loved ones or potential romantic partners but the entire world. Others argue that the connection is only between users and the engineered addictive nature of phones. The first phone appears prehistoric to the computing power in people’s hands today. The computing power in the iPhone that most keep at arm’s reach has over 100,000 times the processing power of the computer that landed a man on the moon 50 years ago (Kendall, 2019). This technology is in the

hands of three billion users worldwide (Statista, 2020). Phone giants, such as Samsung, Huawei, and Apple, are competing daily to bring novel, unique, and stimulating features to their next-generation smartphones. They, along with social media companies, show no signs of slowing down innovation. Critics and defenders both agree that is not whether phones are impacting user's relationships, but about to what extent and who is truly in control? Technological innovation will not end at smartphones; humans will continue to devise faster, smarter, more secure forms of communication. These questions and debates will not end soon and are not exclusive to phones. These discussions go above phones, their true nature being the social and mental effects of humans and technology. These issues will be repeated throughout centuries to come, the only change being the technology of the time. Will technology connect users to the world, as Mark Zuckerberg stated, or will it control them?

References

- Hanks, V. (2019, November 4). How Dating Apps Are Revolutionizing Relationships Today? ThriveGlobal.Com. thriveglobal.com/stories/how-dating-apps-are-revolutionizing-relationships-today/
- Brown, J. (2018, September 10). When Your Partner Keeps Choosing Their Phone Over You. Fatherly. www.fatherly.com/love-money/phubbing-ruining-relationships-phone-snubbing/
- Chotpitayasunondh, V., & Douglas, K. M. (2016). How “phubbing” becomes the norm: The antecedents and consequences of snubbing via smartphone. *Computers in Human Behavior*, 63, 9–18. doi.org/10.1016/j.chb.2016.05.018
- Clement, J. (2020, February 3). Facebook users reach by device 2020. www.statista.com/statistics/377808/distribution-of-facebook-users-by-device/
- Comscore | About. (2020). Comscore, Inc. www.comscore.com/About
- CTIA (2019) The Wireless Industry Industry/Data. www.ctia.org/the-wireless-industry/infographics-library.
- David, M. E., & Roberts, J. A. (2017). Phubbed and Alone: Phone Snubbing, Social Exclusion, and Attachment to Social Media. *Journal of the Association for Consumer Research*, 2(2), 155–163. doi: 10.1086/690940
- Davies, M., Musango, J. K., & Brent, A. C. (2016, January 12). A Systems Approach to Understanding the Effect of Facebook Use on the Quality of Interpersonal Communication. www.sciencedirect.com/science/article/abs/pii/S0160791X15300373
- Deutsch, A. L. (2020, March 18). WhatsApp: The Best Facebook Purchase Ever? www.investopedia.com/articles/investing/032515/whatsapp-best-facebook-purchase-ever.asp
- Dwyer, Ryan J., et al. “Smartphone Use Undermines Enjoyment of Face-to-Face Social Interactions.” *Journal of Experimental Social Psychology*, vol. 78, 2018, pp. 233–239., doi:10.1016/j.jesp.2017.10.007.
- Global Digital Future in Focus 2018. (2018, March 18). Comscore, Inc. www.comscore.com/Insights/Presentations-and-Whitepapers/2018/Global-Digital-Future-in-Focus-2018.

- Goodman-Deane, J., Mieczkowski, A., Johnson, D., Goldhaber, T., & Clarkson, P. J. (2016). The impact of communication technologies on life and relationship satisfaction. *Computers in Human Behavior*, *57*, 219–229. doi.org/10.1016/j.chb.2015.11.053
- Hinge (2020). Mission. hinge.co/mission
- How to Market Mobile Phones: Understanding consumer psychology and advertising Mobile Phones ... (n.d.). www.marketing-schools.org/consumer-psychology/marketing-mobile-phones.html
- Insel, T. (2018). Speaking of Psychology: Smartphones Are a Problem: Can They Be a Solution? www.apa.org/research/action/speaking-of-psychology/smartphone-wellbeing
- Jago, P. (2015, July 15). "Reach Out and Touch Someone." www.prmuseum.org/blog/2015/7/14/reach-out-and-touch-someone
- Kendall, G. (2019, July 2). *Your Mobile Phone vs. Apollo 11's Guidance Computer* | *RealClearScience*. Realclearscience.com. www.realclearscience.com/articles/2019/07/02/your_mobile_phone_vs_apollo_11s_guidance_computer_111026.html
- NowThis News Apple. (2018, Oct. 1). CEO Tim Cook Interview: "The Future is Now." *NowThis* [Video file]. youtu.be/vX9xBB_vBsc.
- Number of smartphone users worldwide 2014-2020 (2020, Feb. 28). Statista. www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/
- OFSMS (n.d.). Resources. www.ofsms.org/resources.
- OkCupid (2017). OkCupid. About. www.okcupid.com/about.
- Phubbing and Why It's Bad for Us. (2018, March 23). Newport Academy. www.newportacademy.com/resources/mental-health/phubbing-why-its-bad-for-us/
- Przybylski, A. K., & Weinstein, N. (2012). Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality. *Journal of Social and Personal Relationships*, *30*(3), 237–246. doi: 10.1177/0265407512453827
- Roberts, J. A., & David, M. E. (2016). My life has become a major distraction from my cell phone: Partner phubbing and relationship satisfaction among romantic partners. *Computers in Human Behavior*, *54*, 134–141. doi.org/10.1016/j.chb.2015.07.058
- Sharabi, L. L., Roaché, D. J., & Pusateri, K. B. (2019). Texting toward intimacy: Relational quality, length, and motivations in textual relationships. *Communication Studies*, *70*(5), 601–619. psycnet-apa-org.proxy01.its.virginia.edu/doi/10.1080/10510974.2019.1634117

Stanborough, R. (2019, October 17). Cell Phone Addiction: Is It Really a Thing, and What Can You Do? Healthline. www.healthline.com/health/mental-health/cell-phone-addiction#how-to-break-the-addiction

Tinder – Our Mission. (2020). Tinder – Meet Interesting People Nearby. www.gotinder.com/jobs?locale=en

Twenge, J. M. (2017). *IGEN: Why today's super-connected kids are growing up less rebellious, more tolerant, less happy--and completely unprepared for adulthood*. New York: Atria Books.

University Communications and Public Affairs – Social Media 101 (n.d.). ucpa.ucsd.edu/resources/social/social-101.

Xie, X., & Xie, J. (2020). Parental phubbing accelerates depression in late childhood and adolescence: A two-path model. *Journal of Adolescence*, 78, 43–52. psycnet-apa-org.proxy01.its.virginia.edu/doi/10.1016/j.adolescence.2019.12.004

Zuckerberg, M. (2017, June 22). Bringing the World Closer Together. www.facebook.com/notes/mark-zuckerberg/bringing-the-world-closer-together/10154944663901634/