

June 2024

# DIGITAL DISRUPTION

EXPLORING THE LINK  
BETWEEN TECHNOLOGY,  
SOCIAL MEDIA, AND  
POLITICAL POLARIZATION

Miranda Spindt  
Will Flanders, PHD.



---

## Executive Summary

This paper, the second in our three-part series, examines the profound impact of technological advancements on human interaction and societal dynamics during the 20<sup>th</sup> and 21<sup>st</sup> centuries. This also explores how that advancement has impacted our personal and community relationships—as well as how it may be contributing to the rise of political polarization.

- The rise of technology in the 20<sup>th</sup> century, especially television, greatly shifted the way that we spend time with and relate with others due to the individualization and privatization of entertainment. The average time spent watching television peaked at nine hours a day in 2009. In 2022, a person spent 7.5 hours a day on average using their phones and watching television.
- Both with television and social media, individuals are experiencing parasocial or pseudo-relationships more often and in more extreme ways. These false relationships with celebrities or online personalities do not replace the importance of real-life connections, but they make us feel as though pursuing real connections is not as necessary.
- Depressive symptoms in teenagers have risen from around 30% in 2010 to almost 50% in 2023 as the use of smartphones and social media has grown. The instant validation received through likes and other interactions creates an addiction that can be harmful if we do not continuously receive it.
- Social media contributes to political polarization as it incentivizes more polarized online behavior. The most controversial opinions get the most interactions, and the algorithms will show the most interacting content to more people. The anonymity of the internet also emboldens users to say things they may never otherwise say in real life. This makes controversial content seem more pertinent than it is and damages the image we have of ideological others.
- Polarization is important to consider in the study of social capital because it impacts our relationships with, and trust in, others. Both Republicans and Democrats feel less connected to their community when they feel they are in the political minority.

---

## The Rise of Technology in the 20<sup>th</sup> Century

The 20<sup>th</sup> century saw a boom of technological advancement and the use of technology in the home, which has been detrimental to the ways in which we interact with others, and how often. One way Harvard Sociologist Robert Putnam, a well-known expert on social capital, illustrates this is through our entertainment. It used to be that, to watch a play or listen to an orchestra, communities would have to gather in a theatre and enjoy it at the same time. While we still do this today, it is no longer necessary. Our phones, televisions,

and laptops make watching shows or listening to music possible wherever we are. We can do so in complete solitude, which also reduces the incentive to share similar tastes with anyone around us. It does not matter if what we watch or listen to appeals to broad audiences as it doesn't need to attract large crowds of people. This also means that people have less opportunity to connect and build relationships based on their similar tastes and experiences since they can be completely different.

Putnam emphasizes the rise of televisions as the technological advancement that caused this. The invention of the black and white television entered the homes of American families faster than anything else. In 1946, there were 6,000 television sets in use. By 1951, just five years later, that rose to 12 million.<sup>i</sup>

Television changed how people spend their free time. As television became more common in the home, people no longer had to leave to be entertained— nor did they have to watch the same thing as others. Watching television replaced activities such as joining social clubs or attending community events. Between the years 2000 and 2023, the number of households with a television grew from 102.2 million to 123.8 million.<sup>ii</sup> Television viewership peaked in 2009-2010 when the average American household watched 8 hours and 55 minutes a day.<sup>iii</sup> That has decreased as the use of non-television entertainment, like social media, has risen but is still very high. In 2017, household television use was 7 hours and 50 minutes every day.

Hours of TV American Households Watch Per Day

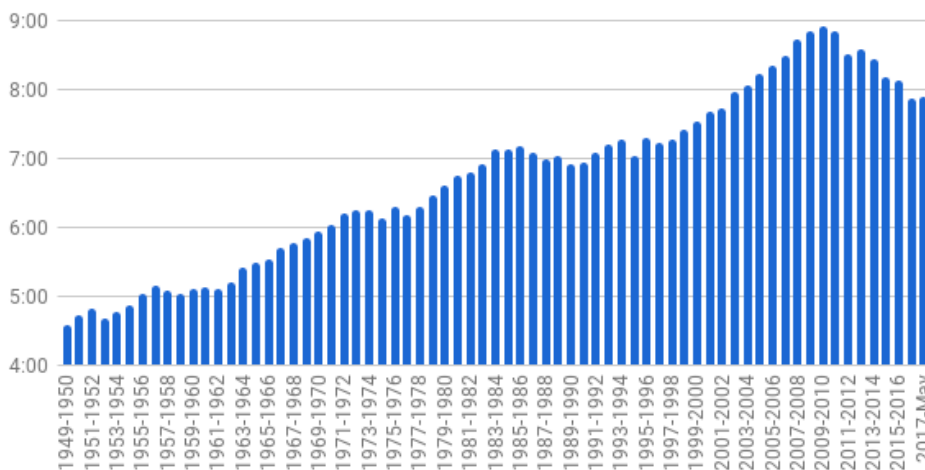


Figure 1: Nielson numbers for television viewing time since 1949

Not only did this erode time spent in the community, but also time spent with family. It used to be that there was just one television in the living room that the family would gather around. Now, family members can be completely isolated in separate rooms consuming their own entertainment. By 2009, the number of television sets in a household was 2.93, while the average number of persons in a household was 2.54.<sup>iv</sup> This has also decreased slightly since then, but the number of screens in a household has increased to 7.3 when

including laptops, smart phones, and tablets.<sup>v</sup> In 2019, Americans spent an average of 3 hours and 45 minutes on their phone each day. By 2022, that climbed to 4 hours and 29 minutes.<sup>vi</sup> Additionally, Americans spend about 3 hours on average watching television.<sup>vii</sup> That is 7 hours and 29 minutes on average that one person spends a day being entertained by technology.

Putnam mentions that not even the radio, although offering similar opportunities for private entertainment, had this same effect. Television, and now other personal devices, engages almost all of the senses and demands greater attention in a way that listening to the radio does not. In his book, Putnam estimated that television accounted for 25% of the loss of social capital seen in the second half of the 20<sup>th</sup> century.

Another way that modern media has potentially harmed social interaction is through the creation of pseudo-relationships. The prefix “pseudo-” means imitation or not real. While “pseudo-relationship” has no authoritative definition, it can be understood as a relationship that feels real but has no true foundation or connection. Putnam used the example of feeling like you know your favorite actor after watching them on television for years and seeing stories on their personal lives.

Online media has likely only furthered this trend. Some online platforms allow users to interact in a limited fashion with content creators, but generally only while compensation is being provided. On TikTok, viewers can send content creators “gifts” of money, from twelve cents up to five hundred dollars, during live streams. In return, the content creator may give that viewer a shoutout or do a specific action. Twitch is another live-streaming platform where users can pay to subscribe to their favorite content creators, which gives them access to exclusive video content and chat rooms. This kind of interaction, whether it is monetary or not, is similar to what some may understand as a “parasocial” relationship. This is when someone puts a lot of emotional energy into a person who is not aware of the existence of the other.<sup>viii</sup> Both parasocial and pseudo-relationships give a false sense of interaction or connection and, unfortunately, make us less likely to seek out real relationships in our daily lives.

---

## The Impact of Social Media

It does not take much thought to realize how parasocial and pseudo-relationships have been heightened through the internet and social media. It’s easy to think you know someone well when they post about their vacations, relationship and job statuses, and their personal interests. A 2021 survey of 1,000 parents found that 75% share photos of their children on social media, and 80% have followers that they have never met in real life.<sup>ix</sup> Knowing such personal things about someone makes it seem as if we really know them.

This happens with larger groups and communities as well. People who have never met in person can be found on “subreddits” (on the eponymous website) or Facebook groups. Almost 80% of online users are part of an online “community.” Of those, 18% feel a sense of belonging in those groups and 24% feel that they can be themselves.<sup>x</sup> Even in-person relationships interact more online. Only 24% of US teenagers report interacting with their friends in person daily while 60% interact with them online daily.<sup>xi</sup>

Whether we are building relationships in person or online, humans are driven by a strong desire for belonging. We feel validated when those around us show support for our feelings, actions, and experiences. Unfortunately, social media makes us feel validated almost instantly based on the number of likes or comments we get on a post, or how many followers we have. Research has shown that receiving likes and followers releases dopamine, which triggers the reward part of our brains and makes us seek it out again and again through chemical addiction.<sup>xii</sup> More likes and followers trigger the same feeling as exercising or achieving a goal—thus giving us feelings of validation.<sup>xiii</sup> On the flip side, social media can have very negative consequences for our mental health if we do not get the validation we are seeking. Symptoms of depression and anxiety among teenagers have significantly increased since the introduction of the smart phone and social media platforms like Instagram and Snapchat.<sup>xiv</sup> Figure 2 below shows polling results from the University of Michigan of teen mental health. The 2020 data was gathered before the pandemic began in Mid-March.

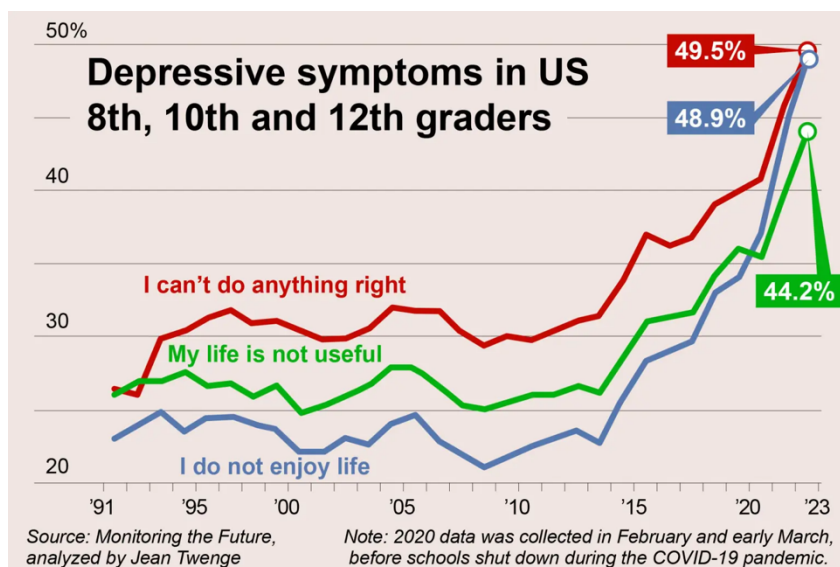


Figure 2: Depressive symptoms in teenagers from 1991 to 2023



---

## Polarization and Social Media

Seeking validation through social media has been a main driver in the online polarization we see today, which is discussed in depth by Chris Bail in his book *Breaking the Social Media Prism*. One point he makes is that we are incentivized to share more extreme or aggressive thoughts since that is what gets the most interaction. Whether or not someone truly agrees with the thoughts they share or would present them aggressively, Bail's research found that people are more likely to say and do so online for attention.

This tendency for people to exaggerate or “play a role” when that role has some distance from their own identity is well-known, even in more polished enterprises than online commenting. For instance, the literary critic and translator Hillel Halkin wrote an etymology column for decades under the pseudonym “Philologos.” For most of that time, the author's identity was a well-kept secret. In 2021, after Halkin's authorship was leaked and confirmed, he explained, “Now Philologos has an independent status as a fictional character I invented. Philologos often says things or goes out on a limb by expressing crazy things that I would never say. But then he's Philologos, he can do what he wants.”<sup>xv</sup>

Online anonymity gives us a chance to present ourselves online in a way that makes us feel validated. This can be taken to the extreme of using a different name or photo, and acting completely different online than one would in real life. In a political context, Bail gave an example of a study participant who, when interviewed, was a kind person. But when they looked at his online profile, he shared offensive posts and would leave angry comments. While not necessarily to this extreme, all of us put a version of ourselves online that we believe is going to be accepted by others.

Alarming, Bail also found that our online personalities can become a greater part of our real identity. Consequently, more people are becoming defensive over their political views because they are more likely to see online attacks on those views as personal. On the other side of the equation, meanwhile, if sharing extreme views is incentivized with dopamine, nasty attacks are similarly rewarding. It is also much easier to attack with insults or accusations when we know we won't see that person in real life, or they don't know that we are the ones saying it. This is part of a spiral, since people, for the sake of engagement, will proclaim more over-the-top views, which are the kind that invite more attacks. All of this makes us more hostile and online arguments escalate very quickly.

As these more extreme posts are interacted with, whether positively or negatively, the algorithms on the platform will show it to more people. As this content becomes more visible, it appears as though anyone conservative or liberal must agree with this more extreme content—giving us a less-than-accurate understanding of the views of those whom

we disagree with. Additionally, we never have to see anything we disagree with on social media. We can follow the pages we agree with, and the algorithms will show us more similar content. It is also easy to unfriend or block anyone who disagrees with us or turn off comments.

It seems intuitive that to combat polarization enhanced by social media, we must ensure that people are exposed to accurate opposing viewpoints. There are two problems with this that Bail discovered in his research. First, moderates tend to be less politically active on social media. This is partly due to the likelihood that moderates are not seeking validation online for their views, which are more accepted in our daily interactions, as much as do extremists—who may need to go online to find that same level of acceptance. It is also because, as mentioned earlier, moderate posts do not get the same engagement as extreme ones, and moderates would prefer to disengage from an online disagreement that spirals into name-calling. These factors mean that there is an overrepresentation of extreme views online.

Second, Bail found that as people are exposed to opposing viewpoints, they become more partisan. He conducted a study where both liberal and conservative participants followed a bot that generated content with opposing views. This bot would post multiple times a day, and what Bail discovered after the experiment was surprising. Rather than becoming more open and receptive to opposing opinions, and ideally becoming less partisan, participants were more partisan. As previously discussed, our political views are becoming a more integral part of our identities, and opposing views are seen as personal attacks. Even seeing moderate content, the participants became defensive which caused them to hold their ground even more.

In political psychology, this concept is known as “Motivated Reasoning.” When new information matches what we already believe—or would like to believe—we readily accept it. When information runs counter to that belief, we either reject it wholesale, more strongly question the credibility of the source, or quickly seek out an alternative, more aligned viewpoint.<sup>xvi</sup>

Studies have found that it is older generations, which do not use the internet as much, that have become the most polarized.<sup>xvii</sup> This suggests the internet is likely not the main cause for the rising polarization this country has experienced over the last ten to fifteen years. However, the evidence for how the internet and social media exacerbates the problem cannot be ignored and there does seem to be a correlation.

Other studies have shown that you are more likely to be polarized as you spend more time on social media.<sup>xviii</sup> The algorithms show you the most interacted-with content in a way that makes you want to come back to the platform, but this causes us to have harsher views of people with opposing viewpoints. This also means that not all ideas are shared within

groups equally. A social media study found that influencers—people at the center of a network— have a lot of power in filtering ideas that the rest of the network will be influenced by.<sup>xix</sup> This contrasts with egalitarian groups where ideas are shared equally, making the group more moderate. As seen in Figure 3, the change in polarization between 2004 and 2014, when internet usage became much more common, is considerably greater compared to the previous decade.

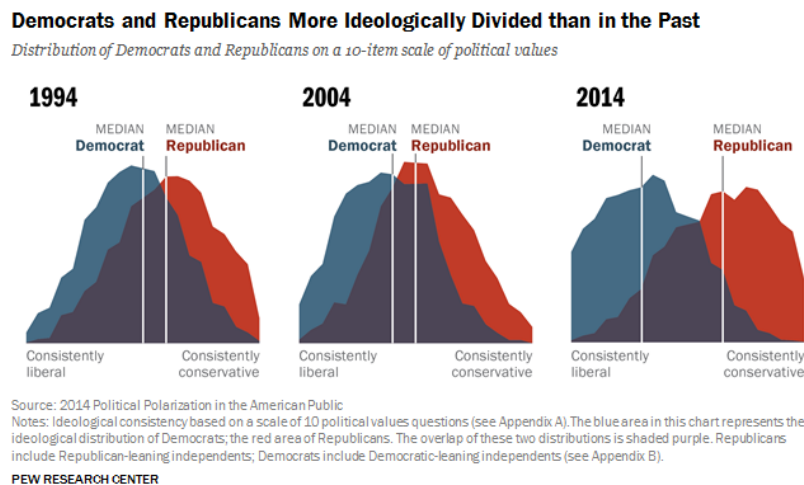


Figure 3: Polarization between Democrats and Republicans from 1994 to 2014

## Polarization and Social Capital

At the same time as Americans have seen their social capital decline, we have also become more polarized politically. One measure of this is how people feel about the other party on what is known as a “feeling thermometer.” The feeling thermometer on the American National Election Study (ANES) asks respondents to rate how they feel about partisans of the other party on a 100-point scale, with lower numbers indicative of “cold” feelings and higher numbers indicative of “warm” feelings.

The figure below shows the ANES feeling thermometer data for the Upper Midwest (WI, IL, IA, MN, MI) since 1992. The Upper Midwest is used instead of just Wisconsin because the number of observations for Wisconsin on the ANES is too small in some years to serve as a valid sample. Over this time frame, the Midwest tracks the nation going from feeling just between 35 and 40 towards the opposition party to around 17 on a 100-point scale.



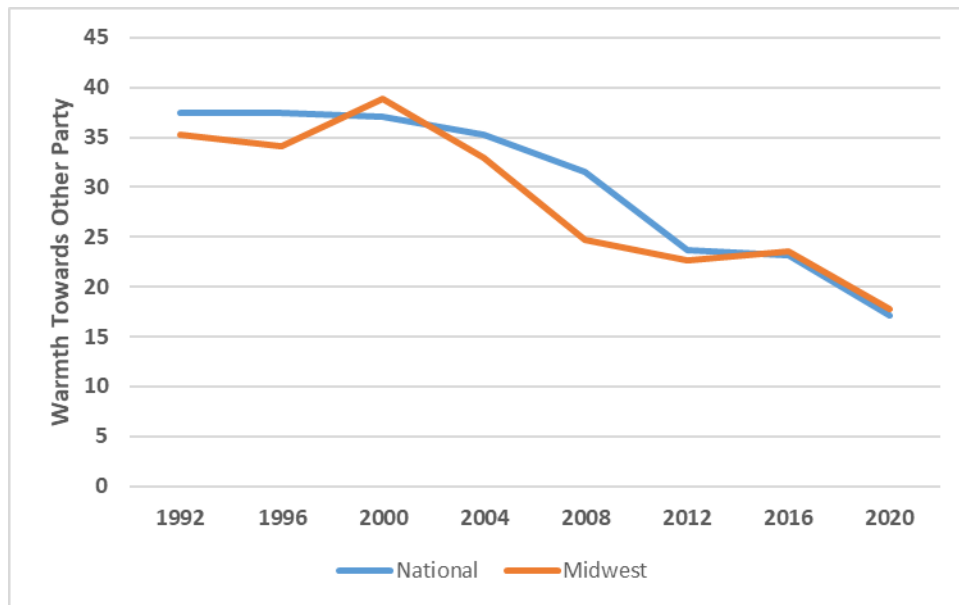


Figure 4: Partisan Feeling Thermometers, 1992-2020

While there is no doubt some dual causality between political polarization and declining social capital, the association between polarization and our family and community relationships is worth examining. In 1958, 72% of Gallup poll respondents said they did not care if their daughter married a Democrat or Republican. By 2016, that had decreased to 45%.<sup>xx</sup> Also in 2016, Thanksgiving dinners were 30 to 50 minutes shorter due to partisan effects, such as the likelihood of family members voting for different presidential candidates.<sup>xxi</sup>

In the past, family and in-person relationships may have played a significant role in moderating extreme viewpoints. As has been noted in previous sections, human beings are social creatures that crave belonging, and holding extreme views might serve as an impediment to that. However, with the modern social media environment allowing us to build parasocial or pseudo-relationships with others who will agree with us, we have less incentive to maintain our real relationships with friends and family who do not immediately validate us, or even make us feel attacked by disagreeing. Many family and friend relationships have been severely impacted by political views.<sup>xxii</sup>

Polarization does not just impact our immediate relationships, but also our feelings and relationships with our communities and institutions. A Gallup poll found that both Republicans and Democrats feel much more attached to their communities if they feel that they are more politically aligned with others in the area.<sup>xxiii</sup> They also feel much less attached to their communities if they feel they are in the political minority. How attached one feels to their community is correlated to how civically engaged they are, including how often one votes and volunteers.<sup>xxiv</sup> The Gallup poll also found that Republicans trust their

neighbors significantly less when they are in the minority (45%) than when they are in the majority (73%).

Polarization can also affect our institutions and the trust that citizens have in them. A 2022 study examined how polarized state legislatures are, meaning that elected officials vote most often with their party and never with the other.<sup>xxv</sup> Figure 5 shows the ranking of all 50 states, with Wisconsin having the 12<sup>th</sup> most polarized legislature.

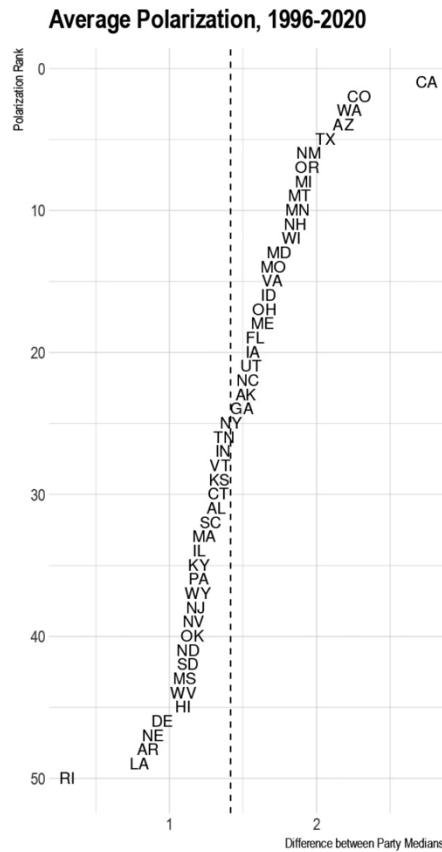


Figure 5: Comparison of polarization averaged across chambers for all 50 state legislatures, 1996–2020.

There are many reasons why some state legislatures are worse than others and few ways that truly address it. However, the study does share that less cooperative legislatures can lead to greater gridlock and budgetary delays, affecting the overall capacity of the legislature. Ultimately, this leads to further distrust in our leaders and institutions and less political involvement—both of which weaken social capital.

---

## Conclusion

The march of technology, notably the rise of television and social media, has ushered in a new era of human interaction and communication. While these technological advancements have offered convenience and connectivity, they have also presented a double-edged sword, severing some of the age-old bonds that once held communities and families together. As we navigate this evolving landscape, it is crucial to understand and address the consequences of these technological shifts. While the benefits of technology are undeniable, we must recognize its potential to exacerbate isolation, amplify divisions, and distort our sense of reality.

Fostering genuine connections and constructive dialogue in the digital age becomes an ever more urgent task in addressing rising political polarization. While it is not typically discussed in the context of social capital, it can have a harmful effect on our relationships with family and friends, worsen the distrust we have for our neighbors and government institutions, and lead to us being less involved in our communities politically and socially.

In the next and final paper of this social capital series, we will discuss the many ways that we can rebuild social capital. This includes policies that could be implemented by federal, state, and local governments. However, government policies can only help create the environment for social capital to grow. Change will only come about through the work of community organizations and individuals who make the choice every day to make improvements. We will discuss what this may look like and why it is important.

---

## Endnotes

---

- <sup>i</sup> Stephens, M. (n.d.). *History of Television*. nyu.edu. <https://stephens.hosting.nyu.edu/History%20of%20Television%20page.html>
- <sup>ii</sup> Stoll, J. (2023, December 12). *Number of TV households in the U.S. 2000-2024*. Statista. <https://www.statista.com/statistics/243789/number-of-tv-households-in-the-us/>
- <sup>iii</sup> Madrigal, A. C. (2018, May 30). When did TV watching peak?. The Atlantic. <https://www.theatlantic.com/technology/archive/2018/05/when-did-tv-watching-peak/561464/>
- <sup>iv</sup> Perry, M. J. (2010, May 2). *More TV sets (2.93) than people per us household (2.54); average TV sets per home sets new record*. [www.aei.org](http://www.aei.org). <https://www.aei.org/carpe-diem/more-tv-sets-2-93-than-people-per-us-household-2-54-average-tv-sets-per-home-sets-new-record/>
- <sup>v</sup> Hayes, D. (2017, May 31). *Average U.S. household now has 7 screens, report finds*. StreamTV Insider. <https://www.streamtvinsider.com/cable/average-u-s-household-now-has-seven-screens-reportlinker-finds>
- <sup>vi</sup> Howarth, J. (2023, December 4). *Time spent using smartphones (2024 statistics)*. Exploding Topics. <https://explodingtopics.com/blog/smartphone-usage-stats>
- <sup>vii</sup> Stoll, J. (2023, September 1). *U.S. TV consumption: daily viewing time 2009-2022, by age group*. Statista. <https://www.statista.com/statistics/411775/average-daily-time-watching-tv-us-by-age/>
- <sup>viii</sup> *Parasocial Relationships: The Nature of Celebrity Fascinations*. National Register of Health Service Psychologists. (n.d.). <https://www.findapsychologist.org/parasocial-relationships-the-nature-of-celebrity-fascinations/>
- <sup>ix</sup> *Parents' social media habits: 2021*. Security.org. (2021, May 13). <https://www.security.org/digital-safety/parenting-social-media-report/>
- <sup>x</sup> Beer, C. (2020, January 9). *The Rise of Online Communities*. GWI. <https://blog.gwi.com/chart-of-the-week/online-communities/>
- <sup>xi</sup> Anderson, M., & Jiang, J. (2018, November 28). *Teens, friendships and online groups*. Pew Research Center. <https://www.pewresearch.org/internet/2018/11/28/teens-friendships-and-online-groups/>
- <sup>xii</sup> Haynes, T. (2018, May 1). *Dopamine, Smartphones & You: A battle for your time*. Science in the News. <https://sitn.hms.harvard.edu/flash/2018/dopamine-smartphones-battle-time/>
- <sup>xiii</sup> Lazimi, S. (n.d.). *Are we obsessed with likes and followers?*. New Digital Age. <https://newdigitalage.co/social-media/are-we-obsessed-with-likes-and-followers/>

- 
- <sup>xiv</sup> Schlott, R. (2023, June 19). *Number of teens who “don’t enjoy life” has doubled with social media*. New York Post. <https://nypost.com/2023/06/19/number-of-teens-who-dont-enjoy-life-has-doubled-with-social-media/>
- <sup>xv</sup> Ivry, Benjamin. (2021, August 31). *Why a master of languages decided to reveal his true identity*. The Forward. <https://forward.com/culture/474735/why-a-master-of-languages-decided-to-reveal-his-true-identity-hillel/>
- <sup>xvi</sup> Bolsen, T., Druckman, J. N., & Cook, F. L. (2013, July 4). *The influence of partisan motivated reasoning on public opinion - political behavior*. SpringerLink. <https://link.springer.com/article/10.1007/s11109-013-9238-0#citeas>
- <sup>xvii</sup> Boxell, L., Gentzkow, M., & Shapiro, J. M. (2017, March). *Is the internet causing political polarization? Evidence from demographics*. [https://www.nber.org/system/files/working\\_papers/w23258/w23258.pdf](https://www.nber.org/system/files/working_papers/w23258/w23258.pdf)
- <sup>xviii</sup> Shapiro, A., Levitt, M., & Intagliata, C. (2022, September 9). *How the polarizing effect of social media is speeding up*. NPR. <https://www.npr.org/2022/09/09/1121295499/facebook-twitter-youtube-instagram-tiktok-social-media>
- <sup>xix</sup> Centola, D. (2020, October 15). *Why social media makes us more polarized and how to fix it*. Scientific American. <https://www.scientificamerican.com/article/why-social-media-makes-us-more-polarized-and-how-to-fix-it/>
- <sup>xx</sup> Opzoomer, I. (2020, September 24). *America speaks: What do they think about cross-party marriages?*. YouGov. <https://today.yougov.com/society/articles/32171-america-speaks-what-do-they-think-about-cross-part>
- <sup>xxi</sup> Chen, M. K., & Rohla, R. (2018, June 1). *The effect of partisanship and political advertising on close family ties*. Science. <https://www.science.org/doi/10.1126/science.aag1433>
- <sup>xxii</sup> Smith, T. (2020, October 27). *“Dude, I’m done”: When politics tears families and Friendships Apart*. NPR. <https://www.npr.org/2020/10/27/928209548/dude-i-m-done-when-politics-tears-families-and-friendships-apart>
- <sup>xxiii</sup> Ritter, Z. (2020, February 19). *Polarization may undermine community bonds, trust in others*. Gallup.com. <https://news.gallup.com/opinion/gallup/284357/polarization-may-undermine-community-bonds-trust-others.aspx>
- <sup>xxiv</sup> Boulianne, S., & Brailey, M. (2014, November 20). *Attachment to Community and Civic and Political Engagement: A Case Study of Students*. Wiley. <https://onlinelibrary.wiley.com/doi/abs/10.1111/cars.12052>
- <sup>xxv</sup> Boris Shor and Nolan McCarty (2022), "Two Decades of Polarization in American State Legislatures", *Journal of Political Institutions and Political Economy*: Vol. 3: No. 3–4, pp 343-370. <http://dx.doi.org/10.1561/113.00000063>