Dean Kawamoto (SBN 232032)
dkawamoto@kellerrohrback.com
KELLER ROHRBACK L.L.P.
1201 Third Avenue, Suite 3400
Seattle, WA 98101-3052
(206) 623-1900, Fax (206) 623-3384

Attorneys for Plaintiff

Additional Counsel listed on signature page

Electronically FILED by Superior Court of California, County of Los Angeles 10/21/2026 3:15 PM David W. Slayton, Executive Officer/Clerk of Court, By J. Covarrubias, Deputy Clerk

Fee exempt pursuant to Govt. Code § 6103.

SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES
UNLIMITED JURISDICTION

WESTERN PLACER UNIFIED SCHOOL DISTRICT,

Plaintiff,

v.

META PLATFORMS, INC.; FACEBOOK HOLDINGS, LLC; FACEBOOK OPERATIONS, LLC; META PAYMENTS INC.; SICULUS, INC.; INSTAGRAM, LLC; SNAP INC.; TIKTOK INC.; BYTEDANCE INC.; TIKTOK PTE. LTD.; BYTEDANCE LTD.; GOOGLE LLC; AND YOUTUBE, LLC,

Defendants.

Case No. 26STCV33293

COMPLAINT

TABLE OF CONTENTS

I. INTRODUCTION 1

II. JURISDICTION AND VENUE 10

III. PARTIES 11

A. Plaintiff 11

B. Meta Defendants 12

C. Defendant Snap Inc. 13

D. TikTok Defendants 13

E. YouTube Defendants 14

IV. FACTUAL ALLEGATIONS 15

A. General Factual Allegations Applicable To All Defendants 15

1. Defendants have targeted school-aged children as a core market. 15

2. Children are uniquely susceptible to harm from Defendants' platforms. 17

3. Defendants designed, developed, produced, operated, promoted, distributed, and marketed their platforms to attract, capture, and addict youth, with minimal parental oversight. 26

4. Millions of kids use Defendants' platforms compulsively, including during the school day. 35

5. Defendants' platforms have created a youth mental health crisis. 37

6. Defendants' conduct has significantly disrupted the learning environment in schools and diverted resources from other student needs. 54

7. Defendants could have avoided harming Plaintiff. 56

B. Factual Allegations As To Meta 58

1. Background and overview of Meta's platforms. 58

2. Meta intentionally encourages youth to use its platforms and then leverages that usage to increase revenue. 74

3. Meta intentionally designed its platforms to addict children and adolescents. 84

4. Meta has concealed from Plaintiff, the public, and Congress the harmful effects that Instagram's and Facebook's design have on children. 122

5. Meta failed to adequately warn Plaintiff or the public about the dangers and harms caused by Instagram and Facebook, or provide instructions regarding safe use. 142

C. Factual Allegations As To Snap 143

1. Background and overview of Snapchat. 143

2. Snap targets children. 146

3. Snapchat is designed to addict children through psychological manipulation. 153

4. Snap designed Snapchat with features that harm children directly or expose children to harm. 165

5. Snap implemented ineffective and misleading parental controls, further endangering children. 169

6. Snap failed to adequately warn Plaintiff and the public about the harms its product causes or provide instructions regarding safe use. 170

D. Factual Allegations As To Tiktok And Bytedance 171

1. Background and overview of TikTok. 171

2. ByteDance intentionally encourages youth to use its platform and then leverages that use to increase revenue. 177

3. ByteDance intentionally designed platform features to addict children and adolescents. 180

4. ByteDance materially contributes to content on TikTok. 200

5. ByteDance's intentionally cumbersome deletion process prioritizes the retention of young users, and ad revenue that they generate, over their well-being. 203

6. ByteDance knows that TikTok harms many young users. 206

E. Factual Allegations As To Google 207

1. Background and overview of YouTube. 208

2. Google intentionally encourages youth to use YouTube and then leverages that use to increase revenue. 209

3. Google intentionally designed platform features to addict children and adolescents. 214

4. Google failed to adequately warn Plaintiff about the harm its platform causes or provide instructions regarding safe use. 228

F. Youth Social Media Use and Addiction Has Disrupted this Country's Public Schools. 229

1. Schools across the country are grappling with the impact of social media use and addiction. 229

2. Plaintiff has expended significant resources addressing student social media use and addiction. 243

V. CAUSES OF ACTION 249

COUNT ONE — CALIFORNIA PUBLIC NUISANCE 249

COUNT TWO — CALIFORNIA NEGLIGENCE 256

COUNT THREE — CALIFORNIA GROSS NEGLIGENCE 262

VI. DEMAND FOR A JURY TRIAL 266

VII. PRAYER FOR RELIEF 266

I. INTRODUCTION

1. School districts across the nation are battling an unprecedented mental health crisis among their students and serious disruption to their educational public mission, fueled by Defendants' creation and promotion of addictive and dangerous social media platforms. Students are now addicted to Defendants' platforms in droves, resulting in substantial interference with school district operations and imposing a large burden on school districts, who are often the number one provider of mental health services to youth.

2. In the past decade, Americans' engagement with social media grew exponentially, nowhere more dramatically than among our country's youth. That explosion in usage is no accident. It is the result of Defendants' studied efforts to induce students to compulsively use their social media platforms—Instagram, Facebook, TikTok, Snapchat, and YouTube. Borrowing heavily from the behavioral and neurobiological techniques used in slot machines and exploited by the cigarette industry, Defendants deliberately embedded in their platforms an array of design features aimed at maximizing youth engagement to drive advertising revenue. Defendants know children and adolescents are in a developmental stage that leaves them particularly vulnerable to the addictive effects of these features. Defendants target them anyway, in pursuit of additional profit.

3. The specific design features of Defendants' platforms vary, but all exploit children and adolescents, to the detriment of Plaintiff and other school districts. These dangerous and harmful design features include, but are not limited to, an algorithmically-generated, endless feed to keep users scrolling in an induced "flow state"; "intermittent variable rewards" that manipulate dopamine delivery to intensify use; "trophies" to reward extreme usage; metrics and graphics to exploit social comparison; incessant notifications that encourage repetitive account checking by manufacturing insecurity; inadequate, essentially illusory age-verification protocols; and deficient tools for parents that create the illusion of control.

4. The resulting ubiquity of Defendants' platforms in the palms, brains, and lives of students across the country, and the ensuing harm to students and school districts, is hard to overstate. Today, over one third of 13- to 17-year-old children report using one of Defendants' platforms "almost

constantly" and admit this is "too much."[1] Yet more than half of these kids report that they would struggle to cut back on their social media use. Instead of feeding coins into slot machines, kids are feeding Defendants' platforms with an endless supply of attention, time, and data.

5. Public education serves as the cornerstone of a just and equitable society, with its mission extending far beyond merely imparting knowledge. School districts impart not only facts and skills into children, but also the values and tools necessary to engage as informed and responsible citizens. Public school districts are facing serious financial and resource disruptions, interfering with their educational mission, caused by Defendants' design, development, production, operation, promotion, distribution, and marketing of addictive and dangerous social media platforms targeting minors.

6. This lawsuit follows a growing body of scientific research, including Defendants' own (previously concealed) studies, drawing a direct line from Defendants' conscious, intentional design choices to the youth mental health crisis gripping our nation. Instagram, Facebook, TikTok, Snapchat, and YouTube have rewired how students think, learn, feel, and behave. Disconnected "Likes" have replaced the intimacy of adolescent friendships. Mindless scrolling has displaced the creativity of play and sport. While presented as "social," Defendants' platforms have in a myriad of ways promoted disconnection, disassociation, and a legion of resulting mental and physical harms.

7. The United States Surgeon General ("Surgeon General") recently explained that children versus Big Tech is "just not a fair fight."[2] He further stated:

> You have some of the best designers and product developers in the world who have designed these products to make sure people are maximizing the amount of time they spend on these platforms. And if we tell a child, use the force of your willpower to control how much time you're spending, you're pitting a child against the world's greatest product designers.

8. Over the past decade, Defendants have relentlessly pursued a strategy of growth-at-all-costs, recklessly ignoring the impact of their platforms on children's mental and physical health and

[1] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[2] Allison Gordon & Pamela Brown, *Surgeon General says 13 is 'too early' to join social media*, CNN (Jan. 29, 2023), https://www.cnn.com/2023/01/29/health/surgeon-general-social-media/index.html.

well-being.[3] In a race to corner the "valuable but untapped" market of tween and teen users, each Defendant designed platform features to promote repetitive, uncontrollable use by kids.[4]

9. Plaintiff's students and others like them are central to Defendants' business models. These age groups are highly connected to the Internet, more likely to have social media accounts, and more likely to devote their downtime to social media usage. Additionally, youth influence the behavior of their parents and younger siblings. As one Defendant put it, "los[ing] the teen foothold in the U.S." would mean "los[ing] the pipeline" for growth.[5]

10. Recognizing the power of engaging young users, Defendants have deliberately tweaked the design and operation of their platforms to exploit the psychology and neurophysiology of students. Because children's and adolescents' brains are not fully developed, they lack the same emotional maturity, impulse control, and psychological resiliency as adults. As a result, they are uniquely susceptible to addictive features in digital products and highly vulnerable to the consequent harms. Knowing this, Defendants wrote code designed to manipulate dopamine release in children's developing brains and, in doing so, create compulsive use of their apps.

11. Defendants' strategy paid off. Users of their platforms now number in the billions, and the frequency and time spent by these users has grown exponentially. This has allowed Defendants to harvest a vast amount of personal user data—from the school you attend, to the sneakers you covet, to the places you've been and the people you've met. This, in turn, has allowed Defendants to mint a fortune, by selling to others the ability to micro-target advertisements to incredibly narrow slices of the public.[6]

---

[3] *See, e.g.*, Haugen_00000934 at Haugen_00000934 (admission by a Software Engineer at Meta: "It's not a secret that we've often resorted to aggressive tactics in the name of growth, and we've been pretty unapologetic about it.").

[4] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667 [https://perma.cc/AK48-E6HH]; *see also* Haugen_00022339.

[5] Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 26, 2021), https://www.nytimes.com/2021/10/16/technology/instagram-teens.html [https://perma.cc/SSL6-QUN2].

[6] *See* Snap Inc., Annual Report (Form 10-K) at 15 (Jan. 31, 2023), https://www.sec.gov/ix?doc=/Archives/edgar/data/0001564408/000156440823000013/snap-20221231.htm ("[W]e rely heavily on our ability to collect and disclose data[] and metrics to our advertisers so we can attract new advertisers and retain existing advertisers. Any restriction or

12. Defendants' choices have generated extraordinary corporate profits—and yielded immense tragedy. Suicide rates for youth are up an alarming 57%.[7] Emergency room visits for anxiety disorders are up 117%.[8] In the decade leading up to 2020, there was a 40% increase in high school students reporting persistent sadness and hopelessness, and a 36% increase in those who attempted to take their own lives.[9] In 2019, one in five high school girls had made a suicide plan.[10] In 2021, one in three girls seriously considered attempting suicide.[11]

13. However, Defendants' growth has come at the expense of its most vulnerable users: children, including those in Plaintiff's district. As a result, Plaintiff has been forced into a constant struggle for students' attention and a constant struggle to provide the social, emotional, mental health, and learning support they need. From addressing use of Defendants' platforms during class in violation of school policy and to the detriment of the learning environment, to increased need for anxiety and depression counseling, Plaintiff has devoted significant resources to combatting students' addiction to social media and the many resulting harms. School districts even need to revise lesson plans and teaching methods to account for the unique way this social-media generation thinks, including reduced attention spans and reduced capacity for critical thinking.

14. The Surgeon General recently issued an advisory "to highlight the urgent need to address the nation's youth mental health crisis."[12] In a scathing rebuke of the assault on our children, the

---

inability, whether by law, regulation, policy, or other reason, to collect and disclose data and metrics which our advertisers find useful would impede our ability to attract and retain advertisers.").

[7] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth- mental-health-advisory.pdf.

[8] Charmaine *Lo et al.*, *Children's Mental Health Emergency Department Visits: 2007–2016*, 145(6) Pediatrics, June 2020, at 3, https://publications.aap.org/pediatrics/article-pdf/145/6/e20191536/1080074/peds_20191536.pdf.

[9] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth- mental-health-advisory.pdf.

[10] *Youth Risk Behavior Survey: Data Summary & Trends Report* 2011-2021 at 60–64, CDC (2023), https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf.

[11] *Youth Risk Behavior Survey: Data Summary & Trends Report* 2011-2021 at 60–64, CDC (2023), https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf.

[12] Press Release, U.S. Dep't Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021), https://public3.pagefreezer.com/browse/HHS.gov/13-12-

Surgeon General recognized the dangerous designs in Defendants' platforms and Defendants' abdication of responsibility for the resulting harms:

> In these digital public spaces, which are privately owned and tend to be run for profit, there can be tension between what's best for the technology company and what's best for the individual user or for society. Business models are often built around maximizing user engagement as opposed to safeguarding users' health and ensuring that users engage with one another in safe and healthy ways[.]
>
> **[T]echnology companies must step up and take responsibility for creating a safe digital environment for children and youth.** Today, most companies are not transparent about the impact of their products, which prevents parents and young people from making informed decisions and researchers from identifying problems and solutions.[13]

15. The Surgeon General's comments have since been echoed by President Biden. In both his 2022 and 2023 State of the Union Addresses, the President urged the nation to "hold social media platforms accountable for the national experiment they're conducting on our children for profit."[14] In a January 11, 2023 op-ed, President Biden amplified this point: "The risks Big Tech poses for ordinary Americans are clear. Big Tech companies collect huge amounts of data on the things we buy, on the websites we visit, on the places we go and, most troubling of all, on our children."[15] The President observed that millions of children and adolescents struggle with "violence, trauma and mental health" as a result of Defendants' conduct and products, and again stated that "[w]e must hold social-media companies accountable" for their role in this crisis.[16]

16. These statements by President Biden and the Surgeon General are in line with a substantial body of peer-reviewed scientific literature documenting the harmful impact that Defendants'

2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html.

[13] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 25–26, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf.

[14] President Biden, *State of the Union Address* (Mar. 1, 2022), https://www.whitehouse.gov/state-of-the-union-2022/; *see also* President Biden, *State of the Union Address* (Feb. 7, 2023), https://www.whitehouse.gov/state-of-the-union-2023/.

[15] Joe Biden, *Republicans and Democrats, Unite Against Big Tech Abuses*, Wall St. J. (Jan. 11, 2023), https://www.wsj.com/articles/unite-against-big-tech-abuses-social-media-privacy-competition-antitrust-children-algorithm-11673439411 [https://perma.cc/ST22-5K32].

[16] *Id.*

platforms have on our children. This body of research confirms that Defendants' platforms can cause addiction, compulsive use, anxiety, depression, eating disorders, body dysmorphia, self-harm, sexual exploitation, suicidal ideations, other serious diseases and injuries, and suicide itself. Overall rates of these disorders have increased greatly because of widespread consumption of Defendants' products by children in this country and across the world.

17. In 2018, the National Education Association ("NEA")—one of the nation's largest labor unions, and the largest to represent teachers—addressed the evolving research about the impact of social media on students. In a 2018 article in "NEA Today," the organization declared: "Research suggests social media is increasing student anxiety and depression, eclipsing any positive role it could potentially play."[17]

18. In 2022, the American Federation of Teachers—one of the largest teachers' unions in the United States—joined the #MakeMarkListen campaign, referring to Meta CEO Mark Zuckerberg. Recognizing the harm of social media on students, the campaign is organizing activities to demand oversight and accountability at Meta on behalf of children, based on the substantial harms caused by Meta's social media platforms. AFT President Randi Weingarten stated: "We're raising a giant red flag on the impact of Meta on kids' lives and how its platforms exacerbate the anxiety that comes with navigating our complicated world at a young age."[18] While this particular effort was aimed at Meta, the behavior of all social media Defendants contributes to the harms raised by this group.

19. A recent study commissioned by several organizations—including groups representing teachers, parents, children, and psychologists—wrote that "[o]ur schools are in crisis."[19] As a direct result of Defendants' successful promotion, distribution and marketing of their addictive platforms to youth, there has been a "dramatic disruption in the teaching and learning ecosystems of all our nation's

---

[17] *Social Media's Impact on Students' Mental Health Comes Into Focus* at 1, NEA Today (Sept. 27, 2018), https://www.nea.org/nea-today/all-news-articles/social-medias-impact-students-mental-health-comes-focus.

[18] Press Release, *AFT Joint National Effort to Demand Corporate Governance Reforms at Meta* (May 17, 2022), at pp. 1–2. https://www.aft.org/press-release/aft-joins-national-effort-demand-corporate-governance-reforms-meta.

[19] *Likes vs. Learning: The Real Cost of Social Media for Schools*, American Federation of Teachers et al., (July 2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf\.

schools."[20] In addition, the rates of mental health issues among children have climbed steadily since 2010. By 2018, suicide was the second leading cause of death for youth.[21] As some of the largest providers of youth counseling in the country, school districts have been forced to devote ever-increasing resources to mental health and learning support.

20. Defendants' conduct has left schools nationwide, including Plaintiff's schools, struggling to provide the support students need, from emotional and mental health support to new and increased learning support programs. School districts are the primary providers of mental health services to youth[22] and are charged with the important public service of educating youth. As a result of Defendants' choices, students and schools are in crisis; responding to this crisis is stealing resources from schools' primary objective of educating youth in a safe and healthy environment. In addition to teaching our children how to read and write, Plaintiff and Plaintiff's schools are tasked with teaching our children how to lead healthy lives, from nutrition to navigating the digital world we live in. Schools cannot ignore the importance of the online world in today's society. But teaching youth how to avoid the pitfalls of that world, including the addictive and dangerous features of Defendants' platforms, requires ever-increasing time and resources. In that fight, schools' limited resources are pitted against Defendants' virtually unlimited resources. This is also not a fair fight, and despite considerable effort, schools are losing the battle.

21. Defendants knew their actions were having a serious impact on school districts and have refused to change their conduct.[23] Indeed, Defendants recognized the importance of infiltrating high schools to their platforms' success, with Meta for example, categorizing high schools as either Facebook

---

[20] *Id.*

[21] CDC, *Deaths: Leading Causes for 2018*, 70(4) National Vital Statistics Reports at 10 (May 17, 2021), https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-04-508.pdf.

[22] *K-12 Schools Now Primary Providers of Mental Health Services for Adolescents*, EAB (Feb. 13, 2020), https://eab.com/insights/press-release/district-leadership/k12-schools-primary-provider-mental-health/; *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020), https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables (reporting that over 3.7 million children ages 12–17 received mental health services through an education setting in 2019, more than any other non-specialty mental health service setting, per table 9.2A – Settings Where Mental Health Services Were Received in Past Year: Among People Aged 12 to 17; by Demographic Characteristics, Numbers in Thousands, 2019 and 2020).

[23] *See, e.g.*, META3047MDL-003-00084526.

or non-Facebook and analyzing Instagram penetration on a school level, i.e., which school Instagram users attend.[24] Similarly, TikTok's internal documents reveal it knew it was disrupting students' school day and their sleep, thereby making focusing and paying attention at school more difficult.[25] Once Snapchat knew it had appeal among school-aged children, Snapchat "ran with it and never looked back."[26] And YouTube directly advertises itself for use in schools, creating "tips and tricks for bringing YouTube into the classroom[.]"[27] Defendants also sell information regarding students' social media use to advertisers who wish to target youth at school, when they are around other youth, thereby increasing the spread of their advertisements.

22. As a direct result of Defendants' successful promotion of their addictive platforms to youth, there has been a "dramatic disruption in the teaching and learning ecosystems of all our nation's schools[.]"[28] This includes the schools in Plaintiff's district. In addition, the rates of mental health issues among children have climbed steadily since 2010. By 2018, suicide was the second leading cause of death for youth.[29] As some of the largest providers of youth counseling in the country, school districts have been forced to devote ever-increasing resources to mental health and learning support.

23. Compulsive social media use and addiction is negatively affecting student focus and behavior in districts across the country. Examples include reduced attention spans, reduced cognitive development or delayed cognitive development, learning impacts, bad behavior, negative impacts on mental and physical health, depression, and loss of life. Some students have become violent and have damaged classrooms when a teacher tries to take a student's phone away, which is a symptom of social media addiction. Social media has even inhibited students' ability to communicate with one another. Plaintiff's district has experienced many of these same problems that have occurred nationwide and is

---

[24] *See, e.g.*, META3047MDL-003-00134688 at META3047MDL-003-00134706; META3047MDL-003-00022355 at META3047MDL-003-00022355.

[25] *See, e.g.*, TIKTOK3047MDL-001-00061318.

[26] *How Snapchat Gained Success By Going Viral At High Schools Across Los Angeles*, Forbes (Feb. 16, 2018), https://www.forbes.com/sites/quora/2018/02/16/how-snapchat-gained-success-by-going-viral-at-high-schools-across-los-angeles/?sh=6f1676083b36 [https://perma.cc/M7LP-ZUAT].

[27] *Teachers: About*, YouTube, https://www.youtube.com/Teachers.

[28] *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed'n Teachers (2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf.

[29] Melonie Heron, *Deaths: Leading Causes for 2018*, 70(4) Nat'l Vital Stat. Reps. 1–115, 10 (2021), https://www.cdc.gov/nchs/data/nvsr/nvsr70/nvsr70-04-508.pdf.

likely to experience all of them in the future if action is not taken to address the social media addiction crisis caused by Defendants.

24. The youth mental health crisis, fueled by social media, also has a serious negative impact on school districts' ability to hire and retain qualified teachers. In many districts, there has been a negative impact on teachers' morale. Teachers are so desperate for help that in at least one district the teachers raised the issue of social media use during contract negotiations.[30] Other districts nationwide have had similar problems with teacher hiring and retention due to Defendants' conduct in creating youth social media addiction.

25. School districts nationwide have made substantial expenditures to combat the drain on learning caused by students' social media compulsive use and addiction. For example, many districts have spent large amounts of money on support for students who are lacking in proficiency, including the purchase of "Tier 2" educational materials to help students get back on pace with their peers.

26. Many districts nationwide have purchased or have looked into purchasing faraday bags, which block cell phone service so that students cannot access social media platforms during school hours. For instance, Clark County (Nev.) School District has purchased faraday bags for all its students, costing approximately $3 million.

27. Like these districts, Plaintiff is committed to addressing the problem caused by Defendants' actions and is exploring options to combat the effect of social media addiction in Plaintiff's schools.

28. Defendants knew or should have known about the risks of social media addiction—which at least one Defendant euphemistically calls "problematic use."[31] They could have changed their platforms to avoid the harm. They could have worked with Plaintiff, and other school districts, to

[30] Donna St. George, *Students can't get off their phones. Schools have had enough*, Wash. Post (May 9, 2023), https://www.washingtonpost.com/education/2023/05/09/school-cellphone-ban-yondr/ [https://perma.cc/8LV6-6WQ2].

[31] *See* Haugen_00016373 at Haugen_00016379 (internal Meta report from March 2020 summarizing internal research on "problematic use"—when a user "experienc[es] both of the following issues 'very often' or 'all the time': Lack of control or feelings of guilt over Facebook use. Negative impact in at least one of the following areas: productivity, sleep, parenting, or relationships."); *Id.* at Haugen_00016412; *Id.* at Haugen_00016490 (referring to "problematic use" as "Loss of Control Over Time Spent" or "LCOTS"); *Id.* at Haugen_00016379 (recognizing that "Problematic Use" is "sometimes referred to as 'social media addiction' externally").

educate and protect students about the risks from their platforms. They could have warned the public and Plaintiff about the danger. Instead, Defendants prioritized growth over responsibility.

29. Defendants' wrongful conduct has caused or contributed to a nuisance within Plaintiff's schools. Social media addiction is widespread within Plaintiff's schools and has resulted in a myriad of harms to Plaintiff. Those harms are continuing today. As public educational facilities, Plaintiff's harms are different in kind from those of the general public. Plaintiff seeks to recover damages from Defendants and hold them responsible for the severe disruption their platforms have caused in its schools, including the expenditure and diversion of significant resources to address students' addiction to social media and related issues resulting from Defendants' wrongful conduct. Defendants' wrongful conduct includes, but is not limited to: (a) designing platforms that disrupted and otherwise harmed Plaintiff's operations; (b) failing to provide adequate warnings about serious and reasonably foreseeable health risks from use of the platforms; (c) failing to utilize reasonable care in, among other things, developing, designing, managing, operating, testing, producing, labeling, marketing, advertising, promoting, controlling, selling, supplying, and distributing their platforms; and (d) as to Meta, engaging in the deliberate concealment, misrepresentation, and obstruction of public awareness of serious health risks to users of its platforms.

30. Defendants also were negligent. They breached their duty to Plaintiff by purposefully addicting children to their platforms, thereby foreseeably causing harm to Plaintiff. School districts nationwide, including Plaintiff, are the first responders forced to address the serious consequences of Defendants' actions given their mission (and obligation) to provide an adequate education, public facilities, mental health services, counseling, and other social and disciplinary services.

31. Defendants should be held to account for the harms their conduct has inflicted on America's youth and on our country's educational ecosystem. As it stands now, Plaintiff and school districts across the country are left footing the bill.

II. JURISDICTION AND VENUE

32. This Court has jurisdiction over this action pursuant to Cal. Code Civ. Proc. §§ 395 and 410.10.

33. This Court has subject matter jurisdiction over all causes of action alleged in this complaint pursuant to Cal. Const. art. VI, § 10, and this is a court of competent jurisdiction to grant the relief requested. Plaintiff's claims arise under the laws of the State of California, are not preempted by federal law, do not challenge conduct within any federal agency's exclusive domain, and are not statutorily assigned to any other trial court.

34. This Court has general personal jurisdiction over Defendants because each is headquartered and has its principal place of business in the State of California, and each has continuous and systematic operations within the State of California.

35. This Court also has specific personal jurisdiction over Defendants because they actively do business in Los Angeles County and the State of California. Defendants have purposely availed themselves of the benefits, protections, and privileges of the laws of the State of California through the design, development, programming, manufacturing, promotion, marketing, and distribution of the products at issue and have purposely directed their activities toward this state. Defendants have sufficient minimum contacts with this state to render the exercise of jurisdiction by this Court permissible.

36. Venue is proper in Los Angeles Superior Court pursuant to Cal. Code Civ. Proc. §§ 395 and 395.5 because Defendants regularly conduct business in Los Angeles County and certain of Defendants' liability arose in Los Angeles County.

III. PARTIES

A. Plaintiff

37. Plaintiff Western Placer Unified School District ("Plaintiff" or the "District") is a school district located in Placer County, California, serving nearly 8,300 students across fourteen sites: 8 elementary schools, 2 middle schools, 2 comprehensive high schools, 1 continuation high school, and 1 independent study program.

38. In addition to traditional elementary, middle, and high school programs, the District also offers a variety of other educational services, including preschool, college and career readiness programs, language programs, adult continuing education programs, GED preparation, and career technical education.

B. Meta Defendants

39. Defendant Meta Platforms, Inc. ("Meta") is a multinational technology conglomerate, having its principal place of business in Menlo Park, California. Meta designs, develops, owns, operates, and markets social media products, communication products, and electronic devices, including Facebook and Instagram, which are available to minors throughout the United States.[32] Meta was originally incorporated in Delaware on July 29, 2004, as "TheFacebook, Inc." On September 20, 2005, the company changed its name to "Facebook, Inc." On October 28, 2021, the company assumed its current designation. While Plaintiff has attempted to identify the specific Meta subsidiary(s) that committed each of the acts alleged in this Complaint, Plaintiff was not always able to do so, in large part due to ambiguities in Meta's and its subsidiaries' own documents, public representations, and lack of public information. However, upon information and belief, Meta oversees the operations of its various platforms and subsidiaries, some of which have been identified and are listed below. For this reason, unless otherwise specified, the shorthand "Meta" contemplates the apparent control that Meta wields over its subsidiaries' overall operations and, therefore, further refers to its various subsidiaries and predecessors. To the extent this assumption is incorrect, the knowledge of which Meta subsidiary, current or former, is responsible for specific conduct is knowledge solely within Meta's possession, the details of which Plaintiff should be permitted to elucidate during the discovery phase.

40. Meta's subsidiaries include, but may not be limited to: Facebook Holdings, LLC; Facebook Operations, LLC; Instagram, LLC; and a dozen other entities whose identity or relevance is presently unclear.

41. Defendant Facebook Holdings, LLC ("Facebook Holdings") was incorporated in Delaware on March 11, 2020, and is a wholly owned subsidiary of Meta. Facebook Holdings is primarily a holding company for entities involved in Meta's supporting and international endeavors, and its principal place of business is in Menlo Park, California.

42. Defendant Facebook Operations, LLC ("Facebook Operations") was incorporated in Delaware on January 8, 2012, and is a wholly owned subsidiary of Meta. Facebook Operations is likely

[32] These products include Facebook (its self-titled app, Messenger, Messenger Kids, Marketplace, Workplace, etc.), Instagram (and its self-titled app), and a line of electronic virtual reality devices called Oculus Quest (soon to be renamed "Meta Quest").

a managing entity for Meta's other subsidiaries, and its principal place of business is in Menlo Park, California.

43. Defendant Meta Payments Inc. ("Meta Payments") is a wholly owned subsidiary of Meta. Meta Payments processes and manages payments made through Meta. Meta Payments' principal place of business is in Menlo Park, California. Meta Payments was incorporated in Florida on December 10, 2010, as Facebook Payments Inc. In July 2022, the entity's name was amended to Meta Payments Inc.

44. Defendant Siculus, Inc. ("Siculus") was incorporated in Delaware on October 19, 2011. Siculus is a wholly owned subsidiary of Meta. Siculus constructs data facilities that support Meta's platforms. Siculus's principal place of business is in Menlo Park, California.

45. Defendant Instagram, LLC ("Instagram") was founded in October 2010. In April 2012, Meta purchased Instagram for $1 billion (later statements from Meta have indicated the purchase price was closer to $2 billion). Meta reincorporated Instagram in Delaware on April 7, 2012. Instagram's principal place of business is in Menlo Park, California. Instagram is a social media platform tailored for photo and video sharing.

C. Defendant Snap Inc.

46. Defendant Snap Inc. ("Snap") was founded in 2011 and is incorporated in Delaware. Snap's principal place of business in Santa Monica, California. Snap designs, develops, owns, markets, and operates the Snapchat social media platform, an application that is widely marketed by Snap and available to minors throughout the United States. Snapchat is social media platform for engaging in text, picture, and video communication, as well as other features of Snapchat's own design.

D. TikTok Defendants

47. Defendant TikTok Inc. ("TikTok") is incorporated in California and its principal place of business is in Culver City, California. TikTok designs, develops, owns, markets, and operates the TikTok social media platform, an application that is widely marketed by TikTok and available to youth throughout the United States. TikTok is known as a video-sharing application, where users can create, share, and view short video clips. TikTok has a valuation of at least $50—75 billion. TikTok made nearly $4 billion in revenue in 2021 and an estimated $10-12 billion in 2022.

48. Defendant ByteDance Inc. ("ByteDance") is incorporated in Delaware and its principal place of business is in Mountain View, California. ByteDance design, owns, develops, markets, and/or operates TikTok, and design, owns, develops, markets, and/or operates the TikTok social media platform.

49. Defendant TikTok Pte. Ltd. ("TikTok Pte."), a related corporate entity, is headquartered in Singapore. TikTok Pte. is nominally listed in the Apple App Store, Google Play Store, and Microsoft Store.

50. Defendant ByteDance Ltd. is a multinational internet technology holding company and is the parent company of TikTok, TikTok Pte., and ByteDance. ByteDance Ltd. is headquartered in Beijing, China and registered in the Cayman Islands. ByteDance Ltd. designs, owns, and/or operates TikTok, and designs, owns, and/or operates the TikTok social media platform.

E. YouTube Defendants

51. Defendant Google LLC ("Google") is a limited liability company incorporated in Delaware, and its principal place of business is in Mountain View, California. Google is a wholly owned subsidiary of XXVI Holdings Inc., and the managing member of YouTube, LLC. Google transacts or has transacted business in this County and throughout the United States. At all times material to this Complaint, acting alone or in concert with others, Google has advertised, marketed, and distributed its YouTube video sharing platform to minors throughout the United States. At all times material to this Complaint, acting alone or in concert with YouTube, LLC, Google formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

52. Defendant YouTube, LLC ("YouTube") is a limited liability company incorporated in Delaware, and its principal place of business is in San Bruno, California. YouTube is a wholly owned subsidiary of Google. YouTube transacts or has transacted business in this County and throughout the United States. At all times material to this Complaint, acting alone or in concert with defendant Google, YouTube has designed, developed, operated, advertised, marketed, and distributed its YouTube social media platform to consumers throughout the United States. At all times material to this Complaint, acting alone or in concert with Google, YouTube formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

IV. FACTUAL ALLEGATIONS

A. General Factual Allegations Applicable To All Defendants

1. Defendants have targeted school-aged children as a core market.

53. Each Defendant has designed, developed, produced, operated, promoted, distributed, and marketed its social media platforms to maximize the number of children, including Plaintiff's students, who download and use them compulsively. Defendants' platforms are powerfully addictive and have succeeded in capturing the time and attention of young users. Researchers studying the effect that social media has on the brain have shown that social media exploits "the same neural circuitry" as "gambling and recreational drugs to keep consumers using their platforms as much as possible."[33]

54. Children are more vulnerable users of Defendants' platforms and have more free time than their adult counterparts. Because children use Defendants' platforms more than adults, they see more ads, and as a result generate more ad revenue for Defendants. Young users also generate a trove of data about their preferences, habits, and behaviors. Information about their users is Defendants' most valuable commodity. Defendants mine and commodify that data, selling to advertisers the ability to reach incredibly narrow tranches of the population, including children. Each Defendant placed its platforms into the stream of commerce and generated revenues through the distribution of those platforms at the expense of the public and Plaintiff. This exploitation of children, including students at Plaintiff's schools, has become central to Defendants' profitability.

55. Recognizing the vulnerability of children under 13, particularly in the Internet Age, Congress enacted the Children's Online Privacy Protection Act ("COPPA") in 1999.[34] COPPA regulates the conditions under which Defendants can collect, use, or disclose the personal information of children under 13. Under COPPA, developers of platforms and websites that are directed to or known to be used by children under 13 cannot lawfully obtain the individually identifiable information of such children without first obtaining verifiable consent from their parents.[35] Even apart from COPPA, it is well

---

[33] *Social Media Addiction: What is Social media Addiction*?, Addiction Ctr., https://www.addictioncenter.com/drugs/social-media-addiction/.

[34] *See* 15 U.S.C. §§ 6501–6506.

[35] The Federal Trade Commission ("FTC") clarified that acceptable methods for obtaining verifiable parental consent include: (a) providing a form for parents to sign and return; (b) requiring the use of a credit card, debit card, or other online payment system that provides notification of each transaction to

established under the law that children lack the legal or mental capacity to make informed decisions about their own well-being.

56. COPPA was enacted precisely because Congress recognized that children under age 13 are particularly vulnerable to being taken advantage of by unscrupulous website operators. As a June 1998 report by the FTC observed, "[t]he immediacy and ease with which personal information can be collected from children online, combined with the limited capacity of children to understand fully the potentially serious safety and privacy implications of providing that information, have created deep concerns about current information practices involving children online."[36] The same report observed that children under the age of 13 "generally lack the developmental capacity and judgment to give meaningful consent to the release of personal information to a third party."[37]

57. Contemporaneous testimony by the Chairman of the FTC observed that the Internet "make[s] it easy for children to disclose their personal information to the general public without their parents' awareness or consent. Such public disclosures raise safety concerns."[38] Further, "the practice of collecting personal identifying information directly from children without parental consent is clearly troubling, since its [sic] teaches children to reveal their personal information to strangers and circumvents parental control over their family's information."[39]

58. None of the Defendants conduct proper age verification or authentication. Instead, each Defendant relies on users to self-report their age. This unenforceable and facially inadequate system allows children under 13 to easily create accounts on Defendants' platforms. Defendants know this,

---

the primary account holder; (c) connecting to trained personnel via video-conference; (d) calling a toll-free number staffed by trained personnel; (e) asking knowledge-based challenge questions; or (f) verifying a photo-ID from the parent compared to a second photo using facial recognition technology. *Complying with COPPA: Frequently Asked Questions*, FTC (July 2020), https://www.ftc.gov/business-guidance/resources/complying-coppa-frequently-asked-questions.

[36] *Privacy Online: A Report to Congress* at 6, FTC (1998), https://www.ftc.gov/sites/default/files/documents/reports/privacy-online-report-congress/priv-23a.pdf.

[37] *Id.* at 5.

[38] *S. 2326, Children's Online Privacy Protection Act of 1998: Hearing Before the Subcomm. on Commc'ns of the Comm. on Com., Sci., & Transp. U.S. S.*, 105th Cong. 10 (1998), https://babel.hathitrust.org/cgi/pt?id=uc1.b5182874&seq=1&q1=it+easy+for+ (prepared statement of Robert Pitofsky, Chairman, FTC).

[39] *Id.* at 11.

which is why they have not implemented necessary and robust age verification or authentication features.

59. This is particularly egregious for two reasons. First, Defendants have long been on notice of the problem. For instance, in May 2011, *Consumer Reports* reported the "troubling news" that 7.5 million children age 12 and younger were on Facebook.[40] Second, given that Defendants have developed and utilized age-estimation algorithms for the purpose of selling user data and targeted advertisements, Defendants could readily use these algorithms to prevent children under 13 from accessing their platforms, but choose not to do so. Instead, they have turned a blind eye to collecting children's data in violation of COPPA and leave school districts, including Plaintiff, to fund treatment and services to remedy the harms that Defendants cause.

60. Defendants have done this because children are financially lucrative, particularly when they are addicted to or compulsively using Defendants' platforms.

2. Children are uniquely susceptible to harm from Defendants' platforms.

61. The frontal lobes of the brain—particularly the prefrontal cortex—control higher-order cognitive functions. This region of the brain is central to planning and executive decision-making, including the evaluation of future consequences and the weighing of risk and reward. It also helps inhibit impulsive actions and "regulate emotional responses to social rewards."[41]

62. Children and adolescents are especially vulnerable to developing harmful behaviors because their prefrontal cortex is not fully developed.[42] Indeed, it is one of the last regions of the brain to mature.[43] In the images below, the blue color depicts brain development.[44] \

---

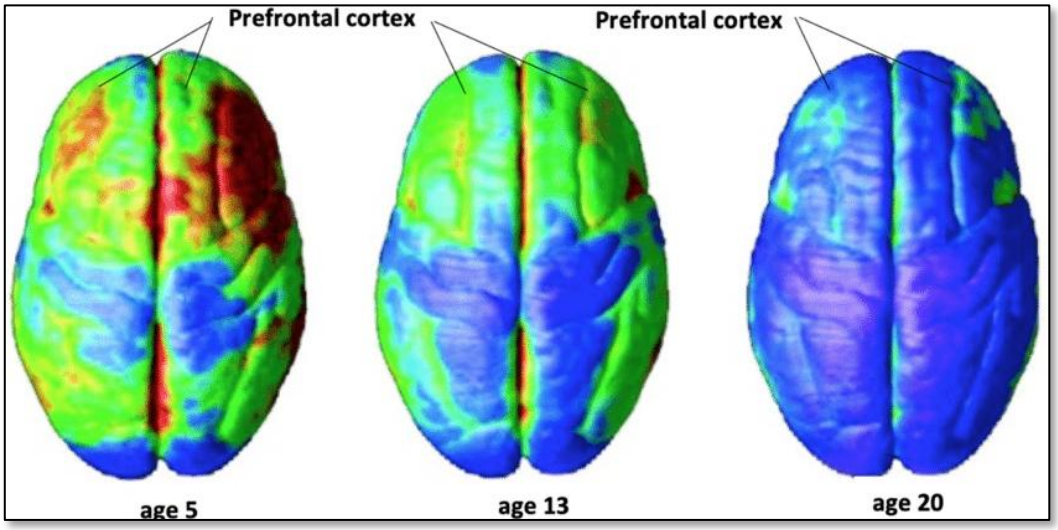
[40] Emily Bazelon, *Why Facebook is After Your Kids*, N.Y. Times (Oct. 12, 2011), https://www.nytimes.com/2011/10/16/magazine/why-facebook-is-after-your-kids.html [https://perma.cc/7EY7-KFF5].

[41] Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), https://www.apa.org/news/apa/2022/social-media-children-teens.

[42] Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279 (2022), https://bmcpsychology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf.

[43] *Id.*; *see also* Fulton Crews *et al.*, *Adolescent cortical development: A critical period of vulnerability for addiction*, 86 Pharmacology Biochemistry & Behav. 189–199, 191 (2007), https://doi.org/10.1016/j.pbb.2006.12.001 [https://perma.cc/Z26H-JKYN].

[44] Heiner Böttger & Deborah Költzsch, *The fear factor: Xenoglossophobia or how to overcome the anxiety of speaking foreign languages*, 4(2) Training Language & Culture 43–55, 46 (2020),



63. Because the prefrontal cortex develops later than other areas of the brain, children and adolescents, as compared with adults, have less impulse control and less ability to evaluate risks, regulate emotions and regulate their responses to social rewards.

64. Social rewards deliver a rush of dopamine and oxytocin, sometimes called the "happy hormones," to the part of the brain called the ventral striatum.[45] Dopamine is a neurotransmitter that is central to the brain's reward system.[46] While the same hormones are released in youth and adults, there are two key differences. As Professor Mitch Prinstein, Chief Science Officer of the American Psychological Association explained: "First, adults tend to have a fixed sense of self that relies less on feedback from peers. Second, adults have a more mature prefrontal cortex, an area that can help regulate emotional responses to social rewards."[47]

65. Although the decision-making region of the brain is still not fully developed, regions such as the ventral striatum, which are involved in the reward pathway and closely tied to social media activity, begin to develop during adolescence.[48]

---

https://www.researchgate.net/publication/342501707_The_fear_factor_Xenoglossophobia_or_how_to_overcome_the_anxiety_of_speaking_foreign_languages.

[45] Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), https://www.apa.org/news/apa/2022/social-media-children-teens.

[46] *Id.*

[47] *Id.*

[48] *Id.*

66. Between the ages of 10 and 12, dopamine receptors multiply in the ventral striatum, which makes social rewards—like compliments or laughter from a friend—more pleasant, and adolescents become more sensitive to attention from others.[49] Adolescents are at a stage where their personalities and identities are forming, much of which "is now reliant on social media."[50]

67. During development, the brain is exposed to stimuli (e.g., Instagram) that becomes associated with a reward (e.g., Likes) and a release of dopamine throughout the reward pathway. The feeling derived during the reward experience drives an individual to seek out the stimulus again, and the association between stimulus and reward grows stronger with repetitive activation.[51] Repeated spikes of dopamine over time may cause "neuroadaptation," where the brain adapts for the increased dopamine levels caused by external stimuli by downregulating its production of and sensitivity to dopamine.[52] As a result, the individual develops tolerance, and the brain requires increasingly more of a stimulus to experience the same feeling of reward.

68. Imaging studies show that during a period of craving, there are also decreases in frontal cortex activity and executive functioning, leading to impaired "decision making, self-regulation, inhibitory control, and working memory."[53]

69. As New York University professor and social psychologist Adam Alter has explained, features such as "Likes" give users a dopamine hit similar to drugs and alcohol:

> The minute you take a drug, drink alcohol, smoke a cigarette ... when you get a like on social media, all of those experiences produce dopamine, which is a chemical that's associated with pleasure. When someone likes an Instagram post ... it's a little bit like taking a drug. As far as your brain is concerned, it's a very similar experience.[54]

---

[49] *Id.*

[50] Betul Keles *et al*., *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, 25(1) Int'l J. Adolescence & Youth 79–93, 81 (2019), https://www.tandfonline.com/doi/epdf/10.1080/02673843.2019.1590851?needAccess=true.

[51] Bryon Adinoff, *Neurobiologic Processes in Drug Reward and Addiction*, 12(6) Harv. Rev. Psychiatry 305–320 (2004), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1920543/pdf/nihms17876.pdf.

[52] George F. Koob & Nora D. Volkow, *Neurobiology of addiction: A neurocircuitry analysis*, 3(8) Lancet Psychiatry 760-773 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf.

[53] *Id.* at 8.

[54] Eames Yates, *What happens to your brain when you get a like on Instagram*, Bus. Insider (Mar. 25, 2017), https://www.businessinsider.com/what-happens-to-your-brain-like-instagram-dopamine-2017-3; *see also* Sören Krach *et al.*, *The rewarding nature of social interactions*, 4(22) Frontiers Behav.

70. Notably, once the brain has learned to make this association, dopaminergic neurons "shift their ... activation from the time of reward delivery to the time of presentation of [a] predictive cue[.]"[55] In other words, the anticipation of a reward can itself trigger a dopamine rush.

71. Conversely, if the stimulus is withheld, feelings of fatigue and anxiety or depression may be experienced, along with decreased sensitivity to the stimulant, which is associated with the withdrawal component of addiction.[56] Youth are more susceptible than adults to feelings of withdrawal when a dopamine hit wears off. Depending on the intensity, delivery, and timing of the stimulus, and the severity of its withdrawal, these feelings can include emotional pain, dysphoria, and irritability.[57] Children and adolescents also are more likely to engage in compulsive behaviors to avoid these symptoms, due to their limited capacity for self-regulation, relative lack of impulse control, and struggle to delay gratification. Together, this means that children and adolescents are uniquely vulnerable and easy targets for the reward-based systems that Defendants build into their social media platforms.

72. A recent article coauthored by former Google CEO Eric Schmidt and social psychologist Jonathan Haidt warns that "the greatest damage from social media seems to occur during the rapid brain rewiring of early puberty, around ages 11 to 13 for girls and slightly later for boys."[58] Schmidt and Haidt urged action, writing that "we must protect children from predation and addiction most vigorously during this time, and we must hold companies responsible for recruiting or even just admitting underage users[.]"[59] As they point out, "[a]s long as children say that they are 13, the platforms let them open

---

Neuroscience 1 (2010), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction.

[55] Luisa Speranza *et al.*, *Dopamine: The Neuromodulator of Long-Term Synaptic Plasticity*, *Reward and Movement Control* at 8, 10 Cells 735 (2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8066851/pdf/cells-10-00735.pdf.

[56] *Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health*, U.S. Dep't Health & Hum. Servs. (2016), https://www.ncbi.nlm.nih.gov/books/NBK424857/pdf/Bookshelf_NBK424857.pdf.

[57] George F. Koob & Nora D. Volkow, *Neurobiology of addiction: A neurocircuitry analysis* at 5, 3(8) Lancet Psychiatry 760-773 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6135092/pdf/nihms-985499.pdf.

[58] Jonathan Haidt & Eric Schmidt, *AI Is About to Make Social Media (Much) More Toxic*, Atl. (May 5, 2023), https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/ [https://perma.cc/7WCA-RWHR].

[59] *Id.*

accounts, which is why so many children are heavy users of Instagram, Snapchat, and TikTok by age 10 or 11."[60]

73. Studies indicate that social rewards such as reputation, maternal and romantic love, positive emotional expressions, and the stimuli of perceived beautiful faces are processed along the same neural reward network as non-social rewards and drug addiction.[61] Dopamine receptors were found reduced in the striatum (central component of the reward system) of the brain in individuals with Internet addiction.[62] Like other addicting products, Defendants' platforms hook their users by disrupting their brains' reward circuitry.

74. When the release of dopamine in young brains is manipulated by Defendants' platforms, it interferes with the brain's development and can have long-term impacts on an individual's memory, affective processing, reasoning, planning, attention, inhibitory control, and risk-reward calibration.

75. "Everyone innately responds to social approval, but some demographics, in particular teenagers, are more vulnerable to it than others."[63] Given their limited capacity to self-regulate and their vulnerability to peer pressure, children (including teens) are at greater risk of developing a mental disorder from use of Defendants' platforms.[64]

76. This can lead to a vicious cycle. Repeated spikes of dopamine over time may cause a child to build up a tolerance for the stimulus. In this process of "neuroadaptation," the production of dopamine and the sensitivity of dopamine receptors are both reduced. As a consequence, the child requires more and more of the stimulus to feel the same reward. Worse, this cycle can cause decreases in

---

[60] *Id.*

[61] Sören Krach *et al.*, *The rewarding nature of social interactions*, 4(22) Frontiers Behav. Neuroscience 1 (2010), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2889690/pdf/fnbeh-04-00022.pdf.

[62] Sang Hee Kim *et al.*, *Reduced striatal dopamine D2 receptors in people with Internet addiction*, 22 NeuroReport 407–411 (2011), https://pubmed.ncbi.nlm.nih.gov/21499141/ [https://perma.cc/7278-RECR].

[63] Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016), https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html.

[64] Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, 25(1) Int'l J. Adolescence & Youth 79–93, 81 (2019), https://www.tandfonline.com/doi/epdf/10.1080/02673843.2019.1590851?needAccess=true.

activity in the prefrontal cortex, leading to further impairments of decision-making and executive functioning.

77. As described further below, each Defendant deliberately designed, developed, engineered, and implemented dangerous features in their platforms that limit the ability of children and their parents to control social media use and present social-reward and other stimuli in a manner that has caused youth in Plaintiff's schools and community to compulsively seek out those stimuli, develop negative symptoms when they were withdrawn, and exhibit reduced impulse control and emotional regulation.

78. In short, children find it particularly difficult to exercise the self-control required to regulate their use of Defendants' platforms, given the stimuli and rewards embedded in those platforms, and as a foreseeable and probable consequence of Defendants' design choices tend to engage in addictive and compulsive use.[65] Defendants engaged in this conduct even though they knew or should have known that their design choices would have a detrimental effect on school operations and youth in schools, including those in Plaintiff's district, leading to serious problems in schools.

79. Adding to the harm caused to children and teens, Defendants' social media platforms generate never-ending and heightened social comparison. The need to compare oneself to other individuals is a hard-wired characteristic of being human and is biologically powerful. But Defendants' platforms create an unnatural environment of constant social comparison due to filters and other features that Defendants have designed and developed. This is by design: social comparison is yet another aspect of human psychology that Defendants intentionally manipulate through the design of their platforms and features to maximize "user engagement" and, in turn, profits. For children and teens, this has significant public health consequences. As the Surgeon General warned, "[s]ocial comparison driven by social media is associated with body dissatisfaction, disordered eating, and depressive symptoms."[66] This has significant consequences for Plaintiff and other school districts, as described below.

---

[65] Fulton Crews *et al.*, *Adolescent cortical development: A critical period of vulnerability for addiction*, 86 Pharmacology Biochemistry & Behav. 189–199, 194 (2007), https://doi.org/10.1016/j.pbb.2006.12.001 [https://perma.cc/Z26H-JKYN].

[66] *Social Media and Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health & Hum. Servs. (2023), https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf.

80. These consequences of Defendants' conduct are no surprise. Since the early 2000s, studies have shown that frequent upward social comparison results in lower self-esteem and reduced overall mental health.[67]

81. Defendants powerfully promote social comparison by getting as many young people as possible to join and stay on their platforms, and by maximizing user time spent on the platforms, including through feeding their algorithms data collected and organized by Defendants' design features. Social-media-induced social comparison often results in a discrepancy between the idealized self and the real self, evoking a sense of depression, deprivation, and distress. This is further exacerbated by Defendants' use of physical-augmentation technology, which allows users to utilize photo and video filters to remove blemishes, make their faces appear thinner, and lighten skin tone, all to make themselves appear more "attractive." Appearance-altering filters are widely used across Defendants' platforms. Especially in combination with the platforms' general-feed algorithm, these filters can cause users to make false comparisons between their real-life appearances and the appearances in the feed. These features can also cause users to make negative comparison between their appearance with a filter and without one. As alleged below, whistleblower documents show that Meta has long been aware of the harm these features can cause.

82. Defendants' image-altering filters cause mental health harms in multiple ways.[68] First, because of the popularity of these editing tools, many of the images teenagers see have been edited by filters, and it can be difficult for teenagers to remain cognizant of the use of filters. This creates a false reality wherein all other users on the platforms appear better looking than they actually are, often in an artificial way. As children and teens compare their actual appearances to the edited appearances of themselves and others online, their perception of their own physical features grows increasingly

---

[67] Claire Midgley *et al.*, *When Every Day is a High School Reunion: Social Media Comparisons and Self-Esteem*, 121(2) J. Personality & Soc. Psych. 285–307 (2020), https://www.researchgate.net/publication/342490065_When_Every_Day_is_a_High_School_Reunion_Social_Media_Comparisons_and_Self-Esteem.

[68] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

negative. Second, Defendants' platforms tend to reward edited photos, through an increase in interaction and positive responses, causing young users to prefer the way they look using filters. Many young users believe they are only attractive when their images are edited, not as they appear naturally. Third, the specific changes filters make to individuals' appearances can cause negative obsession or self-hatred surrounding particular aspects of their appearance. The filters alter specific facial features such as eyes, lips, jaw, face shape, and face slimness—features that often require medical intervention to alter in real life.

83. In a 2016 study, 52% of girls said they use image filters every day, and 80% have used an app to change their appearance before the age of 13.[69] In fact, 77% of girls reported trying to change or hide at least one part of their body before posting a photo of themselves, and 50% believe they do not look good without editing.[70] Filters, especially in combination with other design features, directly cause body image issues, eating disorders, body dysmorphia, and related issues.[71] As one study of 481 university students found, spending more time viewing selfies can increase dissatisfaction with one's own face, and spending more time looking at selfies (and reviewing likes and comments) can cause users to draw more comparisons between themselves and others, prompting even more self-criticism.[72]

---

[69] *Id.*

[70] *Id.*; *see also* Jia Tolentino, *The Age of Instagram Face*, New Yorker (Dec. 12, 2019), https://www.newyorker.com/culture/decade-in-review/the-age-of-instagram-face [https://perma.cc/W7NJ-JZ6W] ("Instagram announced that it would be removing 'all effects associated with plastic surgery' from its filter arsenal, but this appears to mean all effects explicitly associated with plastic surgery, such as the ones called 'Plastica' and 'Fix Me.' Filters that give you Instagram Face will remain.").

[71] *See* Sian McLean *et al.*, *Photoshopping the selfie: Self photo editing and photo investment are associated with body dissatisfaction in adolescent girls*, 48 Int'l J. Eating Disorders 1132–1140, 1133 (2015), https://pubmed.ncbi.nlm.nih.gov/26311205/ [https://perma.cc/PE83-EKV4] (presenting a 2015 study involving 101 adolescent girls, more time spent editing and sharing selfies on social media raised their risk of experiencing body dissatisfaction and disordered eating habits); Jing Yang *et al.*, *Selfie-Viewing and Facial Dissatisfaction among Emerging Adults: A Moderated Mediation Model of Appearance Comparisons and Self-Objectification*, 17 Int'l J. Env't Rsch. & Pub. Health 672 (2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013747/pdf/ijerph-17-00672.pdf; Scott Griffiths *et al., The Contribution of Social Media to Body Dissatisfaction, Eating Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men*, 21 Cyberpsychology, Behav., & Soc. Networking 149–156, 149 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/pdf/cyber.2017.0375.pdf.

[72] Jing Yang *et al.*, *Selfie-Viewing and Facial Dissatisfaction among Emerging Adults: A Moderated Mediation Model of Appearance Comparisons and Self-Objectification* at 5–6, 17 Int'l J. Env't Rsch.

As one psychodermatologist explained, "these apps subconsciously implant the notion of imperfection and ugliness generating a loss of confidence[.]"[73]

84. In another recent study, even users that report a higher initial level of self-esteem, felt they looked 44% worse before their image was edited using a filter. When a filter increases a gap between how individuals want to look and how they feel they actually look, it "reduce[s] their self-compassion and tolerance for their own physical flaws."[74]

85. In a recent article, clinical psychologists predicted social media addiction will become a formal diagnosis, with many of the same effects as substance abuse.[75] The negative impacts of excessive and addictive social media use are especially harmful to youth and interferes with development of healthy coping strategies, social skills, and emotional regulation.[76] To treat social media addiction, clinical psychologists recommend strategies used in substance abuse treatment, including detox, full-stop periods, reducing access, and identifying triggers for the addictive behavior.[77] The triggers for this addictive behavior include design features developed by Defendants to increase use, such as "for you" recommendations, explore tabs or pages, and stories.[78]

86. Defendants' platforms are highly addictive because Defendants intended them to be so.

87. Defendants' deliberate growth of the youth market for their platforms has foreseeably resulted in an increased risk of a variety of harms for today's youth, including, but not limited to, social media addiction, withdrawal (from friends, family, and social and academic advancement), lack of focus, anxiety, body dysmorphia, eating disorders, depression, and difficulty sleeping (e.g., later sleep and wake times on school days and trouble falling back asleep after nighttime awakening).

& Pub. Health 672 (2020), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7013747/pdf/ijerph-17-00672.pdf.

[73] Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn't Be Ignored – Here's Why*, InStyle (Sept. 14, 2022), https://www.instyle.com/beauty/social-media-filters-mental-health.

[74] Ana Javornik *et al.*, *Research: How AR Filters Impact People's Self-Image*, Harv. Bus. Rev. (Dec. 22, 2021), https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image.

[75] Melissa Rudy, *Excessive social media use has many of the same effects as substance abuse, says expert*, FoxNews (Aug. 15, 2023), https://www.foxnews.com/health/excessive-social-media-use-same-effects-substance-abuse-expert.

[76] *Id.*

[77] *Id.*

[78] *Id.*

3. Defendants designed, developed, produced, operated, promoted, distributed, and marketed their platforms to attract, capture, and addict youth, with minimal parental oversight.

88. Plaintiff seeks to hold Defendants accountable for designing their platforms with algorithms that wield user data as a weapon against children and the fuel of the addiction machine.

89. All of Defendants' platforms operate on sophisticated algorithms. These algorithms have different tasks within the platforms. Data-gathering algorithms are a design feature that causes harm to children by collecting volumes of user data that it can feed to content algorithms and fuel addiction.

90. By measuring and exploiting every aspect of content agnostic user interaction with their platforms—from click patterns to location to social networks[79] —the Defendants' algorithms and recommendation systems are optimized to maximize the amount of time users spend on Defendants' platforms without consideration for actual information being served.[80]

91. This automated attention farming weaponizes user interaction to fuel Defendants' addiction engines.[81]

92. Crucially, these aspects of Defendants' systems do not consider the substantive information conveyed by the posts.

93. Meta, for example, explains that "[w]e combine predictions of different events using an arithmetic formula, called value model, to capture the prominence of different signals in terms of deciding whether the content is relevant. We use a weighted sum of predictions such as [w_like * P(Like) + w_save * P(Save) - w_negative_action * P(Negative Action)]. If, for instance, we think the importance of a person saving a post on Explore is higher than their liking a post, then the weight for the save action should be higher."[82] At no point does this process examine the information conveyed by the content.

[79] MC ¶¶ 250, 265, 509, 585–591, 747–49.
[80] *See Id.* ¶¶ 250, 509, 585–591, 747–749.
[81] *See Id.* ¶ 755.
[82] *Powered by AI: Instagram's Explore recommender system*, Meta (Nov. 25, 2019) https://ai.meta.com/blog/powered-by-ai-instagrams-explore-recommender-system/.

94. The following is a subset of the reams of content-agnostic user interaction data that Defendants collect—tracking users' actions without considering the substantive information that is the object of the interactions:[83]

a. a user's demographics;[84]

b. what posts a user clicks on;[85]

c. how long a user reads or watches a post;[86]

d. which posts a user hovers their mouse over—and for how long they do so;[87]

e. which posts users don't engage with—i.e., which posts fail to draw attention or engagement;[88]

f. what times of day users access the product;[89]

g. physical location where users access the product;[90]

h. devices connected to the Wi-Fi networks a user connects through;[91]

i. length of a video;

j. time spent viewing a video;

k. users' connections to other users;

l. the number of users that viewed a particular post;

m. the number of "shares";

n. the number of "saves"; and,

o. the number of "likes."

95. Armed with this content-agnostic user interaction data, Defendants' machine learning systems maximize user attention to their platforms, untethered from any consideration of what that attention is being directed to.

---

[83] Discovery is likely to reveal Defendants' use of other content agnostic interaction data.
[84] *See Id.* ¶ 250–52, 747.
[85] *See Id.* ¶¶ 207, 242, 589–591, 747.
[86] *See Id.* ¶¶ 242, 589–591, 747.
[87] *See Id.* ¶ 250.
[88] *See Id.* ¶ 250, 509, 589–591, 747.
[89] *See Id.* ¶ 242.
[90] *See Id.* ¶¶ 242, 252, 509, 289; 656, 711.
[91] *See Id.* ¶¶ 242, 711.

96. These systems work not on the basis of mechanical, constant rules, but through complex, dynamic mathematical systems that examine data about users' interactions with pieces of content—but not the content itself—to predict how the content is likely to affect a specific users' engagement by showing them only information that is likely to achieve the endpoint that Defendants set: maximizing the time users spend on the platform.

97. These data-gathering algorithms feed information into Defendants' recommendation systems, essentially acting as their fuel. To Defendants' recommendation systems, user posts are data points on a graph, nodes in a vast web of meticulously catalogued interactions, rather than messages being shared.

98. Defendants' recommendation systems do not consider the actual information conveyed in a post, but instead the probability that a user is, or is not, maximally engaged on the platform.

99. Perversely, Defendants' paramount focus on holding users' attention above all else frequently results in users being *denied* the content they are actually interested in.

100. To condition users to keep scrolling, swiping, and refreshing, Defendants' platforms will hold back rewards that might result in them closing out the platform once viewed.

101. The fact that Defendants' content-agnostic recommendation algorithms are neither designed to curate the actual information that is disseminated, nor to give users information that they want, is unsurprising given the truth of their business models. Defendants are not in the business of fostering human connection or helping people further their knowledge. Defendants sell ads. For them to profit, it doesn't matter what their users are looking at, only that they are looking—offering up a captive audience that can be carved up and sold to whichever advertiser is the highest bidder.

102. While not identical, the Defendants' platforms operate—and harm users—in similar ways. Instagram, Facebook, TikTok, Snapchat, and YouTube employ many similar features that are engineered to induce more use by young people—creating an unreasonable risk of compulsive use and addiction.[92] For instance, all five platforms harvest user data and use this information to generate and

[92] *See* Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*, Gizmodo (Aug. 16, 2022), https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419 ("Over the last decade, some of the most popular social media apps have blatantly ripped

push algorithmically tailored "feeds" of photos and videos. And all five include methods through which approval can be expressed and received, such as likes, hearts, comments, shares, or reposts. This section explains the psychological and social mechanisms exploited by these design choices, creating an unreasonable risk of compulsive use and addiction.

103. Far from avoiding this risk, Defendants ran toward it, knowing that child addiction to their platforms would drive their revenue. For example, an internal presentation: *2017 Teens Strategic Focus*, explicitly stated Meta's "goal: retain [Monthly Active People] and [Daily Active People], [and] grow teen time spent" by "rebuild[ing] social Facebook to work better for teens, including entertainment."[93] Similarly, an internal Meta planning document from November 2018 stated, "[w]inning schools is the way to win with teens because an individual teen's engagement is highly correlated with school [Monthly Active People] penetration."[94] "Solving jobs related to school and building school network effects is a way to increase overall teen usage."[95]

104. Defendants employed the design features described herein to maximize youth use, knowing the impact it would have on school districts like Plaintiff's District.

105. Defendants failed to provide features such as robust age verification, effective parental controls, and effective parental notifications. The lack of these features harmed Plaintiff by contributing to the social media addiction epidemic among the children in their schools and communities and by introducing or exponentially increasing the harm of other addictive design features and the corresponding cost of fighting the youth mental health crisis.

106. Defendants' design features failed to reasonably protect child users by failing to: place default limits on the length and frequency of user sessions; utilize opt-in restrictions as opposed to opt-out restrictions on the length and frequency of sessions; provide self-limiting tools; provide blocks to use at certain times of day for minor users such as during school hours; and provide a deactivation and deletion process free from unnecessary barriers.

---

off features from some of the other most popular social media apps, in a tech version of Capture the Flag where the only losers are the users who are forced to persist through this cat-and-mouse game.").

[93] Complaint for Injunctive and Other Relief ("MDL AG Compl.") at 27, ¶ 146, *State of Ariz. v. Meta Platforms*, Inc., No. 4:23-cv-005448-YGR (N.D. Cal. Nov. 22, 2023), ECF No. 73-2.

[94] MDL AG Compl. at 27, ¶ 147.

[95] *Id.*

107. Defendants caused harm to Plaintiff by utilizing addictive design features that weaponized user data and preyed on adolescent minds such as: endless scroll on users' feeds; algorithms that paired intermittent variable rewards ("IVR") to user specific data; strategically timing and clustering notifications to lure users back to Defendants' platforms; and otherwise sending psychologically manipulative notifications and communications to keep minors hooked.

108. Defendants knowingly implemented filters that promote negative social comparison. These filters—especially without any demarcation that a filter is in place—both fuel children's addiction to Defendants' platforms and heighten the mental health toll on children in Plaintiff's schools and communities and the burden on Plaintiff.

109. All of these features worked together and individually to addict young users to social media and to create the youth mental health crisis Plaintiff is fighting today.

110. Defendants' platforms are designed and engineered to methodically, but unpredictably, space out dopamine-triggering rewards with dopamine gaps. Unpredictability is key because, paradoxically, IVR create stronger associations (conditioned changes in the neural pathway) than fixed rewards. Platforms that use this technique are highly addictive or habit forming. IVR is based on insights from behavioral science dating back to research in the 1950s by Harvard psychologist B. F. Skinner. Skinner found that laboratory mice respond most voraciously to unpredictable rewards. In one famous experiment, mice that pushed a lever received a variable reward (a small treat, a large treat, or no treat at all). Compared with mice who received the same treat every time, the mice who received only occasional rewards were more likely to exhibit addictive behaviors such as pressing the lever compulsively. This exploitation of neural circuitry is exactly how addictive platforms like slot machines keep users coming back.

111. Slot machines are a pertinent example of how IVR works in an addictive product to keep users coming back.[96] Users pull a lever to win a prize and with each pull, the user may or may not win a prize (i.e., an intermittent reward that varies in value).

[96] *See, e.g.*, Julian Morgans, *The Secret Ways Social Media Is Built for Addiction*, Vice (May 17, 2017), https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction.

112. The IVR aspect of slot machines is limited by the fact that they deliver rewards in a randomized manner, irrespective of the person pulling the lever. By contrast, Defendants' platforms are designed to purposely withhold and release rewards on a schedule its algorithms have determined is optimal to heighten a specific user's craving and keep them using the platform. Defendants incorporate IVR into the design and operations of their respective platforms in various ways by "link[ing] a user's action (like pulling a lever) with a variable reward."[97] For example, when "we swipe down our finger to scroll the Instagram feed, we're playing a slot machine to see what photo comes next."[98] Meta also delays the time it takes to load the feed. "This is because without that three-second delay, Instagram wouldn't feel variable."[99] Meta also times and clusters notifications to delay gratifications and thereby build user anticipation. Without that delay, there would be no time for users' anticipation and craving to build. In slot machine terms, there would be "no sense of *will I win*? because you'd know instantly. So the delay isn't the app loading. It's the cogs spinning on the slot machine."[100]

113. Former Google CEO Schmidt and psychologist Haidt also compared the manipulative design of social media platforms to a slot machine: "[T]hink of a slot machine, a contraption that employs dozens of psychological tricks to maximize its addictive power. Next, imagine . . . if they could create a new slot machine for each person, tailored in its visuals, soundtrack, and payout matrices to that person's interests and weaknesses. That's essentially what social media *already* does, using algorithms and AI[.]"[101]

114. As further described below, each of Defendants' platforms exploits this psychological reaction among its users, typically using "Likes," "Hearts," or other forms of approval that serve as the reward and are purposefully delivered in a way to create stronger associations and maximize addiction. Instagram's notification algorithm will at times determine that a particular user's engagement will be

---

[97] Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016), https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html.

[98] *Id.*

[99] Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction.

[100] *Id.*

[101] Jonathan Haidt & Eric Schmidt, *AI Is About to Make Social Media (Much) More Toxic*, Atl. (May 5, 2023), https://www.theatlantic.com/technology/archive/2023/05/generative-ai-social-media-integration-dangers-disinformation-addiction/673940/ [https://perma.cc/7WCA-RWHR].

maximized if the app withholds "Likes" on their posts and then later delivers them in a large burst of notifications.

115. Defendants' use of IVR is particularly effective and dangerous for adolescents, given that their brains have not completely matured and the tools that would allow them to moderate their use of Defendants' platforms—impulse control and executive function—are still under development.

116. Defendants also manipulate young users through their exploitation of "reciprocity"—the psychological phenomenon by which people respond to positive or hostile actions in kind. Reciprocity means that people respond in a friendly manner to friendly actions, and with negative retaliation to hostile actions.[102] In the 1970s, sociologists Phillip Kunz and Michael Woolcott famously illustrated the powerful effect of reciprocity through an experiment using holiday cards. They sent cards to a group of complete strangers, and included a return address indicating that they were from either "Dr. and Mrs. Kunz" or "Joyce and Phil."[103] People whom Kunz had never met before reciprocated, flooding him with holiday cards in return, some even including hand-written notes and pictures of their families.[104] Most of the responses did not even ask who "Dr. Kunz" was—they simply responded to his initial gesture with a reciprocal action.[105]

117. Platforms such as Instagram and Snapchat exploit reciprocity by, for example, automatically telling the sender when their message is seen, instead of letting the recipient avoid disclosing whether it was viewed. Consequently, the recipient feels more obligated to respond immediately, keeping users on the product.[106] Similarly, alerts and notifications of delivered messages or comments compel the recipient to return to the product to respond.

---

[102] Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J. Econ. Persps. 159181, 159 (2000), https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.14.3.159.

[103] Phillip R. Kunz & Michael Woolcott, *Season's greetings: From my status to yours*, 5(3) Soc. Sci. Rsch. 269–278, 270–271 (1976), https://doi.org/10.1016/0049-089X(76)90003-X [https://perma.cc/5KLP-MC34].

[104] *Id.*

[105] *Id.*

[106] Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016), https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html.

118. Defendants' platforms and design features also addict young users by preying on their already heightened need for social comparison and interpersonal feedback-seeking.[107] Because of their developmental stage, adolescents are primed to focus on social status, social comparisons, and a desire for social validation.[108] Defendants' platforms encourage repetitive usage by dramatically amplifying those insecurities.

119. Professor Prinstein has explained that online and real-world interactions are fundamentally different.[109] For example, in the real world, no public ledger tallies the number of consecutive days friends speak. Similarly, "[a]fter you walk away from a regular conversation, you don't know if the other person liked it, or if anyone else liked it[.]"[110] By contrast, a design like the "Snap Streak" creates exactly such artificial forms of feedback.[111] On Defendants' platforms, friends and even complete strangers can publicly deliver (or withhold) dopamine-laced likes, comments, views, and follows.[112]

120. The "Like" feature common to Defendants' platforms has an especially powerful effect on teenagers and can neurologically alter their perception of online posts. Researchers at UCLA used magnetic resonance imaging to study the brains of teenagers as they used a program simulating Instagram. They found that the teens' perceptions of a photo changed depending on the number of likes it had generated.[113] That an image was highly liked—regardless of its content—instinctively caused the

---

[107] Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms* at 4, 43 J. Abnormal Child Psych. 1427–1438 (2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/pdf/nihms948986.pdf.

[108] Susan Harter, *The construction of the self: developmental and sociocultural foundations* (2d. ed. Guilford Press 2012) (explaining how, as adolescents move toward developing cohesive self-identities, they typically engage in greater levels of social comparison and interpersonal feedback-seeking).

[109] Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), https://www.apa.org/news/apa/2022/social-media-children-teens.

[110] *Id.*

[111] A "Snap Streak" is designed to measure a user's Snapchat activity with another user. Two users achieve a "Snap Streak" when they exchange at least one Snap in three consecutive 24-hour periods. When successively longer "Streaks" are achieved, users are rewarded with varying tiers of emojis.

[112] Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), https://www.apa.org/news/apa/2022/social-media-children-teens.

[113] Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Ass'n Psych. Sci. 1027–1035, 1027 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf.

girls to prefer it. As the researchers put it, teens react to perceived "endorsements," regardless of whether they know the source.[114]

121. Other features of Defendants' platforms also amplify the heightened awareness of status and appearance that is part of adolescence. Built into Defendants' platforms are appearance-altering filters, which underscore conventional (and often racially biased) standards of beauty, by allowing users to remove blemishes, make bodies and faces appear thinner, and lighten skin tone. Those features contribute to a harmful body image among adolescents, who begin to negatively perceive their own appearance and believe their bodies, and indeed their lives, to be comparatively worse.[115]

122. Defendants' respective product features work in combination to create and maintain a user's "flow-like state": a hyper-focused, hypnotic state, where bodily movements are reflexive, and the user is totally immersed in smoothly rotating through aspects of the social media product.[116] This experience of "flow," as psychologists describe it, "fully immerse[s]" users, distorts their perception of time, and is associated with excessive use of social media sites.[117]

123. As discussed in more detail below, features like the ones just described can cause or contribute to the following injuries in young people: eating and feeding disorders; depressive disorders; anxiety disorders; sleep disorders; trauma- and stressor-related disorders; obsessive-compulsive and related disorders; disruptive, impulse-control, and conduct disorders; suicidal ideation; self-harm; and suicide.[118]

---

[114] *Id.*

[115] *Id.*; *see also* Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279 (2022), https://bmcpsychology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf (explaining that youth are particularly vulnerable because they "use social networking sites for construing their identity, developing a sense of belonging, and for comparison with others").

[116] *See, e.g.*, Sophia Petrillo, *What Makes TikTok so Addictive?: An Analysis of the Mechanisms Underlying the World's Latest Social Media Craze*, Brown Undergraduate J. Pub. Health (Dec. 13, 2021), https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/ (describing how IVR and infinite scrolling may induce a flow-like state in users).

[117] Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279 (2022), https://bmcpsychology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf.

[118] *See, e.g.*, *Id.*

124. As a result, Plaintiff has been forced to expend significant resources addressing the behavior of impacted students, such as compulsive use of social media at school, and providing education and support to students, staff, parents, and Plaintiff's community.

4. Millions of kids use Defendants' platforms compulsively, including during the school day.

125. Defendants have been staggeringly successful in their efforts to attract young users to their platforms. In 2021, 32% of 7- to 9-year-olds,[119] 49% of 10- to 12-year-olds,[120] and 90% of 13- to 17-year-olds in the United States have used social media.[121] A majority of U.S. teens use Instagram, TikTok, Snapchat, and/or YouTube. Thirty-two percent say they "wouldn't want to live without" YouTube, while 20% said the same about Snapchat, and 13% said the same about both TikTok and Instagram.[122]

126. U.S. teenagers who use Defendants' platforms are likely to use them every day. Sixty-two percent of U.S. children ages 13–18 use social media daily.[123] And daily use often means constant use. About one-in-five U.S. teens visit or use YouTube "almost constantly," while about one-in-six report comparable usage of Instagram.[124] Nearly half of U.S. teens use TikTok at least "several times a day."[125] TikTok's internal data shows that children aged 13–17 check the platform nearly 17 times a day and spend, on average, almost two hours a day on TikTok, out pacing all older age groups.[126] Many

---

[119] *Sharing Too Soon? Children and Social Media Apps*, 39(4) C.S. Mott Child.'s Hosp. Univ. Mich. Health (2021), https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf.

[120] *Id.*

[121] *Social Media and Teens, Am. Acad. Child & Adolescent Psychiatry* (Mar. 2018), https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx.

[122] Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 31, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

[123] *Id.*

[124] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[125] *Id.*

[126] Complaint for Violations of the Consumer Sales Practices Act ("Utah AG Compl.") at 3, ¶ 5, *Utah Div. of Consumer Prot. of the State of Utah v. TikTok Inc.,* (Utah Jud. Dist. Ct. Cnty. Salt Lake), ECF No. 1.

children are spending four or more hours on TikTok every day.[127] In one study, U.S. teenage users reported checking Snapchat thirty times a day on average.[128]

127. Many teenagers know they are addicted to Defendants' platforms: 36% admit they spend too much time on social media.[129] Yet they cannot stop. Of the teens who use at least one social media product "almost constantly," 71% say quitting would be hard. Nearly one-third of this population—and nearly one-in-five of all teens—say quitting would be "very hard."[130]

128. Notably, the more teens use Defendants' platforms, the harder it is to quit. Teens who say they spend too much time on social media are almost twice as likely to say that giving up social media would be hard, compared to teens who see their social media usage as about right.[131]

129. Despite using social media frequently, most young people don't particularly enjoy it. In 2021, only 27% of boys and 42% of girls ages 8–18 reported liking social media "a lot."[132] Moreover, one survey found that young people think social media is the main reason youth mental health is getting worse.[133] About twice as many of the surveyed youth believed that social media is the main reason for declining mental health than the next likely cause, and over seven times more believed it to be the main cause rather than drugs and alcohol.[134]

130. The most recent data shows these trends persist. According to a 2023 report, 45% of teen girls who use TikTok say they feel addicted to it or use it more than intended at least weekly.[135] Similarly, 37% of teen girls said they felt addicted to Snapchat, 34% said they felt addicted to YouTube,

---

[127] *Id.*

[128] Erinn Murphy *et al.*, Fall 2021: *Taking Stock with Teens at 13*, Piper Sandler (2021), https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top.

[129] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[130] *Id.*

[131] *Id.*

[132] Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 34, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

[133] *National Youth Mental Health Survey 2018* at 51, headspace Nat'l Youth Mental Health Found. (2018), https://headspace.org.au/assets/headspace-National-Youth-Mental-Health-Survey-2018.pdf.

[134] *Id.*

[135] Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media* at 6, Common Sense Media (2023), https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf.

and 33% said they felt addicted to Instagram.[136] Notably, teenage girls reported higher rates of feeling addicted to these social media platforms than messaging apps.[137]

131. Defendants have also deliberately designed their platforms to encourage the compulsive use of their platforms during the school day. Indeed, a recent study performed by Common Sense Media and the C.S. Mott Children's Hospital confirms the ubiquity and intensity of notifications in a young person's life.[138] The research found that young users "received a median of 237 notifications" in a "typical day," and that "[n]otification frequency varied widely, with maximums of over 4,500 delivered and over 1,200 seen" and nearly "a quarter of [those] notifications arrived during school hours[.]"[139]

132. When youth are able to stop or limit their social media use, it is often because of the negative impacts they experienced using social media. In one sample, 38% of adolescent social media users reported that "they had ever stopped using a platform or limited how much they use it because they felt it had a negative impact on them."[140] Indeed, many teenage girls reported feeling they were spending too much time on social media or that it was getting in the way of other activities; 43% of teenage girls described these feelings in relation to YouTube, 23% said the same of TikTok, 23% said the same of Instagram, and 10% said the same of Snapchat.[141]

5. Defendants' platforms have created a youth mental health crisis.

133. Nearly a decade of scientific and medical studies demonstrate that dangerous features engineered into Defendants' platforms—particularly when used multiple hours a day—can have a "detrimental effect on the psychological health of [their] users," including compulsive use, addiction, body dissatisfaction, anxiety, depression, and self-harming behaviors such as eating disorders.[142]

---

[136] *Id.*

[137] *Id.*

[138] Jenny S. Radesky *et al.*, *Constant Companion: A Week in the Life of a Young Person's Smartphone Use*, Common Sense Media (2023), https://www.commonsensemedia.org/sites/default/files/research/report/2023-cs-smartphone-research-report_final-for-web.pdf.

[139] *Id.* at 6.

[140] *Id.* at 27.

[141] *Id.*

[142] *See, e.g.*, Fazida Karim *et al.*, *Social Media Use and Its Connection to Mental Health: A Systemic Review* at 7, 12(6) Cureus, June 15, 2020, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/pdf/cureus-0012-00000008627.pdf; Alexandra R. Lonergan *et al.*, *Protect me from my selfie: Examining the association between photo-based social media behaviors and self-reported eating disorders in adolescence*, 53 Int'l J. Eating

134. Defendants' platforms employ features that are designed for ease of access, rewards and reinforcement, gamification, escapism, and lack of regulation.[143] These features cause online social media experiences to become addictive such that adolescents experience depression, anxiety, loneliness, and lower self-esteem and life satisfaction.[144]

135. Addiction and compulsive use of Defendants' platforms can entail a variety of behavioral problems, including but not limited to: (1) a lessening of control; (2) persistent, compulsive seeking out of access to the platform; (3) using the platform more, and for longer, than intended; (4) trying to cut down on use but being unable to do so; (5) experiencing intense cravings or urges to use the platform; (6) tolerance (needing more of the platform to achieve the same desired effect); (7) developing withdrawal symptoms when not using the platform, or when the platform is taken away; (8) neglecting responsibilities at home, work, or school because of the intensity of usage; (9) continuing to use the platform even when doing so interferes and causes problems with important family and social relationships; (10) giving up important or desirable social and recreational activities due to use; and (11) continuing to use despite the platform causing significant harm to the user's physical and mental health.

136. Each Defendant has long been aware of research connecting use of their apps with harm to its users' wellbeing, but chose to ignore or brush it off.[145] For example, in 2018, a Meta employee mocked it as "BS . . . psedu [sic] science," and "a bunch of people trying to get air time."[146] Yet, as

---

Disorders 755-766 (2020), https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256 [https://perma.cc/L9TN-SZKP].

[143] Puruesh Chaudhary, *A Slow Scroll Into Addiction*, Aurora Dawn (Sept. 4, 2023), https://aurora.dawn.com/news/1144883.

[144] *Id.*

[145] In August 2019, a social psychologist, and leading expert on the effects that technology devices have on the mental health of their users, wrote to Mr. Zuckerberg ahead of a meeting to note that a new study "point[ed] heavily to a connection, not just from correlational studies but from true experiments, which strongly indicate[d] causation, not just correlation" between Meta's platforms and harms to users' wellbeing. META3047MDL-003-00089107 at META3047MDL-003-00089108. In some cases, Meta was not only aware of research connecting its platforms to detrimental effects but actively sought to undermine that research. See META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-00082166 (discussing methods to undermine research on addiction to apps).

[146] META3047MDL-003-00082165 at META3047MDL-003-00082165.

discussed at length below, Defendants conducted some of the research themselves—and then hid their unfavorable findings from the public.[147]

137. Scientists have studied the impacts of the overuse of social media since at least 2008, with social media addiction recognized in literature around that time after a pervasive upsurge in Facebook use.[148] The Bergen Social Media Addiction Scale assesses social media addiction along six core elements: (1) salience (preoccupation with the activity); (2) mood modification (the behavior alters the emotional state); (3) tolerance (increasing activity is needed for the same mood-altering effects); (4) withdrawal (physical or psychological discomfort when the behavior is discontinued); (5) conflict (ceasing other activities or social interaction to perform the behavior); and 6) relapse (resuming the behavior after attempting to control or discontinue it).[149]

138. Social media addiction is more prevalent among younger age groups.[150] Researchers note that such "high prevalence in adolescence unveils the need to allocate more public resources on mental health services to prevent or treat social media addiction in this high-risk group."[151]

---

[147] *See, e.g.*, Haugen_00016373 at Haugen_00016381 ("The best external research indicates that Facebook's impact on people's well-being is negative."); *Id.* at Haugen_00016414 (March 9, 2020 presentation: *All problematic users were experiencing multiple life impacts*, including loss of productivity, sleep disruption, relationship impacts, and safety risks.); Haugen_00005458 at Haugen_00005500 (November 5, 2019 presentation containing a slide: But, We Make Body Image Issues Worse for 1 in 3 Teen Girls).

[148] Daniele La Barbera *et al.*, *Social network and addiction*, Interactive Media Inst. & IOS Press (2009), https://pubmed.ncbi.nlm.nih.gov/19592725/ [https://perma.cc/WB99-CGTK].

[149] Cecilie S. Andreassen *et al.*, *The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study*, 30(2) Am. Psych. Ass'n 252–262 (2016), http://dx.doi.org/10.1037/adb0000160.

[150] *See* Cecilia Cheng *et al.*, *Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values*, 117 Addictive Behavs., June 2021, at 5–6, https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdfft?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf; Lucia Monacis *et al.*, *Exploring Individual Differences in Online Addictions: the Role of Identity and Attachment*, 15 Int'l J. Mental Health & Addiction 853–868, 862 (2017), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5529496/pdf/11469_2017_Article_9768.pdf.

[151] Cecilia Cheng *et al.*, *Prevalence of social media addiction across 32 nations: Meta-analysis with subgroup analysis of classification schemes and cultural values*, 117 Addictive Behavs., June 2021, at 6, https://www.sciencedirect.com/science/article/pii/S0306460321000307/pdfft?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdfhttps://tinyurl.com/364c2trt.

139. Beginning in at least 2014, researchers began demonstrating that addictive and compulsive use of Defendants' platforms leads to negative mental and physical outcomes for kids.

140. Subsequent literature has shown that social media addiction causes a wide range of negative effects. These negative effects generally fall into four categories, as further discussed below: (1) emotional; (2) relational; (3) health related; and (4) performance problems.[152]

141. In 2014, a study of 10- to 12-year-old girls found that increased use of Facebook was linked with body image concerns, the idealization of thinness, and increased dieting.[153] This study was sent to Mark Zuckerberg in 2018, in a letter signed by 118 public health advocates.[154]

142. In 2016, a study demonstrated that young people who frequently use Defendants' platforms are more likely to suffer sleep disturbances than their peers who use them infrequently.[155] Defendants' platforms, driven by IVR and fueled by data-gathering algorithms, deprive users of sleep using a variety of design features that prompt children to re-engage with the platforms when they should be sleeping. Disturbed and insufficient sleep is associated with poor health outcomes,[156] including increased risk of major depression—by a factor of more than three[157]—and future suicidal behavior in

[152] Cecilie S. Andreassen, *Online Social Network Site Addiction: A Comprehensive Review*, 2 Current Addiction Rep. 175-184, 179 (2015), https://link.springer.com/content/pdf/10.1007/s40429-015-0056-9.pdf.

[153] Marika Tiggemann & Amy Slater, *NetTweens: The Internet and Body Image Concerns in Preteenage Girls*, 34(5) J. Early Adolescence 606–620 (2014), https://journals.sagepub.com/doi/epub/10.1177/0272431613501083 [https://perma.cc/TSG5-RZAY].

[154] Letter from Campaign for a Commercial-Free Childhood to Mark Zuckerberg, CEO, Facebook, Inc. (Jan. 30, 2018), https://fairplayforkids.org/wp-content/uploads/archive/devel-generate/gaw/FBMessengerKids.pdf.

[155] Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance among young adults*, 85 Preventive Med. 36–41 (2016), https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025 [https://perma.cc/QYE5-92M4].

[156] *Id.*; *The Teen Brain: 7 Things to Know*, Nat'l Inst. Mental Health (2023), https://www.nimh.nih.gov/sites/default/files/documents/health/publications/the-teen-brain-7-things-to-know/teen-brain-7-things-to-know.pdf; Joseph Campellone & Raymond K. Turley, *Understanding the Teen Brain*, https://www.urmc.rochester.edu/encyclopedia/content.aspx?ContentTypeID=1&ContentID=3051.

[157] Robert E. Roberts & Hao T. Doung, *The Prospective Association between Sleep Deprivation and Depression among Adolescents Sleep*, 37(2) Sleep 239–244, 242 (2014), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3900610/pdf/aasm.37.2.239.pdf.

adolescents.[158] The American Academy of Sleep Medicine has recommended that, in a 24-hour period, children aged 6–12 years should regularly sleep 9–12 hours and teenagers aged 13–18 years should sleep 8–10 hours.[159] Yet studies show that young children are losing approximately one night's worth of sleep every week, staying up to use social media or even waking themselves up in the middle of the night to check notifications, driven by fear of missing out ("FOMO").[160]

143. High numbers of teens also self-report their experiences with the negative consequences of extended social media use on their sleep. In a 2023 survey, 41% of teenage girls who use TikTok said it interferes with their sleep at least weekly, with 24% saying it interferes with their sleep daily.[161] Similarly, 28% of teenage girls who use YouTube said it interferes with their sleep at least weekly; the same is true for 29% of teenage girls who use Instagram; and 31% of teenage girls who use Snapchat.[162]

144. In another 2016 study, 52% of girls said they use image filters every day, and 80% reported using an app to change their appearance before the age of 13.[163] In fact, 77% of girls reported trying to change or hide at least one part of their body before posting a photo of themselves, and 50% believe they did not look good enough without photo editing.[164]

---

[158] Xianchen Liu & Daniel J. Buysse, *Sleep and youth suicidal behavior: a neglected field*, 19(3) Current Op. Psychiatry 288–293, 291–292 (2006), https://pubmed.ncbi.nlm.nih.gov/16612215/ [https://perma.cc/4UUP-Z6XX].

[159] Shalini Paruthi *et al.*, *Consensus Statement of the American Academy of Sleep Medicine on the Recommended Amount of Sleep for Healthy Children: Methodology and Discussion*, 12 J. Clinical Sleep Med. 1549–1561, 1549 (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5078711/pdf/jcsm.12.11.1549.pdf

[160] Beatrice Nolan, *Kids are waking up in the night to check their notifications and are losing about 1 night's worth of sleep a week, study suggests*, Bus. Insider (Sept. 19, 2022), https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9.

[161] Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media at 26*, Common Sense Media (2023), https://www.commonsensemedia.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf.

[162] *Id.*

[163] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

[164] *Id.*

145. In 2017, British researchers asked 1,500 teens to rate how Instagram, Snapchat, and YouTube affected them on certain well-being measures, including anxiety, loneliness, body image, and sleep.[165] Teens rated all three platforms as having a negative impact on body image, FOMO, and sleep. Teens also noted that Instagram and Snapchat had a negative impact on anxiety, depression, and loneliness.

146. In 2018, a *Journal of Social and Clinical Psychology* study examined a group of college students whose use of Instagram, Facebook, and Snapchat was limited to 10 minutes per day per product. The study found that this limited-use group showed "significant reductions in loneliness and depression over three weeks" compared to a control group that used social media as usual.[166]

147. Similarly, in another 2018 study of 40,000 children and adolescents ages 2–17, children and adolescents who spent more time using screen media were "lower in psychological well-being than low users."[167] Further, users with high screen time were "significantly more likely to display poor emotion regulation (not staying calm, arguing too much, being difficult to get along with), an inability to finish tasks, lower curiosity, and more difficulty making friends."[168] And among adolescents, high screentime users were twice as likely to receive a diagnosis of depression or anxiety or need treatment for mental or behavioral health problems.[169]

148. A 2019 survey of American adolescents ages 12–14 found that a user's displeasure with their body could be predicted based on their frequency of using social media (including Instagram and Facebook) and based on the extent to which they engaged in behaviors that adopt an observer's point-of-

---

[165] *#StatusOfMind*, Royal Soc'y Pub. Health (May 2017), https://www.rsph.org.uk/static/uploaded/d125b27c-0b62-41c5-a2c0155a8887cd01.pdf; *see also* Jonathan Haidt, *The Dangerous Experiment on Teen Girls*, Atl. (Nov. 21, 2021), https://www.theatlantic.com/ideas/archive/2021/11/facebooks-dangerous-experiment-teen-girls/620767/ [https://perma.cc/5APH-YA2Z].

[166] Melissa G. Hunt *et al.*, *No More FOMO: Limiting Social Media Decreases Loneliness and Depression*, 37 J. Soc. & Clinical Psych. 751–768, 751 (2018), https://guilfordjournals.com/doi/epdf/10.1521/jscp.2018.37.10.751 [https://perma.cc/E2FL-3B34].

[167] Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study*, 12 Preventive Med. Reps. 271–283, 279 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/pdf/main.pdf.

[168] *Id.*

[169] *Id.*

view (such as taking selfies or asking others to "rate one's looks"). This effect was more pronounced among girls than boys.[170]

149. Another study in 2019 of more than 6,500 American adolescents ranging in age from 12–15 years old found that those who used social media for three hours or more per day were more likely to suffer from mental health problems such as anxiety and depression.[171] Notably, this association remained significant even after adjusting for demographics, past alcohol and marijuana use, and history of mental health problems, mitigating the possibility of reverse causality.[172] This study also showed that "[a]dolescents who engage in high levels of social media use may experience poorer quality sleep[.]"[173] Further, the study noted "negative[] . . . body image," "anxiety" and "depression" as connected to social media use.[174]

150. In 2020, a study of Australian adolescents found that investment in others' selfies (through likes and comments) was associated with greater odds of meeting criteria for clinical/subclinical bulimia nervosa, clinical/subclinical binge-eating disorder, night eating syndrome, and unspecified feeding and eating disorders.[175]

151. In 2020, a longitudinal study investigated whether "Facebook Addiction Disorder" predicted suicide-related outcomes and found that children and adolescents addicted to Facebook are more likely to engage in self-injurious behavior, such as cutting and suicide.[176] Other studies examining

---

[170] Ilyssa Salomon & Christia Spears Brown, *The Selfie Generation: Examining the Relationship Between Social Media Use and Early Adolescent Body Image*, 39 J. Early Adolescence 539–560 (2018), https://journals.sagepub.com/doi/abs/10.1177/0272431618770809 [https://perma.cc/U7FP-QDZR].

[171] Kira Riehm *et al.*, *Associations Between Time Spent Using Social Media and Internalizing and Externalizing Problems Among US Youth*, 76(12) JAMA Psychiatry 1266–1273 (2019), https://jamanetwork.com/journals/jamapsychiatry/fullarticle/2749480 [https://perma.cc/BCL7-6LXP].

[172] *Id.*

[173] *Id.* at 1271.

[174] *Id.*

[175] Alexandra R. Lonergan *et al.*, *Protect me from my selfie: Examining the association between photo-based social media behaviors and self-reported eating disorders in adolescence*, 53 Int'l J. Eating Disorders 755–766 (2020), https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256 [https://perma.cc/L9TN-SZKP].

[176] *See, e.g.*, Julia Brailovskaia *et al.*, *Positive Mental Health Mediates the Relationship Between Facebook Addiction Disorder and Suicide-Related Outcomes: A Longitudinal Approach*, 23(5) Cyberpsychology, Behav., & Soc. Networking 346–350 (2020), https://doi.org/10.1089/cyber.2019.0563 [https://perma.cc/8RBV-QC6U]. Jean M. Twenge *et al.*,

the link between these increases found that adolescents who spent more time on screen activities were significantly more likely to have high depressive symptoms or have at least one suicide-related outcome, and that the highest levels of depressive symptoms were reported by adolescents with high social media use and fewer in-person social interactions.[177]

152. One of the primary reasons the use of social media is associated with depressive symptoms among adolescents is because Defendants' platforms encourage unhealthy social comparison and feedback-seeking behaviors.[178] This causes youth to engage in negative comparisons with their peers.[179] Specifically, adolescents are likely to engage in harmful upward comparisons with others they perceive to be more popular.[180]

Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time, 6 Clinical Psych. Sci. 3–17 (2018), https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf (updated Jean M. Twenge *et al.*, *Corrigendum: Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 7 Clinical Psych. Sci. 397 (2019), https://journals.sagepub.com/doi/epub/10.1177/2167702618824060).

[177] Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 Clinical Psych. Sci. 3–17 (2018), https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf (updated Jean M. Twenge *et al.*, *Corrigendum: Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 7 Clinical Psych. Sci. 397 (2019), https://journals.sagepub.com/doi/epub/10.1177/2167702618824060); see also Anthony Robinson *et al.*, *Social comparisons, social media addiction, and social interaction: An examination of specific social media behaviors related to major depressive disorder in a millennial population*, 24 J. Applied Biobehavioral Rsch., Jan. 8, 2019, https://doi.org/10.1111/jabr.12158 [https://perma.cc/938C-SD59].

[178] Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms* at 4, 43 J. Abnormal Child Psych. 1427–1438 (2015), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/pdf/nihms948986.pdf.

[179] *Id.*; *see also* Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279 (2022), https://bmcpsychology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf (explaining that youth are particularly vulnerable because they "use social networking sites for construing their identity, developing a sense of belonging, and for comparison with others").

[180] *Id.*

153. In 2020, clinical research demonstrated an observable link between youth social media use and disordered eating behavior.[181] The more time young girls spend using Defendants' platforms, the more likely they are to develop disordered eating behaviors.[182] And the more social media accounts adolescents have, the more disordered eating behaviors they exhibit.[183]

154. Eating disorders often occur simultaneously with other self-harm behaviors such as cutting and are often associated with suicide.[184]

155. A 2022 study of Italian adolescent girls ages 13–17 and young women ages 18–28 found that Instagram's image editing and browsing features, combined with an emphasis on influencer interactions, promulgated unattainable body ideals that caused users to compare their bodies to those ideals.[185] These trends were more prominent among adolescent girls, given their higher susceptibility to social pressures related to their bodies and given the physical changes associated with puberty.

156. In 2023, a study of magnetic resonance images demonstrated that compulsive use of Defendants' platforms measurably alters children's brains.[186] This study measured fMRI responses in 12-year-old adolescents who used Facebook, Instagram, and Snapchat over a three-year period and found that neural patterns diverged. Specifically, those who engaged in high social media checking behavior "showed lower neural sensitivity to social anticipation" than those who engaged in low to moderate checking behavior.[187]

---

[181] Simon M. Wilksch *et al.*, *The relationship between social media use and disordered eating in young adolescents*, 53 Int'l J. Eating Disorders 96-106, 101 (2020), https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23198

[182] *Id.* at 101–103.

[183] *Id.*

[184] *See*, *e.g.*, Sonja A. Swanson *et al.*, *Prevalence and Correlates of Eating Disorders in Adolescents*, 68(7) Archives Gen. Psychiatry 714-723 (2011), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5546800/pdf/nihms886935.pdf (correction Errors in Figures, 177 JAMA Pediatrics (2023), https://jamanetwork.com/journals/jamapediatrics/fullarticle/2801455).

[185] Federica Pedalino & Anne-Linda Camerini, *Instagram Use and Body Dissatisfaction: The Mediating Role of Upward Social Comparison with Peers and Influencers among Young Females*, 19(3) Int'l J. Env't Rsch. & Pub. Health 1543 (2022), https://www.mdpi.com/1660-4601/19/3/1543.

[186] Maria Maza *et al.*, *Association of Habitual Checking Behaviors on Social Media With Longitudinal Functional Brain Development*, 177 JAMA Pediatrics 160–167 (2023), https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812 [https://perma.cc/64FA-9SPB].

[187] *Id.*

157. Problematic social media use is also linked to self-reported and diagnosed attention-deficit/hyperactivity disorder ("ADHD") in adolescents.[188] One longitudinal study of adolescents found that over two years, high-frequency use of digital media, including social media, was associated with statistically significant increased odds of developing ADHD symptoms.[189] As another study notes, social media presents "potentially distracting activities [that] may co-occur with other behaviors such as short-term attention, restlessness, forgetfulness, impulsiveness and decreased ability to retain information. These behaviors are symptoms of ADHD that can lead to maladaptive functioning in academic, home and recreational settings."[190]

158. Social media addiction can also cause individuals to perform worse in other activities. In the academic context, several studies have shown that excessive social media use and addiction is related to poorer academic performance and receiving lower grades.[191] Such poor academic performance is often linked to (1) distraction from multitasking on social media, thereby adversely affecting learning,

---

[188] Tycho J. Dekkers & Jorien van Hoorn, *Understanding Problematic Social Media Use in Adolescents with Attention-Deficit/Hyperactivity Disorder (ADHD): A Narrative Review and Clinical Recommendations*, 12(12) Brain Scis. 1625 (2022), https://www.mdpi.com/2076-3425/12/12/1625; Maartje Boer *et al.*, *Attention Deficit Hyperactivity Disorder-Symptoms, Social Media Use Intensity, and Social Media Use Problems in Adolescents: Investigating Directionality*, 91(4) Child Dev. 853–865 (2019), https://srcd.onlinelibrary.wiley.com/doi/epdf/10.1111/cdev.13334.

[189] Chaelin K. Ra *et al.*, *Association of Digital Media Use With Subsequent Symptoms of Attention-Deficit/Hyperactivity Disorder Among Adolescents*, 320(3) JAMA 255–263 (2018), https://jamanetwork.com/journals/jama/fullarticle/2687861.

[190] Zaheer Hussain & Mark D. Griffiths, *The Associations between Problematic Social Networking Site Use and Sleep Quality, Attention-Deficit Hyperactivity Disorder, Depression, Anxiety and Stress*, 19 Int'l J. Mental Health & Addiction 686–700, 694 (2021), https://link.springer.com/content/pdf/10.1007/s11469-019-00175-1.pdf.

[191] Emre Çam & Onur İşbulan, *A new addiction for teacher candidates: Social networks*, 11(3) Turkish Online J. Educ. Tech. 14–19, 14 (2012), https://www.researchgate.net/publication/267556427_A_new_addiction_for_teacher_candidates_Social_networks; Mustafa Koc & Seval Gulyagci, *Facebook Addiction Among Turkish College Students: The Role of Psychological Health, Demographic, and Usage Characteristics*, 16(4) Cyberpsychology, Behav., & Soc. Networking 279–284 (2013), https://doi.org/10.1089/cyber.2012.0249 [https://perma.cc/RS4Y-H93L]; Paul Kirschner & Aryn Karpinski, *Facebook and academic performance*, 26(6) Comput. Hum. Behav. 1237–1245 (2010), https://doi.org/10.1016/j.chb.2010.03.024 [https://perma.cc/5Y2A-R27T]; Manjur Kolhar *et al.*, *Effect of social media use on learning, social interactions, and sleep duration among university students*, 28(4) Saudi J. Biological Scis. 2216–2222 (2021), https://www.sciencedirect.com/science/article/pii/S1319562X21000103/pdfft?md5=b16529034494af5780843d4990768894&pid=1-s2.0-S1319562X21000103-main.pdf.

and (2) high enough usage to amount to addiction, which increases academic procrastination and reduces sleep time and quality, increasing academic stress.[192] And studies show that the amount of time a student spends on social media is negatively correlated with their academic performance, meaning the more a student spends on social media the worse their grades are.[193] In fact, 82% of Gen Z students say social media "has distracted them from their schoolwork."[194] Noting the "negative and significant relationship between the overall use of social networks and academic performance of students," one study author has stated it is "imperative" for school authorities to "take interventional steps to help students who are dependent on these [social media] networks and, through workshops, inform them about the negative consequences of addiction to social networks."[195] This places a large burden on districts like Plaintiff's.

159. Defendants' platforms have triggered depression, anxiety, eating disorders, self-harm, and suicidality among thousands of children, including students in Plaintiff's schools, to which Plaintiff must respond. Defendants have created nothing short of a national crisis.

---

[192] Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of undergraduate medical students*, 77 Med. J. Armed Forces India 37–41 (2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf (citing Aryn C. Karpinski *et al.*, *An exploration of social networking site use, multitasking, and academic performance among United States and European university students*, 29(3) Comput. Hum. Behav. 1182–1192 (2013), https://www.sciencedirect.com/science/article/abs/pii/S0747563212002798 [https://perma.cc/C43P-J8V9]; Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) BMC Psychiatry 28 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf); *see* Yubo Hou *et al.*, *Social media addiction: Its impact, mediation, and intervention*, 13(1) J. Psychosocial Rsch. Cyberspace, 2019, https://cyberpsychology.eu/article/view/11562/10369.

[193] Jamal Al-Menayes, Social Media Use, *Engagement and Addiction as Predictors of Academic Performance*, 7(4) Int'l J. Psych. Stud. 86–94 (2015), http://dx.doi.org/10.5539/ijps.v7n4p86 [https://perma.cc/4A7V-4RMD].

[194] Karen D'Souza, *Eight out of 10 Gen Zers say social media districts from schools*, EdSource (Dec. 8, 2021), https://edsource.org/updates/eight-out-of-10-gen-zers-say-social-media-distracts-from-school.

[195] Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and academic performance in Iranian students of medical sciences: a cross-sectional study* at 1, 7(1) BMC Psychiatry 28 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf.

160. From 2009 to 2019, the rate of high school students who reported persistent sadness or hopelessness increased by 40% (to one out of every three students).[196] The share of kids who seriously considered suicide increased by 36%, and those that created a suicide plan increased by 44%.[197]

161. From 2007 to 2019, suicide rates among youth aged 10-24 in the United States increased by 57%.[198] By 2018, suicide was the second leading cause of death for youth ages 10–24.[199]

162. From 2007 to 2016, emergency room visits for youth aged 5–17 rose about 117% for anxiety disorders, 44% for mood disorders, and 40% for attention disorders.[200]

163. By 2019, one-in-five children aged 3–17 in the United States had a mental, emotional, developmental, or behavioral disorder.[201] Mental health issues are particularly acute among females.[202]

---

[196] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth- mental-health-advisory.pdf.

[197] *Id.*

[198] *Id.*

[199] *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health*, Am. Acad. Pediatrics (Oct. 19, 2021), https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/.

[200] Charmaine Lo *et al.*, *Children's Mental Health Emergency Department Visits: 2007–2016*, 145(6) Pediatrics, June 2020, at 3, https://publications.aap.org/pediatrics/article-pdf/145/6/e20191536/1080074/peds_20191536.pdf.

[201] Press Release, U.S. Dep't Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021), https://public3.pagefreezer.com/browse/HHS.gov/13122021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html.

[202] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 3, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf; *see also* Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 Clinical Psych. Sci. 3-17, 8 (2018), https://courses.engr.illinois.edu/cs565/sp2018/Live1_Depression&ScreenTime.pdf (updated Jean M. Twenge *et al.*, *Corrigendum: Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 7 Clinical Psych. Sci. 397 (2019), https://journals.sagepub.com/doi/epub/10.1177/2167702618824060) (noting that mental health issues are particularly acute among females).

164. In December 2021, the Surgeon General issued an advisory on the youth mental health crisis.[203] The Surgeon General explained, "[m]ental health challenges in children, adolescents, and young adults are real and widespread. Even before the pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and thoughts of suicide—and rates have increased over the past decade."[204] Those "mental health challenges were the leading cause of disability and poor life outcomes in young people."[205]

165. In February 2023, the CDC released new statistics revealing the extent of the public health crisis in this country regarding youth mental health.[206]

166. This CDC survey showed that "[i]n 2021, 42% of high school students felt so sad or hopeless almost every day for at least two weeks in a row that they stopped doing their usual activities"; 57% of female high school students reported feeling "persistent feelings of sadness or hopelessness" in 2021, compared to 36% in 2011; 41% of female respondents and 29% of all respondents report experiencing "poor mental health" in the past 30 days; 30% of female high school students had "seriously considered attempting suicide" in 2021, compared to 19% in 2011.[207]

167. In 2022, an analysis of datasets comprising 84,011 participants found that the cross-sectional relationship between use of Defendants' platforms and life satisfaction ratings is most negative in younger adolescents.[208] Longitudinal analyses revealed windows of sensitivity to social media and

---

[203] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf.

[204] Press Release, U.S. Dep't Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021), https://public3.pagefreezer.com/browse/HHS.gov/13-12-2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html.

[205] *Id.*

[206] Azeen Ghorayashi & Roni Caryn Rabin, *Teen Girls Report Record Levels of Sadness*, C.D.C. Finds, N.Y. Times (May 10, 2023), https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html?searchResultPosition=1 [https://perma.cc/9CE6-4E4].

[207] *Youth Risk Behavior Survey: Data Summary & Trends Report* 2011-2021 at 60–64, CDC (2023), https://www.cdc.gov/healthyyouth/data/yrbs/pdf/YRBS_Data-Summary-Trends_Report2023_508.pdf.

[208] Amy Orben *et al.*, *Windows of developmental sensitivity to social media*, 13 Nature Commc'ns 1649 (2022), https://www.nature.com/articles/s41467-022-29296-3.pdf.

adolescents between ages 11 and 19 years old, and that decreases in life satisfaction ratings also predict subsequent increases in social media use.[209]

168. In 2023, young adolescent participants in a cohort study who engaged in habitual social media checking behaviors showed a "distinct neurodevelopmental trajectory within regions of the brain comprising the affective salience, motivational, and cognitive control networks in response to anticipating social rewards and punishments compared with those who engaged in nonhabitual checking behaviors."[210] In other words, these results showed that "teens who grow up checking social media more often are hypersensitive to feedback from their peers."[211] Previous studies confirm that social media use is associated with changes to users' brain anatomy. In another study, MRI scans of 20 social media users with varying degrees of social media addiction showed social media addiction is associated with a more efficient impulsive brain system, demonstrated by reduced grey matter volumes in the amygdala (bilaterally).[212] This pruning of the amygdala presumably leads to generating strong impulsive behaviors. Such brain alteration is similar to that associated with other addictive activities like gambling and substance abuse.

169. Published in 2023, a systemic review from January 2004 to July 2022 evaluated the impact of social media interventions on mental well-being and demonstrated that abstinence from Defendants' platforms is effective in improving mental well-being, especially for depression.[213]

170. Use of Defendants' platforms by adolescent females significantly affects their wellbeing.[214] Moreover, the use of specific features on Defendants' platforms is a strong predictor of

---

[209] *Id.*

[210] Maria Maza *et al.*, *Association of Habitual Checking Behaviors on Social Media With Longitudinal Functional Brain Development*, 177 JAMA Pediatrics 160–167, 161 (2023), https://jamanetwork.com/journals/jamapediatrics/article-abstract/2799812 [https://perma.cc/64FA-9SPB].

[211] Ellen Barry, *Social Media Use Is Linked to Brain Changes in Teens, Research Finds*, N.Y. Times (Jan. 3, 2023), https://www.nytimes.com/2023/01/03/health/social-media-brain-adolescents.html [https://perma.cc/7XAH-NGT8].

[212] Quinghua He *et al.*, *Brain Anatomy Alterations Associated with Social Networking Site (SNS) Addiction*, 7 Sci. Reps. 45064 (2017), https://www.nature.com/articles/srep45064.pdf.

[213] Ruth Plackett *et al.*, *The Impact of Social Media Use Interventions on Mental Well-Being: Systemic Review*, 25 J. Med. Internet Rsch. E44922 (2023), https://www.jmir.org/2023/1/e44922/PDF.

[214] Sevim Çimke & Dilek Yıldırım Gürkan, *Factors affecting body image perception, social media addiction, and social media consciousness regarding physical appearance in adolescents*, J. Pediatric Nursing (2023),

negative body image perception, increase of social media addiction and of scores on the Appearance Related Social Media Consciousness Scale, the Social Media Addiction Scale for Adolescents, and the Body Image Scale.[215]

171. A 2023 study from May to August of high school students demonstrated that as the level of social media addiction increases, adolescents are becoming increasingly socially ostracized and experiencing harmful levels of loneliness.[216]

172. In another 2023 experimental study, 50 students were allocated randomly into groups either using social media as normal or reducing their usage by 15 minutes a day. Over the three-month period, the group reducing social media activity reported "less social media dependence, and improved general health and immune functioning, as well as reduced feelings of loneliness and depression."[217] Not only did this study confirm prior cross-sectional studies showing an association between reduced social media use and improved health, this study had the advantage "in showing an experimentally-controlled relationship between reduced social media activity and improved wellbeing . . . adding to the suggestion of a causal connection[.]"[218]

173. In May 2023, the Surgeon General issued an advisory: Social Media and Youth Mental Health.[219] The advisory "calls attention to the growing concerns about the effects of social media on youth mental health."[220] The advisory noted that "[s]ocial media platforms are often designed to maximize user engagement" and highlighted the use of "algorithms that leverage user data" to achieve

---

https://www.sciencedirect.com/science/article/abs/pii/S0882596323002506.[https://perma.cc/U3XN-UHX4].

[215] *Id.*

[216] Necmettin Çiftci *et al.*, *The mediating role of social ostracism in the effect of social media addiction on loneliness in adolescents*, 73 J. Pediatric Nursing 177–183 (2023), https://www.sciencedirect.com/science/article/abs/pii/S0882596323002452 [https://perma.cc/S9LQ-SGHN].

[217] Phil Reed *et al.*, *Reduction in Social Media Usage Produces Improvements in Physical Health and Wellbeing: An RCT*, 8 J. Tech. Behav. Sci. 140–147, 146 (2023), https://link.springer.com/content/pdf/10.1007/s41347-023-00304-7.pdf.

[218] *Id.*

[219] *Social Media and Youth Mental Health: The U.S. Surgeon General's Advisory*, U.S. Dep't Health & Hum. Servs. (2023), https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf.

[220] *Id.* at 3.

maximum engagement.[221] Consistent with Defendants having known of the harm their platforms cause users, particularly youth, the Surgeon General's advisory noted "[t]here is broad concern ... that a lack of access to data and lack of transparency from technology companies have been barriers to understanding the full scope and scale of the impact of social media on mental health and well-being."[222] Put another way, Defendants have gone to great lengths to prevent the public from gaining knowledge of the serious harms that result from excessive use of social media.

174. Also in May 2023, the American Psychological Association issued a health advisory on social media use in adolescence due to the harmful effects of social media use on adolescents' social, educational, psychological, and neurological development.[223] Both visible and unknown features built into social media platforms inform adolescent experiences on such platforms. The American Psychological Association recommends that Defendants' platforms tailor features such as the "Like" button, recommended posts, unrestricted time limits, endless scrolling, notices, and alerts to the social and cognitive abilities of adolescent users.[224]

175. The scientific literature recognizes that design features of social media platforms cause problematic social media use, social media addiction, and resulting negative mental health outcomes.[225] These harms result from the Defendants' conduct in designing, developing, producing, operating, promoting, distributing, and marketing their social media platforms to attract and addict minors.

---

[221] *Id.* at 9.

[222] *Id.* at 11.

[223] *Health Advisory on Social Media Use in Adolescence*, Am. Psych. Ass'n (May 2023), https://www.apa.org/topics/social-media-internet/health-advisory-adolescent-social-media-use.pdf.

[224] *Id.* at 5.

[225] Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, 16(14) Int'l J. Env't Rsch. & Pub. Health 2612 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-02612.pdf; Christian Montag & Jon D. Elhai, On Social Media Design, (Online-) *Time Well-spent and Addictive Behaviors in the Age of Surveillance Capitalism*, 10 Current Addiction Reps. 610–616 (2023), https://link.springer.com/content/pdf/10.1007/s40429-023-00494-3.pdf; Maèva Flayelle *et al.*, *A taxonomy of technology design features that promote potentially addictive online behaviours*, 2 Nature Revs. Psych. 136–150 (2023), https://doi.org/10.1038/s44159-023-00153-4 [https://perma.cc/TB9Z-TDNK].

176. Further, "[n]early all researchers now agree that there are correlations between ... time spent on social media and ... mental health problems."[226] The literature indicates that higher use and higher social media addiction scores are more positively associated with more severe health outcomes.[227]

177. As discussed herein, each of Defendants' platforms manipulates young users' brains by building in stimuli and social reward mechanisms (e.g., "Likes") that cause users, such as students in Plaintiff's schools, to compulsively seek social rewards. That, in turn, leads to neuroadaptation; a child requires more and more stimuli to obtain the desired dopamine release, along with further impairments of decision-making. It also leads to reward-seeking. These consequences are the foreseeable results of Defendants' engineering decisions.

178. Defendants' actions have led to a national youth mental health crisis. Notably, the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children's Hospital Association declared a national emergency based on the current state of youth mental health.[228] Moreover, in 2021, the U.S. Surgeon General issued an advisory alerting the public that "[r]ecent national surveys of young people have shown alarming increases in the prevalence of certain mental health challenges" and that "in 2019 one in three high school students and half of female

---

[226] Jonathan Haidt *et al.*, *Social Media and Mental Health: A Collaborative Review* at 11, N.Y.U. (Nov. 1, 2023) (unpublished manuscript available at tinyurl.com/SocialMediaMentalHealthReview).

[227] *See* Yaoguo Geng *et al.*, *Smartphone addiction and depression, anxiety: The role of bedtime procrastination and self-control*, 293 J. Affective Disorders 415–421, 417 (2021), https://doi.org/10.1016/j.jad.2021.06.062 [https://perma.cc/U8CV-L63C]; Pu Peng & Yanhui Liao, *Six Addiction Components of Problematic Social Media Use in Relation to Depression, Anxiety, and Stress Symptoms: a Latent Profile Analysis and Network Analysis*, 23 BMC Psychiatry 321 (2023), https://bmcpsychiatry.biomedcentral.com/counter/pdf/10.1186/s12888-023-04837-2.pdf; Anthony Robinson *et al.*, *Social comparisons, social media addiction, and social interaction: An examination of specific social media behaviors related to major depressive disorder in a millennial population*, 24 J. Applied Biobehavioral Rsch., Jan. 8, 2019, https://doi.org/10.1111/jabr.12158 [https://perma.cc/938C-SD59].

[228] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory*, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf; *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health*, Am. Acad. Pediatrics (Oct. 19, 2021), https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aapaacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/.

students reported persistent feelings of sadness or hopelessness, an overall increase of 40% from 2009."[229]

179. While Defendants have profited off of their design, development, production, operation, promotion, distribution and marketing of their social media platforms to America's youth, Plaintiff and other school districts like it have expended significant human and financial resources to address the youth mental health crisis caused by Defendants.

6. Defendants' conduct has significantly disrupted the learning environment in schools and diverted resources from other student needs.

180. The widespread and compulsive use of Defendants' platforms has consequences beyond the harms to the individual users of the platforms. It has fundamentally changed the learning and teaching environment at Plaintiff's schools, affecting students, parents, teachers, administrators, coaches, counselors, and other members of Plaintiff's community.

181. School districts have been, and continue to be, uniquely harmed by students' compulsive use of, and addiction to, social media. Students' compulsive, problematic use of Defendants' platforms results in significant disruption to schools' operations, greatly frustrates their ability to achieve their mandate of educating students in a safe and healthy environment, and forces school districts to expend or divert significant resources in response.

182. Because of the way social media platforms are designed, any interaction between students or events (on school grounds or outside of school) can be amplified, shared widely and immediately, reposted, rehashed, and blown out of proportion. Whether or not this online amplification happens during school hours, if it involves students, it will fall to school administrators and staff to respond.

183. The nature of Defendants' platforms means that information moves through a school community rapidly, and spreads farther than it otherwise could. It is extremely challenging, if not impossible, for teachers and administrators to get ahead of it. Teachers and administrators start each school day with the possibility that something involving their students might have spiraled out of control

[229] *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 3, U.S. Dep't Health & Hum. Servs. (2021), https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf.

on social media overnight. Or something might transpire during class time, affecting multiple students within the classroom but with no way for the teacher to see what is coming. Moreover, the instantaneous dissemination of social media posts across a broad network—part of the design of Defendants' platforms—can result in the formation of a "pack" or herd mentality. Rather than needing to address an issue with a single student or a small group of students, teachers, administrators, and counselors must address issues affecting large groups of students at the same time. Often, to do so effectively requires meeting with students one on one, which takes a significant amount of time for counseling staff.

184. Even if teachers or administrators implement a policy that requires students to put devices away or physically out of reach during class time, the addictive nature of Defendants' platforms continues to disrupt learning. Students struggle with being separated from Defendants' platforms and experience anxiety over missing even a single notification, and this anxiety interferes with students' ability to focus and learn.

185. Addressing the wide range of impacts from students' social media addiction requires a multi-faceted approach that far exceeds school districts' available resources. School districts are forced to divert human and financial resources to address social media-related student behavior or mental health issues, taking away resources from other important school district operations, including teaching.

186. Staff and teachers cannot ignore students who are in crisis and need to support those students, even if this comes at the expense of the educational goals and experience for the larger student body. School campuses are public spaces, and classes and activities are communal experiences. Increases in anxiety, depression, suicidal ideation, and other mental health crises impact both the students suffering from these problems and the other students, teachers, and staff who need to interact with these students.

187. To address this complex issue, school districts must provide significant support for students in crisis and also educate staff, parents, and the community about the dangers presented by Defendants' platforms. Such education includes how to safeguard children from those dangers, and how to support students and families impacted by social media addition and problematic use. School districts are one of the primary providers of mental health services to youth. Youth addiction to social media

platforms diverts time away from the educational mission of school districts and from other valuable engagement time.

7. Defendants could have avoided harming Plaintiff.

188. Each Defendant solicited youth, including Plaintiff's students, on the open market and encouraged the use of their addictive platforms.

189. Each Defendant offers its product to the public with dangerous, standardized features and designs (discussed herein) that users, like Plaintiff's students, cannot change.

190. Plaintiff's students (along with millions of other U.S. users) are incredibly valuable to Defendants. Although Defendants' platforms are ostensibly free of charge, in reality, Defendants charge users by collecting their data, which they then leverage into advertising revenue. For example, Instagram's terms of use state, in part:

> We agree to provide you with the Instagram Service. ... Instead of paying to use Instagram, by using the Service covered by these Terms, you acknowledge that we can show you ads that businesses and organizations pay us to promote on and off the Meta Company Products. We use your personal data, such as information about your activity and interests, to show you ads that are more relevant to you.[230]

191. Each Defendant knew or should have known that its platforms were causing serious harm and impacts on public schools, like Plaintiff's.

192. Each Defendant could have, but purposefully failed to, design its platforms to protect and avoid injury to kids and adolescent users, such as Plaintiff's students, and avoid harm to Plaintiff's schools and operations.

193. Each Defendant knew or should have known that adolescents' developing brains leave them relatively less able to delay gratification, control impulses, or resist immediately pleasurable social rewards.

---

[230] The other Defendants have similar provisions. For example, TikTok's Terms of Service state, in part: "You acknowledge that we may generate revenues, increase goodwill or otherwise increase our value from your use of the Services, including . . . through the sale of usage data[.]" Snap Terms of Service permit Snap to use content submitted by users for any purpose, including revenue generating purposes, and acknowledge Snap leverages the collection of user data to sell advertising. YouTube's Terms of Service similarly permit YouTube to use content uploaded by users for business purposes, including monetization of that content, and Google's Privacy Policy (applicable to YouTube) details the wide range on user data Google collects, whether you are a registered user or not.

194. Each Defendant knew or should have known that the more children use social media, the harder it is for them to quit.

195. Each Defendant knew or should have known that excessive use of its platforms has severe and wide-ranging effects on youth mental and physical health.

196. Each Defendant knew or should have known that youth are especially vulnerable to long-term harm from its addictive platforms.

197. Each Defendant knew or should have known that many of its users are under the age of 13, despite the limitations set out in COPPA.

198. The harm to Plaintiff caused by Defendants' actions was foreseeable. Defendants purposefully sought to attract and addict minors—including those who attend Plaintiff's schools—to their social media platforms and engaged in substantial efforts to promote, distribute, and market their social media platforms to minors, despite knowing that their design choices made the social media platforms incredibly dangerous to adolescents. Moreover, while deliberately seeking to attract and addict minors to their platforms, Defendants were aware that school districts—which provide adolescents with critical educational, counseling, mental health, social, and disciplinary services—would be forced to address, through financial and human resources, the devastating impact that compulsive social media use and addiction is known to have on youth mental health. Accordingly, Plaintiff was in the foreseeable zone of risk from Defendants' targeting of minors who reside in Plaintiff's local communities and attend Plaintiff's schools.

199. Despite the foreseeable risk to students and to school districts, each Defendant failed to adequately warn youth or their parents, including Plaintiff's students and families, of the known risks and harms of using its platforms. Defendants also failed to warn school districts, including Plaintiff, of the impact of their platforms on students.

200. Each Defendant avoided design changes that would have increased youth safety. And, each Defendant pressed ahead with changes designed to keep kids hooked, even though they knew or should have known those changes presented risks to the wellbeing of youth.

201. Each Defendant was in a superior position to control the risks of harm, ensure the safety of its platforms, insure against and spread the costs of any harm resulting from their dangerous choices.

202. Plaintiff, its students, and the public did not have, and could not have had, as much knowledge as Defendants about Defendants' platforms and how they were dangerously designed.

B. Factual Allegations As To Meta

1. Background and overview of Meta's platforms.

203. Meta coded, engineered, manufactured, produced, assembled, and operates Facebook and Instagram, two of the world's most popular social media platforms, and placed them into the stream of commerce. In 2022, two billion users worldwide were active on Instagram each month, and almost three billion were monthly active users of Facebook.[231] This enormous reach has been accompanied by enormous damage for adolescent users.

204. Meta understands that its platforms are used by kids under 13: "[T]here are definitely kids this age on [Instagram][.]"[232] Meta understands that its platforms are addictive: "(1) teens feel addicted to [Instagram] and feel a pressure to be present, (2) like addicts, they feel that they are unable to stop themselves from being on [Instagram], and (3) the tools we currently have aren't effective at limiting their time on the ap [sic]."[233] Meta also understands that addictive use leads to problems: "it just keeps people coming back even when it stops being good for them[.]"[234] Further, Meta understands that these problems can be so extreme as to include encounters between adults and minors—with such "sex-talk" 32 times more prevalent on Instagram than on Facebook.[235]

205. Despite this knowledge, Meta has abjectly failed at protecting child users of Instagram and Facebook. Rather than resolving the problems created by its platforms, "the mental health team stopped doing things . . . it was defunded . . . [and] completely stopped[.]"[236] "We've consistently deprioritized addiction as a work area[.]"[237] Zuckerberg himself was personally warned: "We are not on track to succeed for our core well-being topics (problematic use, bullying & harassment, connections,

---

[231] Alexandra Barinka, *Meta's Instagram Users Reach 2 Billion, Closing In on Facebook*, Bloomberg (Oct. 26, 2022), https://www.bloomberg.com/news/articles/2022-10-26/meta-s-instagram-users-reach-2-billion-closing-in-on-facebook [https://perma.cc/TM83-6MUZ].
[232] META3047MDL-003-00123666 at META3047MDL-003-00123666.
[233] META3047MDL-003-00157036 at META3047MDL-003-00157036.
[234] META3047MDL-003-00011760 at META3047MDL-003-00011761.
[235] META3047MDL-003-00119838 at META3047MDL-003-00119838.
[236] META3047MDL-003-00011697 at META3047MDL-003-00011698.
[237] META3047MDL-003-00157133 at META3047MDL-003-00157134.

and SSI),[] and are at increased regulatory risk and external criticism. These affect everyone, especially [y]outh and [c]reators; if not addressed, these will follow us into the Metaverse[.]"[238]

206. Yet Meta did nothing. Like with considering actions to protect children in other ways, "the growth impact was too high."[239] Taking action would lower usage of (and therefore lower profits earned from) a critical audience segment. "Youth and [t]eens are critically important to Instagram. . . . there's a new group of 13-year-olds every year and the competition over their [s]ocial [m]edia engagement has never been more fierce."[240]

207. Meta's gestures toward youth safety were never serious and always driven by public relations, "it's all theatre."[241] Meta offered tools to kids and parents, like "time spent," that it knew presented false data—"Our data as currently shown is incorrect. . . . We're sharing bad metrics externally. . . . [although] we vouch for these numbers."[242] At the same time, Meta engaged in a cynical campaign to "counter-messag[e] around the addiction narrative" by discrediting existing research as "BS...psedu [sic] science[.]"[243] Meta knew better. Meta failed to prevent the harms suffered by youth, despite having ample ability and knowledge.

a. Meta's origins and the development of Facebook.

208. In October 2003, a sophomore at Harvard College named Mark Zuckerberg hacked into the websites of Harvard's residential dorms to collect photos of students. He then designed a website called "Facemash" that invited users to rank the "hotness" of female students by comparing their photos side-by-side. In just one day, Facemash users cast over 22,000 votes judging the looks of women at Harvard.[244] This was precisely the point of Facemash, as its homepage made clear: "Were we let in for

---

[238] META3047MDL-003-00188109 at META3047MDL-003-00188114 (footnote omitted). "SSI" refers to "suicide and self-injury." META3047MDL-003-00068863 at META3047MDL-003-00068863, META3047MDL-003-00068872.

[239] META3047MDL-003-00013254 at META3047MDL-003-00013254.

[240] META3047MDL-003-00030070 at META3047MDL-003-00030071.

[241] META3047MDL-003-00053803 at META3047MDL-003-00053803.

[242] META3047MDL-003-00157133 at META3047MDL-003-00157133.

[243] META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-00082166.

[244] Katherine A. Kaplan, *Facemash Creator Survives Ad Board*, Harv. Crimson (Nov. 19, 2003), https://www.thecrimson.com/article/2003/11/19/facemash-creator-survives-ad-board-the/; Bari M. Schwartz, *Hot or Not? Website Briefly Judges Looks*, Harv. Crimson (Nov. 4, 2003), https://www.thecrimson.com/article/2003/11/4/hot-or-not-website-briefly-judges/; Sam Brodsky,

our looks? No. Will we be judged on them? Yes."[245] When interviewed about Facemash, Zuckerberg stated, "I'm a programmer and I'm interested in the algorithms and math behind it[.]"[246] Zuckerberg was summoned to appear before Harvard College's disciplinary body.

209. After narrowly escaping expulsion, Zuckerberg began writing code for a new website, thefacebook.com. The growth of the product that subsequently became Facebook has been extensively documented and was the subject of an Academy Award-winning film.[247] By the end of 2005, Facebook had expanded its reach to thousands of colleges and high schools in the United States and abroad. Over the coming years, Facebook grew well beyond campuses, reaching over 100 million total active users by Fall 2008. By the end of 2011, Facebook's photo collection from its users was projected to include 140 billion photos and reach 800 million users.[248] By the end of 2011, Facebook, Inc. had also turned its initial losses into immense profitability, bringing in annual revenues of $3.7 billion and working with an operating cash of $1.5 billion.[249]

210. However, Facebook knew its future success was not guaranteed. On February 1, 2012, Facebook, Inc. filed with the SEC for an initial public offering. Facebook's filing noted that its historic performance might not continue indefinitely:

> A number of other social networking companies that achieved early popularity have since seen their active user bases or levels of engagement decline, in some cases precipitously. There is no guarantee that we will not experience a similar erosion of our active user base or engagement levels. A decrease in user retention, growth, or engagement could render

---

Everything to know about Facemash, the site Zuckerberg created in college to rank 'hot' women, Metro (Apr. 12, 2018), https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-created-in-college-to-rank-hot-women/; @noamcohen, Twitter (Mar. 20, 2018, 12:27 PM), https://twitter.com/noamcohen/status/976178549550931968 [https://perma.cc/5NL3-LYWG].

[245] Bari M. Schwartz, *Hot or Not? Website Briefly Judges Looks*, Harv. Crimson (Nov. 4, 2003), https://www.thecrimson.com/article/2003/11/4/hot-or-not-website-briefly-judges/.

[246] *Id.*

[247] *The Social Network*, Columbia Pictures (2010).

[248] Richard MacManus, *Facebook Mobile Usage Set to Explode*, Read Write Web (Oct. 27, 2011), https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook_mobile_usage_set_to_explode.php; Athima Chansanchai, *One-third of year's digital photos are on Facebook*, NBC News (Sept. 20, 2011), https://www.nbcnews.com/news/world/one-third-years-digital-photos-are-facebook-flna120576.

[249] Erick Schonfeld, *Facebook's Profits: $1 Billion, On $3.7 Billion in Revenues*, TechCrunch (Feb. 1, 2012), https://techcrunch.com/2012/02/01/facebook-1-billion-profit/.

> Facebook less attractive to developers and advertisers, which may have a material and adverse impact on our revenue, business, financial condition, and results of operations.[250]

211. Facebook, Inc. also disclosed that the proliferation of smartphones could materially affect its ongoing prospects:

> [O]ur users could decide to increasingly access our products primarily through mobile devices. We do not currently directly generate any meaningful revenue from the use of Facebook mobile products, and our ability to do so successfully is unproven. Accordingly, if users continue to increasingly access Facebook mobile products as a substitute for access through personal computers, and if we are unable to successfully implement monetization strategies for our mobile users, our revenue and financial results may be negatively affected.[251]

212. Facebook actively pursued changes to its product, including adding design features offered to the public. As a result of these actions, Facebook achieved its goal. As of October 2021, Facebook had ballooned to roughly 2.91 billion monthly active users, thus reaching 59% of the world's social networking population, the only social media product to reach over half of all social media users. At least 6% of these users are children in the U.S. between the ages of 9 and 11.[252]

213. Since its inception, Facebook has implemented several changes, developments, and designs to its product to prolong user engagement and impose alterations to the user experience. As discussed further below, several changes, developments, and designs render the product dangerous, addictive, and harmful.

b. Modifications of Facebook's product features over time.

214. When Meta launched thefacebook.com on February 4, 2004, only Harvard students could create accounts using their university-issued email addresses. In March 2004, students at Stanford, Columbia, and Yale were permitted to join, and eventually, any student with a college- or university-issued email address could join Facebook.[253] In 2005, Facebook was opened to high school students,

---

[250] Facebook, Inc., Registration Statement (Form S-1) at 11 (Feb. 1, 2012), https://www.sec.gov/Archives/edgar/data/1326801/000119312512034517/d287954ds1.htm#toc287954_2.

[251] *Id.* at 13.

[252] Katherine Schaeffer, *7 facts about Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021), https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/.

[253] Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12, 2006), https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-

provided they were invited by someone who was already using the site.[254] By September 2006, Facebook was preparing to open membership to all users.[255] At the time, Meta claimed that it was open only to persons aged 13 and older with a valid email address.[256] However, Meta did not require verification of a user's age or identity and did not verify users' email addresses. As a result, underage users could easily register an account with and access Facebook.

215. At first, Facebook was a collection of personal profiles and single photos. It was described by *The New York Times* as "a fancy electronic version of the whiteboard that students often mount on their doors to leave and receive messages."[257] Users could post a single profile picture, add personal details such as gender, birthdate, phone number, and interests, or connect with other users by "friending" them, either by searching for them or inviting them by email. Users could also display their relationship statuses or, alternatively, what they were "[l]ooking for" (e.g., friendship, dating, a relationship, "random play," or "whatever I can get") and "[i]nterested in" (e.g., women, men). In September 2004, however, Meta introduced the "Wall," which allowed users to interact with "friends" by posting on each other's profiles. This product feature kept users returning to Facebook to monitor Wall activity.

216. In 2005, Facebook began allowing users to upload an unlimited number of photos, making it the first photo hosting website to do so.[258]

---

others.html [https://perma.cc/DK5D-J4UZ]; Adam P. Schneider, *Facebook Expands Beyond Harvard, The Harvard Crimson* (Mar. 1, 2004), https://www.thecrimson.com/article/2004/3/1/facebook-expands-beyond-harvard-harvard-students/.

[254] Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16, 2005), https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html [https://perma.cc/4EJT-2K38].

[255] Saul Hansell, *Site Previously for Students Will Be Opened to Others*, N.Y. Times (Sept. 12, 2006), https://www.nytimes.com/2006/09/12/technology/site-previously-for-students-will-be-opened-to-others.html [https://perma.cc/DK5D-J4UZ].

[256] *Id.*; Jennifer Van Grove, *Facebook then and now (pictures)*, CNET (Feb. 13, 2014), https://www.cnet.com/pictures/facebook-then-and-now-pictures/.

[257] Ellen Rosen, *THE INTERNET; Facebook.com Goes to High School*, N.Y. Times (Oct. 16, 2005), https://www.nytimes.com/2005/10/16/nyregion/the-internet-facebookcom-goes-to-high-school.html [https://perma.cc/4EJT-2K38].

[258] Craig Kanalley, *A History of Facebook Photos (Infographic)*, Huffington Post (Aug. 2, 2011), https://www.huffpost.com/entry/facebook-photos-infographic_n_916225.

217. In 2006, Meta introduced the Newsfeed to Facebook.[259] While previously "[e]very browsing session was like a click-powered treasure hunt[,]"[260] the Newsfeed provided a centralized home page where users could view their friends' activity, including any changes to their profiles or activity on the app, such as, for example, uploading new pictures, or a change in relationship status.[261] It was the first "social feed" of its kind, and, as intended, increased time spent on the product.[262] Users immediately decried this feature as an invasion of privacy.[263] Mark Zuckerberg rationalized the feature by saying, "we agree, stalking isn't cool; but being able to know what's going on in your friends' lives is."[264] The Newsfeed algorithm was originally designed to maximize a user's time spent in one session. However, Meta later changed the code to maximize as many use sessions as possible. The frequency of sessions is a strong indicator of problematic use, a point internal Facebook researchers have made when suggesting that Facebook should "help people consolidate their use of Facebook into fewer sessions."[265] Despite this knowledge, Meta continued to focus on maximizing sessions, including for teens,[266] even prioritizing the metric over "integrity" improvements to its platforms.[267]

218. In May 2007, Meta launched a video service on Facebook, which allowed it to compete with YouTube and the then-popular MySpace.[268] Users could upload videos or record them from a webcam.

---

[259] *This Is How Facebook Has Changed Over the Past 14 Years*, Think Mktg. (Feb. 6, 2018), https://thinkmarketingmagazine.com/facebook-celebrates-14-years-of-milestones-a-timeline/.

[260] Jillian D'Onfro, *Facebook's News Feed is 10 years old. This is how the site has changed*, World Econ. F. (Sept. 9, 2016), https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed.

[261] *Id.*

[262] *Id.*

[263] Moneywatch, *Facebook Under Fire for New Feature*, CBS News (Sept. 7, 2006), https://www.cbsnews.com/news/facebook-under-fire-for-new-feature/.

[264] Jillian D'Onfro, *Facebook's News Feed is 10 years old. This is how the site has changed*, World Econ. F. (Sept. 9, 2016), https://www.weforum.org/agenda/2016/09/facebooks-news-feed-is-10-years-old-this-is-how-the-site-has-changed.

[265] Haugen_00010114 at Haugen_00010121.

[266] *See, e.g.*, META3047MDL-003-00161881 at META3047MDL-003-00161915 (highlighting moderate decline in sessions among teen Instagram users in the United States).

[267] *See, e.g.*, META3047MDL-003-00161881 at META3047MDL-003-00161915 (highlighting moderate decline in sessions among teen Instagram users in the United States).

[268] Pete Cashmore, *Facebook Video Launches: YouTube Beware!*, Mashable (May 24, 2007), https://mashable.com/archive/facebook-video-launches.

219. In April 2008, Meta launched Facebook Chat, which later became Facebook Messenger, allowing users to have private conversations with each other.[269] Facebook Chat appeared as a permanent bar across the bottom of users' screens; it also provided users the ability to see which friends were "online" and presumably available to chat. Facebook Chat allowed users to immerse themselves even deeper into Meta's product; one commentator noted that "[b]y making Facebook more real time/presence oriented, Facebook session length should go up a lot."[270]

220. In May 2008, Meta added a "People You May Know" feature to the product, touting it as a way to "connect [users] to more of your friends" on Facebook.[271] Facebook's algorithms utilize the vast amount of data it collects from its users to make personalized suggestions to users for "friending."[272] It utilizes information such as a user's friends list, their friends' friends list, education information, and work information, along with other data, to make these suggestions.[273] Some users dislike the feature, complaining that it constantly shows them people they do not want to friend, or even suggests people in sexually explicit poses[,][274] but Facebook does not provide the option to disable this feature.

221. In February 2009, Meta launched the "Like" button on Facebook.[275] The button allowed users to provide a quick reaction, as opposed to typing out a comment. Facebook's algorithm counts and displays Likes to other users. The measure also served as a social measuring stick, by which users could gauge the success of their posts, photographs, and videos. Soon after, Meta expanded the Like feature to comments as well. Users could also use the Like button to follow public figures, such as brands or publishers. When a user Liked a brand, for example, Meta would use that information to show ads for

---

[269] Dan Farber, *Facebook Chat begins to roll out*, CNET (Apr. 6, 2008), https://www.cnet.com/culture/facebook-chat-begins-to-roll-out/.
[270] *Id.*
[271] Kashmir Hill, '*People You May Know:' A Controversial Facebook Feature's 10-Year History*, Gizmodo (Aug. 8, 2018), https://gizmodo.com/people-you-may-know-a-controversial-facebook-features-1827981959.
[272] *Id.*
[273] *Id.*
[274] *Id.*
[275] Will Oremus, *How Facebook Designed the Like Button—and made social media into a Popularity Contest, Fast Co.* (Nov. 15, 2022), https://www.fastcompany.com/90780140/the-inside-story-of-how-facebook-designed-the-like-button-and-made-social-media-into-a-popularity-contest.

that brand to the user's friends on Facebook.[276] In April 2010, Meta launched "social plug-ins" that would allow people to "Like" things on the Internet outside of Facebook. Meta used the button to track Facebook users' engagement across the Internet, leveraging the data it gathered to sell targeted ads and fuel the Newsfeed algorithm.[277] The button also shaped users' own behavior, as they were conditioned to act and interact in whatever ways would generate the Like rewards, or risk having their activity hidden from their friends' Newsfeeds.[278]

222. Also in 2009, Meta changed the Newsfeed experience from chronological to algorithmic ordering, with Meta now dictating which posts users would see by highlighting "top stories" in each user's Newsfeed.[279]

223. In December 2010, Meta began using facial recognition to identify people in users' Facebook photos and suggest that users tag them.[280] Rather than letting users opt-in to the feature, Meta automatically enabled it for all users.[281]

224. Meta also debuted infinite scrolling in 2010, initially for photos, but later for its core Newsfeed, ensuring that users would never reach the bottom of a page and would, instead, keep scrolling without end or limits, leading to excessive and compulsive product use.[282]

225. In August 2012, Meta introduced the Facebook Messenger app, a feature that allowed users to see when their friends were last active on the product.[283]

---

[276] *Id.*
[277] *Id.*
[278] *Id.*
[279] Alex Hern, *Facebook to restore chronological feed of posts from friends*, Guardian (July 21, 2022), https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-from-friends.
[280] Ben Parr, *Facebook brings facial recognition to photo tagging*, Mashable (Dec. 16, 2010), http://www.cnn.com/2010/TECH/social.media/12/16/facebook.facial.recognition.mashable/index.html.
[281] Charles Arthur, *Facebook in new privacy row over facial recognition feature*, Guardian (June 8, 2011), https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-recognition?INTCMP=SRCH.
[282] Bob Leggitt, *How the Internet Destroyed Your Attention Span*, Popzazzle (Apr. 30, 2021), https://popzazzle.blogspot.com/2021/04/how-the-internet-destroyed-your-attention-span.html.
[283] Billy Gallagher, *Facebook Brings Notifications, Album-Specific Uploads to Standalone Camera App*, TechCrunch (Aug. 28, 2012), https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-schawbel_art&blogger=dan-schawbel#.

226. In August 2015, Meta launched Facebook Live, which allowed users to live-stream videos.[284] It immediately prompted more engagement with the platform and furthered Meta's goal of keeping users coming back, both to create the videos and to interact with them.[285]

227. In February 2016, Meta expanded Facebook's "Like" feature for posts, adding "Reactions" such as "like," "love," "haha," "wow," "sad," and "angry."[286] The following year, reactions were extended to comments.[287] In a manner similar to Likes, these reactions further manipulated adolescents' behavior, preying on their psychological vulnerabilities to produce compulsive use.

228. In March 2017, following the launch of a similar product on Instagram, Meta introduced Facebook Stories, with the hope of competing with the success of Snapchat among young people.[288] With Stories, users could post short, ephemeral videos that appeared for 24-hours at the top of friends' Newsfeeds.[289] Stories is designed to keep users coming back to the platform at least daily, feeding performance metrics that are crucial to Meta's bottom line, or otherwise risk missing out.

229. Later that year, in December 2017, Meta rolled out Messenger Kids, a messaging app designed for kid's ages 6 to 12,[290] for the purpose of getting younger users on its product sooner. The app does not require a Facebook account, and instead allows children to create accounts that are managed through parents' Facebook accounts.[291] Meta touted it as a way to "give[] parents more control."[292] The app, however, still collects an extraordinary amount of data about its child users,

---

[284] Joe Lazauskus, *The Untold Story of Facebook Live, Fast Co.* (Sept. 29, 2016), https://www.fastcompany.com/3064182/the-untold-story-of-facebook-live.

[285] *Id.*

[286] Casey Newton, *Facebook rolls out expanded Like button reactions around the world*, Verge (Feb. 24, 2016), https://www.theverge.com/2016/2/24/11094374/facebook-reactions-like-button.

[287] Natt Garun, *Facebook reactions have now infiltrated comments*, Verge (May 3, 2017), https://www.theverge.com/2017/5/3/15536812/facebook-reactions-now-available-comments.

[288] Casey Newton, *Facebook launches stories to complete its all-out assault on Snapchat*, Verge (Mar. 28, 2017), https://www.theverge.com/2017/3/28/15081398/facebook-stories-snapchat-camera-direct.

[289] *Id.*

[290] Nick Statt, *Facebook launches a version of Messenger for young children*, Verge (Dec. 4, 2017), https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview.

[291] *Id.*

[292] Loren Cheng, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4, 2017), https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/.

including their messages, any photos they send, and what features they use on the app.[293] Currently, there are no other official Facebook platforms marketed publicly by Meta as intended for children under 13 (despite the proliferation of such users on Instagram and Facebook). However, as of April 2021, Meta was actively seeking to develop ways for children as young as six to use the product.[294]

230. In August 2020, Meta introduced "Reels" on Instagram.[295] Reels are short videos posted by other Instagram users, presented in an algorithmically generated feed, and in a full-screen format popularized by TikTok. Meta subsequently introduced Reels to Facebook in 2021.[296] As explained more fully below, Meta committed to making videos more and more prevalent on of their platforms to attract and keep younger users in the face of competition from TikTok.

c. Facebook's acquisition and control of Instagram.

231. On or around April 6, 2012, Zuckerberg called Kevin Systrom, one of the co-founders of Instagram, offering to purchase his company.[297]

232. Instagram launched as a mobile-only app that allowed users to create, filter, and share photos. On the first day of its release in October 2010, it gained a staggering 25,000 users.[298] By April 2012, Instagram had approximately 27 million users. When Instagram released an Android version of its app—right around the time of Zuckerberg's call—it was downloaded more than a million times in less

---

[293] Nitasha Tiku, *Facebook for 6-Year-Olds? Welcome to Messenger Kids*, Wired (Dec. 5, 2017), https://www.wired.com/story/facebook-for-6-year-olds-welcome-to-messenger-kids/. [https://perma.cc/WYE3-UBY].

[294] Ezra Kaplan & Jo Ling Kent, *Documents reveal Facebook targeted children as young as 6 for consumer base*, NBC News (Oct. 29, 2021), https://www.nbcnews.com/tech/social-media/facebook-documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma.

[295] Instagram, *Introducing Instagram Reels*, Meta (Aug. 5, 2020), https://about.fb.com/news/2020/08/introducing-instagram-reels/.

[296] Facebook, *Launching Reels on Facebook in the US*, Meta (Sept. 29, 2021), https://about.fb.com/news/2021/09/launching-reels-on-facebook-us/.

[297] Nicholas Carlson, *Here's The Chart That Scared Zuckerberg Into Spending $1 Billion On Instagram*, *Bus. Insider* (Apr. 14, 2012), https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4 [https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4].

[298] Dan Blystone, *Instagram: What It Is, Its History, and How the Popular App Works, Investopedia* (Oct. 22, 2022), https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram.

than a day.[299] Instagram's popularity is so widespread and image-based, a new term has grown up around it for the perfect image or place, "Instagrammable."[300] Its users also use a variety of slang derived from the product, such as "IG"; "The Gram"; "Do it for the Gram", a phrase used by a user performing a risky or unusual action to garner attention; "Finsta," a contraction of fun or fake Instagram used to refer to secondary accounts; among other slang.

233. On April 9, 2012, just days after Zuckerberg's overture to Systrom, Facebook, Inc. purchased Instagram, Inc. for $1 billion in cash and stock. This purchase price was double the valuation of Instagram implied by a round of funding the company had closed days earlier.[301]

234. Facebook, Inc. held its initial public offering less than two months after acquiring Instagram, Inc.[302]

235. Zuckerberg's willingness to pay a premium for Instagram was driven by his instinct that Instagram would be vital to reaching a younger, smartphone-oriented audience—and thus critical to his company's future success.

236. This was prescient. Instagram's revenue grew exponentially from 2015 to 2022.[303] A study conducted in the second quarter of 2018 showed that, over the prior year, advertisers' spending on Instagram grew by 177%—more than four times the growth of ad spending on Facebook.[304] Likewise, visits to Instagram rose by 236%, nearly thirty times the growth in site visits experienced by Facebook

---

[299] Kim-Mai Cutler, *From 0 To $1 Billion In Two Years: Instagram's Rose-Tinted Ride To Glory*, TechCrunch (Apr. 9, 2012), https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/.

[300] Sarah Frier, *No Filter: The Inside Story of Instagram* (Simon & Schuster 2020).

[301] Alexia Tsotsis, *Right Before Acquisition, Instagram Closed $50M At A $500M Valuation From Sequoia*, Thrive, Greylock And Benchmark, TechCrunch (Apr. 9, 2012), https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/.

[302] Evelyn Rusli & Peter Eavis, *Facebook Raises $16 Billion in I.P.O.*, N.Y. Times (May 17, 2012), https://archive.nytimes.com/dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/ [https://perma.cc/6GQV-TEY8].

[303] *See* Josh Constine, *Instagram hits 1 billion monthly users, up from 800M in September, TechCrunch* (June 20, 2018), https://techcrunch.com/2018/06/20/instagram-1-billion-users/ (showing meteoric rise in monthly active users over period and reporting year-over-year revenue increase of 70% from 2017–2018).

[304] Merkle, *Merkle Releases Its Q2 2018 Digital Marketing Report*, Bloomberg (July 19, 2018), https://www.bloomberg.com/press-releases/2018-07-19/merkle-releases-its-q2-2018-digital-marketing-report [https://perma.cc/9CGM-UDA6].

during the same period.[305] By 2021, Instagram accounted for over half of Meta's $50.3 billion in net advertising revenues.[306]

237. Meta has claimed credit for Instagram's success since its acquisition. Zuckerberg told market analysts that Instagram "wouldn't be what it is without everything that we put into it, whether that's the infrastructure or our advertising model[.]"[307]

238. Instagram has become the most popular photo-sharing social media product among teenagers and young adults in the United States. 62% of American teens use, with 10% of users reporting that they use it "almost constantly."[308] Instagram's young user base has become even more important to Meta as the number of teens using Facebook has decreased over time.[309]

239. Facebook's and Instagram's success, and the riches they have generated for Meta, have come at an unconscionable cost in human suffering.

240. In September 2021, The Wall Street Journal began publishing internal documents leaked by former Facebook product manager, Frances Haugen.[310] The documents are disturbing. They reveal that, according to Meta's researchers, 13.5% of U.K. girls reported that Instagram made suicidal thoughts worse, and 17% of teen girls reported worsening eating disorders after using Instagram.[311] Over

---

[305] *Id.*

[306] Sara Lebow, *For the first time, Instagram contributes over half of Facebook's US ad revenues*, Insider Intel. (Nov. 1, 2021), https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues.

[307] Salvador Rodriguez, *Mark Zuckerberg is adamant that Instagram should not be broken off from Facebook*, CNBC (Oct. 30, 2019), https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html.

[308] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/; *see also* Erinn Murphy *et al.*, *Fall 2021: Taking Stock with Teens* at 19, Piper Sandler (2021), https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-44248fb10e3adfcbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top (81% of teens use Instagram at least once a month).

[309] Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 26, 2021), https://www.nytimes.com/2021/10/16/technology/instagram-teens.html [https://perma.cc/SSL6-QUN2].

[310] *See the facebook files: A Wall Street Journal investigation*, Wall St. J., https://www.wsj.com/articles/the-facebook-files-11631713039?mod=bigtop-breadcrumb (collection of The Wall Street Journal articles).

[311] Morgan Keith, *Facebook's internal research found its Instagram platform contributes to eating disorders and suicidal thoughts in teenage girls, whistleblower says*, Bus. Insider (Oct. 3, 2021),

40% of Instagram users who reported feeling "unattractive" said that feeling began while using Instagram,[312] and 32% of teen girls who already felt bad about their bodies felt even worse because of the app.[313]

241. Internal Meta presentations from 2019 and 2020 were transparent in their conclusions about the harms caused by Instagram: "'We make body image issues worse for one in three teen girls[;]'"[314] "Mental health outcomes related to this can be severe[;]"[315] and "Aspects of Instagram exacerbate each other to create a perfect storm."[316]

242. Haugen's revelations made clear to the public what Meta has long known: In an effort to addicts kids and drive increased usage, Meta's platforms exploit the neurobiology of developing brains, and all the insecurities, status anxieties, and beauty comparisons that come along with it. In a bid for higher profits, Meta ignored or actively concealed the harms resulting from its addiction-based business model, which are widespread, serious, long-term, and in tragic instances, fatal.

d. Modifications of Instagram's product features over time.

243. In its earliest form, Instagram was a photo-sharing app. Users could post still images enhanced by the product's suite of built-in photo filters "follow" other users, and "Like" or comment on posts by other users, all in a centralized chronological feed. Instagram also allowed users to see their

---

https://www.businessinsider.com/facebook-knows-data-instagram-eating-disorders-suicidal-thoughts-whistleblower-2021-10.

[312] Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021), https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739 [https://perma.cc/6XL4-TGJ8]; *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 9, Wall St. J. (Mar. 26, 2020), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf.

[313] Billy Perrigo, *Instagram Makes Teen Girls Hate Themselves. Is That a Bug or a Feature?*, Time (Sept. 16, 2021), https://time.com/6098771/instagram-body-image-teen-girls/.

[314] Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021), https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739 [https://perma.cc/6XL4-TGJ8].

[315] *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 34, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf.

[316] Georgia Wells *et al.*, *Facebook Knows Instagram is Toxic for Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021), https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739 [https://perma.cc/6XL4-TGJ8].

friends' activity—such as liking or commenting on a post, or following other accounts—on the app, through its "Following" tab.

244. In January 2011, Instagram added hashtags, which allowed users to group together posts about particular topics.[317]

245. Since acquiring Instagram, Meta has introduced to the product a host of additional features to drive pre-teen and teenage engagement and, in doing so, increase advertising revenues.

246. In June 2013, in addition to the still, filtered images for which the product was known, Instagram began to support videos of up to 15 seconds.[318] This feature also included 13 new, specially created filters that could be applied to the videos.[319] At the time, this feature satisfied what some characterized as the "years-long search for an 'Instagram for video,'"[320] and allowed Instagram to compete with a popular video-sharing product at the time, Vine. It also allowed users posting videos to select their "favorite" scene from the video to be displayed as the cover image on video posts. According to Systrom, this ensured that user's videos were "beautiful even when they're not playing."[321] Despite this, Instagram remained largely a photo-sharing app.

247. In December 2013, Meta added Instagram Direct, a feature that allows users to send messages or posts to specific people directly from the app.[322] This function allowed Instagram to compete against messaging platforms like Snapchat that were gaining popularity among teens and pre-teens.

248. In June 2015, Meta opened Instagram to all advertisers, weaving advertisements into users' Feeds.[323]

---

[317] Jonah Madrigallos, *Diving Deep into the Science of the Instagram Algorithm*, Signalytics (Sept. 1, 2021), https://www.signalytics.ai/instagram-algorithm/.

[318] Colleen Taylor, *Instagram Launches 15-Second Video Sharing Feature*, With 13 Filters And Editing, TechCrunch (June 20, 2013), https://techcrunch.com/2013/06/20/facebook-instagram-video/.

[319] *Id.*

[320] *Id.*

[321] Kevin Systrom, *Introducing Video on Instagram*, Instagram (June 20, 2013), https://about.instagram.com/blog/announcements/introducing-video-on-instagram.

[322] Jordan Crook, *Instagram Introduces Instagram Direct*, TechCrunch (Dec. 12, 2013), https://techcrunch.com/2013/12/12/instagram-messaging/.

[323] Vindu Goel & Sydney Ember, *Instagram to Open its Photo Feed to Ads*, N.Y. Times (June 2, 2015), https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-advertising.html [https://perma.cc/RMQ9-KSCJ].

249. In March 2016, Meta did away with Instagram's chronological feed and implemented engagement-based ranking algorithms.[324] Now, upon opening the app, users would no longer see posts from people they followed in the order they were posted; instead, they would encounter an algorithmic feed, like the one employed on Meta's other product, Facebook. At the time, Instagram said that the new algorithmic feed would rank the order of posts in users' feeds "based on the likelihood [that users would] be interested in the [post], [their] relationship with the person posting and the timeliness of the post[.]"[325]

250. In February 2016, with the popularity of video rising on Instagram, Meta added view counts to videos, allowing users to see how many times users had viewed their posts.[326] Later that year, in December 2016, Instagram added the ability to "Like" comments to posts (symbolized by a heart emoji).[327] Both features became a source of additional motivation by users to seek social acceptance and validation.

251. In August 2016, Meta introduced Instagram Stories,[328] another feature intended to compete against Snapchat for the youth market. Systrom has admitted that the feature was copied from a Snapchat feature popular with children called "Snapchat Stories."[329] Later that year, in November 2016, Meta introduced Instagram Live,[330] designed to compete with both Snapchat's ephemeral, disappearing posts, and the live-streamed videos of a then-popular product called Periscope. Instagram Live permitted users to live stream video, which disappeared as soon as the live stream stopped.

---

[324] Alex Heath, *Instagram is about to go through its most radical change ever*, Bus. Insider (Mar. 15, 2016), https://www.businessinsider.com/instagram-to-introduce-algorithmic-timeline-2016-3.

[325] *Id.*

[326] Michael Zhang, *Instagram is Adding View Counts to Your Videos*, PetaPixel (Feb. 11, 2016), https://petapixel.com/2016/02/11/instagram-adding-view-counts-videos/.

[327] Hayley Tsukayama, *Instagram will soon let you like comments – or even turn them off completely*, Wash. Post (Dec. 6, 2016), https://www.washingtonpost.com/news/the-switch/wp/2016/12/06/instagram-will-soon-let-you-like-comments-or-even-turn-them-off-completely/ [https://perma.cc/6ALQ-ZSE5].

[328] *Introducing Instagram Stories*, Instagram (Aug. 2, 2016), https://about.instagram.com/blog/announcements/introducing-instagramstories#:~:text=Today%2C%20we're%20introducing%20Instagram,a%20slideshow%20format%3A%20your%20story.

[329] Rachel Kraus, *Instagram Founder Admits He Blatantly Stole Stories from Snapchat*, Mashable (Mar. 11, 2019), https://mashable.com/article/kevin-systrom-instagram-stories-snapchat.

[330] Josh Constine, *Instagram launches disappearing Live video and messages*, TechCrunch (Nov. 21, 2016), https://techcrunch.com/2016/11/21/instagram-live/.

252. Meta recognized early on that the Live feature was successful among young users. A February 2017 internal memo noted that of the 9.2 million broadcasts per day, "35% of [Live] broadcasters are teens (early and late high school)."[331]

253. In December 2016, Meta introduced a product feature that allowed users to "save" posts from other users.[332] By tapping a bookmark icon underneath posts in their feeds, users could save posts for later, in a private tab that was viewable only to the saving user.

254. In April 2017, Meta introduced another feature with appeal to children, an offline mode that allows users to view posts and interact with Instagram even when they do not have access to an internet connection,[333] for example when riding a bus to or from school or when parents have disabled home internet to prevent overuse of social media by their kids.

255. In January 2018, Meta launched a feature allowing Instagram users to see when others they had messaged with were active, or most recently active, on Instagram. This feature exploits social reciprocity, which, as explained above, results in more time spent using the product.

256. In June 2018, at the same time it announced that Instagram had grown to one billion users, Meta introduced IGTV, both in the Instagram app and as a standalone product.[334] IGTV was intended to rival YouTube. IGTV allowed users to upload videos up to one-hour long.

257. In September 2018, Systrom and Instagram co-founder Mike Krieger resigned from Instagram, and Facebook named Adam Mosseri, a 10-year veteran of Facebook, as Instagram's new CEO.

258. Under Mosseri's leadership, Instagram aggressively focused on acquiring and maximizing the engagement of young users. In 2018, Instagram allotted most of its global annual marketing budget to targeting 13- to 15-year-old children, a marketing demographic it calls "early high

[331] MDL AG Compl. at 21, ¶ 106.

[332] Lisa Eadicicco, *Instagram Just Added a New Feature that Lets You Save Other Users' Posts*, Time (Dec. 14, 2016), https://time.com/4602063/instagram-new-update-features-2016/.

[333] Josh Constine, *Instagram on Android gets offline mode*, TechCrunch (Apr. 18, 2017), https://techcrunch.com/2017/04/18/instagram-offline/.

[334]. Kevin Systrom, *Welcome to IGTV, our New Video App*, Instagram (June 20, 2018), https://about.instagram.com/blog/announcements/welcome-to-igtv.

school."[335] According to Meta, these users represent the platform's "teen foothold" for its "US pipeline."[336] "Youth and [t]eens are critically important to Instagram. While Instagram has strong market-fit with [t]eens, we know we need to constantly 're-win' this segment[.]"[337] Meta has expressly sought to maximize metrics like "teen time spent" on the Instagram product.[338]

259. One way Meta sought to increase its teen metrics was through its launch of "Reels" in August 2020, which mimicked the format of videos on TikTok. As noted, Reels mirrors TikTok by algorithmically presenting short, "full-screen" videos posted by other Instagram users. Like TikTok, Reels counts and displays the number of likes, follows, comments, shares, and views of a video. The following year, Meta did away with IGTV, which had allowed longer videos to be posted by users in a more traditional format. In late July 2022, Mosseri announced that "more and more of Instagram is going to become video over time[.]"[339]

260. Instagram creates images and GIFs for users to incorporate into their videos and picture postings. Instagram has also acquired publishing rights to thousands of hours of music and video, which it provides to its users to attach to the videos and pictures that they post on Instagram.

2. Meta intentionally encourages youth to use its platforms and then leverages that usage to increase revenue.

261. Facebook and Instagram owe their success to their design choices, including their underlying computer code and algorithms, and to Meta's failure to warn the public, particularly youth, that the platforms present serious safety risks. Meta's tortious conduct begins before a user has viewed, let alone posted, any content.

---

[335] Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 26, 2021), https://www.nytimes.com/2021/10/16/technology/instagram-teens.html [https://perma.cc/SSL6-QUN2].

[336] *Id.*

[337] META3047MDL-003-00030070 at META3047MDL-003-00030071.

[338] Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 26, 2021), https://www.nytimes.com/2021/10/16/technology/instagram-teens.html [https://perma.cc/SSL6-QUN2].

[339] Marisa Dellatto, *Instagram Exec Defends Shift to Video Despite Complaints from Creators like Kylie Jenner*, Forbes (July 26, 2022), https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e [https://perma.cc/AZH9-MEMX].

262. Meta describes the Instagram product as a "mobile-first experience."[340] Indeed, the great majority of Instagram users in the U.S. access Instagram through a mobile application for either the iOS or Android operating systems.

263. To use the Facebook or Instagram app, one must first obtain it. On a mobile device, this is accomplished by visiting a store from which the product can be downloaded—either the Apple App Store (for iPhone users) or the Google Play Store (for Android users). Once installed onto an individual's smartphone, they can open the app. They are then asked to create a new account by entering an email address, adding a name, and creating a username and password.

264. A prospective Instagram or Facebook user is then invited to press a colorful "Sign up" button. In small print above this button, the user is informed that "[b]y tapping Sign up, you agree to our Terms, Data Policy and Cookies Policy." The text of those policies is not presented on the sign-up page. While the words "Terms," "Data Policy," and "Cookies Policy" are slightly bolded, the user is not informed that they can or should click on them, or otherwise told how they can access the policies.

[340] Yorgos Askalidis, *Launching Instagram Messaging on Desktop*, Instagram (Sept. 25, 2020), https://about.instagram.com/blog/engineering/launching-instagram-messaging-on-desktop.



265. Meta's Data Policy (rebranded as a "Privacy Policy" in 2022), which applies to a range of Meta apps, including Facebook and Instagram,[341] indicates Meta collects a breathtaking amount of data from the users of its platforms, including, among others:

a. "[c]ontent you create, like posts, comments or audio";

b. "[c]ontent you provide through our camera feature or your camera roll settings, or through our voice-enabled features";

[341] *Privacy Policy*, Meta (June 15, 2023), https://mbasic.facebook.com/privacy/policy/printable/#annotation-1.

c. "information you've shared with us through device settings, like GPS location, camera access, photos and related metadata";

d. "[m]essages you send and receive, including their content";

e. "[m]etadata about content and messages";

f. "[t]ypes of content, including ads, you view or interact with, and how you interact with it";

g. "[t]he time, frequency and duration of your activities on our Products";

h. "your contacts' information, such as their name and email address or phone number, if you choose to upload or import it from a device, like by syncing an address book";

i. information about "[w]hat you're doing on your device, like whether our app is in the foreground or if your mouse is moving";

j. "device signals from different operating systems[,]" including "things like nearby Bluetooth or Wi-Fi connections";

k. "[i]nformation about the network you connect your device to and your connection, including your IP address" (including the "name of your mobile operator or internet service provider (ISP)[,] . . . [l]anguage[,] . . , [t]ime zone[,] . . , [m]obile phone number[,] . . , [c]onnection and download speed"),

l. "[i]nformation about other devices that are nearby or on your network",

m. "Wi-Fi hotspots you connect to using our Products"; and

n. information from third parties, including, "[m]arketing and advertising vendors and data providers, who have the rights to provide us with your information."

266. While the Data Policy indicates the scope of user information collected by Meta through Facebook and Instagram, it is far less forthcoming about the purposes for which this data is collected, and its consequences for younger users.

267. The Data Policy presents those goals as benign and even positive for its users—"to provide a personalized experience to you" and to "[m]ake suggestions for you (such as people you may know, groups or events that you may be interested in or topics that you may want to follow)[.]"[342]

[342] *Id.*

268. The Data Policy does not inform users that the more time individuals spend using Facebook and Instagram, the more ads Meta can deliver and the more money it can make; or that the more time users spend on Facebook and Instagram, the more Meta learns about them, and the more it can sell to advertisers the ability to micro-target highly personalized ads.[343]

269. Meta monetizes its users and their data by selling ad placements to marketers. Meta generated $69.7 billion from advertising in 2019, more than 98% of its total revenue for the year.[344]

270. Given its business model, Meta has every incentive to—and knowingly does—addict users to Facebook and Instagram. It accomplishes this through the algorithms that power its apps, which are designed to induce compulsive and continuous scrolling for hours on end, operating in conjunction with the other dangerous features described throughout this Complaint.[345]

271. Indeed, even Mark Zuckerberg confirmed Meta's core business model relies on increasing the amount of time its users stay on their platforms. Zuckerberg wrote he hoped to see time spent on Instagram increase by 10% between 2016 and 2021.[346]

---

[343] Nor does it inform users that Meta previously allowed third-party apps to harvest from Facebook "vast quantities of highly sensitive user and friends permissions." Order Granting in Part Plaintiffs' Motion for Sanctions at 9, *In Re: Facebook, Inc. Consumer Privacy User Profile Litigation*, No. 18-md-02843-VC (N.D. Cal. Feb. 9, 2023), ECF No. 1104. This has included an app called Sync. Me, which—according to Meta's internal investigative documents—"had access to many 'heavyweight' permissions, including the user's entire newsfeed, friends' likes, friends' statuses, and friends' hometowns." *Id.* It has included Microstrategy, Inc., which accessed data from "16 to 20 million" Facebook users, despite only being installed by 50,000 people. *Id.* And it has included one Yahoo app that made "'billions of requests'" for Facebook user information, including "personal information about those users' friends, including the friends' education histories, work histories, religions, politics, 'about me' sections, relationship details, and check-in posts." *Id.* at 9–10.

[344] Rishi Iyengar, *Here's how big Facebook's ad business really is*, CNN (July 1, 2020), https://www.cnn.com/2020/06/30/tech/facebook-ad-business-boycott.

[345] *See* Christian *Montag et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories* at 5, 16(14) Int'l J. Env't Rsch. & Pub. Health 2612 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-02612.pdf ("One technique used to prolong usage time in this context is the endless scrolling/streaming feature."); *see generally*, Ludmila Lupinacci, '*Absentmindedly scrolling through nothing': liveness and compulsory continuous connectedness in social media*, 43 Media, Culture & Soc'y 273 (2021), https://journals.sagepub.com/doi/epdf/10.1177/0163443720939454 (describing the ways that users use and experience social media apps).

[346] MDL AG Compl. at 12, ¶ 57.

272. As Meta noted in its 2021 Annual Report to the SEC, "[t]he size of our user base and our users' level of engagement across our products are critical to our success."[347] It noted that factors affecting Meta's revenue generation include: (1) "user engagement, including time spent on [Meta's] products"; (2) increasing "user access to and engagement with [Meta's] products"; (3) Meta's ability "to maintain or increase the quantity or quality of ads shown to users"; (4) maintaining traffic to monetized features like the "Feed" and "Stories"; (5) the "effectiveness of [Meta's] ad targeting"; and (6) the degree to which users engage with Meta's ads.[348]

273. Accordingly, Meta constantly collects and reviews data on young users' activity on its platforms. As a Director of Product Management at Instagram stated in January 2020, he was "focused on getting a very clear understanding of our current US [Daily Active People] and [Monthly Active People] growth situation, opportunities, and challenges because 1) US Teens are our #1 cohort for both long-term growth of [Instagram] and [Facebook] Family incrementality."[349]

274. Meta's Data Policy contains no warnings whatsoever that use of its platforms at the intensity and frequency targeted by Meta creates known risks of mental, emotional, and behavioral problems, nor does it mention the increased likelihood of injury for children, Instagram's key audience.

275. Instagram's collection and utilization of user data begins the instant a user presses "Sign Up." At that point, Instagram prompts a new user to share a substantial amount of personal data. First, Instagram asks the user to share their personal contacts, either by syncing contacts from their phone and/or syncing their "Friends" from Facebook—"We'll use your contacts to help you find your friends and help them find you." Next, Instagram asks the new user to upload a photo of themselves. After that, Instagram asks the user to "Choose your interests" to "Get started on Instagram with account recommendations tailored to you." Finally, Instagram invites the new user to "Follow accounts to see their photos and videos in your feed," offering a variety of recommendations. After sign-up is completed, Instagram prompts the new user to post either a photo or a short video.

---

[347] Meta Platforms, Inc., Annual Report (Form 10-K) at 13 (Feb. 2, 2022), https://www.sec.gov/Archives/edgar/data/1326801/000132680122000018/fb-20211231.htm.
[348] *Id.* at 15–16.
[349] MDL AG Compl. at 14, ¶ 69.

276. Meta's collection and utilization of user data continues unabated as a new user begins to interact with its platforms. Meta's tracking of behavioral data—ranging from what the user looks at, to how long they hover over certain images, to what advertisements they click on or ignore—helps Meta build out a comprehensive and unique enticement, tailormade to inconspicuously lure each respective user. As the user continues to use the product, Meta's algorithm works silently in the background to refine this enticement, by continuously monitoring and measuring patterns in the user's behavior. Meta's algorithm is sophisticated enough that it can leverage existing data to draw educated inferences about even the user behavior it does not track firsthand. Meta's comprehensive data collection allows it to target and influence its users to engineer their protracted "engagement" with its platforms.

277. Meta's collection and analysis of user data allows it to assemble virtual dossiers on its users, covering hundreds if not thousands of user-specific data segments. This data collection and analysis allows advertisers to micro-target advertising to very specific categories of users, who can be segregated into pools or lists using Meta's data segments. Only a fraction of these data segments come from content knowingly designated by users for publication or explicitly provided by users in their account profiles. Many of these data segments are collected by Meta through surveillance of each user's activity on the platform and off the platform, including behavioral surveillance that users are not even aware of, like navigation paths, watch time, and hover time. As Meta's user database grows, it leverages that data to manipulate users into spending more time on the platforms. As users spend more time on the platforms, the more detailed information Meta can extract. The more detailed information Meta can extract from users, the more money it makes.

278. Currently, advertisers can target Instagram and Facebook ads to young people based on age, gender, and location.[350] According to U.S.-based non-profit Fairplay, Meta did not actually cease collecting data from teens for advertising in July 2021, as Meta has claimed.[351]

279. Meta clearly understands the revenue and growth potential presented by its youngest users, and it is desperate to retain them. In an internal email from August 2017, a Meta employee

[350] Andrea Vittorio, *Meta's Ad-Targeting to Teens Draws Advocacy Group Opposition*, Bloomberg (Nov. 16, 2021), https://news.bloomberglaw.com/privacy-and-data-security/metas-ad-targeting-to-teens-draws-advocacy-group-opposition.

[351] *Id.*

expressed one of Meta's "[l]onger-term [f]ocus [a]reas" was how to "get teens to share their location with us so we can leverage that data for awesome product experiences and also analytics around high schools.[352] Further, documents obtained by *The New York Times* indicate that, since 2018, almost all Instagram's $390 million global marketing budget has gone towards showing ads to teenagers.[353]

280. Meta has also acknowledged the importance of its young users by quantifying their value to the company. An internal email from September 2018 characterized Meta's youth users in terms of their "Lifetime Value (LTV)" to Meta, defined as the cumulative total profit expected from a user.[354] The email identified "[t]he lifetime value of a 13 y/o teen is roughly $270 per teen" and that "[t]his number is core to making decisions about [Meta's] business" because "you do not want to spend more than the LTV of the user."[355]

281. Despite its research to the contrary, Meta has denied it places a monetary value on young users. At a Senate subcommittee hearing on September 30, 2021, Senator Amy Klobuchar asked Meta executive Antigone Davis what Meta believed the lifetime monetary value of young users was. Davis responded, "[t]hat's just not the way we think about [it]."[356] Davis also denied that Meta "considered the profit value of developing products when [Meta] make[s] their decisions of how those products look," testifying that this would be a "terrible business model."[357]

282. Before the rise of Instagram, Facebook was the social media product by which Meta targeted young users. Until recently, this targeting was devastatingly effective. In January 2014, 90% of U.S. teens used Facebook monthly; as late as January 2016, 68% did.[358]

283. While the number of teen Facebook users has declined in recent years, Facebook remains critical to Meta's strategy towards young users. Meta views Facebook as the nexus of teen users' lives on social media, "where all social circles intersect," and as filling a similar role for such users as the

---

[352] Complaint and Jury Demand ("Mass. AG Compl.") at 19, ¶ 83, *Commw. Mass. v. Meta Platforms, Inc.*, No. 2384cv02397-BLS1 (Mass. Super. Ct. Nov. 6, 2023), ECF No. 1.

[353] Sheera Frenkel *et al.*, *Instagram Struggles With Fears of Losing Its 'Pipeline': Young Users*, N.Y. Times (Oct. 16, 2021), https://www.nytimes.com/2021/10/16/technology/instagram-teens.html [https://perma.cc/SSL6-QUN2].

[354] MDL AG Compl. at 19, ¶ 84.

[355] *Id.*

[356] MDL AG Compl. at 19, ¶ 85.

[357] *Id.*

[358] META3047MDL-003-00171899 at META3047MDL-003-00171904.

career-focused social media product LinkedIn fills for adults.[359] According to the summary of a 2018 meeting, Meta's expressed goal was to have users "move through" Meta's platforms "as they grow, i.e. Messenger Kids → Instagram → Facebook."[360]

284. To create this cycle, Meta embarked on a "major investment in youth," researching and pursuing platforms targeted at kids as young as six.[361] The centerpiece of these efforts is Messenger Kids.[362] In 2019, Meta conducted at least two research projects on growing Messenger Kids. One study explored how to use "Playdates as a Growth Lever for Messenger Kids."[363] During this study, Meta sought to understand better how playdates might be an area to increase usage among kids by interviewing parents of active users. Investigators suggested there was an opportunity to "brainstorm features and/or prompts encouraging use of[364] the app, prior and after playdates to inprove [sic] retention and active threads."[365] Later that year, they released a finding from a second investigation of parents and children who used Messenger Kids and those who did not.[366] To drive Messenger Kids growth, the study recommended "encourag[ing] more [kid-to-kid] connections in [Messenger Kids]" by "surfac[ing] and develop[ing] additional in-app activities that involve others," while emphasizing to parents the "play-based messaging" and the "play aspect of [Messenger Kids] — camera filters, games, filters via notif[ication]s and QPs."[367] These are many of the same features found in Instagram.

285. Meta was also eager to market its platforms to tweens—users aged 10-12. Although Meta employees publicly denied using children as "guinea pigs" to develop product features, internally Meta was intensely interested in children's use of their apps.[368] Meta conducted research projects, with titles

---

[359] *Id.* at META3047MDL-003-00171909.
[360] META3047MDL-003-00003731 at META3047MDL-003-00003732.
[361] Haugen_00017238 at Haugen_00017238.
[362] Nick Statt, *Facebook launches a version of Messenger for young children*, Verge (Dec. 4, 2017), https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview.
[363] Haugen_00023087 at Haugen_00023087.
[364] *Id.* at Haugen_00023088.
[365] *Id.* at Haugen_00023090.
[366] Haugen_00023066 at Haugen_00023067.
[367] *Id.* at Haugen_00023085.
[368] John Twomey, *Molly Russell inquest latest: Teenager viewed suicide videos of 'most distressing nature'*, Express (Sept. 23, 2022), https://www.express.co.uk/news/uk/1673461/Molly-Russell-inquest-latest-Teenager-suicide-videos-instagram.

such as, *Tweens JTBD Survey*;[369] and *Exploring Tweens' Social Media Habits*.[370] In the latter study, Meta compared tween perceptions of their competitors' platforms to understand "tween product needs,"[371] noting that tweens can "connect and have fun using existing apps, even though they're not made with a 10-to-12-year-old in mind."[372] Meta's takeaway was to "use entertainment/interests as a starting point for engagement" and to "highlight fitting in."[373]

286. In 2019, Meta conducted a series of interviews in Los Angeles and Denver with tween friend groups, friend pairs, and individuals.[374] Meta used this research to craft "product recommendation[s]" to appeal to tweens, suggesting features to help "decrease friction in the digital interaction funnel."[375] The recommendations included developing ways to "provide automatic signals that indicate whether friends are available to interact," "[e]nable tweens to instrumentally signal their availability," "[p]rovide lightweight conversation starters that tweens can use to test the reciprocity of an interaction (e.g., poking, waves)," and "build in a way that enables quick communication across all messaging modalities."[376]

287. Meta's interest, efforts, and success in expanding the presence of its platforms in children's lives is clear. Given the delicate, developing nature of the young brain and Meta's creation of social media platforms designed to promote repetitive, compulsive use, it is not surprising that American society is now grappling with the ramifications of Meta's growth-at-any-cost approach. In a candid moment, a Software Engineer at Meta admitted that "[i]t's not a secret that we've often resorted to aggressive tactics in the name of growth, and we've been pretty unapologetic about it."[377]

288. Meta has studied features and designs from its other platforms to make Instagram as attractive and addictive as possible to young users. Meta's flagship product Facebook was the original testing ground for many of Instagram's addictive and otherwise harmful features, which the two

---

[369] "JTBD" appears to stand for "Jobs to Be Done." Haugen_00024450 at Haugen_00024454.
[370] Haugen_00023849 at Haugen_00023850.
[371] *Id.* at Haugen_00023888.
[372] *Id.* at Haugen_00023886.
[373] *Id.* at Haugen_00023888.
[374] Haugen_00024450 at Haugen_00024450.
[375] *Id.* at Haugen_00024466.
[376] *Id.*
[377] Haugen_00000934 at Haugen_00000934.

platforms share to this day. This feature overlap is no accident: it represents a conscious strategy adopted by Meta to keep social media users hooked on its "family" of platforms for their entire lives.

3. Meta intentionally designed its platforms to addict children and adolescents.

289. Meta designed Facebook and Instagram with harmful features that users encounter at every stage of interaction with the product and that lead to serious problems in Plaintiff's schools. These include, but are not limited to: (a) recommendation algorithms, fueled by extensive data collection, which are designed to promote use in quantities and frequency harmful to youth; (b) features that prey upon children's desire for validation and need for social comparison; (c) features that are designed to create harmful loops of repetitive and excessive product usage; (d) lack of effective age-verification mechanisms, despite having the ability to implement them; (d) inadequate parental controls and facilitation of unsupervised use of the platforms; and (e) intentionally placed obstacles to discourage cessation of use of the platforms.

290. Facebook and Instagram have been designed, maintained, and constantly updated by one of the world's most wealthy, powerful, and sophisticated corporations. Large teams of expert data scientists, user experience ("UX") researchers, and similar professionals have spent years fine-tuning these platforms to addict users. Every aspect of the platforms' interfaces, each layer of their subsurface algorithms and systems, and each line of underlying code has been crafted by brilliant minds. Every detail—the color of product icons, the placement of buttons within the interface, the timing of notifications, etc.—is designed to increase the frequency and length of use sessions. Therefore, it is impractical to create a comprehensive list of addictive, harm-causing elements of and features in the product until in-depth discovery occurs. Many features, such as the inner workings of Meta's algorithms, are secret and unobservable to users. Discovery during this litigation will reveal additional details about the addictive and harmful design of Meta's platforms.

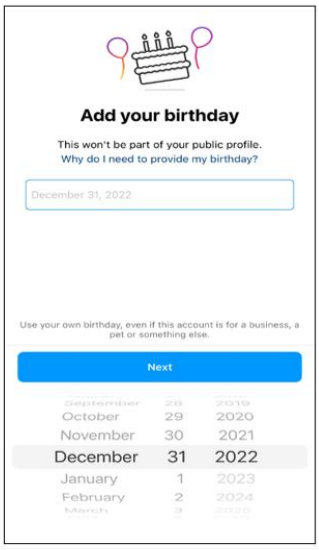
a. Meta has failed to implement effective age-verification measures to keep children off Facebook and Instagram.

291. Children of all ages can use and become addicted to Meta's platforms without any effective safeguard or process prior to entry. Yet children are most vulnerable to the negative impacts of Facebook and Instagram.

292. Meta purports to prohibit children under the age of 13 from using their platforms but, at all relevant times, has lacked any reliable form of age verification to prevent underage users from using their platforms. Even now, over two years after Frances Haugen testified before Congress regarding the harm Meta knowingly causes to minors, users are only asked to self-report their birthday when signing up for a Facebook or Instagram account:



(Facebook, January 2023)

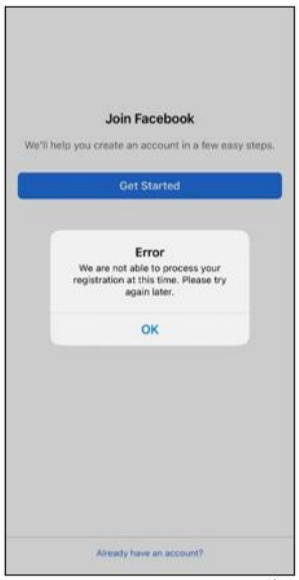


(Instagram, January 2023)

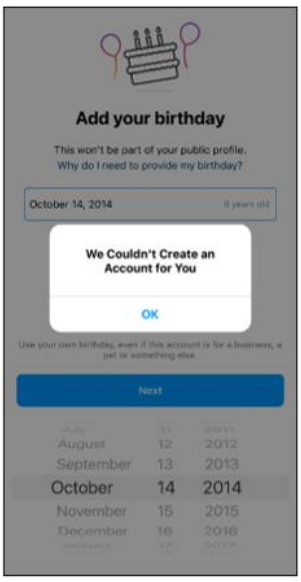
293. If users report a birthday indicating they are less than 13 years old, the platforms redirect them to the messages below:



(Facebook, January 2023)



(Facebook, January 2023)



(Instagram, January 2023)

294. After acknowledging this message, users can immediately reattempt to create an account and input an eligible birthday. When a user enters an eligible birthday, there are no restrictions to creating an account other than having it linked to a cell phone number or an email. In a matter of seconds—without meaningful age verification, identity verification, or parental consent—children of all ages can create a Facebook or Instagram account, then immediately become subject to recommendation systems designed to induce endless interaction with algorithmically tailored user experiences, all while their behavior is closely but inconspicuously monitored, without actual consent, to make a progressively more addicting experience.

295. Meta chooses not to universally utilize available, effective, and reliable age verification methods and systems used by many companies across the internet. Indeed, Meta has jettisoned age-related safeguards that were initially present on the Facebook product to increase its user numbers, thereby increasing its profit, to the detriment of children.

296. Other online platforms employ substantially more effective and reliable age verification schemes before granting children access. These include, but are not limited to, connecting new users to parents' accounts, credit card verification, verification by presentation of an identification card (or other government-issued document), or linking a verified undergraduate or professional email, among other methods. Meta chooses not to implement any of these systems, even though they are technologically feasible, used by many companies across the Internet, and could be employed at relatively low cost. Indeed, Meta itself uses an age verification technique for its Facebook Dating product that it claims can verify ages without identifying users—but does not use the same technology at account startup for Facebook or Instagram.[378]

297. For most of its history, Meta has known that children under the age of 13 are using its apps. This was clearly evidenced by, for example, posted photos of elementary school age users. Yet Meta continued to promote and usher Facebook and Instagram to children. As long as a new user simply clicked a box confirming that they were at least 13 years old, Meta asked no questions, engaged in zero follow-up, and let the user access the platforms indefinitely. This did not go unnoticed by certain of its

[378] Erica Finkle, *Bringing Age Verification to Facebook Dating*, Meta (Dec. 5, 2022), https://about.fb.com/news/2022/12/facebook-dating-age-verification/.

employees who criticized the company's policy: "[I]f we collected age on [Instagram] we could age-gate [suicide and self-injury ("SSI")] content. . . and if we used age classifiers we could detect under 13s and kick them off the platform[.]"[379]

298. Indeed, Meta did not ask for the age of new Instagram users until December 2019, after Instagram had been on the market for more than seven years.[380] Even then, Meta did not ask *existing* users to disclose their ages, effectively grandfathering in underage users. Indeed, an internal document confirms that, in April 2020, Meta had an age for only approximately 55% of its users,[381] which Meta did not attempt to correct until August 30, 2021. Meta did not begin requiring age verification for users who attempt to change their age from under to over 18 until 2022.[382]

299. There can be no serious debate about whether Meta has more effective age verification tools at its disposal. Meta has internal age identification models, such as the "teen_non_teen" model or the "dim_ig_age_prediction_adult_classifier" that can estimate a user's age.[383] Although tools like this could be used to identify when a user is under 13 (or, for that matter, if a user is a teenager and should therefore be safeguarded from particularly injurious aspects of Meta's platforms), Meta does not use this safeguard. [384]

300. Perversely, Meta does employ age verification on Instagram—but only when a user self-reports they are *younger* than 13. In that case, Meta provides a user with what amounts to an appeal right: "[I]f you believe we made a mistake, please verify your age by submitting a valid photo ID that clearly shows your face and date of birth."

---

[379] META3047MDL-003-00086015 at META3047MDL-003-00086015.

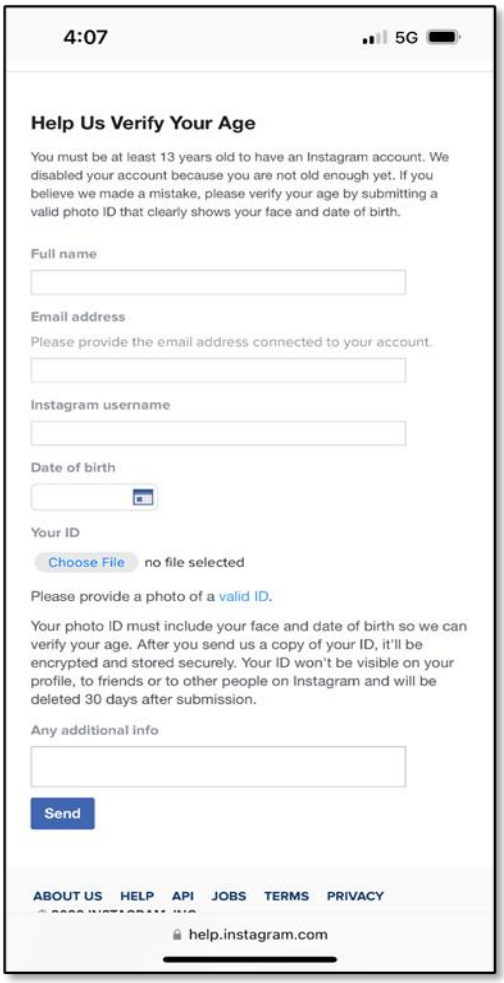
[380] META3047MDL-003-00157020 at META3047MDL-003-00157020 ("[W]e have very limited age information on [Instagram] (we only started collecting age in December at registration).").

[381] META3047MDL-003-00042548 at META3047MDL-003-00042551–META3047MDL-003-00042552.

[382] Instagram, *Introducing New Ways to Verify Age on Instagram*, Meta (June 23, 2022), https://about.fb.com/news/2022/06/new-ways-to-verify-age-on-instagram/. Meta explained the choice of age by saying that they provide users under 18 with an experience that is appropriate for their age, including "preventing unwanted contact from adults they don't know[.]" However, as described herein, each week hundreds of thousands of children are inappropriately contacted by adults on Instagram.

[383] Haugen_00003463 at Haugen_00003463–Haugen_00003465; *see also* Ibrahim Mousa Al-Zuabi *et al.*, *Predicting customer's gender and age depending on mobile phone data*, 6 J. Big Data 18 (Feb. 19, 2029), https://journalofbigdata.springeropen.com/counter/pdf/10.1186/s40537-019-0180-9.pdf (discussing generally how a similar age prediction algorithm works).

[384] Haugen_00003463 at Haugen_00003463–Haugen_00003465.



301. At best, this reflects a completely upside-down view of Meta's duty of care, using age verification to screen *in* minor users but not to screen them *out*. At worst, Meta's "are you sure you're really under 13" question invites pre-teens to falsify their identification to gain access to Instagram.

302. Similarly, Meta imposes unnecessary barriers to the removal of accounts created by children under 13. Since at least April 2018, Instagram and Facebook both accept reports of accounts created by children under 13.[385] However, before an Instagram or Facebook account is deleted, Meta requires verification that the child is under the age of 13. For example, Instagram's reporting page states:

> If you're reporting a child's account that was made with a false date of birth, and the child's age can be reasonably verified as under 13, we'll delete the account. You will not

385 Report an Underage User on Instagram, Instagram, https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctHOwkalXtfJ1ft9O09Q; Report an Underage Child, Facebook, https://www.facebook.com/help/contact/209046679279097.

> get confirmation that the account has been deleted, but you should no longer be able to view it on Instagram. Keep in mind that complete and detailed reports (example: providing the username of the account you're reporting) help us take appropriate action. If the reported child's age can't reasonably be *verified as under 13*, then we may not be able to take action on the account.[386]

Facebook's reporting page contains almost identical language.[387] By choosing to implement age verification only before deleting accounts of users suspected to be children, but not when those accounts are first created, Meta makes it more difficult to prove a user is under age 13 than it does for a minor to pretend to be over 13.

303. It is unclear how long Meta takes to delete a reported account, if it does so at all. Meta has ignored some parents' attempts to report and deactivate accounts of children under 13 years old.

304. Zuckerberg has stated that he believes children under 13 should be allowed on Facebook,[388] so Meta's lax approach to age verification appears to reflect true company policy.

305. Meta's approach to underage users has consistently been one of feigned ignorance. On October 10, 2021, Senator Marsha Blackburn reported that a young celebrity told Instagram CEO Adam Mosseri that she had been active on Instagram since she was eight. Mosseri replied that he "didn't want to know that."[389]

306. But Meta *does* know that its age-verification protocols are inadequate to keep minors off Facebook and Instagram. According to a May 2011 *ABC News* report, "about 7.5 million [Facebook] users in the U.S. are under the age of 13, and about 5 million are under the age of 10[.]"[390] Meta knows

---

[386] *Report an Underage User on Instagram*, Instagram, https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctHOwkalXtfJ1ft9O09Q (emphasis added).

[387] *Report an Underage Child*, Facebook, https://www.facebook.com/help/contact/209046679279097.

[388] Kashmir Hill, *Mark Zuckerberg Is Wrong About Kids Under 13 Not Being Allowed on Facebook*, Forbes (May 20, 2011), https://www.forbes.com/sites/kashmirhill/2011/05/20/mark-zuckerberg-is-wrong-about-kids-under-13-not-being-allowed-on-facebook/?sh=2ea85e825506 [https://perma.cc/6TZX-EKE6].

[389] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

[390] Ki Mae Heussner, *Underage Facebook Members: 7.5 Million Users Under Age 13*, ABC News (May 9, 2011), https://abcnews.go.com/Technology/underage-facebook-members-75-million-users-age-13/story?id=13565619.

through retrospective cohort analyses that "up to 10 to 15% of even 10-year-olds in a given cohort may be on Facebook or Instagram."[391]

307. Meta knows that its chosen method of registration does not adequately protect minor users from reporting inaccurate and implausible age information. As one product engineer cautioned while analyzing the age of Facebook users, "Don't believe anything in the stated age graph for under 30. They are all mixed up . . . We have way more people who say they are born in the early 90s than exist in the population."[392]

308. Meta's internal studies confirm its knowledge that kids, tweens, and teens use its platforms. In one study, Meta researched children as young as seven and found that, in the fifth grade, "social media becomes a part of their digital diets."[393] Moreover, they identified that 24% of children ages 7-9 and 55% of tweens ages 10-12 have at least one social media account,[394] and specifically stated that Instagram's perceived user base included middle schoolers.[395]

309. Another internal post reveals Meta's knowledge of the widespread use of Instagram by preteens, as well as its targeting of children under the age of 13. In a study from around January 2021: *The Role of the Teen in Shaping a Household's Experience of Instagram*, Meta expressed a desire to utilize teenagers as the doorway into capturing an entire household of users, including children under age 13.[396] The study explains that teens can be used to teach their preteen siblings how to join while underage, and to help them develop a habit of using and posting indiscriminately.[397] The study expresses concern that some teens may teach their preteen siblings to post less, and recommends that Meta combat this by changing perceptions among teens so that they will instruct their preteen siblings to use Instagram more spontaneously.[398] Key discussion points from this document include:

---

[391] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

[392] Haugen_00012303 at Haugen_00012314.

[393] Haugen_00023849 at Haugen_00023855; Haugen_00023849 at Haugen_00023858910.

[394] *Id.* at Haugen_00023866.

[395] *Id.* at Haugen_00023879.

[396] Haugen_00016728 at Haugen_00016728.

[397] *See Id.* at Haugen_00016731–Haugen_00016734.

[398] *Id.* at Haugen_00016736–Haugen_00016740.

> Teens strongly influenced preteens' understanding of what and how frequently to share on [Instagram], even discouraging them from sharing. . . . We need to understand [Instagram] myths circulating among teens to inform comms and shift the perception of sharing on [Instagram]. . . .
>
> Historically, teens have been a key focus for [Instagram]. Acquiring and maintaining them continues to be a priority, reflected by investment in new features like Reels. Additionally, capturing the teen user cohort on [Instagram] is critical as we think about Instagram's role within the broader family of apps. . . . [Teens] are typically the first within a household to join. In many cases, they're also critical to the onboarding process for parents and preteens alike. . . .[399]
>
> Older teens were [Instagram] catalysts for preteens. Most preteens became curious about and wanted an [Instagram] account because of their older sibling. In some cases, preteens even relied on their older sibling to create and set up their account, seeking their guidance on a username, profile photo, and accounts to [f]ollow. . . . If we're looking to acquire (and retain) new users we need to recognize a teen's influence within the household to help do so, and the potential ripple effect. . . .

310. Meta has not used its copious knowledge about preteen engagement with its platforms to comply with the law. Far to the contrary, it has leveraged its research to manipulate households and target preteens through their siblings.

b. Facebook's and Instagram's parental controls are ineffective.

311. Once a child has begun scrolling on Meta's platforms, they can use the platforms entirely without the protective aid of parental guidance. Indeed, Facebook and Instagram are plainly problematic due to the lack of adequate parental controls, which hinder parents' ability to monitor and protect their children from harm.

312. Meta does not require "verifiable parental consent" for minors to use Facebook or Instagram. Meta has chosen to avoid its obligations by *purporting* to ban children younger than 13, despite, as demonstrated above, knowing that such children continue to access and use its platforms due to its inadequate age verification methods.

313. A reasonable company that knows or should have known its platforms are harmful to adolescents would require parental consent for *any* minor to use them. But Meta's lack of parental consent requirement for users robs parents of an important way to protect their children from the harms caused by Instagram and Facebook.

[399] *Id.* at Haugen_00016731–Haugen_00016734.

314. Meta's platforms largely lack readily available parental controls, despite their affordability and ease of implementation. For example, Meta has chosen not to: (a) require children's accounts on Facebook and Instagram to be linked to their parents', as it does with another one of its platforms—Messenger Kids;[400] (b) send reports of a child's activity to parents; (c) allow parents to implement maximum daily usage limitations or to prohibit use during certain hours (e.g., school and sleep hours); (d) notify parents about interactions with accounts associated with adults; or (e) require parental approval before a minor can follow new accounts.

315. Controls like these would enable parents to track the frequency, time of day, and duration of their child's use, and identify and address problems arising from such use. It is reasonable for parents to expect that social media companies that actively promote their platforms to minors will undertake reasonable efforts to notify parents when their children's use becomes excessive, occurs overnight, or becomes otherwise problematic. Meta could feasibly design Instagram and Facebook to address these concerns at negligible cost.

316. Meta creates a foreseeable risk to Plaintiff's schools and students through its design choices, and then attempts to shift the burden of protection from those platforms onto parents. Meanwhile, Meta intentionally designs Facebook and Instagram to aid children's efforts to undermine parental supervision. For example, Instagram and Facebook allow children to create a limitless number of anonymous accounts without parental approval or knowledge and allows kids to block parent profiles.[401] On Instagram, children can post stories to "Close Friends Only," i.e., to a select group of followers, excluding their parents. On Facebook, children can place their parents on a "restricted list" of people who are unable to view their stories. Meta has intentionally designed many aspects of Instagram

[400] Loren Cheng, *Introducing Messenger Kids, a New App for Families to Connect*, Meta (Dec. 4, 2017), https://about.fb.com/news/2017/12/introducing-messenger-kids-a-new-app-for-families-to-connect/.

[401] In 2018, Meta observed that "the participation rate of multiple account switching (basically the equivalent of finstas) [was] going up," with 36% of teens engaging in multiple account switching. Haugen_00017698 at Haugen_00017784. "Finsta," a widely used slang term, is a contraction of "fake" and "Insta" (short for Instagram). "It is neither an official designation nor a type of account offered by Facebook. Rather, it is a term many users ascribe to secondary accounts they create for themselves on Instagram, where their identities — and, often, the content of their posts — are obscured to all but a small, carefully chosen group of followers." Caity Weaver & Danya Issawi, *'Finsta,' Explained*, N.Y. Times (Sept. 30, 2021), https://www.nytimes.com/2021/09/30/style/finsta-instagram-accounts-senate.html [https://perma.cc/T737-UG7V].

and Facebook to undermine parental supervision in an effort to maximize teen usage: "If Mom starts using an app all the time, the app can lose a 'cool' factor, if we're not conscious of separation."[402] "[W]e should be thinking about how having parents being on Instagram might affect graph management and teen engagement over time. Discovery/usage of additional accounts could prove critical for authentic sharing by teens."[403]

317. As one internal document described the issue:

> [A]re teens able to maintain spaces that feel sacred to them (and their friends) or do we see decreased usage or new behavior patterns emerge as household members join? . . . Preservation of protected spaces will require: [1] Learning how to create spaces within the app where teens feel like they have privacy both from their own parents but also privacy from non-peers (e.g., Aunt Sally, neighbor down the street, teachers, etc.). [2] Finding opportunities, such as ["]close friends["] where teens have their own, protected peer communities. [3] Understanding the value of certain features being more complex (i.e., indirectly made for teens because more challenging for parents or preteens). Both Snapchat and TikTok are somewhat confusing to parents, in turn affording teens a protected place to play/engage.[404]

318. Meta's internal documents recognize that parents are largely ill-equipped to protect children from its platforms. As one employee asserted in the discussion of a focus group survey regarding the mental health impact of Meta's platforms on teenagers:

> The other big reason that parents aren't a source of support has to do with parents' ability (or really, their inability) to understand what adolescence in the age of social media looks and feels like. The parents of today's teens came of age before social media, so they don't know and *can't* know what it's like to live in what feels like a constant spotlight. When today's parents were teens, social comparison was much more limited both in terms of scope and scale. Teens today compare themselves to many more people, much more often, and about more parts of life than their parents did during their adolescence. In addition, today's parents were able to turn it off when they went home, while teens feel compelled to be on social media all the time.[405]

[402] Haugen_00016728 at Haugen_00016735.

[403] Haugen_00011969 at Haugen_00011975. "Graph management" apparently refers to efforts by a user to unfollow accounts, i.e., "prun[e]." META3047MDL-003-00146492 at META3047MDL-003-00146496; META3047MDL-003-00178437 at META3047MDL-003-00178437–META3047MDL-003-00178438.

[404] Haugen_00016728 at Haugen_00016735.

[405] Haugen_00017069 at Haugen_00017173.

319. When employees have raised the possibility of additional safeguards—"could we offer a parental control feature so that parents and kids could learn and cope together?"—Meta has consistently ignored them. [406]

320. Finally, Meta has failed to develop effective reporting tools to deal with abuse directed at underage Instagram and Facebook users. Meta does not have a phone number that a parent, caregiver, teacher, school counselor, school administrator, or child can call to report such abuse in real time, and its online reporting mechanisms lack immediate response protocols, regardless of the seriousness of the harm at issue. In fact, Meta has, in some instances, declined to respond to reports filed through its online reporting tool, citing technical issues.

c. Facebook and Instagram were intentionally designed to addict its users.

321. From the moment a child first begins to scroll on Facebook or Instagram, Meta assails them with an addictive and harmful features. The platforms permeate with user experience and user interface designs intended to create and maintain an addictive "flow-state," using auto-playing features, time-limited experiences, IVR, reciprocity, and gamification.

322. To drive user engagement (and thereby drive data collection and advertising revenue), Facebook and Instagram utilize a series of design features that are carefully calibrated to exploit users' neurobiology, especially aspects unique to minors. Indeed, Meta's product design team's research with respect to "long-term retention" confirmed that "the young ones are the best ones . . . You want to bring people to your service young and early."[407] These features work in tandem with algorithmic ranking, discussed below, to promote addictive engagement. Meta understands this, "teens tell us that they try to take a break but feel compelled back onto the app."[408] But it does not warn prospective or current users about the following features or their safety risks, which are particularly harmful to children and result in serious problems in Plaintiff's schools.

323. *First,* Meta programs IVR into its platforms. Behavioral training via IVR keeps users endlessly scrolling in search of a dopamine release, oftentimes despite their desire to put their device down and move onto other activities. Children, who are less likely to have adequate impulse control than

[406] *Id.* at Haugen_00017172.
[407] Mass. AG Compl. at 39, ¶ 146.
[408] META3047MDL-003-00093303 at META3047MDL-003-00093303.

adults, are more susceptible to being drawn into this engineered flow state and more likely to grow dependent on Facebook or Instagram.

324. *Second,* Facebook and Instagram utilize "Likes" to control the release of dopamine in children. This feature, which Meta first created for Facebook and "introduced . . . to the world" in 2010, allows users to indicate that they approve a post, and visibly tallies the number of "Likes" any given post has earned.[409] Instagram launched in 2010 with the Like feature built-in—a user can "Like" a post simply by tapping a heart-shaped button.

325. As with a slot machine, users never know when a "Like" will come. Rather than delivering "Likes" in real time, Meta's platforms space out "Likes" (and other notifications such as comments and follows) to trigger on a schedule most likely to strengthen users' addiction, e.g., when they would otherwise end their use sessions. This design conditions users to stay on the platforms, including through social comparison and feedback seeking, creating detrimental effects on minors' physical and mental health. Indeed, Meta knows from its own internal research that the "Like" feature negatively impacts its younger users.[410] In that research, Meta acknowledged how much younger users care about the number of "Likes" they received.[411]

326. Despite this knowledge, Meta has expanded the "Likes" feature in both Facebook and Instagram. In December 2016, Meta began allowing users to "Like" comments, not just posts. In February 2022, Meta began allowing users to "Like" Instagram Stories.[412] Expanding the "Like" feature has intensified and multiplied the body of feedback that teen users receive (or don't receive) on their posts, preying on their desire to seek validation through comparison with others.

[409] Ray C. He, *Introducing new Like and Share Buttons*, Meta (Nov. 6, 2013), https://developers.facebook.com/blog/post/2013/11/06/introducing-new-like-and-share-buttons/.

[410] *See* Haugen_00008207 at Haugen_00008210 (summarizing 2020 research and referencing 2018 research regarding the stress and anxiety that "Likes" cause teens).

[411] *Id.* at Haugen_00008232.

[412] Jhinuk Sen, *Instagram is adding Likes to Stories so it doesn't clog up people's inboxes*, Bus. Today (Feb. 15, 2022), https://www.businesstoday.in/technology/news/story/instagram-is-adding-likes-to-stories-so-it-doesnt-clog-up-peoples-inboxes-322661-2022-02-15.

327. Meta's research confirms that hiding "Likes" for all its users would decrease social comparison on the apps.[413] Yet its research also demonstrated that hiding "Likes" would decrease the rates at which users click on advertisements (and thereby lower Meta's ad revenue).[414]

328. For that reason—despite its ability to alleviate the negative impact of "Likes" on younger users—Meta chose only to implement ineffective, nominal measures as a public relations strategy. Meta first created the option for users to hide "Like" counts in May 2021, but it made this an optional setting left off by default.[415] Moreover, even when hidden, the number of "Likes" remains visible to the poster. These changes stop short of resolving the issue of negative social comparison and compulsive use that these score-keeping features cause.

329. *Third,* Meta has designed its video features to create and maximize users' flow state, which also keeps them immersed in its platforms for longer periods of time. Video clips on Facebook Reels and Instagram Reels automatically play as users scroll, and automatically restart once scrolling is concluded. Reels cannot be paused, and tapping on the video will simply mute its audio. In addition, Meta imposes limits on the length of videos on Reels (currently 90 seconds, and at times as short as 15 seconds). These limits ensure that users do not become bored by long videos and end their sessions.

330. Meta designed the comment features of Reels to minimize any disruption to users' heightened flow state. The interface of Reels displays the "Like," "Comment," "Save," and "Share" buttons on the bottom right of the screen. This placement avoids the milliseconds of delay or discomfort that could disrupt the flow state of right-handed users if placed elsewhere on the screen. Furthermore, these buttons are overlaid on top of the continuously playing clips, to eliminate any temporal or visual interruption during which a user might evaluate whether to continue using the product. Likewise, when a user taps to view the comments on a Reel, the video's audio and the top quarter of the video continue to play behind the comments section. Again, this design feature keeps the user's attention on the feed.

331. In keeping with its study of IVR, Meta knows when to strategically interrupt a user's flow. Occasionally, while a video is playing, a comment from the video will appear on the bottom of the

---

[413] Haugen_00008207 at Haugen_00008232.
[414] *Id.* at Haugen_00008250.
[415] Instagram, *Giving People More Control on Instagram and Facebook*, Meta (May 26, 2021), https://about.fb.com/news/2021/05/giving-people-more-control/.

screen, even without the user tapping to view the comments section. These comments are selected, displayed, and timed intentionally, to retain a user's attention by engaging with the comments section.

332. And Meta tracked data showing features like auto-play furthered Meta's goal of increasing the amount of time young users spent on Facebook and Instagram:

> We have been investing effort in researching time spent to find opportunities. By comparing long-term tests that always or never auto-play videos, we find that auto-play increases overall time spent for some people and cannibalizes time spent for others. Using SmartScorer, we found that auto-play increases time spent for people with high inventory utilization and younger people (college and late high school), and decreases time spent for other people. This shows there is opportunity to grow time spent by personalizing auto-play rules in feed (details)."[416]

333. *Fourth,* Meta carefully calibrates the notifications it sends outside of the Facebook and Instagram apps, to maximize success in drawing back users who are not presently using the platforms and engaging in unrelated activities, such as attending school. Internal company documents outline Meta's strategy of pursuing "Teen Growth" by "leverag[ing] teens' higher tolerance for notifications to push retention and engagement."[417] By default, Facebook and Instagram notify users through text and email about activity that might be of interest, which prompts users to open and reengage with the platforms. However, Meta intentionally chooses to use "clickbait"[418] to display only a limited amount of information in notifications, in order to trigger curiosity and manipulate the user to click or tap through to the product. In December 2020, Meta internally acknowledged that the goal of this feature was to optimize engagement at the expense of value to users: "A few years ago we stopped sending out emails telling you what happened - e.g., telling you what your friend did - instead we just say 'someone comment [sic] on your post,' in the hope that you'll click through. This a clear value-engagement tradeoff."[419] Similarly, Meta stopped sending push notifications telling users about friend activities, finding that, without notifications, users were forced to go to the product itself to "check what's happening," thereby initiating a new session, increasing engagement, and improving Meta's bottom

---

[416] MDL AG Compl. at 27, ¶ 145.
[417] MDL AG Compl. at 52, ¶ 304.
[418] *Clickbait*, Merriam-Webster Dictionary, https://www.merriam-webster.com/dictionary/clickbait (defined as "something (such as a headline) designed to make readers want to click on a hyperlink especially when the link leads to content of dubious value or interest").
[419] Haugen_00010114 at Haugen_00010117.

line.[420] Meta designed these features despite knowledge that they would increase addictive behaviors,[421] and in disregard of safer alternative designs.[422]

334. Meta knows that its storm of notifications is successful in keeping youth on its platforms. In a November 2019 internal presentation: *Instagram Notification Systems Roadshow*, Meta's research revealed that as a result of its "high volume" push notifications, young users are "overload[ed]," "overwhelm[ed]," and compelled to re-open Instagram repeatedly throughout the day.[423]

335. Similarly in May 2020, Meta conducted research: *Teen Fundamentals*. This research showed that because "[a]pproval and acceptance are huge rewards for teens," notifications are highly effective in encouraging teens to continue coming back to Meta's platforms over and over again in hopes of receiving an "award," i.e., some type of positive social validation.[424] Indeed, Meta's research noted that teen brains have "insatiable" need for these "feel good dopamine effects."[425]

336. Meta's studied manipulation of user engagement through notifications is particularly detrimental to teenagers, who lack impulse control and crave social rewards, and who are therefore more susceptible to falling into compulsive patterns of product use. Those harms are compounded by the fact that Meta sends push notifications in the middle of the night, prompting children to re-engage with Instagram and Facebook when they should be sleeping. Disturbed and insufficient sleep is associated with poor health outcomes.[426]

337. Meta pursued its strategy of maximizing engagement through notifications to young users despite knowing from its own internal research that it causes harm to young users' well-being. In July 2018, a research article circulated internally within Meta: *Problematic Facebook use: When People Feel Like Facebook Negatively Affects Their Life*, noted that notifications are psychologically harmful to

---

[420] *Id.*

[421] *See* Haugen_00016893 at Haugen_00016899–Haugen_00016902.

[422] *See* Haugen_00016893 at Haugen_00016913 (Meta intern suggesting changing to a subtler form of notifications); Haugen_00016893 at Haugen_00016915–Haugen_00016916 (Meta intern urging the company to stop "inundating users with excessive notifications" and instead focus on user experience to create meaningful connections for users).

[423] Mass. AG Compl. at 28, ¶ 93.

[424] Mass. AG Compl. at 27, ¶ 91.

[425] Mass. AG Compl. at 35, ¶ 129.

[426] *The Teen Brain: Still Under Construction* at 6, Nat'l Inst. Mental Health (2011), https://foster-ed.org/wp-content/uploads/2017/02/The-Teen-Brain-Still-Under-Construction-2011.pdf.

young users by "caus[ing] inattention and hyperactivity among teens," and "reduc[ing] productivity and well-being."[427]

338. Similarly, in a November internal presentation: *[Instagram] Notification Systems Roadshow*, Meta's employees acknowledged that some of it users are "overloaded because they are inherently more susceptible to notifications dependency."[428] Despite acknowledging users' concern that Instagram's push notifications had the potential to "constantly harm . . . mental health," the presentation did not propose any product changes to protect young users' mental health—and instead deferred the "harmful effect on teen usage" for further investigation.[429]

339. *Fifth,* the "Stories" feature of both Facebook and Instagram is designed to create artificial urgency so that users return to the apps from frequently. "Stories" was added by Meta in response to the growing popularity of Snapchat with teenagers in 2016. "Stories" appear at the top of a user's home page upon opening the app and are available to view for only 24 hours, after which they disappear. This creates pressure to use the product daily, or else risk missing out on dopamine-causing stimuli or social interactions. This feature is particularly addictive to adolescent users, like Plaintiff's students, who feel increased social pressure to view all their contacts' stories each day before they disappear, thus increasing their compulsive usage and potential addiction to the product.[430] The ephemeral nature is a ploy intended to inspire urgent perusal, and it works.[431]

340. Meta's internal data shows that its "Stories" feature successfully increased the amount of time users spend on Instagram. Internal data from 2018 touted statistics that 72% of people on Instagram viewed Stories each day, that "[g]rowth is especially strong" among U.S. teens, and that based on these viewership rates "Stories Ads Revenue" had grown to be "20% of daily Instagram revenue."[432] Internal

---

[427] Haugen_00021690 at Haugen_00021708.
[428] MDL AG Compl. at 53, ¶ 312.
[429] *Id.*
[430] Sarah Lempa, *Science Behdind [sic] Why Instagram Stories Are So Addicting*, Healthline (Apr. 5, 2021), https://www.healthline.com/health/why-are-instagram-stories-so-addicting#The-story-behind-the-Stories.
[431] Madiha Jamal, *Ephemeral Content — The Future of Social Media Marketing*, Better Mktg. (Mar. 2, 2021), https://bettermarketing.pub/ephemeral-content-the-future-of-social-media-marketing-996d265916c2#:~:text=Ephemeral%20content%20relates%20to%20the,WhatsApp%20Stories%2C%20and%20LinkedIn%20Stories.
[432] Mass. AG Compl. at 31, ¶ 109.

Meta documents from 2018 also state that "we've invested in [Facebook] stories—and have seen engagement more than double[;] teen original sharing [is] up for the first time since 2012."[433]

341. Another purposefully designed FOMO-inducing feature is Instagram's "Live" feature that Meta launched in 2016. Through the "Live" feature, an Instagram user can broadcast livestream videos for their followers or the public to watch and react to in real time.[434] As the feature's name suggests, these videos are only accessible and can be interacted with during the time that user is going "Live."

342. When an Instagram account "goes Live," Instagram sends out a notification on the mobile devices of users that follow that account that reads, "[@user] started a live video. Watch it before it ends!"[435] Instagram sends this notification even when a user does not have the Instagram app open to induce them to re-open and revisit the platform.

343. Emails to Instagram executives show that the "Live" feature was designed to maximize young users' time spent on Instagram. In a December 2015 strategy email to Meta's executives, including former Instagram CEO Kevin Systrom and CTO Mike Krieger, Meta employees set goals "[to] drive substantial watch time via Live" by "[finding] partners to appeal to teens" and "driving time spent" for teens by "supporting initiatives" around "Live Events."[436]

344. Meta quickly found that the Live feature was popular among young users, including teens. An internal highlights memo noted in February 2017 that of the over 9 million daily broadcasts, "[Meta] found that 35% of [Live] broadcasters are teens (early and late high school)."[437]

345. As another set of Meta researchers acknowledged, the majority of negative experiences on Instagram come not from direct interactions with others (i.e., through comments or direct messages) but rather through algorithmically-generated recommendations, via Explore, Feed, Stories, or hashtag pages.[438]

---

[433] MDL AG Compl. at 21, ¶ 101.
[434] *Live*, Instagram Help Ctr., https://help.instagram.com/272122157758915/?helpref=hc_fnav.
[435] *Notification Settings*, Instagram Help Ctr., https://help.instagram.com/105448789880240.
[436] Mass. AG Compl. at 33–34, ¶ 122.
[437] MDL AG Compl. at 21, ¶ 106.
[438] META3047MDL-003-00087111 at META3047MDL-003-00087112.

346. All of the above design choices, in addition to those discussed in the section that follows, interact with and compound one another to make Meta's platforms relentlessly addictive and harmful for youth, including youth in Plaintiff's schools and community.

d. Meta knew that its platforms caused problematic use and failed to prevent it.

347. Meta has long been aware of this compounding likelihood of injury posed by its platforms.

348. In 2017, Meta investigated Facebook users who were addicted to the product—that is, those who "cannot stop using [the] product to the point where it can cause them harm."[439] The research found that "[i]n a given week, approximately 5.9 million people leave Facebook" because they "spent too much time" or because they were taking a temporary break and "planned to return."[440] "This subset provided a good signal for people who could be addicted, who ultimately leave Facebook as a solution."[441] The analysis also found that this subset had a higher number of sessions per day, received more notifications, and responded quicker to notifications compared to all users.[442] In 2018, Meta examined the issue of "Facebook addiction" through a study: *Problematic Facebook use: When people feel like Facebook negatively affects their life*.[443] The investigators defined "problematic use" as meaning: "Serious problems with sleep, work, or relationships that they attribute to Facebook AND concerns or preoccupations about how they use Facebook (e.g., a fear of missing out (FOMO) or lack of control)[.]"[444] Notably, the investigators did not target the heaviest Facebook users in their research.[445]

349. The study found that approximately 5% of teens ages 13-20 were problematic users.[446] "Problematic use is highest among teens and people in their 20s, consistent with previous findings that younger people generally have more problems with self-regulation."[447] Additionally, "problematic users" evidenced common tendencies, such as: (a) accessing and spending more time on Facebook; (b)

---

[439] Haugen_00016893 at Haugen_00016895. This group's investigation also included meeting with Nir Eyal, author of the book: *Hooked: How to Build Habit-Forming Products*.
[440] Haugen_00016893 at Haugen_00016898.
[441] *Id.*
[442] Haugen_00016893 at Haugen_00016899–Haugen_00016902.
[443] Haugen_00021690 at Haugen_00021690.
[444] *Id.* at Haugen_00021692.
[445] *Id.* at Haugen_00021697.
[446] *Id.* at Haugen_00021699.
[447] *Id.* at Haugen_00021697.

using Facebook late at night; (c) receiving more and responding more quickly to push notifications; (d) temporarily deactivating their account in the past; and (e) sending far more messages per minute with a higher ratio of messages sent to messages received.[448] Meta understands that "teens feel addicted to [Instagram] and feel a pressure to be present" and "like addicts, they feel that they are unable to stop themselves from being on [Instagram][.]"[449]

350. A study into Instagram user behaviors from that same year similarly found that "high time spent users do tend to be disproportionately younger users, and these users may warrant extra attention."[450] The study found that "[a]s time spent increases, we see a larger proportion of users that are high school, college or early work life-stages, with additional increases in high school when we zoom in on the top 1% of time spent users."[451]

351. Meta knows that "problematic use" of Facebook and Instagram leads to real problems. In one internal company document, Meta acknowledged that the pressure to be present and obtain validation on Instagram meant that teens lacked the capacity to "switch off and shut down," noting that teens "can get addicted to things that make them feel bad."[452] One of Meta's data scientists did not mince words when describing this phenomenon to their colleagues:

> I worry that driving sessions incentivizes us to make our product more addictive, without providing much more value. How to keep someone returning over and over to the same behavior each day? Intermittent rewards are most effective (think slot machines), reinforcing behaviors that become especially hard to extinguish—even when they provide little reward, or cease providing reward at all.[453]

Another Meta employee was clear-eyed that "little reward" was too charitable—and that addictive use was actively harming kids' mental health:

> In the focus groups teens told us that they don't like the amount of time they spend on the app but feel like they have to be present. They often feel 'addicted' and know that what they're seeing is bad for their mental health but feel unable to stop themselves. This makes them not feel like they get a break [sic] or to can't switch off social media[.]

---

[448] *Id.* at Haugen_00021703–Haugen_00021704; Haugen_00021708–Haugen_00021710, Haugen_00021715–Haugen_00021716.
[449] META3047MDL-003-00157036 at META3047MDL-003-00157036.
[450] Haugen_00017177 at Haugen_00017181.
[451] *Id.*
[452] Haugen_00017069 at Haugen_00017128, Haugen_00017132.
[453] Haugen_00010114 at Haugen_00010127.

> [A]bout 30% (and even larger proportions of those who are unsatisfied with their lives) said that the amount of time they spend on social media makes them feel worse. About half of teens in both [the U.S. and UK] want Instagram to encourage them to take a break or to get off the app[.]
>
> [In another survey,] we found that time spent is among one of the most negative experiences for [Instagram] (25%+ say they spend too much time on social media, and it's worst on Instagram and Facebook). At the same time, they didn't think there was anything they could do about it and had fairly negative things to say about the time spent tools we have (particularly that the tools are easy to ignore).[454]

352. In January 2021, another Meta employee wrote: "No one wakes up thinking they want to maximize the number of times they open Instagram that day. But that's exactly what our product teams are trying to do."[455]

353. Meta failed to invest in adequate tools to limit the harm their platforms inflicted on users. As their internal documents reveal, "the tools we currently have aren't effective at limiting [users'] time on the ap [sic][.]"[456] Nonetheless, Meta publicly presented certain of these tools as solutions, despite knowing of their ineffectiveness. For example, Meta offered its users a feature that purported to show how much time users had spent on Instagram, and Meta touted this feature "when speaking to consumers, the press, and stakeholders about our efforts to combat social media addiction."[457] But internally, Meta acknowledged that the data reported by this tool was fundamentally "incorrect":

> It's not just that Apple / Google have better data. Ours is wrong. Far worse. We're sharing bad metrics externally. We've been unable to right it despite several person-months of efforts. . . . So it's wrong (bad enough in itself), can't be fixed easily (we've tried), has been half-rolled-out for a while . . . the group that audits metrics we provide to the outside world[] has called us out on it. . . . The reason this is relevant is we vouch for these numbers. Any day they're out there is a legal liability.[458]

354. Meta's failure to prevent, and indeed pursue, compulsive use by children, and the harms resulting therefrom, are a function of its misplaced priorities. One "integrity researcher" at Facebook wrote an internal article in August 2020 with her parting thoughts as she left the company. She explained that Meta's leadership consistently ignored concerns about user safety:

---

[454] Haugen_00017069 at Haugen_00017171.
[455] META3047MDL-003-00161686.
[456] META3047MDL-003-00157036 at META3047MDL-003-00157036.
[457] *Id.*
[458] META3047MDL-003-00157133 at META3047MDL-003-00157133.

> Integrity teams are facing increasing barriers to building safeguards. . . . [T]ime and time again I've seen promising interventions from integrity product teams, with strong research and data support, be prematurely stifled or severely constrained by key decision makers—often based on fears of public and policy stakeholder responses. Similarly (though even more concerning), I've seen already built & functioning safeguards being rolled back for the same reasons . . . While mountains of evidence is (rightly) required to support a new intervention, none is required to kill (or severely limit) one. . . . [This] is intended as a call to reflection for those decisions-makers [sic] imposing constraints.[459]

355. Meta's decision to addict teenage users by rewiring their brains has not aged well for some of its former employees. Chamath Palihapitiya, the former Vice President of User Growth at Facebook, admitted that he feels "tremendous guilt" about his contributions to social media, saying "[t]he short-term, dopamine-driven feedback loops that we have created are destroying how society works[.]"[460]

e. To combat declining revenue drivers, Meta further revamped its algorithms to maximize addictive efficacy, despite increased awareness of palpable harm to youth.

356. As a child continues to glide through the platforms' sleek UX and UI design, Meta's algorithms track innumerable data points about the child's behavior (especially noting which stimuli captures the child's attention most effectively) and uses this data to fuel one of the most addictive component of its platforms: algorithmic recommendations.

357. Meta has invested its vast resources to intentionally design Facebook and Instagram to be addictive to adolescents, all the while concealing these facts from its users and the public, including Plaintiff, Plaintiff's students, and Plaintiff's community.

358. As discussed above, in their original forms, Meta's Facebook and Instagram algorithms were ranked chronologically, meaning that a particular user's feed was organized according to when material was posted or sent by the people the user followed. In 2009, Meta did away with Facebook's chronological feed in favor of engagement-based ranking; in 2016, it did the same on Instagram. This

[459] Haugen_00021096 at Haugen_00021097 (emphasis omitted).

[460] Amy B. Wang, *Former Facebook VP says social media is destroying society with 'dopamine-driven feedback loops'*, Wash. Post (Dec. 12, 2017), https://www.washingtonpost.com/news/the-switch/wp/2017/12/12/former-facebook-vp-says-social-media-is-destroying-society-with-dopamine-driven-feedback-loops/ [https://perma.cc/LC22-8SW].

"engagement-based" system meant that posts that received the most likes and comments were highlighted first for users. But facing declining engagement, Meta redesigned its algorithms once again in or around early 2018. This change prioritized "meaningful social interaction" ("MSI"), with the goal of showing users with which they were more likely to engage. The MSI-oriented algorithms purportedly emphasize the interactions of users' connections, e.g., Likes and comments, and give greater significance to the interactions of connections that appear to be closest to users. Meta's current algorithms consider a post's Likes, shares, and comments, as well as a respective user's past interactions with posts with similar characteristics, and displays the post in the user's feed if it meets these and certain other benchmarks.

359. In algorithmically generating users' feeds, Meta draws upon the vast amount of data it collects about and from its users. Meta's algorithms combine the user's profile (e.g., the information posted by the user on the product) and the user's dossier (the data collected and synthesized by Meta, to which it assigns categorical designations) along with a dossier of similar users.[461] Meta's algorithms identify and rank recommended posts to optimize for various outcomes, such as for time-spent by a user or for user engagement. This can have serious mental health consequences, and associated impact on Plaintiff's operations, because Meta knows that teens "can get addicted to things that make them feel bad."[462]

360. Much of what Meta shows users is material that they did not sign up for but cannot avoid. In a 2019 internal document, a Meta data scientist explained that "users have told us the pages they would like to see content from, but we often override those explicit preferences because our predictions

[461] Instagram's former Head of Product Analytics defined "ranking" as "an ordering of content by importance or relevance" in a 2018 post: *Is Ranking Good?*. Haugen_00002372 at Haugen_00002374.

[462] Haugen_00006798 at Haugen_00006799 (observing that Meta's recommendation algorithms "are often prone to recommending bad content"); Haugen_00024997 at Haugen_00024997 (conducting experiment showing that, in 3 weeks, "by following just . . . *recommended* content, the test user's News Feed has become a near constant barrage of polarizing nationalist content, misinformation, and violence and gore"); Haugen_00024997 at Haugen_00024998 ("[W]hen Watch isn't sure what you want, it seems to recommend a lot of softcore porn[.]"); Haugen_00003739 at Haugen_00003740 ("[Instagram] is more 'successful' ranking harmful content than benign content, and is more likely to mistakenly rank higher [] harmful content than to mistakenly rank higher benign content."); Haugen_00017069 at Haugen_00017128.

of what will get shared and engaged with disagree."[463] This same employee pointed to additional data demonstrating that users get relatively few connected posts (from pages they chose to like) as opposed to unconnected posts that are reshared by others, even as Meta knows that such material is less valued by users.[464]

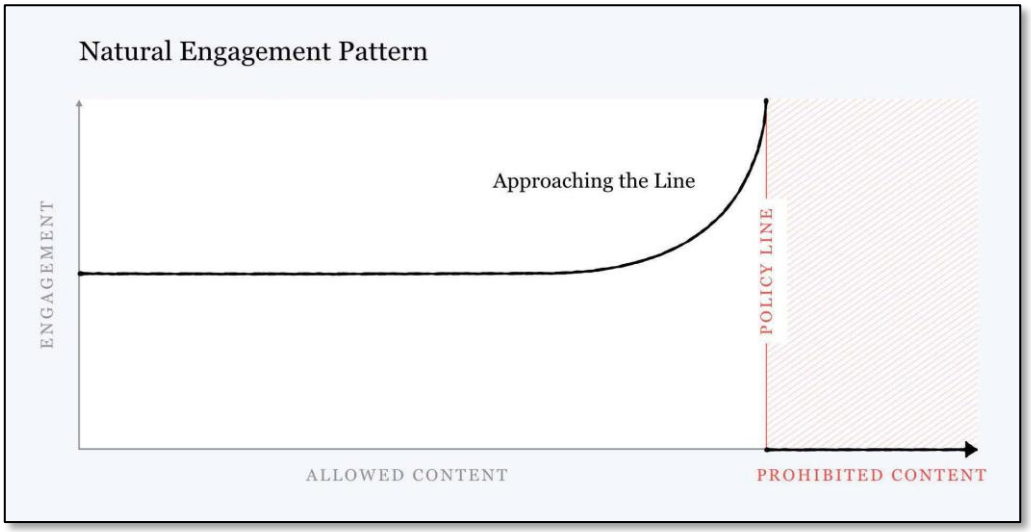
361. Meta also optimizes the design of its platforms for overall "network value"—that is, what will get the most downstream engagement by other users—rather than what that specific user would like.[465] As the Meta data scientist put it, "we show things to users that we think they have a small chance of sharing, leading to comments between people who see it downstream, over things that have a greater chance of being explicitly liked by that user."[466]

362. Through these algorithms, Meta intentionally supplants the material that users have elected to see with items that it believes will drive more use and engagement. Thus, the platforms that Meta touts as "[g]iv[ing] people the power to build community and bring[ing] the world closer together[,]" are designed in a way that prioritizes not social connection but product use at all costs, even to the detriment of the health and safety of young people[467]. The result for Meta is an increase in its bottom line. The result for young users is platforms that are so addictive that they return again and again, even when their mental and physical health suffers greatly.

363. Meta knew that its engagement-based ranking algorithm (and its subsequent, iterative MSI ranking algorithm) was structured so that posts which produces intense reactions (i.e., strong engagement) triggers amplification by the apps. This propels users into the most reactive experiences, favoring posts that generate engagement because they are extreme in nature. Zuckerberg publicly recognized this in a 2018 post, in which he demonstrated the correlation between engagement and sensational content that is so extreme that it impinges upon Meta's own ethical limits, with the following

[463] Haugen_00021247 at Haugen_00021248; *see also* Haugen_00006798 at Haugen_00006799 (Meta Research Scientist in 2019 stated, "it's at best unclear whether users 'want' us to put unconnected stories in their feed, even if they like some of them.").
[464] Haugen_00021247 at Haugen_00021248.
[465] *Id.* at Haugen_00021251.
[466] *Id.*
[467] *Our Mission*, Meta, https://about.meta.com/company-info/.

chart:[468] While Zuckerberg went on to claim that Meta had designed its algorithms to avoid this natural propensity of engagement-based algorithms, his claim to the public is belied by the extensive internal and external research indicating Meta's platforms did amplify extreme material.



364. Other documents show that Meta's employees also discussed their motive for changing the design of the algorithm—namely, that users began to interact less with the product, which became a worrisome trend for Meta's bottom-line. Meta's engagement-based algorithm (including its MSI variant) was designed to drive more engagement, which, in turn, helped Meta sell more of the digital ads that generated most of their revenue. In 2016, one Facebook Tech Lead wrote: "[W]e only cared about things like time spent, open links, etc. That's what we optimized for. That's what we used to define success and failure. And that's the problem."[469]

365. Meta intentionally designed its MSI-focused algorithms to collect and analyze several users' data[470] to predict what posts will capture users' attention. Meta also tracks and utilizes data from

[468] Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement* at 6, Facebook, https://www.facebook.com/notes/751449002072082/ [https://perma.cc/LS86-A943] (last edited May 5, 2021).
[469] Haugen_00001033 at Haugen_00001033.
[470] Haugen_00017177 at Haugen_00017177.

various other sources, such as a users' off-product activities and the activities on websites that contain Facebook or Instagram "Like" or share buttons.[471]

366. Meta's algorithmic ranking is utilized in a variety of product features that are designed by Meta to maximize user engagement. For example, the Instagram product consists primarily of a never-ending and user-specific Feed, which Instagram's data-driven algorithms generate for each user. In the app's "Home" pane, this feed includes (but is not limited to) photos and videos posted by Instagram users that the user has elected to "follow," as well as recommended photos and videos. In the app's "Explore" pane, the feed consists almost exclusively of photos and videos from users the user has *not* elected to "follow." In both cases, Instagram's algorithms evaluate each user's data to predict what material will maximize their attention and time spent using the product, irrespective of what the user wants to see.

367. Other "recommendation" features that are similarly algorithmically powered to drive compulsive use include Facebook's Newsfeed, Instagram's Feed, Instagram Reels, Facebook Reels, Facebook Watch (and its "For You" page), Accounts to Follow, People You May Know (introductions to persons with common connections or backgrounds), Groups You Should Join, and Discover (recommendations for Meta groups to join).

368. While Meta has publicly attempted to cast MSI as making time spent on its platforms more "meaningful," MSI was just another way for Meta to increase user engagement on Instagram and Facebook. While the feature increases the chance that product interaction will be "meaningful" by Meta's definition—more "Likes," comments, and interactions—it does not consider whether recommended posts are welcomed by the user. This sets up users who may have rejected upsetting or dangerous posts to see more of the same, resulting in what Meta itself calls a "horrible feedback loop / downward spiral."[472] Also referred to as "feeding the spiral,"[473] the MSI algorithm increases the

[471] Allen St. John, *How Facebook Tracks You, Even When You're Not on Facebook*, Consumer Reps. (Apr. 11, 2018), https://www.consumerreports.org/privacy/how-facebook-tracks-you-even-when-youre-not-on-facebook-a7977954071/.

[472] META3047MDL-003-00068860 at META3047MDL-003-00068860.

[473] META3047MDL-003-00121808 at META3047MDL-003-00121808. Meta employees sometimes refer to this "spiral" as a "rabbit hole"; *see also* META3047MDL-003-00077939 at META3047MDL-003-00077939.

likelihood that a user sees posts "that makes them feel bad, they engage with it [even if only to reject it], and then their [user experience] is flooded w[ith] it."[474] Because Meta's algorithm prioritizes engagement above all else, any harmful feeling or impulse that users have are amplified by Instagram—which becomes an echo chamber screaming their most upsetting thoughts back at them.

369. This feedback-loop dynamic was cast into vivid reality when 14-year-old Molly Russell took her own life.[475] During an official inquest investigating the role that social media platforms played in her death, the coroner found that:

> The platform operated in such a way using algorithms as to result, in some circumstances, of binge periods of images, video clips and text some of which were selected and provided without Molly requesting them. These binge periods . . . are likely to have had a negative effect on Molly . . . . The sites normalised her condition focusing on a limited and irrational view without any counterbalance of normality.[476]

370. The coroner further observed that "[t]here was no age verification when signing up to the on-line platform" and that Molly's parents "did not have access, to the material being viewed or any control over that material."[477]

371. Disturbingly, years before Meta sent an executive to the inquest to tout its platforms as "safe," Meta had conducted internal research which warned that there was a risk of "similar incidents like Molly Russell" due to the operation of algorithmic product features.[478]

372. Despite Molly's death, and notwithstanding Meta's research into dangerous spirals—at one point dubbed the "Rabbithole project"—the company did nothing to stop harm to its young users. Meta has been clear about the problem: "[O]ur recommendations algorithms will start pushing you down a rabbit hole[.]"[479] They have been clear about potential solutions: targeted changes to the algorithm do

---

[474] META3047MDL-003-00121808 at META3047MDL-003-00121808.

[475] Dan Milmo, *Social media firms 'monetising misery', says Molly Russell's father after inquest*, Guardian (Sept. 30, 2022), https://www.theguardian.com/uk-news/2022/sep/30/molly-russell-died-while-suffering-negative-effects-of-online-content-rules-coroner.

[476] Andrew Walker, *Regulation 28 Report to Prevent Future Deaths* at 2, ¶ 4, N. London Coroner's Serv. (Oct. 13, 2022), https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf.

[477] *Id.* at 3 ¶ 5.

[478] META3047MDL-003-00043617 at META3047MDL-003-00043644.

[479] META3047MDL-003-00077939 at META3047MDL-003-00077939; *see also* META3047MDL-003-00068860 at META3047MDL-003-00068860; META3047MDL-003-00087111 at

lead to meaningful changes.[480] But they have been resistant to making changes, citing an explicit, profit-minded reason that such tweaks "came with a clear engagement cost[.]"[481]

f. Meta's dangerous and harmful features cause negative body image and harmful impacts on youth mental health.

373. Meta has known since at least 2018 that Instagram has a corrosive effect on the mental health of pre-teen and teenage users.[482] Meta has an internal research team comprised of employees with expertise in, *inter alia*, computer science, psychology, and quantitative and qualitative analysis. In 2019, this team completed a "teen mental health deep dive" which included focus groups, and online surveys. The study paired a survey of thousands of Instagram users with data about the time each respondent spent on Instagram and the type of posts they viewed.[483]

374. The evidence collected by Meta's research team is damning. Among other findings, Defendants' researchers learned that:

a. 41% of teen users of Instagram in the U.S. who reported feeling "[not] attractive" said the feeling began while using the product; [484]

b. 32% of teenage girls said that when they felt bad about their bodies, Instagram made them feel worse; [485]

META3047MDL-003-00087112 (acknowledging that a majority of "negative experiences" come from algorithmically-powered features like explore and hashtags).

[480] META3047MDL-003-00077939.

[481] *Id.*

[482] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667 [https://perma.cc/AK48-E6HH]; META3047MDL-003-00146240 at META3047MDL-003-00146256.

[483] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; Haugen_00017069; META3047MDL-003-00000029.

[484] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; META3047MDL-003-00000029 at META3047MDL-003-00000043.

[485] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; Haugen_00019219 at Haugen_00019226; META3047MDL-003-00001846 at META3047MDL-003-00001852.

c. "We make body image issues worse for 1 in 3 teen girls;"[486]

d. "Frequent social comparison is a key driver of subjective well-being and teens say [Instagram] makes this problem worse;" [487]

e. One in five teens said that Instagram made them feel worse about themselves or their mental health;[488]

f. Two-thirds of teen girls on Instagram experienced negative social comparison;[489]

g. 17% of teen girl Instagram users said the product made "[e]ating [i]ssues" worse; [490]

h. About a quarter of teens who reported feeling "[n]ot good enough" said the feeling started on Instagram; [491]

i. About a quarter of teens said that Instagram undermined their confidence in the strength of their friendships; [492]

j. Teenagers who struggle with mental health said that Instagram worsened those problems; [493]

k. "Teens blame Instagram for increases in the rates of anxiety and depression among teens" in recent years—a response that was "unprompted and consistent across all groups";[494]

---

[486] Haugen_00016699 at Haugen_00016707.

[487] Haugen_00019219 at Haugen_00019226.

[488] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; Haugen_00017069 at Haugen_00017091; META3047MDL-003-00000029 at META3047MDL-003-00000049.

[489] Haugen_00019219 at Haugen_00019226.

[490] Haugen_00020135 at Haugen_00020162.

[491] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; META3047MDL-003-00000029 at META3047MDL-003-00000043.

[492] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; *Id.*

[493] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; *Id.* at META3047MDL-003-00000053.

[494] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667; *Id.* at META3047MDL-003-00000052.

l. Among teens who reported suicidal thoughts, 13% of British users and 6% of American users traced the desire to kill themselves to Instagram;[495] and

m. 13.5% of teen girls on Instagram said the product made[496] thoughts of "suicide and self-injury" worse. [497]

375. Further, in Meta's October 2019 *Teen Mental Health Deep Dive* research, which surveyed over 2,500 teenagers who use Instagram on at least a monthly basis, Meta researchers found that "[y]oung people are acutely aware that Instagram can be bad for their mental health, yet are compelled to spend time on the app[.]"[498]

376. Meta's researchers were clear in explaining that Instagram product features were responsible for these problems. In one chart illustrating the "High" amount of "Body, Appearance Comparison" on Instagram, researchers cited as contributing factors "Product mechanics (addicting)" and "Explore, discover, stalk (down the rabbit hole)[.]"[499] In another slide, researchers noted the particular problems with Instagram's Explore feature, as it contains "[t]ons of body image triggers" that are "[i]Intimidating" to users.[500]

377. Children are developmentally unprepared for the psychological ramifications of peer judgment and online comparisons.

378. Meta's internal researchers were not only clear about the fact that Instagram causes a high level of social comparison for teenagers; they were clear-eyed about the dire consequences. They observed that the addictive nature of the Instagram product, combined with a pressure to match unrealistic beauty ideals, can send teens into a downward spiral that includes anger, withdrawal, insecurity, and body dysmorphia—"a series of emotions that in many ways mimic stages of grief."[501] They further warned that "[u]sers[']' experience of [this] downward spiral is exacerbated by our

---

[495] Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show*, Wall St. J. (Sept. 28, 2021), https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667 ; *Id.* at META3047MDL-003-00000043.
[496] MDL AG Compl. at 37, ¶ 204.
[497] Haugen_00016699 at Haugen_00016707.
[498] Mass. AG Compl. at 34, ¶ 124.
[499] Haugen_00015958 at Haugen_00015987.
[500] *Id.* at Haugen_00015989.
[501] *Id.* at Haugen_00015985.

platform[.]"[502] "Comparisons on Instagram can change how young women view and describe themselves," they noted, changing a girl's self-perception from "multi-dimensional" and "centered" to "[n]ot in control," "[d]ark," [b]oxed in," "[l]ow esteem," and "[a]nxious."[503] The researchers' conclusions were stark: "Mental health outcomes related to this can be severe" and can include "[e]ating [d]isorders," "[b]ody [d]ysmorphia," "[b]ody [d]issatisfaction," "[d]epression," and "[l]loneliness."[504]

379. Meta's research demonstrates that social comparison is particularly bad on Instagram where Meta fuels addiction to its platform by exploiting and monetizing tweens and teens' susceptibility to body dissatisfaction and negative social comparison.[505] The mental health of tween and teen users bears the cost of Meta's manufacturing and emphasizing influence and celebrity.[506] Meta knows as much. In 2020, its researchers found that exposure to "top accounts" (i.e., those with the top 0.1% follower counts) was most associated with negative comparison and that Instagram's influence-driven algorithms ensure top accounts comprise almost half of all material viewed on the platform.[507]

380. Score-keeping features designed into Instagram amplify these problems and the resulting compulsive and problematic use. Teenage girls are particularly impacted when comparing "Like" counts, follower counts, views, and comments on their posts to those of models, celebrities, and so-called influencers. Meta's internal research reveals that teen girls are eight times more likely to engage in negative social comparison than their male counterparts.[508]

381. Instagram compounds the foregoing problems with yet another pernicious feature—image "filters" that allow users to engage in selective self-presentation by altering their appearance in photos and videos. These filters allow facial structure alteration, body slimming, skin lightening, skin tanning, blemish clearing, the artificial overlap and augmentation of makeup, and other beautification

---

[502] *Id.* at Haugen_00015990.
[503] *Id.* at Haugen_00015983.
[504] *Id.* at Haugen_00015992.
[505] *See* Haugen_00015958 at Haugen_00015996.
[506] Haugen_00002527 at Haugen_00002555–Haugen_00002556, Haugen_00002564–Haugen_00002565.
[507] META3047MDL-003-00159559 at META3047MDL-003-00159560; *see also* Haugen_00002527 at Haugen_00002555.
[508] Haugen_00017263 at Haugen_00017263.

"improvements."[509][510] These filters have harmed young users in multiple ways, both independently and in concert with Instagram's other harmful features, all in the name of increased user engagement.[511]

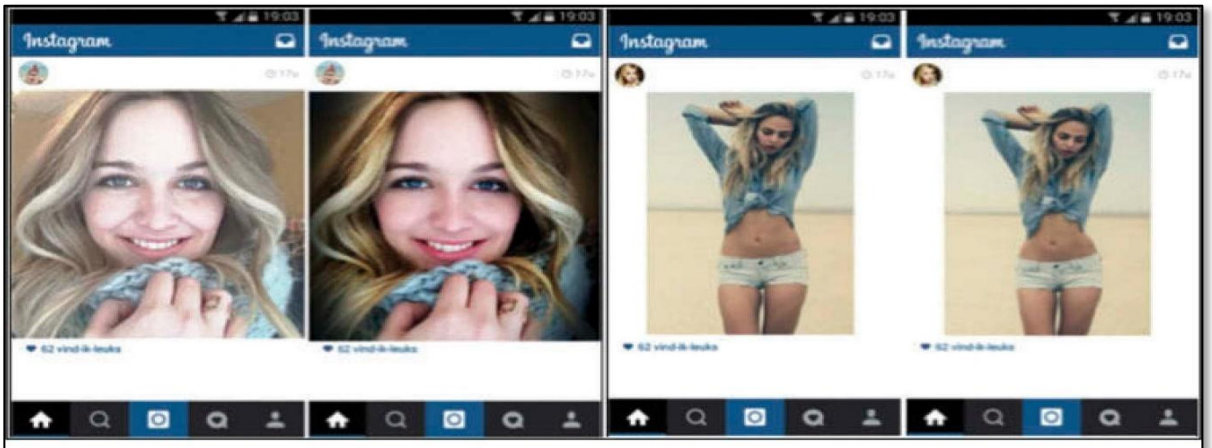


Figure 1. Examples of original versus manipulated Instagram photos emphasizing face, skin, and hair (left), or body (right).

382. *First,* the easy accessibility of filters, combined with features such as "Likes," encourages adolescents to artificially change their appearance.[512] As noted, adolescents naturally seek social validation. When they notice increased interaction and favorable responses to their filter-edited photos (more "Likes" and "comments"), many are led to believe they are only attractive when their images are edited.[513] These young people, including youth in Plaintiff's schools and community, begin to prefer

[509] *See, e.g.*, Tanyel Mustafa, *An 'Instagram Vs Reality' filter is showing how toxic photo editing can be*, Metro (Apr. 30, 2021), https://metro.co.uk/2021/04/30/an-instagram-vs-reality-tool-is-showing-how-toxic-filters-can-be-14498265/.

[510] Mariska Kleemans *et al.*, *Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls*, 21 Media Psych. 93–110, 98 (2016), https://www.tandfonline.com/doi/pdf/10.1080/15213269.2016.1257392.

[511] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

[512] Tate Ryan-Mosley, *Beauty filters are changing the way young girls see themselves*, MIT Tech. Rev. (Apr. 2, 2021), https://www.technologyreview.com/2021/04/02/1021635/beauty-filters-young-girls-augmented-reality-social-media/amp/.

[513] *Id.*

how they look using filters, not as they appear naturally.[514] In a 2016 study, 52% of girls said they use image filters every day, and 80% have used an app to change their appearance before age 13.[515] Meta's own findings showed teen girls spend hours editing images by altering their appearance before posting on Instagram,[516] and that "teen girls in particular" are "some of the biggest users of these filters."[517] Pictures must be "Instagrammable" to be worthy of posting.

383. *Second,* Instagram causes youth to compare their real-life appearances to the edited appearances only achievable by filters and Meta's tools.[518] These false and unrealistic body image standards further lead teenagers like Plaintiff's students to develop negative perceptions of their appearance. Seventy-seven percent of girls reported trying to change or hide at least one part of their body before posting a photo of themselves, and 50% believe they did not look good without editing.[519]

384. *Third,* the specific changes filters make to an individual's appearance can cause negative obsession or self-hatred surrounding aspects of their appearance.[520] The filters alter specific facial features such as eyes, lips, jaw, face shape, and slimness, which often require medical intervention to alter in real life.[521] The pervasiveness of Meta-designed filters through the algorithm permeates Instagram and cause adolescent users to negatively compare their real appearances against a false

---

[514] Pooja Shah, *How Social Media Filters Are Affecting Youth*, Parents (Apr. 28, 2022), https://www.parents.com/kids/health/childrens-mental-health/how-social-media-filters-are-affecting-youth/.

[515] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

[516] *See* Haugen_00019219 at Haugen_00019255; Haugen_00019257–Haugen_00019259.

[517] META3047MDL-003-00157020 at META3047MDL-003-00157020–META3047MDL-003-00157021.

[518] *See* Haugen_00019219 at Haugen_00019255 (explaining that users forget that Instagram only shows the highlights of people's lives and is not depicting reality).

[519] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

[520] Tonya Russell, *Social Media Filters Are Changing How Young People See Themselves*, Teen Vogue (Jan. 25, 2022), https://www.teenvogue.com/story/social-media-filters-how-young-people-see-themselves/amp.

[521] *Id.*

physical reality.[522] In one recent study, even users who reported a higher initial self-esteem level felt they looked 44% worse before their image was edited using a filter.[523] "[W]hen the . . . filter increased the gap between how participants wanted to look and how they felt they actually looked, it reduced their self-compassion and tolerance for their own physical flaws."[524] As one psychodermatologist summed it up: "[T]hese apps subconsciously implant the notion of imperfection and ugliness, generating a loss of confidence[.]"[525]

385. *Fourth,* Meta intentionally designed its platforms to not alert adolescent users when images have been altered through filters or edited. Meta has therefore designed its platforms so that users, including youth in Plaintiff's schools and community, cannot know which images are real and which are fake, deepening obsessive, negative appearance comparison.

386. *Fifth,* Meta uses social comparison to keep young users engaged with and addicted to its platforms.

387. Heavily edited and unrealistic beauty, modeling, fitness, talent, and success related posts are highly amplified by Meta's algorithms, especially on the Feeds of young users.

388. Social comparisons on social media are frequent and are especially likely to be upward, as social media provides a continuous stream of information about other people's accomplishments. Research suggests that social comparisons occur automatically; when individuals encounter information about another person, their self-perceptions will be affected. The sheer number of posts in a News Feed, each offering a thumbnail sketch of each person's carefully curated and predominantly ostentatious lives, yields numerous opportunities for social comparison. Although people do not typically post false information about themselves online, they engage in selective self-presentation. As a result, individuals browsing their News Feeds are more likely to see posts about friends' exciting social activities rather than dull days at the office, affording numerous opportunities for comparisons to people seemingly

---

[522] *Id.*

[523] Ana Javornik *et al.*, *Research: How AR Filters Impact People's Self-Image*, Harv. Bus. Rev. (Dec. 22, 2021), https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image.

[524] *Id.*

[525] Genesis Rivas, *The Mental Health Impacts of Beauty Filters on Social Media Shouldn't Be Ignored – Here's Why*, InStyle (Sept. 14, 2022), https://www.instyle.com/beauty/social-media-filters-mental-health.

better-off. Individuals with vacillating levels of self-esteem and certitude, characteristics notoriously endemic to the adolescent cohort, are particularly oriented to making frequent and extreme upward social comparisons on social media. Social-media-induced social comparison often results in a discrepancy between the ideal self and the real self, thus evoking a sense of depression, deprivation, and distress, resulting in an overall aggravation of a person's mental state. Since the early 2000s, studies have shown that frequent upward social comparison results in lower self-esteem and reduced overall mental health. It is well-established that individuals who are more likely to engage in self-comparison are likewise more likely to suffer harm when using social media. Meta's design choices have amplified this dynamic to psychologically harmful levels, as discussed in further detail below.

389. The impact of the negative social and appearance comparison caused by Meta's design choices is profound. Instagram-induced social comparison creates a schism between the ideal self and the real self, leading to distress and depression. Filters, especially in combination with other product features, cause body image issues, eating disorders, body dysmorphia, and related harms. [526]

390. Again, Meta has long been aware of the harms Instagram inflicts on youth by perpetuating social comparison. In one study from 2019, teens explained that Instagram harms their mental health by creating pressure to conform to social stereotypes, the need for validation through views, "Likes" and followers, and the over-sexualization of girls.[527] These and other harmful impacts were associated with isolation, adopting unhealthy habits, depression, anxiety, insecurity, and loneliness.[528]

391. In its "Social Comparison Exploratory Research" conducted in 2020, Meta acknowledged that body image comparisons are formed in part by its features—filters that flood its app with seemingly

[526] *See* Sian McLean *et al.*, Photoshopping the selfie: Self photo editing and photo investment are associated with body dissatisfaction in adolescent girls, 48 Int'l J. Eating Disorders 1132–1140, 1133 (2015), https://pubmed.ncbi.nlm.nih.gov/26311205/ [https://perma.cc/PE83-EKV4] (presenting a 2015 study involving 101 adolescent girls, which found that more time spent editing and sharing selfies on social media raised their risk of experiencing body dissatisfaction and disordered eating habits); Scott Griffiths *et al.*, The Contribution of Social Media to Body Dissatisfaction, Eating Disorder Symptoms, and Anabolic Steroid Use Among Sexual Minority Men, 21 Cyberpsychology, Behav., & Soc. Networking 149–156, 149 (2018), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5865626/pdf/cyber.2017.0375.pdf.

[527] Haugen_00017069 at Haugen_00017122.

[528] *Id.* at Haugen_00017126.

unattainable looks like flawless skin, made worse by posters "using hashtags like no-filters but actually using filters."[529] Meta's researchers found that nearly half of teen girls on Instagram feel like they often or always compare their appearance to others using the product, and more than one-third feel extreme pressure to look perfect on Instagram.[530] In a related survey, Meta found that around the age of 30, the role of Instagram in social comparison begins to diminish.[531]

392. According to research conducted by Meta in 2019, over 60% of teens believe Instagram should help them address the effects of social comparison by recommending positive accounts, reprioritizing their feeds to promote things that make users feel good, and help them follow a balance of accounts.[532] Most users wished Instagram gave them better user controls.[533] Yet a survey conducted two years later revealed that Meta had done little to address its users' concerns. Topics that elicited social comparison still encompassed over one-third of teen girls' feeds. And for every post from a friend that appeared in a teen girl's feed, Instagram's algorithm drove five times as many posts from the top 0.1% of popular accounts.[534]

393. One slide from Meta's study of social comparison offers a particularly succinct summation of how the various features built into Instagram "exacerbate each other to create a perfect storm."[535] "Posting 'For the Gram'" creates a "Pressure to Look Perfect."[536] The ability of influencers to "Monetiz[e] face + body" creates a "Highlight Reel Norm."[537] And the "Vortex of Feed + Profile and Explore" promotes a "Hate to love" dynamic for users, which ***"Feed[s] the Spiral" of compulsive***

---

[529] *See* Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S. at 18, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf; Haugen_00015958 at Haugen_00015971–Haugen_00015977.

[530] Haugen_00007080 at Haugen_00007082.

[531] *Id.* at Haugen_00007095.

[532] Haugen_00017069 at Haugen_00017145.

[533] Haugen_00020135 at Haugen_00020137, Haugen_00020171.

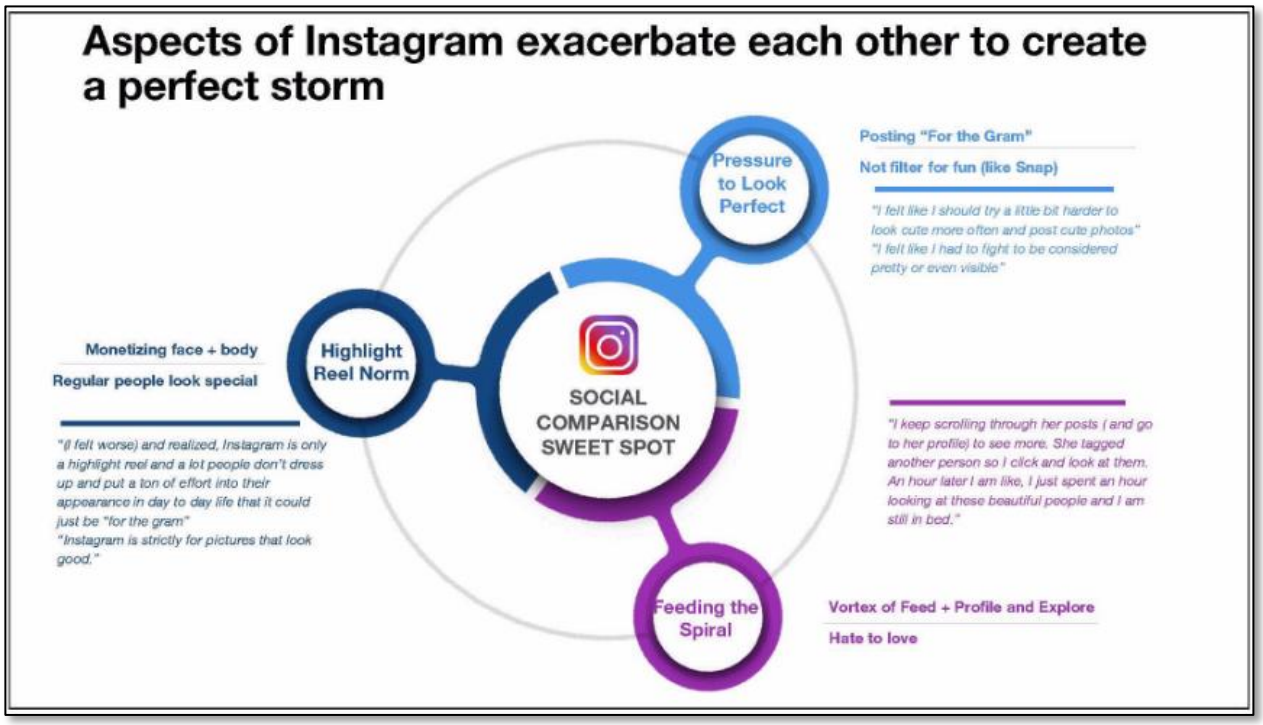
[534] Haugen_00002527 at Haugen_00002529, Haugen_00002555.

[535] *See Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 33, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf; Haugen_00015958 at Haugen_00015991.

[536] *See Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.* at 33, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf.

[537] *See Id.*; Haugen_00015958 at Haugen_00015991.

use.[538] Taken together, these three features—all driven by design features of Instagram—create a "Social Comparison Sweet Spot."[539]



394. Meta understands that the social comparison it knowingly promotes through appearance filters creates compulsive behavior among child users, especially when paired with other features such as "Likes" and algorithmic recommendations. Specifically, Meta knows that "[s]ocial comparison creates a negative feedback loop[.]"[540] Its internal research reveals that, as teens compare themselves to others, their self-doubt grows, which in turn heightens the degree of attention they give to feelings of doubt and worthlessness and to negative aspects of themselves. As these effects compound, teens experience depression and anxiety, making them more vulnerable and susceptible to addiction to Meta's platforms.[541] Meta observed that long-term, constant self-critique and scrutiny permanently shape how

[538] *Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.* at 33, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf; Haugen_00015958 at Haugen_00015991.

[539] *See Teen Girls Body Image and Social Comparison on Instagram – An Exploratory Study in the U.S.* at 33, Wall St. J. (Sept. 29, 2021), https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf; Haugen_00015958 at Haugen_00015991.

[540] Haugen_00017069 at Haugen_00017127.

[541] *Id.* at Haugen_00017127–Haugen_00017128.

teens view themselves in all relationships, on and offline.[542] Moreover, they found that the incessant social pressure Instagram inflicted on teens led "to obsessive control of what goes on social media and often to attention-seeking [behavior] (often in negative ways)" to obtain social validation.[543] In other words, Instagram's design features resulted in an insidious cycle of harm where teens believed they could only find reprieve by increased Instagram use.

395. Meta has the technological capabilities to mitigate social comparison harms significantly, but actively chooses to ignore leading research (including its own) and its product engineers' recommendations. One internal presentation recommended several "[t]argeted [i]nterventions" for changes to Instagram that could mitigate these harms, such as a recommendation that users take a break during a long use session.[544] In another, computational social researchers and engineers at Meta proposed numerous, feasible product design changes, including: demotions on Explore and Reels using topic and image and video features from an FBLearner model, separating top-account feed from close-friend feed, and not recommending celebrities to follow that post primarily fashion/beauty material as users "can find these accounts on their own, but [Meta] shouldn't amplify their influence through recommendations."[545]

396. Despite its vast knowledge of the harms that Instagram's features were causing to adolescents, in Meta's 2021 Milestone Tracker, the action item of reducing the negative effects from social comparison through controls had yet to be started.[546] In other words, despite awareness that the deliberate design of Instagram was drastically damaging teen mental and physical health, Meta ignored the problem, failing to implement its own researchers' recommendations.

g. Facebook's and Instagram's dangerous and harmful features include impediments to discontinuing use.

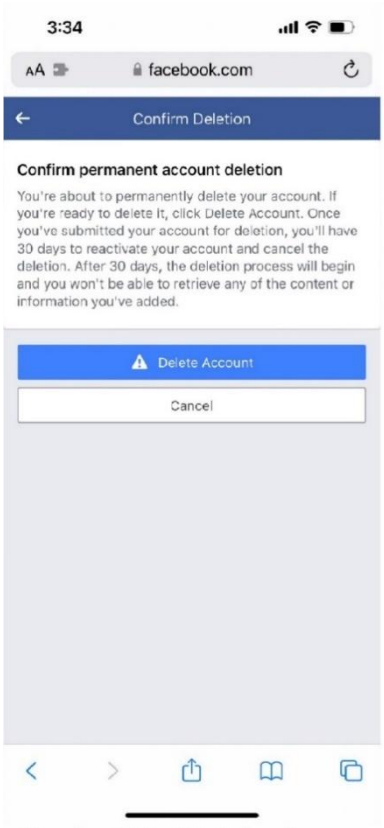
397. Once the addicted child realizes the injury Meta's platforms are inflicting, and wants to quit using, Meta shifts the full force of its genius product design teams to prevent the child's escape.

[542] *See Id.* at Haugen_00017128.
[543] *Id.* at Haugen_00017130.
[544] Haugen_00019219 at Haugen_00019272.
[545] Haugen_00002527 at Haugen_00002565.
[546] Haugen_00025741 at Haugen_00025763.

Meta has intentionally designed its platforms so that adolescent users face significant navigational obstacles and hurdles when trying to delete or deactivate their accounts, in stark contrast to the ease with which users can create those accounts.

398. To delete or deactivate an Instagram or Facebook account, a user must locate and tap on approximately seven different buttons (through seven different pages and popups) from the main feed. Some users have undoubtedly given up in their attempt to quit because it was too difficult to navigate through the interface to completion.

399. Even if a user successfully navigates these seven pages, Meta still won't immediately delete their account. Instead, Meta preserves the account for 30 days. If at any time during those 30 days a user's addictive craving becomes overwhelming and they access the account again, the deletion process starts over. The user must go through all the above steps again, including the 30-day waiting period, if they again wish to delete their account.



(Facebook Final Deletion Screen February 2023)



(Instagram Final Deletion Screen, January 2023)(account name redacted)

400. Moreover, the deletion process includes what Meta readily acknowledges are "aggressive" attempts to dissuade users from deleting their accounts.[547] Before a user can delete their Facebook account, Meta "lists some of your friends to remind you that they will no longer be able to contact you through the site and more importantly, [requires] the user to choose a reason for why they're leaving."[548] Meta also requires users attempting to leave Instagram to select a reason why they are leaving.

401. As an additional barrier to deletion, Meta urges users of both platforms to deactivate, rather than delete, their accounts. For example, Instagram users who choose to delete their accounts are immediately shown a screen with their profile picture and asked: "Deactivate your account instead of deleting?" The option to deactivate is conspicuously highlighted. Similarly, Facebook displays a screen that automatically selects the option of deactivating rather than deleting a user account.

402. Meta's aggressive efforts to prevent users from discontinuing their use of Facebook and Instagram is particularly problematic because unsuccessful efforts to discontinue use are a hallmark of addiction, incorporated as the sixth criteria in the *Bergen Social Media Addiction Scale*, discussed above.

4. Meta has concealed from Plaintiff, the public, and Congress the harmful effects that Instagram's and Facebook's design have on children.

403. Meta represents to the public that it prioritizes safety. At the same time, Meta has engaged in a years-long pattern of concealing critical information about the safety of Instagram and Facebook from the public, including Plaintiff and its students. In one internal document from February 2018, employees at Meta communicated about how best to "refin[e] counter-messaging around the addiction narrative that's been propagating."[549] This effort to conduct "message testing around addiction PR responses" included the ideas that "[t]he whole dopamine thing is completely made up and based on

[547] Haugen_00016893 at Haugen_00016898.
[548] *Id.*
[549] META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-00082166.

no research," "[t]here's no agreement on what is meant by addiction," and (contradictorily) "[w]e're taking it seriously, doing research, [and] launching new tools to help people[.]"[550]

404. Meta knew that none of this was true. For instance, in the summer of 2019, Zuckerberg met with a psychologist and leading expert on the mental health effects of social media on young people. This leading expert countered Zuckerberg's contention that harms from social media are trivial and explained how, to the contrary, Instagram and other platforms have been a major contributor to the spike in young girls' mental health problems since 2012. The psychologist addressed his research "on the dramatic rise in rates of teenage anxiety, depression, and self-harm" and explained how the research on social media's role "points heavily to a connection, not just from correlational studies but from true experiments, which strongly indicate causation, not just correlation." [551]

405. Instead of "taking [this] seriously" and "launching new tools" to protect kids,[552] Meta did the opposite. By late 2019, Meta's "mental health team stopped doing things[,]" "it was defunded" and "completely stopped[.]"[553] And, as noted, Meta allowed safety tools it knew were broken to be held out as fixes. All the while, Meta ignored cries from their well-being researchers to aggressively confront its youth safety problem: "[T]here's so much more we could have done here. . . . [But] there was the explicit decision last half not to fund this anymore."[554] And Meta even internally researched the extent of its platforms' harmful effects on youth mental health.

406. In June 2018, an internal presentation recognized that "[i]t may be a problem if Facebook seems rewarding [to users] based on the principle of unpredictability, while the inherent value of the reward is lacking."[555] This includes "[n]otifications with little or no relevance, and that come at unpredictable times."[556] The same document warned that dopamine "rewards available through Facebook may contribute to problems for some people."[557]

---

[550] *Id.*
[551] META3047MDL-003-00089174 at META3047MDL-003-00089176.
[552] META3047MDL-003-00082165 at META3047MDL-003-00082165.
[553] META3047MDL-003-00011697 at META3047MDL-003-00011698; *see also* META3047MDL-003-00103260 at META3047MDL-003-00103260 (referencing "the explicit decision last half to not fund [protective measures against problematic use] anymore)".
[554] *See* META3047MDL-003-00103260.
[555] MDL AG Compl. at 30, ¶ 164.
[556] *Id.*
[557] *Id.*

407. For example, in October 2019, Meta conducted a "Teen Mental Healthy Deep Dive" to "get a nuanced understanding of teens' perception of how Instagram effects their mental health."[558] The results of this research showed that Instagram's teen users "have an addicts' narrative about their use," "recognize the amount of time they spend online isn't good for them," "but at the same time know they lack the willpower to control the time spent themselves."[559]

408. Similarly, in June 2020, Meta's Senior User Experience ("UX") Researcher noted in an internal report: *What Makes Teens Tick?*, that "our own product foundation research has shown teens are unhappy with the amount of time they spend on our app" and that "[d]ue to the immature [teen] brain, they have a much harder time stopping even though they want to."[560] The report further noted that because "[t]een brains are much more sensitive to dopamine," the risk of "addiction" is higher and that is what "keeps them scrolling and scrolling." [561]

409. The presentation also noted teens often go down "rabbit holes" because of the "especially 'plastic'" nature of their brains, and asked how Instagram could satisfy "teen[s'] insatiable appetite for novelty" through features on the app.[562] The presentation further discussed teens' "increased sensitivity" and "concerns about being judged," along with teens' desire for reward, which "makes them predisposed to impulse, peer pressure, and potentially harmful risky behavior."[563]

410. Meta has researched and analyzed addictive or "problematic use" reported by young users on its platforms. According to Meta's 2019 research: *Hard Life Moments—Mental Health Deep Dive*, which studied "the reach, intensity, [and] impact of Instagram" "[a]cross 13 mental health and well-being issues," "[over 30% of users across age cohorts" told Meta that "Instagram made problematic use worse."[564] Meta researchers defined "problematic use" as "when people feel a lack of control over how they use technology, and this leads to negative life impact (e.g., sleep, parenting, social relationships, or productivity)."[565] An internal presentation also showed that 55% of Facebook's U.S.

---

[558] Mass. AG Compl. at 37, ¶ 135.
[559] *Id.*
[560] *Id.* at ¶ 136.
[561] *Id.*
[562] MDL AG Compl. at 66, ¶ 407.
[563] *Id.*
[564] Mass. AG Compl. at 37, ¶ 137.
[565] *Id.*

users suffered from problematic use, which Meta described as "serious" and as having "negative impacts on sleep, relationships, work, or lives."[566] Another internal Meta post from July 2018 showed that problematic use was highest among teens and people in their twenties.[567]

411. Meta also knows young users' physical health is harmed by compulsive "problematic use" induced by its platform design features. Specifically, Meta's researchers noted that "sleep problems" can "be part of [Facebook] addiction" and confirmed "it is true that negative impacts on sleep is one possible outcome of problematic social media use."[568] Another data scientist explained "the only insight I see . . . is that teens are really into using [Instagram] at 11pm when they probably should be sleeping[]" and "it is true that negative impacts on sleep is one possible outcome of problematic social media use (or even non-problematic use)."[569]

412. In February 2019, Meta's VP of Research, David Ginsberg circulated a summary of external and internal research on Instagram and "Teen Well-Being" to executives, including then-COO Sheryl Sandberg and Head of Instagram Adam Mosseri, that acknowledged "[w]hen social media use displaces sleep in adolescents (via nighttime social media use), it is negatively correlated to indicators of mental health."[570]

413. Moreover, Meta knows that is addictive features, such as infinite scroll, and autoplay in Stories and Reels, harm young users because they encourage passive consumption. As one Meta employee stated in October 2021, "because [Stories are] so passive—you can just sit there and watch without interacting with the poster or other people much, and we know that passive consumption is generally worse for wellbeing."[571]

414. Based on its own research, Meta found that "passive consumption—passively watching videos, [and] scrolling [is] not associated w[ith] well-being [and is] more negative psychologically" compared with "active engagement."[572]

---

[566] MDL AG Compl. at 90–91, ¶ 539.
[567] *Id.*
[568] Mass. AG Compl. at 38, ¶ 138.
[569] MDL AG Compl. at 91, ¶ 542.
[570] Mass. AG Compl. at 38, ¶ 139.
[571] Mass. AG Compl. at 38, ¶ 140.
[572] MDL AG Compl. at 69, ¶ 421.

415. Meta is also aware of the effect its platforms have on teens experiencing negative social comparison. For example, Meta researchers concluded that a "majority of teen girls experience negative social comparison and a significant share of them think [Instagram] makes it worse."[573] Similarly, Meta knows that 13.5% of teen girls on Instagram say the platform makes thoughts of suicide and self-injury worse.[574] Further, in a January 2020 study Meta conducted, it noted that social comparison is "higher among younger than older people. Younger people are more susceptible to peer influence and social comparison."[575]

416. Three months later, Meta conducted another study revealing 1 in 4 people "think that Instagram makes social comparison worse" and that "[s]eeing high Like counts is associated with feeling worse (more negative, less positive comparison)."[576]

417. Instagram researchers have also observed that "[s]ocial comparison exacerbates problems teens are dealing with" in that "[a]lthough others' behaviors online can hurt, the self-scrutiny and anxiety associated with personal consumption patterns is more damaging to mental health." [577]

418. In addition to knowing that social comparison exacerbates teens' mental health problems, Meta also knows through an internal report that "social comparison was also associated with greater time spent" on Meta's platforms.[578] Indeed, Meta's researchers stated they were "confident of a causal link between [seeing] Like counts and social comparison."[579] And an internal email from 2020 explains that "[Meta] know[s] from previous internal and external research that social comparison is linked to multiple negative well-being outcomes (e.g., increased loneliness, worse body image, and negative mood or affect)[.]"[580]

419. A 2021 internal presentation also notes that teens suffer from "constant negative comparisons" on Instagram because Meta recommended triggering content to them and continued

[573] MDL AG Compl. at 37, ¶ 203.
[574] *Id.* at ¶ 204.
[575] MDL AG Compl. at 42, ¶ 233.
[576] *Id.* at ¶ 234.
[577] MDL AG Compl. at 38, ¶ 207.
[578] MDL AG Compl. at 41, ¶ 229.
[579] *Id.* at ¶ 231.
[580] MDL AG Compl. at 42, ¶ 232.

showing them Like counts.[581] Other internal documents reflect that "the mechanics of Instagram amplify the impact of social comparison."[582]

420. Despite knowing better, Meta's high-ranking executives then began pushing intentionally misleading talking points to the public. Instead of informing the public about Meta's internal research demonstrating Instagram's and Facebook's negative impacts on the health and well-being of the nation's youth, Meta repeatedly omitted key facts and misrepresented its platforms in service of an overall message touting the safety of its platforms for children.

421. Because of Meta's concealment, Plaintiff, Plaintiff's students, the public, and Congress were left in the dark and reasonably relied on Meta's reassurances. Had Meta disclosed the truth regarding its platforms, Plaintiff may not have suffered the harms it did, and the harms it continues to suffer resulting from students' use of its platforms. Instead, Meta pursued a knowing pattern of concealment to Plaintiff's detriment.

422. In the year leading up to Meta's acquisition of Instagram, Meta publicly acknowledged its duty to children and worked to create false expectations about its platforms' safety. For example:

a. Zuckerberg (3/25/2011): "So, we're really focused on, on safety, especially children's safety. So we're having folks under the age of 18, um we, we just take a lot of extra precautions for it, to make sure that it's just a safe environment for them um, to use this service that you know, the default for, for people sharing things isn't that they're sharing with everyone but that they're sharing with a smaller community . . . . But I think, I think that's a lot of it. We really try to build a safe environment. Um, and um, that's gonna be the key long term."[583]

b. Zuckerberg (3/25/2011): "Right, and they, they feel like Facebook is this really secure place and that it's a hundred percent safe, and um, we're always thinking about little and

[581] *Id.* at ¶ 236.
[582] MDL AG Compl. at 45, ¶ 259.
[583] *Mark Zuckerberg at BYU with Senator Orrin Hatch*, YouTube (Mar. 25, 2011), http://www.youtube.com/watch?v=zRsbWOmmvNo.

big things like that that we can do to keep it safe for, for the people who use our service."[584]

c. Zuckerberg (5/25/2011): "I mean, we do not allow people under the age of 13 to sign up and I think if we ever were, we would need to try to figure out a lot of ways to make sure that they were safe, right, because that's just extremely important and that's just not the top of the list in terms of things for us to figure out right now."[585]

423. Following Meta's acquisition of Instagram, high-ranking executives continued to make public pronouncements about the safety of Meta's platforms, including, but not limited to, the following statements:

a. Zuckerberg (12/1/2015): "We will do our part to make this [better world] happen, not only because we love you, but also because we have a moral responsibility to all children in the next generation."[586]

b. Zuckerberg (4/10/2018): "Congressman, we have a number of measures in place to protect minors specifically. We make it so that adults can't contact minors who they - they aren't already friends with. We make it so that certain content that may be inappropriate for minors, we don't show."[587]

c. Zuckerberg (4/10/2018), when asked by members of the U.S. Senate Committee on Commerce, Science, and Transportation whether his companies "[h]ire consulting firms to help them figure out how to get more dopamine feedback loops so that people don't want to leave the platform[,]" responded: "No . . . that's not how we talk about this or

---

[584] *Id.*

[585] Maurice Levy, *Conversation with Mark Zuckerberg at E-G8 Forum*, YouTube (May 25, 2011), http://www.youtube.com/watch?v=Gy0bq9FAJRs.

[586] Mark Zuckerberg, Facebook (Dec. 1, 2015), https://www.facebook.com/zuck/posts/10153375081581634 [https://perma.cc/W99E-QTZQ].

[587] *Transcript of Zuckerberg's appearance before House committee*, Wash. Post (Apr. 11, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on [https://perma.cc/SA9L-QK4C].

how we set up our product teams. We want our products to be valuable to people, and if they're valuable, then people choose to use them."[588]

d. Zuckerberg (7/12/2018): "There are really two core principles at play here. There's giving people a voice, so that people can express their opinions. Then, there's keeping the community safe, which I think is really important."[589]

e. Zuckerberg (7/25/2018): "[W]e will continue to invest heavily in security and privacy because we have a responsibility to keep people safe. But as I've said on past calls, we're investing so much in security that it will significantly impact our profitability."[590]

f. Zuckerberg (8/21/2018): "One of the most important responsibilities we have as a company is to keep people safe and stop anyone from abusing our service."[591]

g. Zuckerberg (9/7/2018): "What I've learned so far is that when you build services that are used by billions of people across countries and cultures, you will see all of the good humanity is capable of, and people will try to abuse those services in every way possible. It is our responsibility to amplify the good and mitigate the bad."[592]

---

[588] *Facebook, Social Media Privacy, and the Use and Abuse of Data: Hearing Before the S. Comm. on the Judiciary & S. Comm. on Com., Sci., & Transp.*, 115th Cong. (Apr. 10, 2018), https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data.

[589] Kara Swisher, *Zuckerberg: The Recode Interview*, Vox (Oct. 8, 2018), https://www.vox.com/2018/7/18/17575156/mark-zuckerberg-interview-facebook-recode-kara-swisher.

[590] *Q2 2018 Earnings: Transcript* at 2, Meta Inv. Rels. (July 25, 2018), https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q2/Q218-earnings-call-transcript.pdf.

[591] Mark Zuckerberg, Facebook (Aug. 21, 2018), https://www.facebook.com/zuck/posts/10105188590724391?__tn__=K-R [https://perma.cc/RUV3-5AJB].

[592] Mark Zuckerberg, Facebook (Sept. 7, 2018), https://www.facebook.com/zuck/posts/10105224999156601?__xts__%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjvaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkrzJ_dTLszwUZ3H6b3Q4biIc&__tn [https://perma.cc/L5C4-XUYY].

h. Zuckerberg (11/15/2018): "[W]e have a responsibility to keep people safe on our services."[593]

i. Zuckerberg (1/1/2019): "We ended 2018 with more than 30,000 people working on safety and security -- up from 10,000 people a couple of years ago."[594]

j. Zuckerberg (1/30/2019): "[O]n all the content and safety and security issues, there's more to do here but I'm proud of the work that we have done to get in front of a lot more of these issues."[595]

k. Zuckerberg (3/30/2019): "[W]e have a responsibility to keep people safe on our services."[596]

l. Zuckerberg (4/24/2019): "You should expect we'll do everything we can to keep you safe on our services, within the bounds of an encrypted service."[597]

m. Sheryl Sandberg, COO, Meta (1/29/2020): "[We] have to keep people safe and give them control over their experience on our apps. And we are."[598]

n. Sheryl Sandberg (10/29/2020): "While we continue to invest in helping businesses, we are equally focused on keeping our platform safe."[599]

o. Meta (12/23/2020), when asked by the Senate Committee on the Judiciary whether it could "determine whether increased use of its platform among teenage girls has any

---

[593] Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement* at 1, Facebook, https://www.facebook.com/notes/751449002072082/ [https://perma.cc/LS86-A943] (last edited May 5, 2021).

[594] *Q4 2018 Earnings: Earnings Call Transcript* at 2, Meta Inv. Rels. (Jan. 30, 2019), https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q4/Q4-2018-earnings-call-transcript.pdf.

[595] *Id.* at 26.

[596] Mark Zuckerberg, *Mark Zuckerberg: The Internet needs new rules. Let's start in these four areas*, Wash. Post (Mar. 30, 2019), https://www.washingtonpost.com/opinions/mark-zuckerberg-the-internet-needs-new-rules-lets-start-in-these-four-areas/2019/03/29/9e6f0504-521a-11e9-a3f7-78b7525a8d5f_story.html?noredirect=on [https://perma.cc/AF8J-AM5E].

[597] Mark Zuckerberg, Facebook (Apr. 24, 2019), https://www.facebook.com/zuck/posts/10107243286682221 [https://perma.cc/YVG5-GMQJ].

[598] *Q4 2019 Earnings: Earnings Call Transcript* at 5, Meta Inv. Rels. (Jan. 29, 2020), https://s21.q4cdn.com/399680738/files/doc_financials/2019/q4/Q4'19-FB-Earnings-Call-Transcript.pdf.

[599] *Q3 2020 Earnings: Earnings Call Transcript* at 6, Meta Inv. Rels. (Oct. 29, 2020), https://s21.q4cdn.com/399680738/files/doc_financials/2020/q3/FB-Q3-2020-Earnings-Call-Transcript.pdf.

correlation with increased signs of depression [or anxiety][,]" responded: "No."[600] And, when asked what research Meta had conducted internally on the mental health impacts of social media use, Meta responded: "[t]he effects of social media are still being studied."[601]

p. Zuckerberg (3/25/21), when asked by members of the U.S. House of Representatives Committee on Energy and Commerce, "Do you believe that your platform harms children?": "I don't believe so. This is something that we study and we care a lot about; designing products that [improves] peoples' well-being is very important to us. And what our products do is help people stay connected to people they care about, which I think is one of the most fundamental and important human things that we do, whether that is for teens or for people who are older than that."[602]

q. David Wehner, CFO, Meta (4/28/2021): "I mean, the only thing I'd add . . . is that, I think more than anyone else in the industry, we invest on the safety and security side to sort of keep bad content off the site before it gets ranked and put into what people see. So we've got 35,000 -- over 35,000 people on the safety and security side. We've got the most robust set of content policies out there. We do a quarterly call, public call around our content review process and procedures. So I think that on the front, before it even gets into the algorithm, I think we really do more than anyone else in the industry on the safety and security front to prevent things like misinformation and a bad content going into the system in the first place."[603]

---

[600] *Breaking the News: Censorship, Suppression, and the 2020 Election: Facebook, Inc. Responses to Questions for the Record from the Comm. on the Judiciary's November 17, 2020 Hearing*, 116th Cong. 124 (2020), https://www.judiciary.senate.gov/imo/media/doc/Zuckerberg%20Responses%20to%20QFRs.pdf.

[601] *Id.* at 50–51

[602] *Disinformation Nation: Social Media's Role in Promoting Extremism and Misinformation: Hearing Before the H. Subcomm. on Commc'ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm. on Energy & Com.*, 117th Cong. 175:4166–4175 (2021), https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf.

[603] Taylor Hatmaker, *Facebook Knows Instagram Harms Teens. Now its Plan to Open the App to Kids Looks Worse than Ever*, TechCrunch (Sept. 16, 2021), https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/.

r. Adam Mosseri (5/2021), in a statement to reporters, dismissing concerns around Instagram's negative impact on teens as "quite small."[604]

424. On each of the above occasions, and many others, Meta falsely touted the safety of its platforms; it could have but failed to disclose information it knew concerning the significant risks associated with its platforms, even though it knew that the public lacked access to this information. For instance, in a December 2019 memo, Meta's Chief Technology Officer remarked that the media has "limited information to work with" about the company and that this limitation is by Meta's "own design."[605]

425. In 2018, Sandberg's talking points prepared for conversations with reporters included the statement that Meta "do[es] not optimize [its] systems to increase amount of time spent in News Feed" and "explicitly do[es]n't give [its] teams goals around time spent."[606]

426. During a November 2020 Congressional hearing, Mark Zuckerberg was asked whether he believed Meta's platforms can be addictive. In response, Zuckerberg stated, "we certainly do not design the product in that way."[607]

427. Then in his March 2021 testimony before Congress, Zuckerberg was asked whether he agreed that Meta makes money off creating an addiction to its platforms. Again, Zuckerberg responded, "No. I don't agree with that."[608]

---

[604] Taylor Hatmaker, *Facebook Knows Instagram Harms Teens. Now its Plan to Open the App to Kids Looks Worse than Ever*, TechCrunch (Sept. 16, 2021), https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/.

[605] Haugen_00007350 at Haugen_00007350 (December 30, 2019 memo by Andrew Bosworth: *Thoughts for 2020*).

[606] MDL AG Compl. at 25, ¶ 135.

[607] *Breaking the News: Censorship, Suppression, and the 2020 Election: Hearing Before the S. Comm. on the Judiciary*, 116th Cong. (2020), https://www.judiciary.senate.gov/committee-activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election (testimony of Mark Zuckerberg); *see also Facebook CEO Mark Zuckerberg on whether products are addictive: 'We Certainly Do Not Design the Product in that Way'*, Recount (Nov. 17, 2020), https://therecount.com/watch/facebook-ceo-mark-zuckerberg-on/2645864077.

[608] *Disinformation Nation: Social Media's Role in Promoting Extremism and Misinformation: Hearing Before the H. Subcomm. on Commc'ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm. on Energy & Com.*, 117th Cong. 107:2491–2497 (2021), https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf (testimony of Mark Zuckerberg).

428. Further, Zuckerberg's talking points included the following statement: "The impact that our products have on the well-being of everyone is a top priority. It's not how much time you spend online, it's how you spend it."[609] Zuckerberg denied that Meta designed its platforms to be addictive to maximize time spent.[610]

429. Similarly, Zuckerberg told Congress on March 25, 2021, that "it is a common misconception that our teams—our goals, or even have goals, of trying to increase the amount of time that people spent" and that "I don't give our News Feed team or our Instagram team goals around increasing the amount of time that people spend."[611]

430. In September 2021, Meta's Global Head of Safety Antigone Davis told Congress, "I disagree with calling our product addictive . . . . [T]hat's not how we build products."[612]

431. In December 2021, Head of Instagram Adam Mosseri told Congress, "I don't believe that research suggests that our products are addictive."[613]

432. Meta's pattern of intentional concealment came to a head in August 2021, just weeks before Frances Haugen dropped her bombshell revelations on the public. On August 4, 2021, Senators Marsha Blackburn and Richard Blumenthal wrote to Mark Zuckerberg. The Senators' letter observed that "[a]n expanding volume of scientific research shows that social media platforms can have a profoundly harmful impact on young audiences" and noted "grave concerns about [Meta's] apparent effort to ensnare children into social media platforms at earlier and earlier ages."[614] The letter concluded

[609] MDL AG Compl. at 26, ¶ 137.
[610] MDL AG Compl. at 26, ¶ 137.
[611] MDL AG Compl. at 26, ¶ 137.
[612] *See Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms.
[613] Taylor Hatmaker, *Instagram's Adam Mosseri defends the app's teen safety track record to Congress*, TechCrunch (Dec. 8, 2021), https://techcrunch.com/2021/12/08/instagrams-adam-mosseri-senate-hearing-teen-safety/.
[614] Letter from Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator, to Mark Zuckerberg, CEO, Facebook, Inc. at 1 (Aug. 4, 2021), https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf.

by asking Zuckerberg six "pretty straightforward questions about how the company works and safeguards children and teens on Instagram."[615]

433. In its August 17, 2021 written response to Senators Blackburn and Blumenthal, Meta omitted any reference to the internal research it had conducted demonstrating the negative impact Instagram can have on kids' mental health.[616]

434. The Senators' letter asked whether Meta had ever developed products or features "that it had reason to believe could have a negative effect on children's and teens' mental health or well-being[.]"[617] Meta responded by claiming it had "built many special protections for teens."[618] But it failed to mention, for example, that it employed "growth hackers" who internally advised that "we can be very aggressive with our notifications to create a habit[.]"[619]

435. The Senators' letter also asked if Meta's research had "ever found that its platforms and products can have a negative effect on children's and teens' mental health or well-being[.]"[620] Meta responded that the matter was "still being studied,"[621] that it was challenging to conduct such research,[622] and that the company was "not aware of a consensus among studies or experts about how much screen time is 'too much.'"[623] While Meta reiterated its vague and already public position that

---

[615] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower; *see also* Letter from Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator, to Mark Zuckerberg, CEO, Facebook, Inc. at 2–3 (Aug. 4, 2021), https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf.

[616] Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator (Aug. 17, 2021), https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf.

[617] *Id.* at 4.

[618] *Id.*

[619] Haugen_00016893 at Haugen_00016914 (quoting August 3, 2017 memo: *Have we made people addicted to Facebook?*).

[620] Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator at 2 (Aug. 17, 2021), https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf.

[621] *Id.*

[622] *Id.* at 3.

[623] *Id.*

"passive" use of social media can correlate with "negative outcomes,"[624] it failed to disclose any more specific findings.[625]

436. Meta failed to disclose, in response to the Senators' direct question, its detailed research regarding addiction to its platforms, which the company terms problematic usage;[626] its assessment that "[t]he best external research indicates that Facebook's impact on people's well-being is negative";[627] its identification of "Problematic Use," loneliness, and social comparison as the three drivers of this negative impact;[628] its finding that up to 25% of people on Facebook experience so-called problematic use;[629] its data showing that "high time spent users do tend to be disproportionately younger users";[630] its conclusion that so-called problematic use causes profound harms, including loss of productivity, sleep disruption, relationship impacts, and safety risks;[631] its identification of multiple Meta product features that act as triggers for so-called problematic use;[632] its knowledge that teens who feel addicted to a Meta app "know that what they're seeing is bad for their mental health but feel unable to stop

---

[624] *Id.*; *see also Q1 2018 Earnings: Transcript* at 2, Meta Inv. Rels. (Apr. 25, 2018), https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q1/Q1-18-Earnings-call-transcript.pdf.

[625] Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S. Senator at 6 (Aug. 17, 2021), https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf.

[626] Haugen_00016373 at Haugen_00016379 (March 9, 2020 internal presentation and discussion about problematic use with a slide stating that problematic use "is sometimes referred to as 'social media addiction' externally"); *Id.* at Haugen_00016373 (March 9, 2020 internal presentation and discussion regarding problematic use in which a Meta employee shared a post stating, "[i]n Q4 2019, our Well-being Product Team conducted global qualitative research to better understand 'problematic' use (sometimes called 'social media addiction' externally"); Haugen_00005458 at Haugen_00005473 (November 5, 2019 Meta employee report: *Hard Life Moments – Mental health deep dive*); Haugen_00007055 at Haugen_00007055 (May 6, 2019 Meta employee memo: *Problematic use / time-spent papers at CHI*).

[627] Haugen_00016373 at Haugen_00016381 (March 9, 2020 internal presentation and discussion about problematic use).

[628] *Id.*

[629] Haugen_00016373 at Haugen_00016383.

[630] Haugen_00017177 at Haugen_00017181 (quoting October 30, 2018 Meta employee report: *How does Instagram usage change depending on overall time spent?*); Haugen_00005458 at Haugen_00005750–Haugen_00005751 (2020 presentation containing slides about brain maturation).

[631] Haugen_00016373 at Haugen_00016414 (March 9, 2020 presentation: *All problematic users were experiencing multiple life impacts*).

[632] *Id.* at Haugen_00016410 ("We heard about 10+ triggers contributing to PU habits.").

themselves";[633] its studies regarding body image and social comparison;[634] its knowledge that Instagram makes body image issues worse "for one in three teen girls";[635] its analysis showing that topics eliciting appearance comparison comprise one third of what teen girls see on Instagram;[636] its research concluding that negative social comparison on Instagram gets worse for users over time;[637] its awareness that teens report Instagram as a source of increased anxiety and depression;[638] its researchers' conclusion that teens "[h]ave an addict's narrative about their use" of Instagram;[639] and its survey finding that "[o]ver one third of teens felt they have only a little control of no control at all over how Instagram makes them feel"[640] —in addition to the other findings described in this Complaint.

437. Meta's years-long concealment of its research was revealed just weeks later, when Frances Haugen released these studies, along with a trove of other internal Meta documents, to *The Wall Street Journal*. Even these disclosures did not reveal the full scope and extent of Meta's misrepresentations, discussed elsewhere in this Complaint.

438. On September 21, 2021, Senator Blumenthal confronted a Meta representative about the conspicuous omissions in Meta's response to his letter:

> Last month, on August 4, Senator Blackburn and I wrote to Mark Zuckerberg and asked him specifically about this issue. We asked, and I'm quoting, "Has Facebook's research ever found that its platforms and products can have a negative effect on children's and teens' mental health or well-being such as increased suicidal thoughts, heightened

---

[633] Haugen_00017069 at Haugen_00017171 (October 10, 2019 report by Meta employees and discussion about teens' mental health).

[634] Haugen_00005458 at Haugen_00005484 (presentation: *Mental Health Findings*); Haugen_00000797 at Haugen_00000797 (November 16, 2018 report: *[Instagram] Social Comparison Research Findings*).

[635] Haugen_00005458 at Haugen_00005500 (November 5, 2019 presentation containing a slide: *But, We Make Body Image Issues Worse for 1 in 3 Teen Girls*).

[636] Haugen_00002527 at Haugen_00002527 (March 9, 2021 report: How the topics people see are linked to appearance comparison on [Instagram]).

[637] Haugen_00000797 at Haugen_00000875 (November 16, 2018 report containing a page displaying data about negative social comparison over time).

[638] Haugen_00017069 at Haugen_00017121 (October 10, 2019 presentation containing a slide: Teens blame Instagram for increases in the rates of anxiety and depression among teens).

[639] Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021), https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms.

[640] *Id.*

> anxiety, unhealthy usage patterns, negative self-image, or other indications of lower well-being?"
>
> It wasn't a trick question. It preceded the reports in the Journal. We had no idea about the whistleblower documents that were ultimately revealed.
>
> Facebook dodged the question. "We are not aware of a consensus among studies or experts about how much screen time is too much."
>
> We are not aware.
>
> Well, we all know now that representation was simply untrue.[641]

439. Senator Blumenthal went on to ask the witness, Steve Satterfield, Facebook's Vice President of Privacy & Public Policy, "why did Facebook misrepresent its research on mental health and teens when it responded to me and Senator Blackburn?" After disputing the characterization, Satterfield responded, "The safety and well-being of the teens on our platform is a top priority for the company. We're going to continue to make it a priority. This was important research." Senator Blumenthal then went on: "Why did you conceal it?" Satterfield responded, "we didn't make it public because we don't, with a lot of the research we do because we think that is an important way of encouraging free and frank discussion within the company about hard issues."[642]

440. Meta unilaterally decided to prioritize "free and frank" internal discussion over honest and transparent responses to direct questions from sitting United States Senators. When it "dodged, ducked, sidetracked, [and] in effect misled" Senators Blumenthal and Blackburn, Meta also deceived the public.[643]

---

[641] Press Release, Richard Blumenthal, U.S. Senator, *Blumenthal Demands Facebook Appear at Next Week's Consumer Protection Subcomm. Hearing to Explain Coverup of its Platforms' Negative Impact on Teens and Children* (Sept. 21, 2021), https://www.blumenthal.senate.gov/newsroom/press/release/blumenthal-demands-facebook-appear-at-next-weeks-consumer-protection-subcommittee-hearing-to-explain-coverup-of-its-platforms-negative-impact-on-teens-and-children.

[642] *Id.*

[643] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec*., 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower; *Id.* (Senator Brian Schatz to Frances Haugen that he had "a long list of misstatements, misdirections and outright lies from the company").

441. Moreover, Satterfield's "free and frank discussion" excuse has been contradicted both internally and publicly by Meta employees. On January 8, 2020, a Meta software engineer participated in an internal "ask me anything" session on the last day of his four-year tenure at the company. When asked how the Meta Defendants should respond to outside pressures and critiques, the software engineer stated, "[r]ight now, many employees feel that if they whistleblow, dissent, give feedback to unethical decisions, etc, then they are at risk for being fired. We can fix that by giving people the safety to speak up when they see something wrong going on."[644]

442. Frances Haugen echoed this sentiment in her testimony before the Senate, citing evidence that Meta "is so scared of even basic transparency that it goes out of its way to block researchers who are asking awkward questions."[645] Ms. Haugen further testified that Meta's culture emphasizes insularity and promotes the idea that "if information is shared with the public, it will just be misunderstood."[646]

443. The above representations of former employees are consistent with reports from Facebook content moderators that there is a "culture of fear and excessive secrecy" within Meta that "prevent[s] [them] from speaking out[.]"[647]

444. Notably, Meta's pattern of concealment did not end after Frances Haugen came forward. On September 30, 2021, Antigone Davis, Facebook's Head of Safety, testified before the Senate. Ms. Davis represented that, when Instagram "do[es] ads to young people, there are only three things that an advertiser can target around: age, gender, location. We also prohibit certain ads to young people,

---

[644] Haugen_00007481 at Haugen_00007492 (January 8, 2020 report: *Political Ads Announcement Preview [Confidential]*).

[645] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

[646] *Id.*

[647] Zoe Schiffer, *Facebook content moderators call for company to put an end to overly restrictive NDAs*, Verge (July 22, 2021), https://www.theverge.com/2021/7/22/22587757/facebook-content-moderators-ireland-end-restrictive-ndas.

including weight-loss ads."[648] She further testified, "We don't allow the sexualization of minors on our platform."[649] A study by the Technology Transparency Project proved this was false.[650]

445. In addition to the litany of misrepresentations and omissions identified above, Meta has repeatedly failed to tell the truth about the age of users on Instagram. In statements to Congress and elsewhere, Zuckerberg has represented that Meta does not allow users under the age of 13 to use the product. For example, in testimony before the U.S. House of Representatives Committee on Energy and Commerce, Zuckerberg stated that "[t]here is clearly a large number of people under the age of 13 who would want to use a service like Instagram. We currently do not allow them to do that."[651]

446. However, as shown above, Meta has long known that its products are widely used by children under the age of 13. In fact, Meta knows through retrospective cohort analyses that "up to 10 to

[648] *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms.

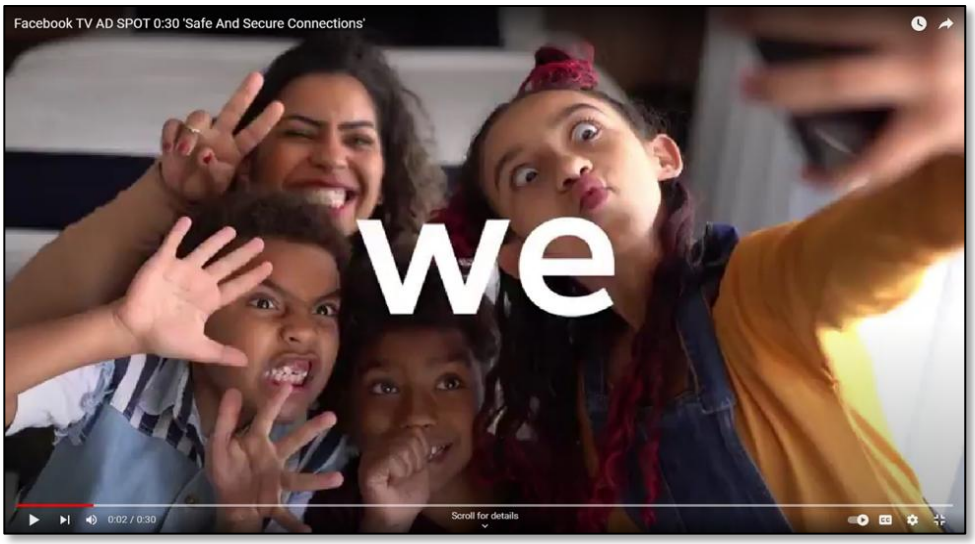
[649] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

[650] *See Id.*

[651] *Disinformation Nation: Social Media's Role in Promoting Extremism and Misinformation: Hearing Before the H. Subcomm. on Commc'ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm. on Energy & Com*., 117th Cong. 59:1316–1320 (2021), https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf; *see also Id.* at 175:4168–4178 (Zuckerberg: "[O]ur policies on the main apps that we offer generally prohibit people under the age of 13 from using the services."); *see also Transcript of Zuckerberg's appearance before House committee*, Wash. Post (Apr. 11, 2018), https://www.washingtonpost.com/news/the-switch/wp/2018/04/11/transcript-of-zuckerbergs-appearance-before-house-committee/?utm_term=.e7b476fb8ac7&noredirect=on [https://perma.cc/SA9L-QK4C] (When asked if it is correct that children can get a Facebook account starting at age 13, Zuckerberg confirmed that it was correct); *see also* NewSchools Venture Fund, *NewSchools Summit 2011: John Doerr and Mark Zuckerberg on innovation and education*, YouTube (May 24, 2011), https://www.youtube.com/watch?v=n03zAOadyMA (Zuckerberg: "[A]nd so basically, we don't allow people under the age of 13 on Facebook . . . today we don't allow people under the age of 13 to sign up.").

15% of even 10-year-olds in a given cohort may be on Facebook or Instagram."[652] Meta is also aware that teenagers coach tweens, defined by them as 10- to 12-year-olds, on how to use its platforms.[653]

447. Indeed, far from acknowledging the serious problems with its platforms and warning children and parents of the same, Meta has launched advertising campaigns designed to encourage more children to use its platforms—by touting the purported safety of those platforms. For example, in a recent television ad, Meta claimed that it "build[s] technology that gives you more control and helps keep you safe[,]" including through its "industry leading AI" and other "tools that can protect—so you can connect." This advertisement featured children, as in the screenshot below.



Other advertising campaigns have similarly touted Meta's AI as being a feature that contributes to its platforms' safety—without disclosing the serious problems identified in this Complaint.

448. In another example of advertising that promotes use by children, a Meta 2021 online advertisement actively highlighted the posts available for fifth grade children on its Facebook product, highlighting the experience of an art teacher who used Facebook to communicate with students during the pandemic—an experience the video noted was "a lot to unpack for little, tiny people."

---

[652] *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec*., 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

[653] Haugen_00016728 at Haugen_00016737–Haugen_00016740.

449. And Meta only continues to hide the harms its platforms cause. On November 7, 2023, a second Meta whistleblower, Arturo Bejar, testified before a Senate subcommittee about the ways in which Meta has failed to act to protect its teenage users.[654] Bejar, a former Facebook engineering director and Instagram consultant, testified that "Meta leadership was aware of prevalent harms to its youngest users but declined to take adequate action" in response.[655]

450. Bejar testified that he informed Chief Product Officer Chris Cox of research into platform harms to teens and that Cox acknowledged he was already aware of the statistics. Bejar found this response "heartbreaking because it meant that they knew and they were not acting on it[.]"[656]

451. Similarly, Bejar turned over emails that showed he raised similar concerns to top Meta leaders. In an email to Mark Zuckerberg, then-Meta COO Sheryl Sandberg, and Instagram CEO Adam Mosseri dated October 5, 2021, Bejar noted that "51% of Instagram users say 'yes' to having had a bad or harmful experience in the last 7 days."[657] Bejar also flagged to Zuckerberg that one survey showed almost 40% of 13- to 15-year-olds said "they experienced negative comparison" while on Instagram.[658]

452. Less than two weeks later, on October 14, 2021, Bejar raised similar concerns to Adam Mosseri.[659] Bejar testified that he never received a response from or met with Zuckerberg or Sandberg.[660] He further testified that he thought Meta would "take [his] concerns and recommendations seriously. Yet years have gone by and millions of teens are having their mental health compromised and are still being traumatized."[661]

---

[654] Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies*, CNBC (Nov. 7, 2023), https://www.cnbc.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html.

[655] *Id.*

[656] *Id.*

[657] *Internal Instagram and Facebook Documents* at 109, Richard Blumenthal U.S. Senator, https://www.blumenthal.senate.gov/imo/media/doc/1172023bejardocuments.pdf (Bejar whistleblower documents).

[658] *Id.*

[659] *Id.* at 112–113.

[660] Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies,* CNBC (Nov. 7, 2023), https://www.cnbc.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html.

[661] Justin Hendrix, *Transcript: Senate Hearing on Social Media and Teen Mental Health with Former Facebook Engineer Arturo Bejar*, Tech Pol'y Press (Nov. 8, 2023), https://www.techpolicy.press/transcript-senate-hearing-on-social-media-and-teen-mental-health-with-former-facebook-engineer-arturo-bejar/.

453. Bejar drew three conclusions in his Senate testimony. "One, Meta knows the harm that kids experience on their platform. And executives know that their measures fail to address it. Two, there are actionable steps that Meta could take to address the problem. And three, they are deciding time and time again to not tackle these issues."[662]

5. Meta failed to adequately warn Plaintiff or the public about the dangers and harms caused by Instagram and Facebook, or provide instructions regarding safe use.

454. Meta has failed to adequately warn the public, including Plaintiff and its students and parents, about the physical and mental health risks posed by Instagram and Facebook. These risks include a plethora of mental health disorders, like compulsive use, addiction, eating disorders, anxiety, depression, insomnia, exacerbated executive dysfunction, suicidal ideation, self-harm, and death.

455. Meta targets adolescent users via advertising and marketing materials distributed throughout digital and traditional media that fail to provide sufficient warnings to potential adolescent consumers or their parents, teachers, or caregivers, of the physical and mental risks associated with using Facebook and Instagram.

456. Meta also fails to adequately warn the public, adolescent users, or their parents during the product registration process. At account setup, neither Instagram nor Facebook contain warning labels, banners, or conspicuous messaging to adequately inform adolescent users or their parents of the known product risks and potential physical and mental harms associated with usage. Instead, Meta allows adolescent users, including those under the age of 13, to easily create an account (or multiple accounts) and fully access these platforms.

457. Meta's failure to warn continues even as adolescents exhibit problematic signs of addiction to and compulsive use of Facebook or Instagram. For example, Meta does not warn users when their screen time reaches harmful levels or when adolescents are accessing the product habitually.

---

[662] *Former Meta Executive Testifies on Social Media and Youth Mental Health* at 27:30-27:57, C-SPAN (Nov. 7, 2023), https://www.c-span.org/video/?531650-1/meta-executive-testifies-social-media-youth-mental-health; *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec*., 117th Cong. (2021), https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower.

458. Despite proactively providing adolescent users with countless filtering and editing tools, Meta also does not appropriately warn adolescent users regarding which images have been altered or the mental health harms associated with the heavily filtered images that Meta presents and recommends.

459. Not only does Meta fail to adequately warn users regarding the risks associated with Instagram and Facebook, it also does not provide sufficient instructions on how adolescents can safely use the platforms.

460. Meta's failure to properly warn and instruct adolescent users or their parents has proximately caused significant harm to Plaintiff, who has expended and continues to expend significant resources addressing the impact of Meta's conduct on Plaintiff's operations, including providing additional support to impacted students.

C. Factual Allegations As To Snap

1. Background and overview of Snapchat.

461. Snap owns and operates the Snapchat social media product, an application that is widely marketed by Snap and available to users throughout the United States. Snapchat is a platform for engaging in text, picture, and video communication. The app also contains a discovery page and an endless, algorithmically run feed of short videos. The primary objective of the platform is to maximize the frequency and length of each user's viewing sessions. Fifty-nine percent of teenagers in the U.S. actively use Snapchat.[663] Twenty-two percent of parents in the U.S. know their child between the ages of 9 and 11 uses Snapchat.[664]

462. Snapchat was founded in 2011, by three Stanford college students, Reggie Brown, Evan Spiegel, and Bobby Murphy. It began as a simple application designed to allow a user to send a picture to a friend that would later disappear. Having gained only 127 users a few months after its launch, Snapchat began to market to high school students. Within the following year, Snapchat grew to more than 100,000 users.

[663] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[664] Brooke Auxier *et al.*, *Children's engagement with digital devices, screen time*, Pew Rsch. Ctr. (July 28, 2020) https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/.

463. Snapchat became well-known for its ephemeral nature, which, in effect, removes all accountability what is sent on the platform. Specifically, Snapchat allows users to form groups and share posts or "Snaps" that disappear after being viewed by the recipients. However, the Snapchat social media product quickly evolved from there, as its leadership made design changes and rapidly developed new product features intended to and successfully did increase Snapchat's popularity among minors.

464. In 2012, Snapchat added video capabilities to its product, pushing the number of Snaps to 50 million per day. In 2013, Snapchat added "Stories" and "Chat" features; in 2014, live video chat capabilities, text conversations, "Our Story," Geofilters, and Snapcash; in 2015, Discovery, QR code incorporation, and facial recognition software; and in 2016, Memories and Snapchat Groups.

465. By 2015, advertisements were pervasive on Snapchat, and by 2018, 99% of Snapchat's total revenue came from advertising. In 2022, Snap's revenue was approximately $4.6 billion.[665] Like Meta and Defendants in general, Snapchat decided to monetize its userbase, and changed its product in ways that made it more harmful for users yet resulted in increased engagement and profits for Snapchat. By 2015, Snapchat had over 75 million active users and was the most popular social media application among American teenagers in terms of number of users and time spent using the product.

466. To further expand its userbase, Snapchat incorporates several features, as set forth in more detail below, that serve no purpose other than to create dependency on Snapchat's social media product. These features, in turn, result in sleep deprivation, anxiety, depression, shame, interpersonal conflicts, and other serious mental and physical harms. Snapchat knows, or should know, that its product is harmful to adolescents, but, as with Defendants in general, it consistently opts for increased profit at the expense of the well-being of its youth users. Defendants' platforms are used by millions of children every day, children who have become addicted to these platforms because of their design and product features, to the point that parents cannot remove all access to the platforms without minor users adamantly protesting, often engaging in self-harm, threatening hunger strikes and/or suicide, and other foreseeable consequences of withdrawal from these platforms, where such cessation would require professional intervention.

[665] *Snap Inc. Announces Fourth Quarter and Full Year 2022 Financial Results*, Snap Inc. (Jan. 31, 2023), https://investor.snap.com/news/news-details/2023/Snap-Inc.-Announces-Fourth-Quarter-and-Full-Year-2022-Financial-Results/default.aspx.

467. Snap calls itself "a camera company."[666] Its "flagship product, Snapchat, is a camera application that was created to help people communicate through short videos and images. [Snap] call[s] each of those short videos or images a Snap."[667] Snap's design of its Snapchat product capitalizes on children's increasing attachment to quick, instantaneous exchanges. As Snap's founder and CEO Evan Spiegel has explained, "today. . . pictures are being used for talking. So when you see your children taking a zillion photos of things that you would never take a picture of, it's cos [sic] they're using photographs to talk. And that's why people are taking and sending so many pictures on Snapchat every day."[668]

468. Spiegel's statement is telling, as Snap has tailored every aspect of its Snapchat product to children rather than adults. Snap designed and implemented dangerous features in Snapchat that exploit children's need for social acceptance and rewards by pushing its users to maximize their use of and engagement with the app. Snap built Snapchat using manipulative techniques to compel young users to send an ever-increasing number of photographs and videos, and to reward users who maximize their engagement with elevated status. Snap also dangerously encourages adolescents to increase engagement on the app indiscriminately, pushing tools to share sensitive material with an ever-expanding group of friends and strangers.

469. Snapchat's design features cause its young users to suffer increased anxiety, depression, disordered eating, sleep deprivation, suicide, and other severe mental and physical injuries. Snap knows or should have known this. Snap intentionally designed Snapchat to prey on the neuropsychology and

---

[666] Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017), https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm; *see also Snap Inc. Announces New Augmented Reality Tools and Camera Experiences for Snapchatters, Creators, and Businesses*, Snap Inc. (May 20, 2021), https://investor.snap.com/news/news-details/2021/Snap-Inc.-Announces-New-Augmented-Reality-Tools-and-Camera-Experiences-for-Snapchatters-Creators-and-Businesses/default.aspx ("We believe that reinventing the camera represents our greatest opportunity to improve the way people live and communicate."); *Join Team Snap*, Snap Inc. (Mar. 13, 2023), https://careers.snap.com/?lang=en-US [https://web.archive.org/web/20230313191205/https://careers.snap.com/?lang=en-US] ("We believe that reinventing the camera represents our greatest opportunity to improve the way people live and communicate.").

[667] Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017), https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm.

[668] Stuart Dredge, *What is Snapchat? CEO Evan Spiegel explains it all for parents*, Guardian (June 17, 2015), https://www.theguardian.com/technology/2015/jun/17/what-is-snapchat-evan-spiegel-parents.

behavioral patterns of children to maximize their engagement and increase Snap's advertising revenue. Despite this knowledge, Snap continues to update its product and add features intentionally designed to entice, exploit, and addict kids, including Snap Streaks, trophies, social signifiers and reward systems, quickly disappearing messages, filters, lenses, and games.

470. Snap knew, or should have known, that its conduct has negatively affected youth. Snap's conduct has been the subject of inquiries by the United States Senate[669] Senators from across the ideological spectrum have introduced bills that would ban many of Snapchat's features that are particularly addictive to adolescents.[670]

471. Despite these calls for oversight from Congress, Snap has failed to curtail its use of features such as streaks, badges, and other awards that reward users' level of engagement with Snapchat. As described in detail below, Snapchat is a product that causes harm to children, the target audience for whom Snap designed it and to whom Snap promoted its product.

2. Snap targets children.

a. Snap designed its Snapchat platform to grow use by children to drive the company's revenue.

472. Within five months of launching, Snapchat had 40,000 users.[671] By May 2012, less than eight months after launching, CEO Evan Spiegel reported that the company was "thrilled" to learn that most of Snapchat's users were high school students sending "behind-the-back photos of teachers and funny faces" to each other during class.[672] According to Spiegel, Snap's server data showed peaks of activity during the school day.[673]

---

[669] Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and TikTok*, NPR (Oct. 26, 2021), https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing.

[670] *See* Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, NPR (Aug. 3, 2019), https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill; *see also* Social Media Addiction Reduction Technology Act, S. 2314, 116th Cong. (2019); Kids Internet Design and Safety Act, S. 2918, 117th Cong. (2021).

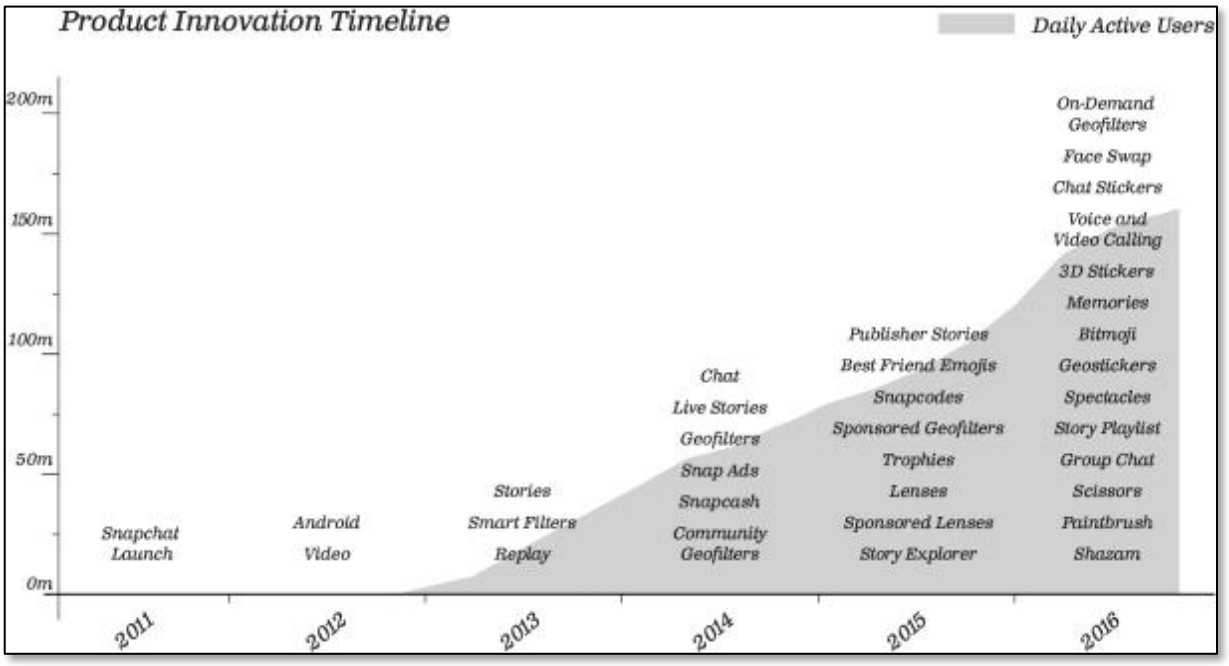
[671] Ken Auletta, *Get Rich U*, New Yorker (Apr. 30, 2012), https://www.newyorker.com/magazine/2012/04/30/get-rich-u [https://perma.cc/K83B-66MX].

[672] Evan Spiegel, *Let's Chat*, Snapchat Blog (May 9, 2012), http://blog.snapchat.com [https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/].

[673] *Id.*

473. Snap immediately focused on increasing the platform's frequency of use.[674] By late 2012, Snapchat had over a million active users sending over 20 million Snaps per day.[675] By 2013, Snapchat users were sending over 60 million Snaps per day[676]. By the end of 2022, this number had risen to over 5 billion Snaps per day.[677]

474. As Snap continued to quickly add new features to its platform, the number of Snapchat's daily active users (users who open Snapchat at least once during a 24-hour period) rapidly increased.[678] In 2017, Snap reported that its users opened the platform more than 18 times a day on average. By 2019, users were opening the platform an average of 30 times per day.



Snapchat Innovation Timeline 2011–2016.[679]

[674] Billy Gallagher, *You Know What's Cool? A Billion Snapchats: App Sees Over 20 Million Photos Shared Per Day, Releases On Android*, TechCrunch (Oct. 29, 2012), https://techcrunch.com/2012/10/29/billion-snapchats/.

[675] *Id.*

[676] Billy Gallagher, *Snapchat Raises $13.5M Series A Led By Benchmark, Now Sees 60M Snaps Sent Per Day*, TechCrunch (Feb. 8, 2013), https://techcrunch.com/2013/02/08/snapchat-raises-13-5m-series-a-led-by-benchmark-now-sees-60m-snaps-sent-per-day/.

[677] *Snap Inc. Q4 2022 Transcript* at 7, Snap Inc. Inv. Rels. (Jan. 31, 2023), https://s25.q4cdn.com/442043304/files/transcript/snap-inc.-q4-2022-transcript.pdf.

[678] Snap Inc., Registration Statement (Form S-1) at 91 (Feb. 2, 2017), https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm.

[679] *Id.*

475. Today, Snapchat is one of the world's most widely used apps. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.[680] Snapchat also "reaches 90% of the 13 to 24-year-old population" in over twenty countries, and reaches nearly half of all smartphone users in the United States.[681]

476. Snapchat's explosive growth is driven by its key user demographic, 13- to 17-year-olds. In 2022, 59% of U.S. teens used Snapchat and 15% said they used it "almost constantly."[682] Snapchat proudly touts its influence over what it calls the "Snapchat Generation" ("Gen Z").[683]

477. In 2014, Snap began running advertisements on Snapchat.[684] Snapchat's entire business model revolves around its advertising revenue. According to internal company records, advertisements were pervasive on Snapchat by 2015 and, by 2018, 99% of Snap's total revenue came from advertising. Advertising has accounted for 99% of Snap's revenue each year since 2018.[685] In 2022, Snap's revenue was approximately $4.6 billion.[686]

478. Snap attracts advertisers by providing them access to the huge universe of Snapchat users and by collecting immense amounts of data on its users, including its pre-teen and teenage users, which it uses to target advertising to those users. Snap makes no secret of this practice, recently acknowledging that:

> [Snap] rel[ies] heavily on our ability to collect and disclose data, and metrics to our advertisers so we can attract new advertisers and retain existing advertisers. Any restriction or inability, whether by law, regulation, policy, or other reason, to collect and disclose data and metrics which our advertisers find useful would impede our ability to attract and retain advertisers.[687]

---

[680] Snap Inc. Investor Presentation October 2022 at 5, Snap Inc. Inv. Rels. (Oct. 20, 2022), https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Deck-(10.20.2022).pdf.

[681] *Id.* at 6, 35.

[682] Emily A. Vogels *et al.*, Teens, Social Media and Technology 2022, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/

[683] SNAP0000137 at SNAP0000139.

[684] Paul Szoldra, *Here's The First Ad To Hit Snapchat*, Bus. Insider (Oct. 18, 2014), https://www.businessinsider.com/snapchat-ad-2014-10.

[685] Snap Inc., Annual Report (Form 10-K) at 15 (Dec. 31, 2022), https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf.

[686] *Id.* at 57.

[687] *Id.* at 15.

479. Snap's growth in advertising revenues was driven by changes Snap made to Snapchat that incentivized compulsive and addictive use at the expense of its users' health. Snap's internal research indicates the Snapchat experience is "more immersive" than its competitors' apps. This means users are more likely than on other apps to keep watching videos (and advertising).[688] The same research shows that Snapchat's daily active users are constantly using its platform; compared to other apps, users are most likely to use Snapchat "[r]ight when [they] wake up," "[b]efore work/school," "[d]uring work/school," "[a]fter work/school," "[o]n vacations," and "[w]hen [they're] with others[.]"[689]

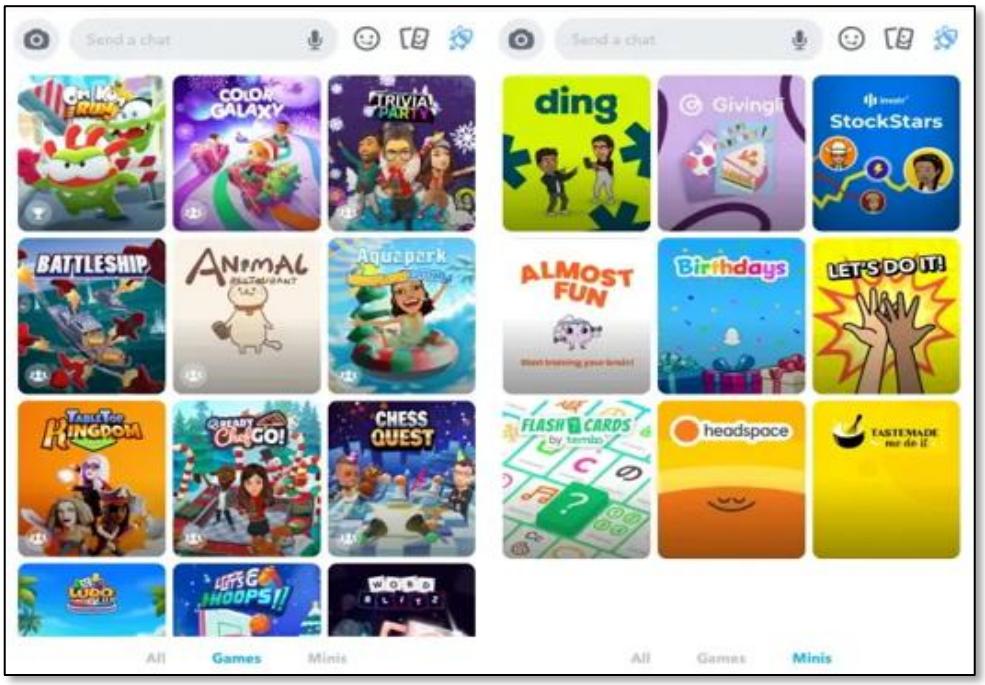
480. Snap understands that its user experience must be immersive and all-encompassing to maximize its advertising revenue. Indeed, Snap recently admitted to its investors that its revenue could be harmed by, among other things, "a decrease in the amount of time spent on Snapchat, a decrease in the amount of content that our users share, or decreases in usage of our Camera, Visual Messaging, Map, Stories, and Spotlight platforms[.]"[690]

b. Snap promotes Snapchat to children.

481. Snap specifically promotes Snapchat to children because they are a key demographic for Snap's advertising business. In its first post on its website, Snapchat observed that "[t]o get a better sense of how people were using Snapchat and what we could do to make it better, we reached out to some of our users. We were thrilled to hear that most of them were high school students who were using Snapchat as a new way to pass notes in class—behind-the-back photos of teachers and funny faces were sent back and forth throughout the day."[691]

482. As shown in this capture of a Snapchat feature page created by Snap, Snap uses bright colors, cartoonish designs, and other features that appeal to younger audiences.

[688] *See* SNAP0000103 at SNAP0000122–SNAP0000124, SNAP0000132.
[689] SNAP0000103 at SNAP0000113.
[690] Snap Inc., Annual Report (Form 10-K) at 16 (Dec. 31, 2022), https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf.
[691] Evan Spiegel, *Let's Chat*, Snapchat Blog (May 9, 2012), http://blog.snapchat.com [https://web.archive.org/web/20120518003029/http://blog.snapchat.com:80/].



483. Snap also added as a feature the ability for users to create cartoon avatars modeled after themselves.[692] By using an artform generally associated with and directed at younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

484. In addition to its marketing, Snap has targeted a younger audience by designing Snapchat in a manner that older individuals find hard to use.[693] The effect of this design is that Snapchat is a platform where its young users are insulated from older users including their parents. As Snap's CEO explained, "[w]e've made it very hard for parents to embarrass their children[.]"[694]

[692] Kif Leswing, *Snapchat just introduced a feature it paid more than $100 million for*, Bus. Insider (July 19, 2016), https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7.

[693] *See* Hannah Kuchler & Tim Bradshaw, *Snapchat's youth appeal puts pressure on Facebook*, Fin. Times (Aug. 21, 2017), https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787 [https://perma.cc/RX3U-RXGN].

[694] Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, Bloomberg (Mar. 3, 2016), https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/ [https://perma.cc/6KVZ-P8G7].

485. Snap also designed Snapchat as a haven for young users to hide activity from their parents by ensuring that photos, videos, and chat messages quickly disappear. This design further insulates children from adult oversight.

486. In an October 2019 interview, Snap's CEO explained that "we've seen a lot of engagement with our 13-34 demographic, which for us is strategically a critical demographic, not only because that's a demographic that enjoys using new products but also because I think they represent, really, the future . . . So that's obviously been a group that's been really fun to build for, and really it started because those are our friends."[695]

487. Snap touts to advertisers its ability to use Snapchat to reach children. In a December 2022 statement to advertisers, Snap claimed that "Snapchat delivers on the emotions that Gen Z seeks and it does so consistently across the platform in areas like Discover, Stories and the Camera."[696] To prove that, Snapchat "used a neuroscience measurement called 'immersion' to measure reactions to different brand messaging—specifically brand purpose messaging vs. non-brand purpose messaging. Immersion captures attention and emotional resonance through variations in heart rate rhythm collected by smartwatches."[697] Per Snapchat, "[a]ny brand or marketer can get on any app and *start targeting Gen Z.* After all, Gen Z is digitally native. But to effectively connect and engage with this generation, that takes a different, more intentional type of platform: Snapchat."[698]

488. Advertisers have responded, pouring into Snapchat money clearly intended for advertising aimed at children. Brands like candy manufacturer Sour Patch Kids, children's toy store ToysRUs, and sugary beverage seller Kool-Aid have all run successful advertising campaigns through Snapchat, frequently using augmented reality tools developed in collaboration with Snapchat.

---

[695] *Evan Spiegel, Co-Founder and CEO of Snap Inc*., Goldman Sachs at 5:02–5:35 (Oct. 2, 2019), https://www.youtube.com/watch?v=PQiKv-GCQ-w.

[696] *What Does Gen Z Want From Brands?*, Snap Inc. (Dec. 15, 2022), https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want.

[697] *Id.*

[698] *Id.* (emphasis added).

489. Despite marketing to children, Snapchat's age verification systems are ineffective at best. For the first two years of its existence, Snap did not even purport to limit user access to those 13 or older.[699] Users were not required to input a date of birth when creating an account.[700]

490. In 2013, Snap belatedly introduced age limits (which, as explained below, it does not effectively enforce). At the same time, Snap launched a new feature called "Snapkidz" aimed at and designed to attract younger child users, while hedging against the potential user loss due to the new age limits. The Snapkidz feature allowed children under the age of 13 to take filtered photos, draw on them, save them locally on their devices, send them to others, and upload them to other apps.[701] Although this version prevented children from sharing "Snaps" on the platform, it nonetheless exposed children to Snapchat's features, which normalized and acclimatized children to using Snapchat. In addition, nothing prevented children from creating an unrestricted account with a false date of birth on Snapchat and using the platform outside the SnapKidz's limited features.[702]

491. The SnapKidz feature was discontinued in or around 2016. Snap now purports to prohibit users under the age of 13. But nothing prohibits the minor user from simply altering their birthdate during the same session where they were just denied an account for being an underage user. Snap could have implemented robust, effective age verification protocols. Instead, it has set up its business and platform so that there is no genuine effort to verify the age of its users or to enforce its age limitations. Snap could, but intentionally does not, verify the phone number, email address, or birthdate used to create accounts, and it allows users to create multiple accounts using the same email address or phone

---

[699] Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013), http://blog.snapchat.com/ [https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/].

[700] *Id.*

[701] *Id.*

[702] *See* Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23, 2013), https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a [https://perma.cc/3BWG-6Q6S]; Anthony Cuthbertson, *Snapchat admits its age verification system does not work*, Indep. (Mar. 19, 2019), https://www.independent.co.uk/tech/snapchat-age-verification-not-work-underage-ageid-a8829751.html.

number. In contrast, Snap will only cutoff a user from its platform based on age if Snap has "actual knowledge that [the user is] under the age of 13[.]"[703]

492. Snap's executives have admitted that Snapchat's age verification "is effectively useless in stopping underage users from signing up to the Snapchat app."[704] Not surprisingly, underage use is widespread. As of 2021, 13% of children ages 8–12 use Snapchat.[705]

493. Once Snapchat is installed on a user's mobile phone, the platform continues to download and install updates, design changes, and new features from Snapchat directly to its users.

494. Similarly, the absence of effective age-verification measures means that users who are older can claim to be children—which is an obvious danger to the actual children on Snap's platform.

3. Snapchat is designed to addict children through psychological manipulation.

495. Once Snap entices children to use its platform, it uses a series of platform features that are designed to addict children. As laid out below, those features can be broadly grouped into two categories that exploit techniques discussed earlier in this Complaint. The first are social metrics and other similar psychological manipulation techniques. The second are features designed to encourage endless passive usage of the Snapchat platform. These features, in tandem with each other and the other harmful features described throughout this section and Complaint, induce addiction, compulsive use, and other severe mental and physical harm to young users of the Snapchat platform, including students in Plaintiff's schools and community.

a. Snap designed Snapchat to drive compulsive use through a set of social metrics and other manipulation techniques that induce compulsive use.

496. Snapchat includes a variety of social metrics—such as Snapscores, Snap Streaks, and Snap Awards—that reward users when they engage with Snapchat and punish them when they fail to engage with Snapchat. Internal research by Snap has found these psychological manipulation techniques

---

[703] *Snap Terms of Service*, Snap Inc. (Aug. 15, 2023), https://snap.com/en-US/terms.

[704] Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*, Bus. Insider (Mar. 19, 2019), https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3.

[705] Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 5, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

are highly effective at instilling anxiety about not using Snapchat frequently enough—and competitor research has confirmed these features are addictive. In tandem with IVR, e.g., push notifications, and design choices that make it difficult to stop using the Snapchat platform, these induce compulsive use of the platform by children.

497. These manipulation techniques are so effective in part because Snapchat's disappearing messages themselves create a compulsion to engage with the Snapchat platform. Because Snaps typically disappear within ten seconds of being viewed, users feel compelled to reply immediately. Snap activates the psychological desire to reciprocate the social gesture of sending a Snap.[706] Snapchat also tells users each time they receive a Snap by pushing a notification to the recipient's device. These notifications are designed to prompt users to open Snapchat repetitively, increasing the overall time spent on the app.

(i) Snapscores

498. Snapscores were one of the earliest features of the Snapchat platform. Almost as soon as Snapchat launched, Snap gave users the ability to draw and color on Snaps and add a short text caption before sending. An Android version of the app, video sharing, and user profiles with "Snapscores" soon followed.[707]

499. Originally called "Hiscore," Snapscore keeps a running profile score based on a user's Snapchat activity levels, such as the number of Snaps sent and received or Stories posted.[708] The sole purpose of Snapscore is to increase platform use and drive revenue.[709]

[706] Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 13, 2015), https://www.nirandfar.com/psychology-of-snapchat/.

[707] Snap Inc., Registration Statement (Form S-1) at 91 (Feb. 2, 2017), https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm; Katie Notopoulos, *The Snapchat Feature That Will Ruin Your Life*, BuzzFeed News (Dec. 5, 2012), https://www.buzzfeednews.com/article/katienotopoulos/the-snapchat-feature-that-will-ruin-your-life

[708] Snapchat Support, *What is a Snap Score?*, Snap Inc. ("Your Snapchat score is determined by a super-secret, special equation . . . 🤓"), https://support.snapchat.com/en-US/a/my-score.

[709] Brad Barbz, **2020 NEW * How To Increase Snapscore By Up To 1000 Per Minute On IOS And Android – Working 2020*, YouTube (Dec. 4, 2019), https://www.youtube.com/watch?v=Mo_tajuofLA.



500. Although Snap does not disclose precisely how Snapscores work, sending and receiving a Snap increases the score by one point. Interacting with other platform features provides additional points. A user's Snapscore is visible on their profile, serves as a signifier of the user's "worth," and encourages users to further engage with Snapchat's features to increase their score. Snapscores are important to users, especially young users, because they operate as a form of social validation, similar to an Instagram "Like." Google has reported millions of searches for "How to improve Snap score." YouTube contains numerous videos with titles like: *How to Increase Snapchat Score Fast*.[710]

501. Snapscores also reward users who post videos that are viewed extensively. This encourages many to use Snapchat in harmful and dangerous ways, to increase the virality of their videos and increase their Snapscore. As more users engage with and forward that video to others, its creator is awarded with an increased Snapscore. Snapchat's rewards incentivize this dangerous behavior, resulting too often in physical harm or humiliation in the obsessive pursuit of social significance.

(ii) Trophies, Charms, and Stickers

502. Snap has also designed Snapchat to include user rewards, including trophies and other social recognition signals, similar to "Likes" on other apps. These features are highly addictive and drive compulsive use.

[710] FozTech, *How to Increase Snapchat Score Fast! (100% Works in 2023)*, YouTube (Oct. 1, 2019), https://www.youtube.com/watch?v=m7s0hvQdTok (*How to Increase Snapchat Score Fast* has 4.4 million views as of Dec. 5, 2023).

503. "Trophies" are emojis awarded for achieving engagement milestones or performing certain activities, such as increasing one's Snapscore, sending creative Snaps, or posting a live story. A user's "Trophies" are displayed in a "trophy box" viewable by their friends. Snap designed this feature to encourage users to share their videos and posts with the public, promote greater use of Snapchat, and deepen young users' addiction to and compulsive use of the platform.

504. In 2020, Snap phased out Trophies and replaced them with "Charms." Unlike Trophies, where users were rewarded for unlocking individual accomplishments like sending 1,000 selfies, Charms reward users for achieving certain milestones in their relationship with other users. Typically, the more users interact with one another, the more Charms they unlock in their relationship. Charms are private and viewable only by users' mutual contacts.

505. For example, if two users are at the top of each other's friends list, meaning they exchange frequent Snaps, they may unlock a "BFF (Best Friends Forever)" Charm. Conversely, the "It's Been Forever" and "It's Been a Minute" Charms may be awarded to friends who are infrequently in contact, to prompt their engagement with one another on Snapchat. Although there are a number of different Charms awarded for various reasons, all of them encourage user interaction, furthering engagement and buy-in to Snap's reward system. This in turn exacerbates social-comparison harms and undermines self-esteem.







506. Snap incorporates other platform features that, like Charms and Trophies, serve no functional purpose, but make Snapchat more appealing and lead to excessive use by children and teens. For example, Snap has developed images called "Stickers" for users to decorate the pictures or videos

they post. Snap also offers app-specific emojis and animations that users can apply to their photos or videos.

507. Time limited features also create a pressure to use the platform daily. Users can post stories that will only be available for 24 hours. Snap's Stories feature includes a running view count and list of viewers for each Story, both of which provide users with dopamine-triggering feedback that encourages users to make their Stories visible to everyone in order to increase the view count. The view count, view list, and ephemeral nature of Stories also reinforces the principle of reciprocity and compels users to monitor Stories, so they do not miss out. Many teens feel an obligation to view all their contact's stories each day before they disappear, or risk hurting the feelings of friends or "missing out."

508. Snap designed each of these features to function as rewards for increased engagement, exploit underage users' desire for social validation, and ultimately compel them to use Snapchat excessively. Because many of these rewards and scores are visible to others, these features tap into adolescents' deep-seated need for acceptance. By exploiting this need, Snap increases time spent engaging with its platform and thereby its profits.

(iii) Snap Streak

509. The "Snap Streak" is unique to Snapchat and is an addictive feature "especially to teenagers[.]"[711] Snapchat streaks provide a reward to users based on how many consecutive days they communicate with another user. In other words, the longer two users are able to maintain a streak by exchanging a communication (a "snap") at least once a day, the more rewarded the users are. The reward comes in the form of a cartoon emoji appearing next to the conversation within Snapchat's interface. The longer the streak is maintained, the more exciting the emoji. Eventually, the emoji will

[711] *See Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27, 2017), https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296; Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you 'addicted'*, Bus. Insider (Feb. 17, 2018), https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13; *see generally* Virginia Smart & Tyana Grundig, *'We're designing minds': Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017), https://www.cbc.ca/news/science/marketplace-phones-1.4384876; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction.

change to a flame, and the number of days the streak has lasted will be positioned next to the flame. If users reach a Streak of 100 days, for example, each receives a 100 emoji.







Worse still, to manufacture deeper addiction to its platform, Snap sends notifications to users with an hourglass emoji when Streaks are about to expire—to create extra urgency, nudge users to keep their Streaks alive, and maintain a system where a user must "check constantly or risk missing out."[712]



510. This feature hijacks teens' craving for social success and connectedness and causes teen users to feel pressure to use Snapchat daily or suffer social consequences. As some academics and mental health treatment providers have described, streaks "provide a validation for the relationship. . . . Attention to your streaks each day is a way of saying 'we're OK.' . . . The makers built into the app a system so you have to check constantly or risk missing out," said Nancy Colier, a psychotherapist and

[712] Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017), https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker [https://perma.cc/HQZ8-K78U].

author of The Power of Off. "It taps into the primal fear of exclusion, of being out of the tribe and not able to survive."[713] For teens, streaks can become a metric for self-worth and popularity. By design, the user's mental wellbeing becomes connected to performance in Snap's platform. Snap Streak emojis are similar to Charms in that they reward users for interaction and are viewable only by mutual friends.

511. It is a matter of common knowledge in the social media industry that the Snap Streak platform feature is designed to be addictive. Meta bluntly acknowledged as much in its internal documents, stating, "[s]treaks are a very important way for teens to stay connected. They are usually with your closest friends and they are addictive."[714] Nonetheless, Snap continues to provide this feature to its adolescent users.

512. This feature is particularly effective with teenage users since Streaks are "a vital part of using the app, and of their social lives as a whole."[715] Some children become so obsessed with maintaining their Streaks that they give their friends access to their accounts when they may be "unable to maintain their own streaks[.]"[716] Aware of how important maintaining a Snap Streak is to its users, Snap has even launched a special form on its support website allowing users who lost their streak to petition to get it back.[717]

513. Snap Streaks contribute to feelings of social pressure and anxiety when users lose or break a Streak. Researchers have found that losing a Streak can cause feelings of betrayal for some

[713] Jon Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9, 2017), https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked.

[714] Haugen_00008303 at Haugen_00008307.

[715] Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you 'addicted'*, Bus. Insider (Feb. 17, 2018), https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13.

[716] Caroline Knorr, *How to resist technology addiction*, CNN (Nov. 9, 2017), https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html; Jon Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9, 2017), https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked.

[717] Snapchat Support, *Submit a request*, Snap Inc., https://support.snapchat.com/en-US/i-need-help?start=5695496404336640.

users, especially girls, who reported "negative" feelings when losing a Streak with one of their friends.[718]

514. In 2018, Snap conducted its own internal research on Snap Streaks, which found that over a third of users reported it was "[e]xtremely" or "[v]ery [important]" to keep a Streak going, and some users reported that the stress level to keep a Streak was "[i]ntolerable" or "[l]arge[.]" Snap's users reported that Streaks are equally important to Likes on Instagram.[719]

515. As this research demonstrates, Streaks are important to users. However, these design features do not enhance the communication function of the platform, i.e., they provide no value to the user. Instead, they exploit users' susceptibility to social pressure and to the compulsive accumulation of other rewards, including Snap Score points and Charms, to maximize addiction to the platform.

(iv) Snap Map

516. "Snap Map," a feature of Snapchat that shows the location of other users on a map. Like other Snapchat features, it drives adolescent engagement. The human desire to belong to an "ingroup" is powerfully connected to self-worth, especially within teens. In a recent study, young respondents reported that they check Snap Map to see where their friends were to avoid exclusion, followed by an increased amount of anxiety.

> Snap Map allows users to view content constantly with minimal effort and to check the application to see what they potentially are missing out on. . . . [A]dolescent users reported feeling "sad," "inadequate," and "isolated" after checking Snap Map, even if they were attempting to avoid these feelings in the first place.
>
> [P]articipants who were unsure of their friends' whereabouts or felt excluded (the uncertain situation), were compelled to check Snap Map and reported experiencing higher levels of anxiety and low-self esteem after doing so. This evaluation of self-worth translates to the participant checking Snap Map to confirm or deny their beliefs, and then experiencing negative emotional responses after making a comparison to their friends' location. Snap Map . . . [is] associated with increased feelings of jealousy and anger in users. Participants expressed how immediate access to locational information directly impacted their mood, especially when they saw something that confirmed their doubts. Something interesting to note is that even when participants were aware of the negative

[718] Dayana Hristoya *et al.*, *"Why did we lose our snapchat streak?" Social media gamification and metacommunication*, 5 Comput. Hum. Behav. Reps., Mar. 2022, at 5, https://www.sciencedirect.com/science/article/pii/S2451958822000069/pdfft?md5=f78e5588d33b758c7f05ddcf606b3827&pid=1-s2.0-S2451958822000069-main.pdf.

[719] SNAP0000008.

feelings that could arise after checking Snap Map, their desire to confirm or deny self-doubt exceeded concerns over these potential consequences.[720]

517. Researchers have found that Snap Map causes feelings of sadness and anxiety for some users, as they jealously view their friends' locations.[721] Snap Map also functions as a social metric. A report by 5Rights, a United Kingdom-based children's online safety advocacy group highlighted the experience of John, a 14-year-old boy, who explained that "[h]aving more connections on Snapchat makes his Snap Map look more crowded, which he can then show off to people in real life and therefore appear more 'popular.'"[722]

(v) Push Notifications

518. In addition to Snapchat's in-app reward features, Snap also sends push notifications and emails to encourage addictive engagement and increase use. Notifications are triggered based on information Snap collects from, and about, its users. Snap "pushes" these communications to users excessively and at disruptive times of day. Snap has even designed the format of these notifications to pull users back onto its app by preying on their fear of missing out—never mind the consequences to their health and well-being.

(vi) Impediments to Discontinuing Use

519. Snap has intentionally designed its platforms so child users face significant navigational obstacles and hurdles when trying to delete or deactivate their Snapchat accounts, despite the ease with which a user can create one. For example, when a user elects to delete their account, they cannot do so on demand. The data and the account are preserved for 30 days. In addition, after initiating the deletion process, the user is presented with a black screen depicting a crying emoji and a message that reads,

---

[720] Jenna Sachs, *Psychological Repercussions of Location-Based Social Networks in Today's Youth*, 9 Elon J. Undergraduate Rsch. Commc'ns 64, 72–73 (2018), https://eloncdn.blob.core.windows.net/eu3/sites/153/2018/12/06-Sachs.pdf.

[721] *See* Tasha R. Dunn & Michael R. Langlais, *"Oh, Snap!": A Mixed-Methods Approach to Analyzing the Dark Side of Snapchat*, 9(2) J. Soc. Media Soc'y 69–104 (2020), https://thejsms.org/index.php/JSMS/article/view/633/371.

[722] *Pathways: How digital design puts children at risk* at 53, 5Rights Found. (July 2021), https://5rightsfoundation.com/uploads/Pathways-how-digital-design-puts-children-at-risk.pdf.

"Your account will be deactivated, which means friends won't be able to contact you on Snapchat. You'll also lose any Chats you've saved and Snaps and Chats you haven't opened."[723]

520. This cumbersome process prioritizes user retention and continued use over the well-being of Snapchat's users.

b. Snap's features are designed to promote compulsive and excessive use.

(i) "Stories" and the "Discover" Interface

521. In October 2013, Snap added "Stories," a feature that generates a compilation of its users' designated photos and videos that expire in 24 hours and can be viewed an unlimited number of times by friends or anyone on Snapchat if the user sets the visibility setting to Everyone.[724] Within eight months of launching the Stories feature, users were viewing more Stories per day than Snaps.[725]

522. Snap's Stories feature includes a running view count and list of viewers for each Story, both of which provide users with dopamine-triggering feedback that encourages users to make their Stories visible to everyone in order to increase the view count. The view count, view list, and ephemeral nature of Stories also reinforces the principle of reciprocity and compels users to monitor Stories, so they do not miss out.

523. In 2016, Snap updated the Stories feature to include recommendations based on an algorithm that considers "proximity, time, interestingness, or other such metrics."[726] That same year, Snap introduced ads between Stories and updated Stories to include "Auto-Advance," a feature that starts a new Story automatically after the preceding one ends.[727] This creates an endless cycle of

---

[723] *See* Snapchat Support, *How do I delete my Snapchat account?*, Snap Inc. (May 31, 2023), https://support.snapchat.com/en-US/a/delete-my-account1 [https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-us/articles/7012328360596].

[724] Darrell Etherington, *Snapchat Gets Its Own Timeline With Snapchat Stories, 24-Hour Photo & Video Tales*, TechCrunch (Oct. 3, 2013), https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-with-snapchat-stories-24-hour-photo-video-tales/.

[725] Ellis Hamburger, *Surprise: Snapchat's most popular feature isn't snaps anymore*, Verge (June 20, 2014), https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival.

[726] Snapchat, Inc., *Content Collection Navigation and Autoforwarding*, U.S. Patent Application No. 20170289234 (filed Mar. 29, 2016), https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234.

[727] James Vincent, *Snapchat will start showing ads between your friends' stories*, Verge (June 14, 2016), https://www.theverge.com/2016/6/14/11930386/snapchat-ads-api-stories; Snapchat, Inc., *Content*

consumption that Snap knows, or should know, is detrimental to users' mental health.[728] Nevertheless, Snap designed and implemented this feature because it is proven to induce a flow state that increases platform use, regardless of whether the use is healthy or enjoyable. Unsurprisingly, one study of over 2,000 UK residents found "68 per cent of respondents who used Snapchat reported that 'the platform prevented them from sleeping.'"[729]

524. Since then, Snap has built upon its Stories interface with "Discover," a feature that showcases a massive and immersive feed of advertisements to Snapchat's captive audience. Using Discover, users may subscribe to an advertiser's "channel" and watch its Stories; as well as see what their friends are watching.

525. Both Stories and Discover encourage user engagement with Snapchat and increase the amount of time users spend using the platform by making the platform more addictive at the expense of users' mental health and well-being.

(ii) "Spotlight"

526. In November 2020, Snap launched "Spotlight," a feature that pushes to users "an endless feed" that Snap curates from its 300 million daily Snapchat users.[730] Spotlight functions and appears nearly identical to TikTok, with similar addictive qualities and harms. Snapchat's Spotlight feature allows users to make videos that anyone can view, and Snap pays users whose Spotlight videos go viral, thus serving as yet another reward system that encourages user engagement. After Snap introduced Spotlight, user time spent on the platform increased by over 200%.[731]

Collection Navigation and Autoforwarding, U.S. Patent Application No. 20170289234 (filed Mar. 29, 2016), https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234.

[728] *See, e.g.*, Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279 (2022), https://bmcpsychology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf.

[729] Fraser Deans, *Curb Your Snapchat Addiction*, Wholesome Tech. Co. (2018), https://www.wholesome.design/advent-2018/2-curb-your-snapchat-addiction/

[730] Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC (Nov. 23, 2020), https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html.

[731] *See* Zacks Equity Research, *SNAP Q4 Earnings Beat Estimates, User Growth Aids Top Line*, Yahoo! Fin. (Feb. 5, 2021), https://finance.yahoo.com/news/snap-q4-earnings-beat-estimates-153003950.html.

527. In February 2022, Snap CEO Evan Spiegel told investors that users are spending more time on Spotlight than almost any other aspect of Snapchat. A year prior, Snap announced "Spotlight Challenges," which provided users with cash prizes for creating Spotlight videos with specific lenses, sounds, or topics, further integrating the user into the Snap ecosystem. Snap claims it paid out more than $250 million in cash prizes to Spotlight Challenge participants in 2021 alone.[732]

4. Snap designed Snapchat with features that harm children directly or expose children to harm.

528. Snapchat further contains a number of features which foreseeably cause children harm above and beyond harms inherent in addiction and compulsive use.

a. Disappearing "Snaps" and "My Eyes Only" thwart parental control and encourage destructive behavior among Snap's teen users.

529. As discussed above, Snapchat's "Snap" feature allows users to send and receive ephemeral, or "disappearing," audiovisual messages. Prior to sending a Snap, a user can designate the period of time—typically no more than a few seconds—that the recipient will be allowed to view the Snap. According to Snapchat, once the allotted time expires, the Snap disappears forever.

530. Disappearing Snaps do not operate as advertised. Although designed to disappear after an allotted time, recipients possess the ability to save or record them at will. This is particularly harmful to adolescents, who rely on Snap's representations when taking and sending photos, and who only learn after the fact that recipients have the means to save photos or videos.

531. Snap could, but does not, warn users, including children and teenagers, that Snaps may not disappear in all instances.

532. In addition, and especially for pre-teen users, Snapchat is dangerous because Snap's parental controls are ill-equipped to mitigate the risks posed by this feature. As set forth below, even with parental controls activated, parents are unable to view a Snap and therefore cannot adequately protect their children and/or deter their children from engaging in dangerous behavior in conjunction with sending Snaps.

[732] Mia Sato, *Snapchat will put ads within stories and share the money with creators*, Verge (Feb. 14, 2022), https://www.theverge.com/2022/2/14/22927656/snapchat-snap-stars-stories-ads.

533. "My Eyes Only" is yet another dangerous feature of Snapchat. This feature enables and encourages users to hide things from their parents in a special tab that requires a passcode. Recovery is not possible from "My Eyes Only"—allegedly even by Snap itself. This dangerous platform feature unreasonably increases the risk to Snapchat's adolescent users, many under age 13.

534. The pictures and videos in "My Eyes Only" self-destructs if a user attempts to access the hidden folder with the wrong code. "My Eyes Only" has no practical purpose or use other than to hide potentially dangerous activity from parents and/or legal owners of the devices used to access Snapchat. Moreover, while this information and evidence should be in Snap's possession and control, it has designed this feature in a way that causes the permanent loss of relevant, material, and incriminating evidence.

b. Snapchat's "Quick Add" feature endangers children.

535. Through a feature known as "Quick Add," Snap has recommended new, sometimes random friends, similar to Facebook's "People You Might Know" feature. Suggestions are formulated using an algorithm that considers users' friends, interests, and location. Quick Add encourages users to expand their friend base to increase their Snapscore by interacting with an ever-expanding group of friends, which--in addition to expanding their time online--can result in exposure to dangerous strangers. Of particular concern, until 2022, Quick Add's suggestions included profiles for users Snap knew to be between the ages of 13–17, meaning that Quick Add could, and in fact did, recommend that a minor and adult user connect.

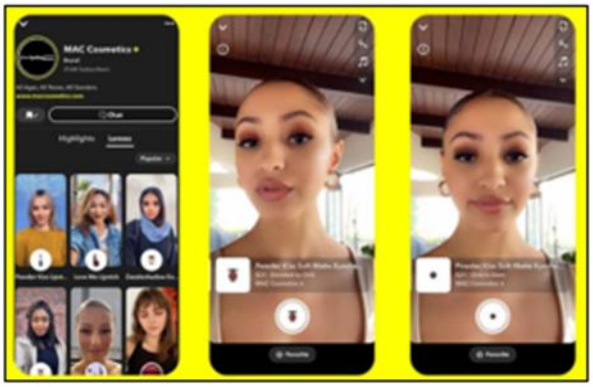
536. Despite these dangers, Snap designed Quick Add because it increases the odds that users will add friends, send more Snaps, and spend more time using Snapchat.

537. In 2022, Snap revised the Quick Add feature to limit the friend suggestions promoted to minor users. For those aged 13 to 17, Quick Add would only suggest friends who shared a certain number of common friends with the minor user. Snap did not disclose how many common friends must be shared by each user to satisfy this safety feature. Further, this modification to the Quick Add feature still does not prohibit the connection of minors with adults and continues to drive additional time on the platform.

c. Snapchat's Lenses and Filters features promote negative appearance comparison.

538. Snap also incorporates numerous custom-designed lenses and filters, which allow users to edit and overlay augmented-reality special effects and sounds on their Snaps. Many of Snapchat's lenses and filters change users' appearance and face, creating unrealistic, idealized versions that cause profound body image issues in teenagers, especially girls.

539. Examples of these features include the Smoothing Filter, which blurs facial imperfections and evens out skin tone; Bold Makeup, which adds makeup over the user's face, blurs imperfections, and evens out skin tone; Sunkissed and Cute Freckles, which adds freckles over the nose and cheeks, blurs imperfections, evens out skin tone, and adjusts skin color; Face and Body Mellow Glow, which smooths the face and body and adjusts skin color; and Fluffy Eyelashes, which alters the shape of the user's face by lifting their eyes and adding more pronounced cheek bones. The common theme among all of these filters is that they remove the subjects' perceived blemishes to create the perfect "selfie."









540. A 2017 study found that these features made Snapchat one of the worst social media platforms for the mental health of children and adolescents, behind only Instagram.[733] In recent years, plastic surgeons have reported an increase in requests for alterations that correspond to Snapchat's filters. This has led researchers to coin the term "Snapchat dysmorphia," in which the effect of Snapchat's filters triggers body dysmorphic disorder.[734] The rationale underlying this disorder is that beauty filters on Snapchat create a "sense of unattainable perfection" that leads to self-alienation and damages a person's self-esteem.[735] One social psychologist summarized the effect as "the pressure to present a certain filtered image on social media [which] can certainly play into [depression and anxiety] for younger people who are just developing their identities."[736]

541. Snap also created and promoted "smart filters" that allowed users to stamp date/time, temperature, battery life, altitude, and speed on their Snaps.[737] These filters utilize sensor data on users' devices to provide the desired filter stamp.

542. A particularly dangerous smart filter is the speed filter, which, from 2013 to 2021 allowed users to record their real-life speed and overlay that speed onto Snaps. Snap knew, or should have known, that the speed filter served no purpose other than to motivate, incentivize, and/or encourage users to drive at dangerous speeds in violation of traffic and safety laws. Indeed, soon after launching its speed filter, the feature became a viral game for users—particularly teenage users—to capture photos

---

[733] Kara Fox, *Instagram worst social media app for young people's mental health*, CNN (May 19, 2017), https://www.cnn.com/2017/05/19/health/instagram-worst-social-network-app-young-people-mental-health/index.html

[734] Jonlin Chen *et al.*, *Association Between the Use of Social Media and Photograph Editing Applications, Self-esteem, and Cosmetic Surgery Acceptance*, 21 JAMA Facial Plastic Surgery 361–367 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6604085/?report=printable; *see also* Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC News (May 1, 2021), https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989.

[735] Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC News (May 1, 2021), https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989.

[736] *Id.*

[737] *See, e.g.*, Karissa Bell, *Snapchat adds an altitude filter to show how high you are*, Mashable (Aug. 19, 2016), https://mashable.com/article/snapchat-altitude-filter-how-to.

and videos of themselves driving at 100 miles-per-hour or more. Tragically, the quest to capture a 100 mile-per-hour Snap caused a number of fatal vehicle accidents involving teens and young adults.[738]

543. Snap knew, or should have known, its speed filter created an unreasonable risk of harm to its users and the public. Despite this knowledge, however, as well as pleas from the public to disable the filter, Snap refused to remove speed filter from its application until 2021.[739]

544. By including features like lenses, cartoonish filters, and stamps to attract ever-increasing numbers of children to use and engage with its platform, Snap has knowingly created a platform that leads to excessive use by children and teens and causes them to suffer harm.

5. Snap implemented ineffective and misleading parental controls, further endangering children.

545. Snap designed and set up Snapchat with inadequate parental controls.

546. From Snapchat's launch in 2011 until August 2022, Snapchat had no parental controls even though its core user base was under the age of 18 and a significant number of those users were under the age of 13.

547. In August 2022, Snap introduced the "Family Center." The features and processes offered through the Family Center are woefully inadequate to protect teen and pre-teen users. The Family Center allows a parent or guardian to install Snapchat on their phone and then link to the child's account. The parent or guardian can then see who the child user is communicating with. However, the substance of these communications remains hidden and still disappears after the allotted time. In addition, the Family Center does not allow a parent or guardian to block minors from sending private messages, control their child's use or engagement with many of Snapchat's platform features, control their child's use of Snapchat's geolocation feature, or control who their child may add to their friend list. Finally, the

[738] *Did Snapchat play role in deaths of 3 young women?*, ABC6 Action News (Feb. 16, 2016), https://6abc.com/action-news-investigation-snapchat-fatal-car-crash-philadelphia/1196846/; Manpreet Darroch, *Snapchat and driving . . . you could be sending your last snap*, Youth Rd. Safety (Apr. 25, 2016), http://www.youthforroadsafety.org/news-blog/news-blog-item/t/snapchat-and-driving-hellip-you-could-be-sending-your-last-snap; Brian Debelle, *The Most Dangerous App on Your Phone*, DistractedDriverAccidents.com (Feb. 9, 2016), https://distracteddriveraccidents.com/the-most-dangerous-app-on-your-phone/.

[739] Bobby Allyn, *Snapchat Ends 'Speed Filter' That Critics Say Encouraged Reckless Driving*, NPR (June 17, 2021), https://www.npr.org/2021/06/17/1007385955/snapchat-ends-speed-filter-that-critics-say-encouraged-reckless-driving.

Family Center fails to help a parent monitor their child's account when the child has secretly created a Snapchat account without the parents' knowledge in the first place.

6. Snap failed to adequately warn Plaintiff and the public about the harms its product causes or provide instructions regarding safe use.

548. Since Snap's inception, it has failed to adequately warn the public, including Plaintiff and its students, about its platforms' physical and mental health risks. These risks include, but are not limited to, addiction, compulsive and excessive use, dissociative behavior, social isolation, and an array of mental health disorders like body dysmorphia, anxiety, depression, and insomnia.

549. Snap targets adolescent users via advertising and marketing materials distributed via digital and traditional media, including expensive advertisements placed during high-profile sporting events. Snap fails to warn the targets of these ads—often minors—about the physical and mental risks associated with using Snapchat.

550. Snap further fails to warn adolescent users during the platform registration process. At account setup, Snap's platform contains no warning labels, banners, or conspicuous messaging to adequately inform adolescent users of the known risks and potential physical and mental harms associated with usage of its platform. Instead, Snap allows adolescent users to easily create an account (or multiple accounts) and fully access the platform.

551. Snap's lack of adequate warnings continues after an adolescent has the Snapchat platform. Snap does not adequately inform adolescent users that their data will be tracked, used to help build a unique algorithmic profile, and potentially sold to Snap's advertising clients, who will in turn use the data to target and profile the user.

552. Alarmingly, Snap also does not warn adolescent users before facilitating adult connections and interactions that adult predators use its platform. It also fails to instruct adolescent users on ways to avoid unknown adults on Snap.

553. Snap also fails to warn adolescent users who exhibit problematic signs of addiction or are habitually and compulsively accessing the app. Instead, Snap utilizes push notifications to encourage engagement with Snapchat.

554. In addition, despite proactively providing adolescent users with countless filtering and editing tools, Snap does not warn its adolescent users regarding the mental health harms associated with those heavily filtered images.

555. Snap's failure to properly warn and instruct adolescent users or their parents has proximately caused significant harm to Plaintiff, who has expended and continues to expend significant resources addressing the impact of Snap's conduct on Plaintiff's operations, including providing additional support to impacted students.

D. Factual Allegations As To Tiktok And Bytedance

1. Background and overview of TikTok.

556. In 2012, Beijing-based technologist Zhang Yiming paired up with American venture capitalist Matt Huang to launch ByteDance, and its first platform Jinri Toutiao ("Today's Headlines"), which utilized A.I. to gather and present world news to users on a single feed.

557. Following the success of its first platform, ByteDance created Douyin in 2016, a music-based app loosely modeled on the popular app Musical.ly. Musical.ly was a hit in the U.S., as American teens gravitated to the platform, which allowed users, including minor users, to create 15-second videos of themselves lip-syncing, dancing, etc. to popular songs and movie scenes, and then post them to a scrollable feed for other users to see.

558. In 2017, ByteDance launched TikTok, a version of Douyin for the non-Chinese market, and acquired Musical.ly—which, by then, boasted a user base of almost 60 million monthly active users—for $1 billion. Nine months later, ByteDance merged its newly acquired app into its existing platform, and a global version of TikTok was born.

559. ByteDance's design of TikTok predecessor Douyin is profoundly different than TikTok. Douyin serves its Chinese users educational and patriotic material and limits young people 14-and-under to just 40 minutes per day.[740] TikTok, however, is designed to encourage addictive and compulsive use and, until recently, had no usage limits for minor users. TikTok's American algorithm is instead design

[740] Sapna Maheshwari, *Young TikTok Users Quickly Encounter Problematic Posts, Researchers Say*, N.Y. Times (Dec. 14, 2022), https://www.nytimes.com/2022/12/14/business/tiktok-safety-teens-eating-disorders-self-harm.html [https://perma.cc/VT8S-HZGM].

to addict its users and keep them on the platform for as long as possible, despite knowing the harm that can result.

560. ByteDance operates TikTok for profit, which creates advertising revenue through maximizing the amount of time users spend on the platform and their level of engagement. The greater the amount of time that young users spend on TikTok, the greater the advertising revenue TikTok earns.

561. TikTok Inc. captures vast swaths of information from its users, both on and off the TikTok platform, including Internet and other network activity information—such as location data and browsing and search histories. ByteDance Ltd. exclusively controls and operates the TikTok platform. In his recent testimony before the House Energy and Commerce Committee, TikTok CEO Shou Chew admitted that he reports directly to ByteDance Ltd. CEO Liang Rubo. ByteDance Ltd. Admits that its personnel outside the United States can access information from American TikTok users including public videos and comments. On information and belief, ByteDance Ltd. Also has access to United States TikTok users' private information.

562. Despite efforts to portray TikTok as separate from Douyin (the Chinese version of TikTok), the two companies share many overlapping personnel and technologies, as the recent report "TikTok, ByteDance and Their Ties to the Chinese Communist Party," produced by the Australian Senate Select Committee on Foreign Interference Through Social Media, makes clear. TikTok's engineering manager works on both TikTok and Douyin, and TikTok Inc.'s development processes are closely intertwined with Douyin's processes. TikTok Inc.'s employees and data systems are also deeply interwoven into Byte Dance Ltd.'s ecosystem.

563. Indeed, TikTok's algorithm was created by ByteDance Ltd. and contains some of the same underlying basic technology as Douyin.[741]

564. TikTok's algorithm still belongs to ByteDance Ltd., which declined to sell the technology to a U.S. company.[742]

[741] Letter from Shou Zi Chew, CEO, TikTok to Marsha Blackburn, U.S. Senator, *et al.* at 4 (June 30, 2022), https://www.documentcloud.org/documents/22126313-tiktok-letter-to-senators.

[742] Zhou Xin & Tracy Qu, *TikTok algorithm not for sale, source says; As tomorrow's US divestment deadline looms, a person familiar with the discussions at ByteDance says company's source code will not be available*, S. China Morning Post (Sept. 14, 2020), https://www.scmp.com/economy/china-

565. ByteDance Ltd. also plays a role in hiring key personnel at TikTok.[743]

566. High-level ByteDance Ltd. Employees served in dual roles for both ByteDance Ltd. And TikTok Inc. at least as recently as 2021. These employees include: (1) Vanessa Pappas, the Head of TikTok Inc. and interim head of the global TikTok business for ByteDance Ltd.; (2) Roland Cloutier, former Global Chief Security Officer, who provided cyber risk and data security support for both TikTok Inc. and ByteDance Ltd.; and (3) Shou Zi Chew, TikTok's CEO and CFO of ByteDance Ltd., who reports to the CEO of ByteDance.[744]

567. In addition to showing that ByteDance Ltd. is highly integrated with TikTok Inc., the Australian Senate Report notes that ByteDance Ltd. is heavily influenced by the Chinese Communist Party. The report notes ByteDance Ltd.'s Editor in Chief, Zhang Fuping, is a Chinese Communist Party Secretary. The Australian Senate report concludes that ByteDance Ltd. is a hybrid state-private entity at least partially controlled by the Chinese government.

568. ByteDance Ltd. designed and operates the Lark communication platform for use by all its subsidiaries, including ByteDance and TikTok. All ByteDance Ltd., ByteDance, and TikTok, personnel have a Lark account and accompanying profile. All oral, video, and written communications between ByteDance Ltd., ByteDance, and TikTok employees are either conducted face-to-face or through Lark. All written communications or documents exchanged through Lark are stored on Lark's database. Lark also provides real-time translation subtitling for oral and video communications between English-speaking and Chinese-speaking personnel. Transcripts of these translated oral and video conversations are stored on Lark's database.

569. Other public report demonstrates that multiple former TikTok employees have reported ByteDance Ltd. Exercises significant control over TikTok's decision-making and operations. Twelve former TikTok and ByteDance Ltd. Employees and executives reported that CEO Shou Zi Chew has

---

economy/article/3101362/tiktoks-algorithm-not-sale-bytedance-tells-us-source [https://perma.cc/9EPY-C5F2].

[743] Letter from Shou Zi Chew, CEO, TikTok to Marsha Blackburn, U.S. Senator, *et al.* at 5 (June 30, 2022), https://www.documentcloud.org/documents/22126313-tiktok-letter-to-senators.

[744] *See TikTok Names CEO and COO*, TikTok Inc. (Apr. 30, 2021), https://newsroom.tiktok.com/en-us/tiktok-names-ceo-and-coo; Ryan Mac & Chang Che, TikTok's C.E.O. Navigates the Limits of His Power, N.Y. Times (Sept. 16, 2020), https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html [https://perma.cc/YG4N-HP6P].

"limited" decision-making power.[745] Instead, major decisions related to TikTok are made by ByteDance Ltd. Founder Zhang Yiming and other ByteDance Ltd. officials in China.[746]

570. Senior TikTok employees hired to head departments have left the company after learning they would not be able to significantly influence decision-making.[747]

571. ByteDance Ltd.'s own Internal Audit team prepared a risk assessment in late 2021 and found that numerous senior employees felt "that themselves and their teams are just 'figureheads' or 'powerless ombudsmen' who are functionally subjection to the control of [China]-based teams."[748]

572. As most recent as 2022, employees that work on product, engineering, and strategy at TikTok said they reported directly to ByteDance leadership in China, bypassing TikTok's executive suite.[749] Similarly, former TikTok employees have stated that "nearly 100% of TikTok's product development is led by Chinese ByteDance employees."[750]

573. Other employees have described ByteDance Ltd. as being "heavily involved" in decision-making and operations at TikTok, with "blurry" boundaries between the two companies.[751] According to employees, these blurred lines included U.S.-based employees working during Chinese business hours

---

[745] Ryan Mac & Chang Che, *TikTok's C.E.O. Navigates the Limits of His Power*, N.Y. Times (Sept. 16, 2020), https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html [https://perma.cc/YG4N-HP6P].

[746] *Id.*

[747] Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-Employees Say*, Forbes (Sept. 21, 2022), https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707 [https://perma.cc/SK33-HJ4S].

[748] Emily Baker-White, *A China-Based ByteDance Team Investigated TikTok's Global Security Chief, Who Oversaw U.S. Data Concerns*, Forbes (Oct. 25, 2022), https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-cloutier/?sh=3dda7fa26640 [https://perma.cc/9VYV-X65J].

[749] Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-Employees Say*, Forbes (Sept. 21, 2022), https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707 [https://perma.cc/SK33-HJ4S].

[750] Salvador Rodriguez, *TikTok insiders say social media company is tightly controlled by Chinese parent ByteDance*, CNBC (June 25, 2021), https://www.cnbc.com/2021/06/25/tiktok-insiders-say-chinese-parent-bytedance-in-control.html.

[751] *Id.*

to answer their ByteDance Ltd. counterparts' questions.[752] Further, one TikTok employee stated ByteDance Ltd. employees could access U.S. user data.[753]

574. Statements from other TikTok employees suggest the lines between the TikTok and ByteDance Ltd. are almost nonexistent, with ByteDance Ltd. being the "central hub for pretty much everything . . . Beijing managers sign off on major decisions involving U.S. operations, including from the teams responsible for protecting Americans' data and deciding which videos should be removed."[754] Further, TikTok employees stated ByteDance Ltd. officials "lead TikTok's design and engineering teams and oversee the software that U.S. employees use to chat with colleagues and manage their work. They're even the final decision-makers on human resources matters, such as whether an American employee can work remotely."[755] ByteDance continues to make decisions "both large and small" about all aspects of TikTok.[756] It directs TikTok's budget, operates TikTok's internal document stroage platform, and handles media criticism directed at TikTok, as well as enters into contracts on behalf of TikTok to provide key services for the TikTok platform.[757] In addition, the source code that still makes up TikTok's recommendation algorithm was originally written by ByteDance employees in China.[758]

575. One former TikTok employee reported to *Forbes* that their paycheck listed ByteDance as the check's drawer, not TikTok.[759] And another employee reported their contract listed TikTok as their employer, but their tax returns listed ByteDance.[760]

576. Since its launch, TikTok has grown exponentially. In late 2021, its owner and creator ByteDance publicly stated that TikTok had 1 billion active global users, up from 55 million in early

---

[752] *Id.*
[753] *Id.*
[754] Drew Harwell & Elizabeth Dwoskin, *As Washington Wavers on TikTok, Beijing Exerts Control*, Wash. Post (Oct. 30, 2022), https://www.washingtonpost.com/technology/interactive/2022/bytedance-tiktok-privacy-china/ [https://perma.cc/4GBZ-6XZJ].
[755] *Id.*
[756] Utah AG Compl. at 53, ¶ 145.
[757] *Id.* at 53, ¶¶ 145–147.
[758] *Id.* at 53–54, ¶ 148.
[759] Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-Employees Say*, Forbes (Sept. 21, 2022), https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707 [https://perma.cc/SK33-HJ4S].
[760] *Id.*

2018 and 700 million in mid-2020.[761] TikTok CEO Shou Chew recently testified that the app currently has over 150 million monthly active users in the United States.[762]

577. A large portion of TikTok's user base is comprised of American children. In July 2020, TikTok reported that more than one-third of its 49 million daily users in the United States were 14 or younger.[763] Internal documents reveal that TikTok's success among U.S. users under the age of 18 has been incredibly successful—reaching a market penetration of 95%.[764] A 2022 *Pew Research Center* survey reported that 67% of American teenagers (age 13–17) use TikTok, with most American teenagers (58%) using the platform daily. Among teenage TikTok users, 16% say they use the platform "almost constantly."[765] In another recent report, more than 13% of young users declared they "wouldn't want to live without" TikTok.[766]

578. Internal documents reveal that U.S. children average nearly two hours a day on the TikTok platform, with many spending more than four hours a day on TikTok alone.[767] Of the nearly seventy million youth aged 13–17 who use TikTok daily, almost thirty million of them are spending close to two or more hours on the platform every day and seventeen million are spending nearly three or more hours on the TikTok platform every day.[768] To put that into perspective, almost a quarter of all

---

[761] Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27, 2021), https://www.cnbc.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html.

[762] *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children From Online Harms: Hearing Before the H. Comm. on Energy & Com.*, 118th Cong. 1 (2023) (written testimony of Shou Chew, CEO, TikTok Inc.), https://d1dth6e84htgma.cloudfront.net/Written_Testimony_of_Shou_Chew_c07504eccf_084e8683f3.pdf?updated_at=2023-03-22T03:10:22.760Z.

[763] Raymond Zhong & Sheera Frenkel, *A Third of TikTok's U.S. Users May Be 14 or Under, Raising Safety Questions*, N.Y. Times (Sept. 17, 2020), https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html#:~:text=The%20TikTok%20data%20seen%20by,as%20being%20of%20unknown%20age [https://perma.cc/PQR5-GSRJ].

[764] Utah AG Compl. at 10, ¶ 26.

[765] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[766] Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31, Common Sense Media (2022), https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

[767] Utah AG Compl. at 17, ¶ 49.

[768] *Id.*

children using the TikTok platform are spending the equivalent of half of their school day on the platform every day.[769]

579. TikTok's capture of the American youth market is no accident, but instead the result of a carefully executed campaign. Early on, Alex Zhu, one of TikTok's creators, recognized that "[t]eenagers in the U.S. [were] a golden audience" for this emerging social media platform.[770] To cash in on this gold, ByteDance implemented a series of platform features designed to attract and addict young users. As Zhu explained in 2019, "[e]ven if you have tens of millions of users, you have to keep them always engaged[.]"[771] This engagement has come at the cost of young users' health and significant impact to school districts charged with educating those youth in a safe and healthy environment.

2. ByteDance intentionally encourages youth to use its platform and then leverages that use to increase revenue.

580. ByteDance has designed and aggressively marketed TikTok, the harmful and addictive version of Douyin, to attract and profit from young Americans.

581. Like the other Defendants' platforms, TikTok depends on advertising revenue, which has boomed. TikTok was projected to receive $11 billion in advertising revenue in 2022, over half of which is expected to come from the United States.[772]

582. The initial iteration of TikTok allowed users to lip sync pop music by celebrities who appealed primarily to teens and tweens (e.g., Selena Gomez and Ariana Grande). It labeled folders with names attractive to youth (e.g., "Disney" and "school"); and included in those folders songs such as "Can You Feel the Love Tonight" from the movie "The Lion King," "You've Got a Friend in Me" from

---

[769] *Id.*

[770] Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016), https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%2Dups,the%20rest%20of%20the%20globe [https://perma.cc/UR2Q-KEF7].

[771] Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you've probably never heard of*, Bus. Insider (May 28, 2016), https://www.businessinsider.com/what-is-musically-2016-5#:~:text=%22I%20think%20we%20have%20these,now%20we%20can%20lay%20back.%22.

[772] Bhanvi Staija, *TikTok's ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022), https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/.

the movie "Toy Story," and other renditions covering school-related subjects or school-themed television shows and movies.[773]

583. ByteDance also specifically and intentionally excluded videos that would not appeal to young Americans, instructing TikTok moderators that videos of people with "too many wrinkles" should not be permitted on users' "For You" pages because such posts were "much less attractive [and] not worth[] . . . recommend[ing][.]"[774]

584. Even TikTok's sign-up process demonstrates that young users are what ByteDance values most. In 2016, the birthdate for those signing up for the app defaulted to the year 2000 (i.e., 16 years old).[775] In December 2016, Zhu confirmed the company had actual knowledge that "a lot of users, especially top users, they are under 13."[776]

585. The FTC alleged that despite the company's knowledge of these and a "significant percentage" of other users who were under 13, the company failed to comply with the COPPA.[777]

586. TikTok settled those claims in 2019 by agreeing to pay what was then the largest ever civil penalty under COPPA and to several forms of injunctive relief.[778]

587. In an attempt to come into compliance with the consent decree and COPPA, TikTok made available to users under 13 what it describes as a "limited, separate app experience."[779] The child

---

[773] Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 8, ¶¶ 26–27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

[774] Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by "Ugly" People and the Poor to Attract New Users*, Intercept_ (Mar. 16, 2020), https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/.

[775] Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed with*, Bus. Insider (Dec. 7, 2016), https://www.businessinsider.com/how-to-use-musically-app-2016-12.

[776] Jon Russell, *Musical.ly defends its handling of young users, as it races past 40M MAUs*, TechCrunch (Dec. 6, 2016), https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/; *see also* TechCrunch, *From Brush to Canvas with Alex Zhu of Musical.ly* at 8:58–11:12, YouTube (Dec. 6, 2016), https://www.youtube.com/watch?v=ey15v81pwII.

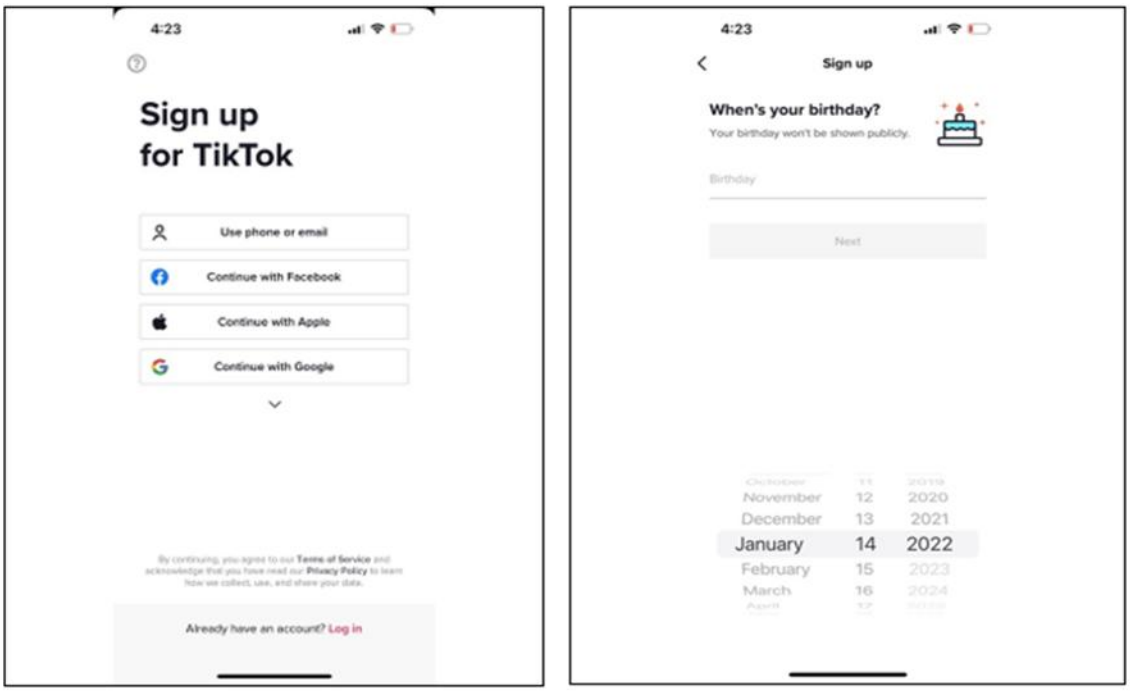
[777] Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 6, ¶¶ 13–15, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

[778] Lesley Fair, *Largest FTC COPPA settlement requires Musical.ly to change its tune*, FTC (Feb. 27, 2019), https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune.

[779] Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge (Feb. 27, 2019), https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law.

version of TikTok restricts users from posting videos through the app. Children can still, however, record and watch videos on TikTok.[780] For that reason, experts fear the app is "designed to fuel [kids'] interest in the grown-up version."[781]

588. These subtle and obvious ways TikTok markets to and obtained a young userbase are manifestations of Zhu's views about the importance of user engagement to growing TikTok. Zhu explained the target demographic to *The New York Times*: "[T]eenage culture doesn't exist" in China because "teens are super busy in school studying for tests, so they don't have the time and luxury to play social media apps."[782] By contrast, Zhu describes "[t]eenagers in the U.S. [as] a golden audience."[783]



[780] *Id.*

[781] Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-.

[782] Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016), https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%2Dups,the%20rest%20of%20the%20globe [https://perma.cc/UR2Q-KEF7].

[783] *Id.*

3. ByteDance intentionally designed platform features to addict children and adolescents.

589. TikTok's growth among young Americans has been further enabled by its ineffective age verification and parental control procedures, which allow children under 13 unfettered access to the platform, without regard to parental consent, despite the fact that TikTok's terms of service require consent of parents or guardians for minors.

a. TikTok's age-verification measures are dangerously deficient.

590. When a user first opens TikTok, they are prompted to "Login in to TikTok" or "Sign up" for an account using a phone number or email address. TikTok then asks, "When's your birthday?"

591. ByteDance does not verify the age that TikTok users report. Nor does it use any method to verify that users who acknowledge they are minors have the consent of their parents or legal guardians to use the platform. In fact, at least as of 2020, TikTok still had not developed a company position on age verification.[784]

592. ByteDance allows users to utilize TikTok without creating an account, to circumvent age restrictions. Indeed, TikTok allows users, no matter what age, to "browse as [a] guest," and watch TikTok's "For You" page, while TikTok's algorithm collects data about that user and their viewing behavior.[785]

593. ByteDance knows that many U.S. TikTok users under the age of 13 fail to report their birth dates accurately.[786] In July 2020, TikTok reported that more than a third of its 49 million daily users in the United States were 14 years old or younger. While some of those users were 13 or 14, at least one former employee reported that TikTok had actual knowledge of children even younger based on videos posted on the TikTok platform—yet failed to promptly take down those videos or close those accounts.[787]

---

[784] TIKTOK3047MDL-001-00060941 at *85 ("Minor Safety Policy & PnP," PowerPoint, January 2021).

[785] *Browse as guest*, TikTok Inc., https://support.tiktok.com/en/log-in-troubleshoot/log-in/browse-as-guest.

[786] Jon Russell, *Musical.ly defends its handling of young users, as it races past 40M MAUs*, TechCrunch (Dec. 6, 2016), https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/.

[787] Raymond Zhong & Sheera Frenkel, *A Third of TikTok's U.S. Users May Be 14 or Under, Raising Safety Questions*, N.Y. Times (Sept. 17, 2020),

594. ByteDance's Trust and Safety team recognizes that one of the biggest challenges it faces is "determining who is a minor (defined as users 13–17 years old)."[788]

595. In 2019, the FTC acted on this admission and alleged that ByteDance failed to comply with COPPA.[789]

596. TikTok settled the FTC claims, agreeing to a then-record civil COPPA penalty and several forms of injunctive relief intended to protect children who use the platform.[790]

597. To comply with the terms of that settlement, ByteDance created "TikTok for Younger Users," a "limited app experience" for users under the age of 13.[791] "TikTok for Younger Users" does not permit users to "share their videos, comment on others' videos, message with users, or maintain a profile or followers."[792] However, users can still "experience what TikTok is at its core" by recording and watching videos on TikTok. For that reason, experts state the app is "designed to fuel [kids'] interest in the grown-up version."[793]

598. Moreover, users under 13 can easily delete their age-restricted accounts and sign up for an over-13 account on the same mobile device—without any restriction or verification—by simply inputting a fake birthdate. Representative Ann Kuster raised this issue with TikTok CEO Shou Chew in his March 23, 2023 congressional testimony.[794] Ms. Kuster indicated that her staff was able to

---

https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.htmlhttps://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html [https://perma.cc/PQR5-GSRJ].

[788] TIKTOK3047MDL-001-00060811 at *16.

[789] *See* Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 9–10, ¶¶ 30–32, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

[790] Natasha Singer, *TikTok Broke Privacy Promises, Children's Groups Say*, N.Y. Times (May 14, 2020), https://www.nytimes.com/2020/05/14/technology/tiktok-kids-priva-cy.html#:~:text=TikTok%2C%20the%20popular%20app%20for%20making%20and%20sharing,20%20children%E2%80%99s%20and%20consumer%20groups%20said%20on%20Thursday [https://perma.cc/S5Q9-ERWP].

[791] *TikTok for Younger Users*, TikTok Inc. (Dec. 13, 2019), https://newsroom.tiktok.com/en-us/tiktok-for-younger-users.

[792] *Id.*

[793] Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-.

[794] *TikTok: How Congress Can Safeguard American Data Privacy and Protect Children From Online Harms: Hearing Before the H. Comm. on Energy & Com.*, 118th Cong. (2023), https://energycommerce.house.gov/events/full-committee-hearing-tik-tok-how-congress-can-safeguard-american-data-privacy-and-protect-children-from-online-harms.

impersonate a minor and create a different account with a more advanced age by merely deleting one and creating another.[795] The staff members did not even need to switch emails. Chew promised to "look at [this]."[796]

599. The absence of effective age verification measures also means that adult users claim to be children—with obvious dangers to the children on ByteDance's platform.

b. TikTok's parental controls are dangerously deficient.

600. In April 2020, following the FTC settlement, ByteDance created a "Family Pairing" feature on TikTok. The supposed purpose of that feature was to allow parents to link their accounts to their children's accounts and enforce certain controls (such as screen time limits and restriction of "content that may not be appropriate for all audiences").[797]

601. "Family Pairing" is supposed to allow parents to prevent their children from direct messaging other TikTok users. But ByteDance has designed TikTok's "Family Pairing" feature so that it is not mandatory for minor users. To use it, a parent or guardian must create their own TikTok account to pair it with their child's account. Further, the "Family Pairing" feature is available only on the TikTok mobile app. It provides no protection when a child accesses TikTok through a web browser. Because this feature requires parents to know the name of their child's account to pair it, youth can easily evade the protections of the "Family Pairing" feature by creating anonymous accounts, again without parental approval or knowledge.

602. ByteDance further stymies parents' ability to supervise minor children's use of TikTok by permitting minor users to block their parents' profiles, post ephemeral videos called "Stories" that disappear after 24 hours, and post those Stories to "Friends Only."

603. ByteDance could, but does not, adopt safety features that notify parents when minors are engaging excessively with the platform and are using it during sleeping hours. The company is aware that many youth are using the platform late at night and admits that such use is a "strong indicator" that those users are not getting the recommended eight hours of sleep necessary for their health and well-

---

[795] *Id.*
[796] *Id.*
[797] Jeff Collins, *TikTok introduces Family Pairing*, TikTok Inc. (Apr. 15, 2020), https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing.

being.[798] Internal TikTok documents reveal that more than 20% of childen are active on its platform between 12:00 a.m. and 5:00 a.m., when they should be sleeping.[799] Specifically, 19% of TikTok's 13 to 15-year-old users globally and 25% of users aged 16–17 are active on TikTok between 12:00 a.m. and 5:00 a.m.[800] Nevertheless, until August 2021, ByteDance would send push notifications to young users at all hours of the day or night to persuade them to log back on to TikTok. Since then, push notifications have been cut off at 9 pm for users self-identified as 13–15 years old, and after 10 pm for users self-identified as 16 or 17 years of age.

604. Until January 13, 2021, ByteDance interfered with parental supervision and endangered children by defaulting all accounts, including those registered to children as young as 13, to "public." That allowed strangers to contact minor users regardless of age or location. ByteDance also intentionally and actively promoted these types of connections by suggesting accounts to follow through the "Find Friends" or "People You May Know" features.

605. For users self-identified as age 16 and over, ByteDance still set the default privacy setting for all registered accounts to "public," meaning that anyone could view a user's profile, on or off TikTok, request the user as a friend, or engage with the user's videos.

c. ByteDance intentionally designed TikTok's features and algorithms to maximize engagement using an endless feed, time-limited experiences, intermittent variable rewards, reciprocity, and ephemeral content.

606. Like each of the other Defendants, ByteDance has designed and coded TikTok with features that foster addictive and compulsive use by youth, leading to a cascade of mental and physical injuries.

607. One of TikTok's defining features is its "For You" page (or "FYP"). According to ByteDance, it is "central to the TikTok experience and where most of our users spend their time."[801]

608. TikTok's FYP uses ByteDance's powerful machine-learning algorithms to to maximize user engagement and thereby serve ByteDance's interests—as opposed to simply responding to searches

[798] Utah AG Compl. at 16, ¶ 42.
[799] *Id.* at 3, ¶ 5.
[800] *Id.* at 16, ¶ 42.
[801] *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020), https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you.

by users. As one industry commentator explained, TikTok uses "a machine-learning system that analyzes each video and tracks user behavior so that it can serve up a continually refined, never-ending stream of TikToks optimized to hold [users'] attention."[802] As another commentator put it, "you don't tell TikTok what you want to see. It tells you."[803]

609. Zhu has remarked that "[e]ven if you have tens of millions of users, you have to keep them always engaged[.]"[804] Thus, according to Zhu, TikTok's algorithms are "focused primarily on increasing the engagement of existing users."[805]

610. TikTok's internal documents make clear that habit formation is a core "mission" of the company:

> Pulling in and retaining new-users is difficult because it is causing these users to make behavioral changes to their current habits. The Habit Loop (neurological loop that governs habits) is broken down into 3 stages: the Cue[,] the Routine, the Reward. Prior to downloading TikTok, new-users already established "Routines" for cues (ex[ample] boredom, free-time, bed-time routine) that we may want as cue[s] to bring people onto TikTok. However, changing someone's routine is not as simple as asking them to. It's about the reward; the positive reinforcement and benefit that the person feels from doing that routine. TikTok[']s mission to increase retention is to discover what "rewards" our users are seeking during the cues we want to associate ourselves with.[806]

611. An internal document: *TikTok Algo 101*, which TikTok has confirmed is authentic, "explains frankly that in the pursuit of the company's 'ultimate goal' of adding daily active users, it has

---

[802] Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019), https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention [https://perma.cc/A3XU-Y73L].

[803] Drew Harwell, *How TikTok Ate the Internet*, Wash. Post. (Oct. 14, 2022), https://www.washingtonpost.com/technology/interactive/2022/tiktok-popularity/ [https://perma.cc/R7JJ-CDSF].

[804] Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you've probably never heard of*, Bus. Insider (May 28, 2016), https://www.businessinsider.com/what-is-musically-2016-5#:~:text=%22I%20think%20we%20have%20these,now%20we%20can%20lay%20back.%22.

[805] Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html#:~:text=musical.ly%20began%20as%20an,has%20expanded%20into%20much%20more

[806] Utah AG Compl. at 11–12, ¶ 31.

chosen to optimize for two closely related metrics in the stream of videos it serves: 'retention'—that is, whether a user comes back—and 'time spent.'"[807]

612. "This system means that watch time is key[,]" explained Guillaume Chaslot, the founder of Algo Transparency.[808] Chaslot noted that "rather than giving [people] what they really want," TikTok's "algorithm tries to get people addicted[.]"[809]

613. To fulfill this goal, the TikTok algorithm responds to a user's time spent watching and engaging with a video by feeding them similar videos.[810] As TikTok describes it, the algorithms populate each user's FYP feed by "ranking videos based on a combination of factors" that include, among others, any interests expressed when a user registers a new account, videos a user likes, accounts they follow, hashtags, captions, sounds in a video they watch, certain device settings, such as their language preferences and where they are located, and finally, the likelihood of the user's interest.[811]

614. ByteDance has designed TikTok's algorithm so that certain factors, such as time spent watching a video, are more important to the algorithm than others. For example, TikTok explained that "whether a user finishes watching a longer video from beginning to end, would receive greater weight than . . . whether the video's viewer and creator are both in the same country."[812]

---

[807] Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html [https://perma.cc/J3L5-35CL].

[808] *Id.*

[809] *Id.*

[810] Kaitlyn Tiffany, *I'm Scared of the Person TikTok Thinks I Am*, Atl. (June 21, 2021), https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/ [https://perma.cc/5T3M-88ZY].

[811] *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21, 2021), https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796; *see also How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020), https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you.

[812] *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21, 2021), https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796; *see also How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020), https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you.

615. TikTok's design features are therefore designed to give young users immediate gratification and boost rewards to encourage excessive, "routine use" of the platform.[813] TikTok acknowledges is "utilizes many coercive design tactics that detract from user agency such as infinite scroll, constant notifications, and the 'slot machine' effect."[814]

616. TikTok knows that is presence in people's lives monopolizes their time. For example, an internal TikTok Powerpoint: *TikTok Strategy: 2021 Positioning*, shows its awareness of the addictive nature of its platform, noting that TikTok is "in most people's lives like this: 'go on tiktok for 5 mins and 3 hours have passed'. . . [o]r even this: 'my night routine: - watch 3 hours worth of tiktok videos[;] - try to follow the dance steps[;] - realise u suck at dancing n cry about it[;] - continue watching tiktok videos[;] - sleep.'"[815] At its core, TikTok's success can largely be attributed to design features "which limits user agency."[816]

617. TikTok's revenue is heavily dependent on the amount of time users spend on the platform and their level of engagement. The more time users spend on TikTok, the more advertising revenue TikTok reaps. Upon knowledge, information, and belief, formed after a reasonable inquiry under the circumstances, TikTok has designed its algorithms to addict users through advanced analytics that create a variable reward system, thereby causing users to spend increased amounts of time on the platform. Upon opening the TikTok application, users are automatically shown an endless stream of videos selected by an algorithm(s). TikTok has "stepped over the midpoint between the familiar self-directed feed and an experience based first on algorithmic observation and inference," or artificial intelligence:

> The most obvious clue is right there when you open the app: the first thing you see isn't a feed of your friends, but a page called "For You." It's an algorithmic feed based on videos you've interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you've explicitly told it you want to see. It's full of things that you seem to have demonstrated you want to watch, *no matter what you actually say you want to watch* . . . Imagine a version of Facebook

[813] Utah AG Compl. at 12, ¶ 32.
[814] *Id.* at 14, ¶ 37.
[815] *Id.* at 12–13, ¶ 32.
[816] *Id.* at 16, ¶ 44.

> that was able to fill your feed before you'd friended a single person. That's TikTok. . . . [The platform is] incredibly addictive.[817]

618. TikTok's algorithms are designed to begin working the minute a user opens the platform. The FYP shows the user a single, full-screen stream of videos, then records how the user reacts. "A second of viewing or hesitation indicates interest; a swipe suggests a desire for something else."[818] With each data point collected, TikTok's algorithm winnows a mass of videos to a single feed, continually refined to keep users engaging often and at length.

619. This algorithmic encouragement of continuous scrolling and interaction makes it hard for users to disengage from the app. A recent ByteDance-funded study, which imaged the brains of TikTok and other social media platform users, found that users engaged with TikTok about 10 times a minute, twice as often as with peer apps.[819]

620. ByteDance leverages users' inability to disengage as a benefit to attract advertisers, rather than taking steps to address the addictive nature of its platform. A recent TikTok marketing document observed that "the TikTok audience is fully leaned in."[820] Marketing research commissioned by TikTok found that, compared to other social media platforms, TikTok users evidenced a higher frequency of rate per minute. TikTok boasted, "[o]ur algorithm and shorter video formats create continuous cycles of engagement, making TikTok the leading platform for Information Density."[821]

621. TikTok's powerful machine-learning algorithms dictate each user's FYP. An estimated 90-95% of the videos viewed on TikTok comes from its algorithms (as opposed to user selection), the highest among Defendants' platforms.[822]

---

[817] John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html.

[818] *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21, 2021), https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796.

[819] *TikTok Ads Break Through Better Than TV And Drive Greater Audience Engagement*, TikTok Bus. (June 2021), https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf.

[820] *Id.*

[821] *Id.*

[822] *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21, 2021), https://www.wsj.com/video/series/inside-tiktoks-highly-secretive-algorithm/investigation-how-tiktok-algorithm-figures-out-your-deepest-desires/6C0C2040-FF25-4827-8528-2BD6612E3796.

622. The algorithm encourages use of the platform, regardless of whether that use is enjoyable or healthy. TikTok's algorithm is not designed to direct users to videos they want to see, but rather to videos they cannot look away from. From TikTok's perspective, it does not matter whether users are engaging with a video because they are horrified, angry, or upset—the engagement itself is the end goal.

623. TikTok's algorithm is a powerful force for addiction. Indeed, TikTok's quest to monopolize user attention often forces users down "rabbit holes." Users end up in these rabbit holes, and become trapped in them, because TikTok has optimized its algorithm's design for retention and time spent on the app.[823] TikTok wants to keep users coming back as often as possible for as long as possible, no matter the cost to the user's health.

624. TikTok knows its algorithm causes real harm. After *The Wall Street Journal* documented the pernicious operation of the TikTok algorithm, TikTok admitted internally (but not publicly) that its shortcomings "bring[] into question TikTok's commitment to user safety, particularly as to younger users[.]"[824]

625. Once users are in a rabbit hole, it is extremely difficult to climb out.[825] In general, escaping a rabbit hole requires a user to repeatedly and actively strategize ways to counter the algorithm, pitting individual users' David against TikTok's machine-learning Goliath.

626. ByteDance's choices about how to design and structure its app—including choosing not to implement effective age-gating and parental controls, in addition to choosing to design algorithms to maximize engagement—go far beyond benignly organizing the third party posts. Instead, they create an environment and experience suited to ByteDance's goal of maximizing ad revenues—an environment and experience that is unreasonably dangerous to the children and teens ByteDance targets.

627. Alyssa Moukheiber, a treatment center dietitian, explained that TikTok's algorithm can push children into unhealthy behaviors or trigger a relapse of disordered eating.[826] Indeed, several

---

[823] Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html [https://perma.cc/J3L5-35CL].

[824] Utah AG Compl. at 30–31, ¶ 79.

[825] Kaitlyn Tiffany, *I'm Scared of the Person TikTok Thinks I Am*, The Atlantic (June 21, 2021), https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/ [https://perma.cc/5T3M-88ZY].

[826] *Id.*

teenage girls interviewed by *The Wall Street Journal* reported developing eating disorders or relapsing after being influenced by TikTok's algorithm.[827]

628. Their experiences are not unique. Katie Bell, a co-founder of the Healthy Teen Project, explained that "the majority of her 17 teenage residential patients told her TikTok played a role in their eating disorders."[828]

629. Others, like Stephanie Zerwas, an Associate Professor of Psychiatry at the University of North Carolina at Chapel Hill, could not even recount how many of her young patients told her that "I've started falling down this rabbit hole, or I got really into this or that influencer on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was doing that[.]"[829]

630. TikTok's rabbit holes are particularly problematic for young people, whose undeveloped frontal lobes lack the executive function and necessary impulse control to stop watching. The more young users engage by viewing or hesitating on a particular video, the more TikTok's algorithms learn about the user. The company knows that what it calls "filter bubbles" are harmful but notes it falls within a "grey area" of its policies consisting of material that is not harmful in isolation but "can negatively influence users when the content is consumed in a condensed way."[830] ByteDance uses this feature to exploit the vulnerabilities of children and teenagers and addict them to its platform.

631. Indeed, ByteDance admits that its recommendation algorithm creates a "risk of presenting an increasingly homogeneous stream of videos[,]" which feeds and creates addiction.[831]

632. This course of conduct resulted in the United Kingdom's Information Commissioner's Office bringing a fine of £12.7 million ($15.8 million) for breaches of data protection law, including the misuse of children's personal data.[832] The fine rested on TikTok's failure to obtain authorization from the appropriate responsible adults before processing and using children's data, failure to adequately

---

[827] *Id.*
[828] *Id.*
[829] *Id.*
[830] Utah AG Compl. at 42, ¶ 115.
[831] *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020), https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you.
[832] Tom Fish, *TikTok Handed £12.7M UK Fine For Misusing Children's Data*, Law360 (Apr. 4, 2023), https://www.law360.com/articles/1593391/tiktok-handed-12-7m-uk-fine-for-misusing-children-s-data.

inform users about how the platform uses and shares data, and failure "to ensure that U.K. users' information was processed lawfully and transparently."[833]

633. ByteDance uses a series of interrelated design features that exploit known mental processes to induce TikTok's users to use the platform more frequently, for more extended periods, and with more intensity (i.e., providing more comments and "Likes"). ByteDance knows or should have known that children, whose brains are still developing, are particularly susceptible to these addictive features.

634. ByteDance designed the app so users cannot disable the auto-play function on the FYP.[834] As noted above, when a user opens the TikTok app or visits the TikTok website, the platform immediately begins playing a video on the user's FYP. The user may request more videos with a simple upward swipe, and the platform will deliver a seemingly endless video stream. If a user does not proceed from a video, it continues to play on an endless loop. The ability to scroll continuously induces a "flow-state" and distorts users' sense of time.

635. The TikTok app interface is designed with only a limited number of buttons and sections of the app for users to navigate, such that the design does not impede "flow."

636. The FYP also leverages principles of IVR to encourage compulsive usage, in the same fashion as Instagram Reels. A user swipes to receive the next video, and each swipe offers the prospect (but not the certainty) of dopamine-releasing stimuli.

637. The cumulative effect of these features is addictive, compulsive engagement. As researchers at the Brown University School of Public Health explained:

> [T]he infinite scroll and variable reward pattern of TikTok likely increase the addictive quality of the app as they may induce a flow-like state for users that is characterized by a high degree of focus and productivity at the task at hand. . . . Once immersed in the flow-like state, users may experience a distorted sense of time in which they do not realize how much time has passed. Furthermore, the app interface itself is straightforward and user-friendly, with only a limited number of buttons and sections of the app for users to navigate, which further enables entrance into "flow." . . . When they play, they consume the entire device screen, which creates an immersive experience for users.

[833] *Id.*

[834] *2 Best Ways You Can Turn off TikTok Autoplay*, Globe Calls (July 8, 2022), https://globecalls.com/2-ways-you-can-turn-off-tiktok-autoplay/.

. . .

> Although the similarity may not be immediately evident, analysis of social media apps reveals that they are designed to function like slot machines — the "swipe down" feature required to refresh one's feed mirrors pulling a slot machine lever, and the variable pattern of reward in the form of entertaining videos on TikTok simulates the intermittent reward pattern of winning or losing on a slot machine; this pattern keeps individuals engaged under the impression that the next play might be "the one." . . . Provided that social media apps are functionally akin to slot machines, it is likely that the use of these apps is just as addictive as slot machines and fosters social media addiction, much like how slot machines contribute to gambling addiction.[835]

638. Dr. Julie Albright, a Professor at the University of Southern California, similarly explained that TikTok is so popular because users will "just be in this pleasurable dopamine state, carried away. It's almost hypnotic, you'll keep watching and watching." Users "keep scrolling," according to Dr. Albright, "because sometimes you see something you like, and sometimes you don't. And that differentiation—very similar to a slot machine in Vegas—is key."[836] TikTok also provides its own set of beauty enhancing filters, which cause insecurities and psychological injury in teens leading to body dysmorphia, eating disorder, self-harm, and in more severe cases, suicide.

639. Aza Raskin, the engineer who designed infinite scroll, described the feature as being "as if [social media companies are] taking behavioral cocaine and just sprinkling it all over your interface, and that's the thing that keeps you coming back and back and back." Because the infinite scroll does not "give your brain time to catch up with your impulses . . . you just keep scrolling."[837]

640. To reinforce this addictive experience, ByteDance intentionally omits the concept of time from their platform, stripping information such as when a user uploaded a video from its endless stream of videos. In the FYP, there is no way to discern how long ago the video was posted, or when the user who posted the video joined TikTok.

---

[835] Sophia Petrillo, *What Makes TikTok so Addictive?: An Analysis of the Mechanisms Underlying the World's Latest Social Media Craze*, Brown Undergraduate J. Pub. Health (Dec. 13, 2021), https://sites.brown.edu/publichealthjournal/2021/12/13/tiktok/.

[836] John Koetsier, *Digital Crack Cocaine: The Science Behind TikTok's Success*, Forbes (Jan. 18, 2020), https://www.forbes.com/sites/johnkoetsier/2020/01/18/digital-crack-cocaine-the-science-behind-tiktoks-success/?sh=4c24917778be [https://perma.cc/K6LZ-6ANF].

[837] *Id.*

641. On at least some phones, TikTok is designed to cover the clock displayed at the top of user's iPhones, preventing them from keeping track of the time spent on TikTok.[838]

642. ByteDance has designed the app so that users can see, however, how many times a video was "Liked," commented on, or shared. So, the only thing users can quantify within the app is the approval or disapproval of others.

643. In June 2022, after receiving public criticism regarding its platform's effects on people's mental health, ByteDance introduced various tools to purportedly encourage users to take a break from infinite scrolling, such as a "Take a Break" reminder and time-limit caps. ByteDance chose not to activate these tools by default and instead buried them behind "a hidden series of menus" so users would not use them.[839] Even for minors, once they have exceeded 100 minutes of usage a day, TikTok only "reminds" them that these "Take a Break" tools exist upon opening the app, but does not activate them by default.

644. In March of 2023, TikTok announced additional measures to quell public criticism about the addictiveness of its platform. Once the changes are implemented, minors under age 18 will by default have their use limited to one hour. There is less to this time limit than meets the eye. Children whose accounts are paired with parental accounts will need a code from the parent to extend the time limit. Children with unpaired accounts, however, can easily extend the time limit or even disable it themselves.

645. In addition to infinite scroll, ByteDance has designed TikTok so it has other design features that exploit social psychological impulses to induce children to use TikTok daily and for extended periods of time, adding to the platform's addictive nature.

646. Several TikTok features actively encourage users to generate ephemeral photos and videos. This promotes compulsive use, because users risk missing posts by their friends and others if they do not check TikTok at least daily.

647. A TikTok user can, for example, post expiring "Stories," short videos that disappear after 24 hours. These videos do not otherwise appear in a user's feed. TikTok's live stream feature is similar.

---

[838] Louise Matsakis, *On TikTok, There is No Time*, Wired (Oct. 3, 2019), https://www.wired.com/story/tiktok-time/ [https://perma.cc/F8D6-UTRD].

[839] *See* Utah AG Compl. at 16, ¶ 43.

648. A relatively new feature, "TikTok Now," pushes daily notifications to users to share "authentic, real-time images or 10-second videos at the same time as your friends."[840] ByteDance designed this feature so that once a user gets the notification, the user has three minutes to post an image or video. That user cannot view friends' "TikTok Now" posts without sharing one of their own, and posts submitted outside of the three-minute window are marked as "late." TikTok preserves a user's history in a calendar view, adding to the pressure to visit the app daily and when notified by TikTok to do so. ByteDance designed these features to increase responsiveness to notifications and keep young users locked into the platform, as they do not want to miss out on this perceived social activity.

649. Like "Snap Streaks," "TikTok Now" does not enhance the communication function of the platform, but simply exploits young users' susceptibility to persuasive design, teenage social anxiety, and FOMO. ByteDance's insidious design of "TikTok Now" also employs point scoring and competition with others to drive frequent and continuous engagement by children, who otherwise risk checking in late and alienating other peers participating in the exchange.

650. Like the other Defendants' platforms, ByteDance designed TikTok to leverage the principle of IVR by encouraging users to "like," share, or reshare videos that others have created or posted. Receiving a "Like" or "Reshare" indicates that others approve of a user's posts, and satisfies the user's natural, developmentally predictable desire for acceptance. As discussed above, "Likes" activate the reward region of the brain and release dopamine to create a positive feedback loop.[841] Users return to TikTok again and again, hoping for yet another pleasurable experience.

651. ByteDance also designed TikTok to use reciprocity to manipulate users into using the platform. One example is the "Duet" feature, which allows users to post a video side-by-side with a video from another TikTok user. Users utilize "Duet" to react to the videos of TikTok creators. ByteDance intends the response to engender a reciprocal response from the creator of the original video, inducing them to return to the app.

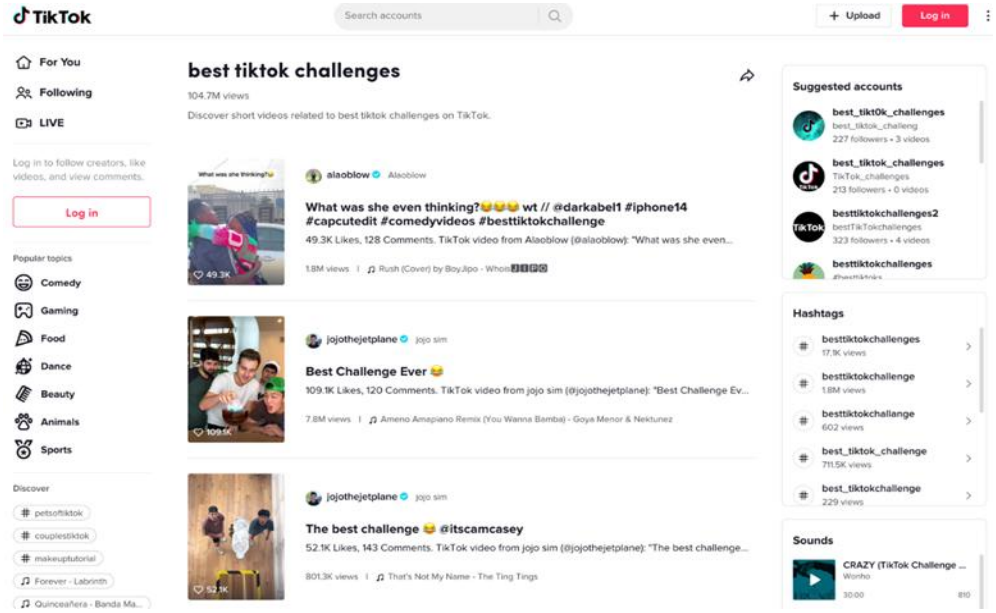
---

[840] *TikTok Now*, TikTok Inc., https://www.tiktok.com/creators/creator-portal/product-feature-updates/tiktok-now.

[841] Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media Addiction* at 1, 11(7) J. Neurology & Neurophysiology 507 (2020), https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf.

652. Another "core feature" of TikTok are "challenges." Challenges are campaigns that compel users to create and post in TikTok certain types of videos, such as performing a dance routine or a dangerous prank. Challenge videos have been described as a "cornerstone" of TikTok and are among the most popular features of the platform.[842]

653. Challenges are incorporated into TikTok's architecture and user interface. ByteDance actively promotes what it determines to be the "best," i.e., most likely to keep users engaged, challenges to its users and fosters the associated competition and social rewards to achieve near-continuous engagement with the platform.



654. ByteDance also encourages businesses to create challenges as a form of marketing, explaining that challenges are "geared towards building awareness and engagement," and "research shows that they can deliver strong results" and increased return on ad spending "at every stage of the funnel."[843]

655. While ByteDance extolls the revenue potential from challenges, young users face new and serious harms, as the challenges' stakes grow more extreme and dangerous, a foreseeable

[842] Brent Barnhart, *TikTok Challenges: what they are and why they're great for brands*, Spout Social (May 4, 2022), https://sproutsocial.com/insights/tiktok-challenges/.

[843] *Branded Hashtag Challenge: Harness the power of participation*, TikTok Bus. (Oct. 18, 2021), https://www.tiktok.com/business/en-US/blog/branded-hashtag-challenge-harness-the-power-of-participation.

consequence of TikTok's engagement-maximization design. Numerous child users have injured or even killed themselves or others participating in viral pranks to obtain rewards and increase the number of "Likes," views, and followers.

656. A study of adolescents and young adults who participated in dangerous challenges found that "engaging in online challenges to gain likes and views was reported as highly important" to the participants. Study participants claimed to have received from sixty to two million views of their challenge videos. Perhaps not surprisingly given the study involved adolescents, these children did not seriously contemplate the possible outcomes from their stunts: "Our participants overlooked or were unaware of the short-term and long-term risks associated with the challenges." Moreover, "participants also frequently encouraged others to perform the same or similar challenges in their posts, thus potentially contributing to social media through propagating the challenge."[844] In fact, ByteDance intentionally promotes these challenges due to their popularity.[845]

657. This is not news to ByteDance. Its own internal platform research has found that the number one most identified reason for teen participation in challenges is "[g]etting views/likes/comments," followed by "[i]impressing others online." ByteDance therefore knows, or in the exercise of reasonable care should know, that young users' quest for social acceptance will cause them to participate in dangerous online challenges to get "likes" or impress their peers. It is also foreseeable that the challenge architecture on TikTok will be used by young users to promote dangerous, deadly, and destructive challenges that ByteDance may not initially know about or actively promote.

658. Death, injury, and destruction are the result of design choices made by ByteDance in the TikTok platform, including but not limited to (1) failure to verify age and identity of users, which allowed children as young as 8 or 9 to see these dangerous challenges; (2) defaulting the youngest users into public accounts, where some post dangerous stunts to increase their views or "Likes"; (3) designing the TikTok algorithm to push this material to young children without regard to safety; and (4) failing to

---

[844] Rebecca Roth *et al.*, *A Study on Adolescents' and Young Adults' TikTok Challenge Participation in TikTok in South India*, 1 Hum. Factors Health Care, Dec. 2021, at 5, https://www.sciencedirect.com/science/article/pii/S2772501422000021/pdfft?md5=3f58814874a5ec80690a5bcd920e436e&pid=1-s2.0-S2772501422000021-main.pdf.

[845] *See* TIKTOK3047MDL-001-00000813 ("The algorithm is designed to surface viral content, regardless of its source.").

include warnings to children or their parents that many of the challenges users see on TikTok are dangerous and potentially fatal.

659. TikTok's algorithms also promote challenges that specifically target school districts.[846] As a result of challenges, school districts have sustained property damage, ranging from stolen urinals to smashed floor tiles. In response, schools have been forced to lock down bathrooms for large portions of the day.[847] Other schools have resorted to diverting staff to monitor bathrooms during the school day.[848] Repairing damages resulting from challenges puts strain on schools that already have budget constraints. Even for schools that do not suffer property damage, responding to threats of the challenge and communicating with students and families diverts significant time away from classroom instruction and other administrative activities.

660. Indeed, threats on Defendants' platforms by students seeking the psychological rewards Defendants' platforms offer require school police to stop what they're doing and investigate immediately, which is a resource intensive and disruptive endeavor. Investigating threats puts a strain on school police's resources.

d. ByteDance's features inflict impossible image standards and encourage negative appearance comparison.

661. ByteDance designed TikTok with image-altering filters that harm users. These filters allow children to artificially change their appearance, for example, by lightening their skin and eyes, giving them glowing tan skin, changing facial structure, or giving them larger lips or fluttering eyelashes.

662. Young people often then compare the filtered images to their real-life appearance, developing a negative self-image based on unrealistic, artificial images.[849] Many young girls use image-

[846] Megan Marples, *The 'devious licks' TikTok challenge has students stealing toilets and vandalizing bathrooms*, CNN (Sept. 18, 2021), https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-challenge-wellness/index.html.

[847] *Id.*

[848] *Viral 'devious licks' TikTok challenge encourages kids to steal from school*, PBS (Oct. 25, 2021), https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-from-school.

[849] Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing The Way We See Ourselves*, Forbes (Apr. 27, 2021), https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia-

altering filters every day, harming their mental health. Those filters subconsciously make girls feel imperfect and ugly, "reduc[ing] their self-compassion and tolerance for their own physical flaws."[850]

663. So compelling is the desire to resemble more closely the filtered ideal that there are online tutorials explaining how to recreate certain filters using makeup. Children's idealization of their filtered image is externally reinforced when the filtered images receive more "Likes," comments, and other interaction. Young people also compare these interaction "scores" to those of friends and celebrities who use filters, reinforcing the idea that beauty depends on matching a digital ideal.

664. The newest TikTok filter is "Bold Glamour." The filter uses artificial intelligence to subtly reshape the user's face, enlarging the eyes, lifting the cheek bones while thinning the cheeks, smoothing the skin and plumping the lips. The effect is a highly "idealized" yet realistic version of the user. Moreover, the filter is difficult to detect since the effect moves with user movements in real time.

665. "Bold Glamour has the power to dramatically distort reality and reinforce narrow and unattainable beauty standards."[851]



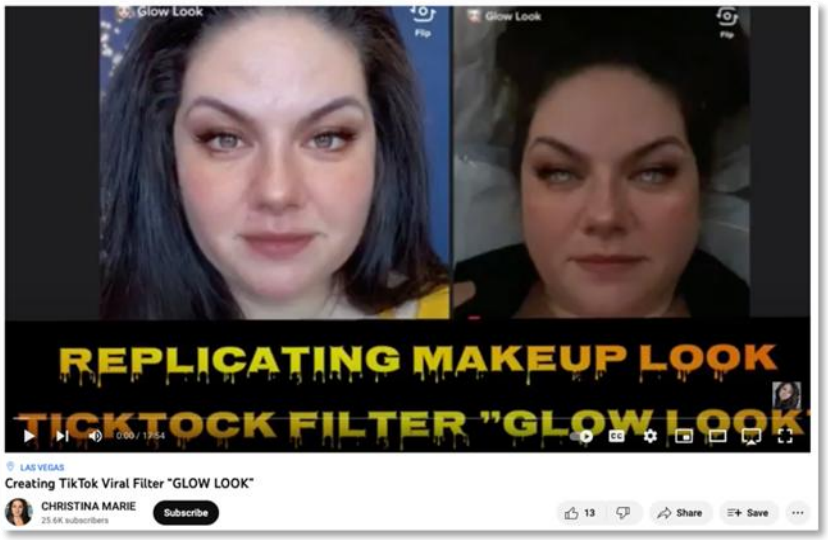
how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff [https://perma.cc/Z8RQ-TC49].

[850] Ana Javornik *et al.*, *Research: How AR Filters Impact People's Self-Image*, Harv. Bus. Rev. (Dec. 22, 2021), https://hbr.org/2021/12/research-how-ar-filters-impact-peoples-self-image.

[851] *Beauty brand Dove is speaking out against the toxic TikTok 'Bold Glamour' filter*, Women's Health (Mar. 9, 2023), https://www.womenshealthmag.com/uk/beauty/body/a43259141/tiktok-bold-glamour-filter/.

666. Many mental health professionals have written that TikTok filters such as "Bold Glamour" and others exacerbate teen mental health problems as children, particularly girls, strive for a standard of beauty that is functionally impossible to achieve, with every TikTok filter creating a test that they are doomed to fail.[852]

667. TikTok's algorithms often work in concert with other social media platforms, like Meta's. A teen may learn about a harmful topic through Meta's recommendation technologies on Instagram, which is feasibly subsequently identified by TikTok's algorithm(s), and TikTok will then amplify and promote the same harm through a series of how-to videos. Like Meta, TikTok has tried to boost engagement and keep young users hooked to its social media platform by any means necessary. Indeed, TikTok similarly sends push notifications and emails to encourage addictive behavior, to increase use of their platform, and to in their own words, "recall"[853] users back to the platform. TikTok's communications are triggered through information its algorithms collect about users, communications that are then "pushed" to users frequently throughout the day.



[852] Anna Kaplan, *'Bold glamour' TikTok filter can create unrealistic beauty standards and harm mental health, experts say*, Today (Mar. 2, 2023), https://www.today.com/health/bold-glamour-tiktok-filter-mental-health-rcna73044.

[853] Utah AG Compl. at 15, ¶ 40.

668. Other platform features that work in combination to cause addiction and other harms include: (1) a platform-imposed limit to the length of videos. Initially, the maximum video time was 60 seconds. The limit was later increased to 3 minutes and is currently 10 minutes. This limit is imposed to keep users in a flow-like focused state. A user is more likely to become bored and end their session during a long video than during several varying videos. Video length limits in Defendants' platforms have conditioned users to have a shorter attention span across years of use; (2) Until a subsequent change, the TikTok app sent notifications to the devices of children well after normal bedtime hours, disrupting sleep patterns and causing psychological injury. Recently, TikTok reportedly stopped the platform from sending notifications to users between the age of 13 and 15 after 9 p.m.; (3) The interface of TikTok positions buttons on the bottom right of the screen, to avoid the milliseconds of delay of discomfort that could disrupt the flow-like state of majority right-handed users tapping the like or comment buttons if placed elsewhere on the screen; (4) Unlike other platforms, TikTok continues to play a video's audio, and the top quarter of the video, while users view comments on the video. This design decision avoids disrupting a user's heightened focused "flow-state"; (5) TikTok's interface places buttons and profiles overlaid on top of the videos, rather than in a separate area. This design prevents there from being any barrier between videos (such as a horizontal bar across the screen on the bottom of one video and on top of the next) and prevents users from having any pause time between videos to evaluate whether they should continue using the app in that moment before more algorithmically selected videos are played on their screen; (6) Videos automatically start playing as a user scrolls. Videos automatically restart once they conclude. In some circumstances, such as when a user sends a link of a video on TikTok to another user that views it in a web browsing app, the next video after that video will automatically play without the user scrolling; and (7) Upon opening the app, users' view of the first video loaded is obstructed with a message saying, "swipe for more" and a graphic of a hand and figure swiping up. The user must scroll down to see an unobstructed video. This design feature trains users to reflexively scroll to the next video once one video ends. Thus, addiction is initiated by the app before the user even sees the first piece of content.

4. ByteDance materially contributes to content on TikTok.

669. A TikTok poster does not create content in a vacuum. ByteDance contributes to TikTok content in a number of ways such that it is materially responsible in whole or in part for creation or development of material posted on the platform.

670. ByteDance creates images and GIFs for users to use in their TikTok videos to keep viewers returning to the platform. It makes video effects that content creators can incorporate. Some of the newest visual contributions from TikTok are "stickers." With this feature, a content creator can pin stickers to moving objects so that it follows the subject as they move throughout the scene. ByteDance acknowledges that "the sticker looks as though it's *part* of the video."[854] The stickers even change size relative to the video's movement.[855]

671. In addition to providing some of the visual components of a video, ByteDance often also provides the sound. ByteDance has "an extensive library" of sounds for creators to add to their videos. Moreover, ByteDance has licensed a huge music catalog that creators can incorporate into their videos. In November 2020, TikTok announced a new agreement with Sony Music Entertainment to make songs available across the TikTok app;[856] in December 2020, TikTok announced another such agreement with Warner Music Group ("WMG");[857] and in February 2021, TikTok announced a "global" licensing agreement with Universal Music Group ("UMG").[858]

672. When a video becomes sufficiently popular, TikTok reaches out to and actively engages with the poster who, once that threshold is met, is referred to as a "creator." ByteDance provides special

---

[854] *Staying up to date with features*, TikTok Inc., https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/.

[855] *Id.*

[856] *TikTok announces agreement with Sony Music Entertainment*, TikTok Inc. (Nov. 2, 2020), https://newsroom.tiktok.com/en-us/tiktok-announces-agreement-with-sony-music-entertainment.

[857] Murray Stassen, *Warner Music Group Inks Licensing Deal with TikTok*, Music Bus. Worldwide (Jan. 4, 2021), https://www.musicbusinessworldwide.com/warner-music-group-inks-licensing-deal-with-tiktok/; *see also Warner, TikTok Agree to new Licensing Deal*, Hits Daily Double (Dec. 19, 2020), https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-LICENSING-DEAL ("[F]ormer WMG executives Ole Obermann and Tracy Gardner recently joined TikTok to oversee global music development. . . . [Gardner] now holds the title of Head of Label Licensing & Partnerships at TikTok. . . . [Obermann]'s now TikTok's Global Head of Music.").

[858] Murray Stassen, *TikTok and Universal Music Group Sign Global Licensing Deal*, Music Bus. Worldwide (Feb. 8, 2021), https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/.

tools, instructional videos and, critically, recommendations as to content and structure for the video. For example, a "creator" might be told to break a longer video up into a series of shorter videos to get additional views. ByteDance might suggest certain music or captions be added. The "creator" would be encouraged to add certain hashtags that might increase the video's visibility on the platform. On information and belief, all TikTok content and associated metadata is modified to include tracking systems, and every time the content is viewed, tracking codes and other data are downloaded to the device and information is actively relayed to TikTok's server.

673. TikTok likewise promises some "creators" that it will amplify their content and promote them based solely on creator status. ByteDance internal documents show that, in addition to letting the algorithm determine what goes viral, the company also hand picks specific videos to artificially increase their distribution—a practice known internally as "heating." Overall, 1% to 2% of videos viewed on TikTok have been "heated." According to media reports, ByteDance uses 'heating" to court influential "creators" or profitable brands to engage with users on TikTok.[859]

674. ByteDance has multiple methods of compensating "creators" who, in conjunction with ByteDance, make content for the platform. These methods include receiving tips and gifts from viewers, special gifts available during TikTok LIVE presentations, and contributions from TikTok's "creator fund." TikTok obtains PayPal information from "creators" and sends them money daily, with communications and full-screen notifications urging them to post more and to post on multiple surfaces of the TikTok platform.

675. ByteDance's contribution to the content on TikTok is further recognized in the rights it asserts to content on the TikTok platform. In its Terms of Service ("Last updated: February 2019"), TikTok requires that all users license to TikTok an unconditional, irrevocable, royalty-free, fully transferable, perpetual worldwide license to use, modify, adapt, reproduce, publish, transmit all material submitted by Users onto TikTok. TikTok further requires that all users waive any rights to inspect or approve their material being used for marketing or promotional materials. Further, they require that users waive any and all rights of privacy and publicity. TikTok requires that all users grant TikTok total

[859] Emily Baker White, *TikTok's Secret 'Heating' Button Can Make Anyone Go Viral*, Forbes (Jan. 20, 2023), https://www.forbes.com/sites/emilybaker-white/2023/01/20/tiktoks-secret-heating-button-can-make-anyone-go-viral/ [https://perma.cc/28S7-MC97].

control over the material that's published – including the right to cut, crop, and edit. Through these licensing provisions, TikTok effectively becomes the owner of all content on the platform.

a. ByteDance's features include impediments to discontinuing use.

676. Even if a user escapes the addictiveness of TikTok's design and decides to delete their account, ByteDance makes doing so a lengthy and complex undertaking. The deletion process is designed to encourage users to retain their accounts, even if their stated reason for deletion is that the platform is endangering their safety or health.

677. When a user selects the "Deactivate or delete account" in the "Account" section of the TikTok app, the user is presented an option to "[d]elete or deactivate?" Deactivating an account will preserve the user's data, but hide it from the platform; deleting, on the other hand, will permanently delete all data associated with the account.

678. However, ByteDance designed TikTok so that deletion is not immediate. The data and account are preserved for 30 days, during which time the user can reactivate their account.

679. If a user selects the "Delete account permanently" option, the user is asked "Why are you leaving TikTok?" The user must select from the following list: (1) I'm leaving temporarily; (2) I'm on TikTok too much; (3) Safety or privacy concerns; (4) Too many irrelevant ads; (5) Trouble getting started; (6) I have multiple accounts; or (7) Another reason.

680. If a user selects "I'm on TikTok too much," ByteDance makes a last-ditch effort to retain the user by reminding the user that a limit can be set on the user's watch time on the platform. If a user selects "Safety or privacy concerns," the user is provided a list of resources to "secure" the account. If the user selects "[a]nother reason," a written explanation must be provided. The only option that does not provide or require further information is "I have multiple accounts." ByteDance isn't worried about users deleting merely one account if they already have multiple others.

681. Once a user selects a reason for deletion, the next screen prompts the user to download their TikTok data.

682. Before the user continues the deletion, the platform requires the user to check a box at the bottom of the screen that says, "[b]y continuing, you reviewed your data request and wish to continue

deleting your account." This contrasts with the process of a user "agreeing" to the Terms of Service and Privacy Policy during the registration process, which does not require a separate confirmation.

683. Once the user confirms a desire to continue with the deletion process, the platform takes the user to yet another screen, which yet again asks whether the user wants to "delete this account?" The text also explains that the account will be deactivated for 30 days, during which the user may reactivate the account, and after 30 days, the account and data associated with it will be permanently deleted. It goes on to warn that if a user deletes the account, the user will no longer be able to do many things in the app.

684. Once a user again confirms that they want to delete their account, TikTok requires validation with a 6-digit code sent to the telephone number or email address associated with the account. Only after the user receives and enters the code may they finally "delete" their account (after waiting 30 days).

685. ByteDance's account deletion process is inadequate for children attempting to escape its addictive and harmful platform. Requiring a child to go through multiple steps, and offering alternatives, as well as a list of things they are giving up, is designed to convince them to change their mind. Moreover, requiring the user to maintain a deactivated account for 30 days, rather than deleting it on demand, increases the chance that an addicted user will relapse and return to the app.

5. ByteDance's intentionally cumbersome deletion process prioritizes the retention of young users, and ad revenue that they generate, over their well-being.

686. ByteDance failed to adequately warn Plaintiff and the public about the harms its platform causes or to provide instructions regarding safe use.

687. Since TikTok's inception, ByteDance has failed to adequately warn the public, including Plaintiff and its students about the physical and mental health risks its product poses. These risks include, but are not limited to, product abuse and addiction, dissociative behavior, damage to body image, social isolation, and a plethora of mental health disorders like body dysmorphia, eating disorders, anxiety, depression, insomnia, ADD/ADHD exacerbation, suicidal ideation, self-harm, suicide, and death.

688. ByteDance targets young users via advertising and marketing materials distributed throughout traditional as well as digital media, including other social media platforms. ByteDance fails to provide adequate warnings in advertising and marketing campaigns to the public or potential adolescent consumers of the physical and mental harms associated with using TikTok.

689. ByteDance heavily advertises its platform on YouTube and Snapchat, where it knows it can effectively reach younger users. In 2019, for example, 80% of TikTok's advertising spending was on Snapchat.[860]

690. One TikTok ad compiles viral videos featuring people of all ages and sets the video to the pandemic musical hit: *Bored in the House*, by a popular TikTok creator.[861] The 15-second video notes, "if it's in culture, #ItStartsonTikTok."[862] Zhu highlighted the importance of the U.S. teen market to TikTok, admitting that, in China, "teenage culture doesn't exist" because "teens are super busy in school studying for tests, so they don't have the time and luxury to play social media apps."[863] On the other hand, teen culture in the United States is "a golden audience."[864]

691. Other advertisements ByteDance places on YouTube promote TikTok as a family-friendly platform. For example, one commercial features parents impersonating their children, explaining that "[p]arents roasting their kids is the best kind of family bonding."[865] Another TikTok ad asks creators what TikTok means to them. Responses include "family," "sharing special moments with my daughter," and a featured appearance by well-known TikTok creator Addison Rae, who says TikTok represents "family and fun."[866]

---

[860] *TikTok – Snapchat's Biggest Advertiser – What's the strategy*, Media Radar (Feb. 24, 2020), https://mediaradar.com/blog/tiktok-snapchat-advertising-strategy/.

[861] TikTok, *It Starts on TikTok: Bored in the House*, YouTube (Sept. 9, 2020), https://www.youtube.com/watch?v=DWZCgkmcIjE.

[862] *Id.*

[863] Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016), https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%2Dups,the%20rest%20of%20the%20globe [https://perma.cc/UR2Q-KEF7].

[864] *Id.*

[865] *Family Impressions, Compilation*, YouTube (Dec. 11, 2020), https://www.youtube.com/watch?v=6EYzm25gW-s.

[866] *TikTok Creators Share Their Thoughts About TikTok*, YouTube (Aug. 10, 2020), https://www.youtube.com/watch?v=KAvEGBv7HVM.

692. ByteDance released another TikTok ad, part of the *It Starts on TikTok* ad campaign, and scheduled it to release on the linear TV, digital media, digital out-of-home, radio and TikTok's own social channels.[867] The tagline for the campaign was "[l]oving all of you and the things you do. Celebrating you" and featured a series of viral clips of various cheerful scenes depicting people gathered with friends and family of all ages.[868]

693. ByteDance is also one of the biggest advertisers on Snapchat. In 2019, ByteDance accounted for 4.4% of Snapchat's advertising revenue.[869] ByteDance knows that advertising on Snapchat is an effective way to reach a young audience. Snap claims that its Snapchat platform reaches 90% of people aged 13–24 years old, and 75% of people aged 13–34 years old in the United States.

694. Despite its funny, cheerful ads featuring smiling families and funny images, TikTok, as designed, presents serious risks to young users on the platform, through its distinctive and manipulative platform features, including a lack of adequate age and identity verification tools, as well as inadequate parental controls.

695. ByteDance fails to adequately warn young users of these risks beginning with the first stages of the platform registration process. At account setup, TikTok contains no warning labels, banners, or conspicuous messaging to adequately inform adolescent users of platform risks, potential dangers, and physical and mental harm associated with usage of the platform. Instead, ByteDance allows underage users to easily create an account (or multiple accounts) and fully access the platform.

696. ByteDance's lack of appropriate warnings continues once a child has TikTok. ByteDance does not suitably inform child users that their data will be tracked, used to help build a unique algorithmic profile, and potentially sold to TikTok's advertising clients.

697. Alarmingly, ByteDance also does not adequately warn young users before facilitating adult connections and interactions that adult predators use its platform.

---

[867] Todd Spangler, *TikTok Launches Biggest-Ever Ad Campaign as Its Fate Remains Cloudy*, Variety (Aug. 18, 2020), https://variety.com/2020/digital/news/tiktok-advertising-brand-campaign-sale-bytedance-1234738607/.

[868] *Id.*

[869] Robert Williams, *TikTok is the biggest advertiser on Snapchat, study says*, MarketingDive (Mar. 16, 2020), https://www.marketingdive.com/news/tiktok-is-the-biggest-advertiser-on-snapchat-study-says/574164/.

698. ByteDance's failure to adequately warn young users about the risks of the platform continues even if they display signs of addiction or habitual and compulsive use. Besides the disabled by default "Take a Break" reminder, ByteDance does not warn users when their screen time reaches harmful levels or when young users are accessing the platform on a habitual basis.

699. Not only does ByteDance fail to adequately warn users about the risks associated with TikTok, but it also does not provide sufficient instructions on how children can safely use the platform. A reasonable and responsible company would instruct children on best practices and safety protocols when using a platform known to contain danger and health risks.

700. ByteDance failed to adequately warn parents about all the foregoing dangers and harms. ByteDance's failure to properly warn and instruct adolescent users or their parents has proximately caused significant harm to Plaintiff, who has expended and continues to expend significant resources addressing the impact of Snap's conduct on Plaintiff's operations, including providing additional support to impacted students.

6. ByteDance knows that TikTok harms many young users.

701. ByteDance has a Trust and Safety division charged with identifying issues in the TikTok platform that are injurious to young users, monitoring malign and exploitative videos sent to young users, and recording, analyzing, and tabulating the mental and physical injuries young users sustain through their use of the TikTok platform.

702. TikTok Trust and Safety division personnel have engaged in thousands of communications through Lark discussing safety and health concerns arising from young users' addictive use of the TikTok platform; algorithmic designs that direct TikTok users to malign videos promoting depression, suicidality, eating disorders and negative body image; dangerous and deadly TikTok challenges; and the exchange of CSAM on TikTok. These concerns have been shared throughout the highest levels of TikTok Inc. and with engineers at ByteDance Ltd. who designed the TikTok platform.[870]

[870] For example, TikTok publicly announced to the Office of the United Nations High Commissioner for Human rights that it was using NCMEC's image hashing technology to detect CSAM material, but then admitted internally that it had never used those tools, writing "could you please share the current

703. TikTok is fully aware of the risks its platform poses to adolescents and acknowledges that children are "more easily persuaded" and "likely don't understand the risks of unhealthy usage."[871] Specifically, TikTok's head of Mental Health Policy has acknowledged that "13-18 yo [TikTok] users are severely struggling with mental health, including thoughts of suicide and self-harm."[872] In an internal digital well-being safety report, TikTok has also admitted that the design of its platform can trigger addictive behaviors that harm mental health:

> An internal study indicates that 50% of inactive TikTok users cited time management as an issue, 24% reported too many notifications, and 23% reported too much time spent on TikTok. . . . [C]ompulsive usage correlates with a slew of negative mental effects like loss of analytical skills, memory formation, contextual thinking, conversational depth, empathy, and increased anxiety. Various similar studies . . . also conclude that compulsive usage interferes with essential personal responsibilities like sufficient sleep, work/school responsibilities, and connecting with loved ones.[873]

E. Factual Allegations As To Google

704. Eric Schmidt, the former CEO of Google and more recently, parent company Alphabet, Inc., recently acknowledged the powerful, and purposeful, addictive effect of social media. Social media platforms are about "maximizing revenue," Mr. Schmidt said, and the best way to maximize revenue is to "maximize engagement."[874] As Mr. Schmidt continued, in pursuit of their goal of maximizing engagement to increase revenues, social media platforms "play[] into the addiction capabilities of every human[.]"[875]

705. Google's YouTube platform is no exception. It includes specific, carefully calibrated features that are known to exploit the mental processes of its users to keep them engaged for as long, as frequently, and as intensely as possible. Google knows that children and teenagers who flock in droves to its YouTube platform are particularly susceptible to these features. The impact of YouTube's addictive power on American youth has been devastating.

---

status of the issue? From previous chat in the group, we promised we were using NCMEC hashed [sic] to detect CP [CSAM] content, but we actually didn't." Utah AG Compl. at 36, ¶ 97.

[871] Utah AG Compl. at 18–19, ¶ 52.

[872] Utah AG Compl. at 18–19, ¶ 52.

[873] Utah AG Compl. at 18–19, ¶ 52.

[874] Issie Lapowsky, *Eric Schmidt: Social media companies 'maximize outrage' for revenue*, Protocol (Jan. 6, 2022), https://www.protocol.com/bulletins/eric-schmidt-youtube-criticism.

[875] *Id.*

1. Background and overview of YouTube.

706. YouTube is a social media platform that allows users to post and consume countless hours of videos about virtually any topic imaginable. YouTube is available without any age verification feature or adequate parental controls, and comes pre-installed in many Smart-TVs, mobile devices, various digital media players like Roku, and video game consoles like PlayStation, Wii, Xbox and Nintendo.

707. YouTube allows users to search for specific videos. It also employs a powerful algorithm that exploits detailed user information to target each individual user with hours upon hours of videos recommended by YouTube.

708. A group of design experts and computer scientists created YouTube and launched the platform for public use in December 2005.

709. Technology behemoth Google quickly recognized YouTube's huge profit potential. In 2006, just a year after YouTube's launch, Google acquired YouTube for more than $1.65 billion in Google stock. At the time, Google's acquisition of YouTube was one of the largest-ever tech acquisitions.

710. YouTube primarily generates revenue by selling advertising. The more people who use YouTube and spend time on the site, the more ads YouTube can sell.[876] The ads are then embedded or placed within the endless stream of videos recommended to the user by YouTube's algorithm.

711. By 2012, YouTube users were watching close to four billion hours of video every month. Yet, the average YouTube user spent just fifteen minutes daily engaged with the platform.[877] Users "were coming to YouTube when they knew what they were coming to look for[.]"[878] They employed the platform to identify and watch certain videos, and then they were done.

---

[876] Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, Bloomberg (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant [https://perma.cc/2RTW-XYVB].

[877] John Seabrook, *Streaming Dreams*, New Yorker (Jan. 8, 2012), https://www.newyorker.com/magazine/2012/01/16/streaming-dreams [https://perma.cc/38VD-MGEM].

[878] Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017), https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed.

712. To drive greater revenue, "YouTube . . . set a company-wide objective to reach one billion hours of viewing a day[.]"[879]

713. As Susan Wojcicki, YouTube's CEO explained, the goal of a "billion hours of daily watch time gave our tech people a North Star."[880]

714. Google decided that "the best way to keep eyes on the site" was to introduce a feature that would "[recommend] videos, [that were playing] or after one was finished[.]"[881]

715. That new platform feature uses a recommendation algorithm to identify and push additional videos to users, which YouTube plays automatically through a feature called "autoplay." Autoplay begins the next video as soon as the previous video ends, creating a constant stream to keep users watching.

716. Google's design changes worked. Today, YouTube "has over 2 billion monthly logged-in users."[882] And that 2 billion figure does not capture all platform usage because YouTube, by design, allows users to consume videos without logging in or registering an account.

2. Google intentionally encourages youth to use YouTube and then leverages that use to increase revenue.

717. Google knows that children and teenagers use YouTube in greater proportions than older demographics. YouTube now ranks as the world's most popular social media platform for minors. According to one recent report, more than 95% of children ages 13–17 have used YouTube.[883] Nearly 20% of U.S. teens use YouTube "almost constantly."[884] Among U.S. teenagers who regularly use social media, 32% "wouldn't want to live without" YouTube.[885]

---

[879] Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, Bloomberg (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant [https://perma.cc/2RTW-XYVB].

[880] *Id.*

[881] *Id.*

[882] *Must-Know Youtube Channel Statistics [Latest Report]*, Gitnux (Oct. 31, 2023), https://blog.gitnux.com/youtube-channel-statistics/.

[883] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

[884] *Id.*

[885] Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31, Common Sense Media (2022),

718. Rather than ensuring minors are not inappropriately or excessively using YouTube, Google has sought to dominate their attention.

719. YouTube's age controls are ineffective (or non-existent, since registration is not required). In addition, Google has developed and marketed a version of YouTube, YouTube Kids, explicitly targeted at children under 13. Google developed this platform to encourage early—and therefore lasting—adoption of YouTube by children.

720. Google knows that a robust and committed base of young users is key to maximizing advertising revenue. Indeed, it has aggressively touted its hold on child users to advertisers.

721. In 2014, for example, Google pitched its YouTube platform to Hasbro, a popular toy manufacturer, and specifically boasted of the platform's immense popularity among children, noting that it was "unanimously voted as the favorite website of kids 2-12" and that "93% of tweens" use the platform.[886]

722. In 2015, Google gave a similar presentation to toy manufacturer Mattel, the maker of Barbie and other popular kids' toys, highlighting children's widespread use of YouTube to persuade Mattel to display digital ads on the site.[887]

723. The FTC has aptly summarized Google's pitch to advertisers concerning the value of its youth user base.[888] For example, Google boasted that "YouTube is today's leader in reaching children aged 6-11[;] . . . the new 'Saturday Morning Cartoons'[;] . . . and the #1 website regularly visited by kids[.]"[889]

---

https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

[886] Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief at 8, *FTC v. Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3, https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_complaint.pdf.

[887] *Id.* at 8.

[888] *Google and YouTube Will Pay Record $170 Million for Alleged Violations of Children's Privacy Law*, FTC (Sept. 4, 2019), https://www.ftc.gov/news-events/news/press-releases/2019/09/google-youtube-will-pay-record-170-million-alleged-violations-childrens-privacy-law ("'YouTube touted its popularity with children to prospective corporate clients,' said FTC Chairman Joe Simons.").

[889] Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief at 8, *FTC v. Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3, https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_complaint.pdf.

724. Many of YouTube's most-viewed videos are kid-focused, and the most subscribed and highest paid YouTubers are children. With over 13 billion views, *Baby Shark Dance*, a video aimed at toddlers, is the most viewed video in the history of YouTube—and it and five other child-focused videos make up the top ten YouTube videos of all time.[890] Child creators also dominate top-earner lists year after year. Ryan Kaji of Ryan's World (f/k/a Ryan ToysReview), a channel featuring now 12-year-old Ryan Kaji unboxing children's toys, has been among YouTube's Top 10 most-subscribed channels in the United States since 2016.[891] Ryan started Ryan's World in 2015 when he was only 3. By 2017, his videos had over 8 billion views, and by 2018, he was the highest-earning YouTuber in the world.[892]

725. As with other Defendants, once Google lures children in, it then mines them (and all other users) for a breathtaking amount of data. Google's current privacy policy, which includes the YouTube platform's data collection, reveals how sweeping this data collection is. It states that Google tracks:

> [I]nformation about the apps, browsers, and devices you use to access Google services . . . includ[ing] unique identifiers, browser type and settings, device type and settings, operating system, mobile network information including carrier name and phone number, and application version number. We also collect information about the interaction of your apps, browsers, and devices with our services, including IP address, crash reports, system activity, and the date, time, and referrer URL of your request.
>
> ***
>
> [Y]our activity in our services . . . includ[ing]: Terms you search for[;] Videos you watch[;] Views and interactions with content and ads[;] Voice and audio information[;]

[890] *Most Viewed Videos of All Time (Over 700M views)*, YouTube, https://www.youtube.com/playlist?list=PLirAqAtl_h2r5g8xGajEwdXd3x1sZh8hC.

[891] Madeline Berg, *The Highest-Paid YouTube Stars of 2019: The Kids Are Killing It*, Forbes (Dec. 18, 2019), https://www.forbes.com/sites/maddieberg/2019/12/18/the-highest-paid-youtube-stars-of-2019-the-kids-are-killing-it/?sh=4c3df9a438cd [https://perma.cc/QE8N-6UCX]; Madeline Berg, *The Highest-Paid YouTube Stars 2017: Gamer DanTDM Takes The Crown With $16.5 Million*, Forbes (Dec. 7, 2017), https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979 [https://perma.cc/RXV4-37ZZ].

[892] Madeline Berg, *The Highest-Paid YouTube Stars 2017: Gamer DanTDM Takes The Crown With $16.5 Million*, Forbes (Dec. 7, 2017), https://www.forbes.com/sites/maddieberg/2017/12/07/the-highest-paid-youtube-stars-2017-gamer-dantdm-takes-the-crown-with-16-5-million/?sh=72de79413979 [https://perma.cc/RXV4-37ZZ]; Natalie Robehmed & Madeline Berg, *Highest-Paid YouTube Stars 2018: Markiplier, Jake Paul, PewDiePie And More*, Forbes (Dec. 3, 2018), https://www.forbes.com/sites/natalierobehmed/2018/12/03/highest-paid-youtube-stars-2018-markiplier-jake-paul-pewdiepie-and-more/?sh=7d909c3f909a [https://perma.cc/V4TK-87GV].

> Purchase activity[;] People with whom you communicate or share content[;] Activity on third-party sites and apps that use our services[;] [and] Chrome browsing history you've synced with your Google Account.
>
> ***
>
> "Your location [information including]: GPS and other sensor data from your device[;] IP address[;] Activity on Google services, such as your searches and places you label like home or work[;] [and] Information about things near your device, such as Wi-Fi access points, cell towers, and Bluetooth-enabled devices[.]"[893]

726. Google's privacy policy also indicates that, like other Defendants, it may also collect data about its users from data brokers, which it euphemistically refers to as "trusted partners" or "marketing partners."[894]

727. As with other Defendants, YouTube's collection and analysis of user data allows it to assemble virtual dossiers on its users, covering hundreds if not thousands of user-specific data segments. This, in turn, allows advertisers to micro-target marketing and advertising dollars to very specific categories of users, who can be segregated into pools or lists using YouTube's data segments. Advertisers purchase ad real estate space on users' feeds, which allow them to place the right ads in front of these micro-targeted segments of users—including children, both in the main YouTube frame and in the YouTube Kids platform. Only a fraction of these data segments come from material knowingly designated by users for publication or explicitly provided by users in their account profiles. Instead, many of these data segments are collected by YouTube through surveillance of each user's activity while using the platform and even when logged off the platform.[895]

728. As with Meta, Google's data policy does not inform users that the more time individuals spend using YouTube, the more ads Google can deliver and the more money it can make, or that the more time users spend on YouTube, the more YouTube learns about them, and the more it can sell to advertisers the ability to micro-target highly personalized ads.

---

[893] *Information Google collects: Google Privacy Policy*, Google, https://policies.google.com/privacy?hl=en#infocollect.

[894] *Id.*

[895] *About Targeting for Video Campaigns*, Google, https://support.google.com/youtube/answer/2454017?hl=en.

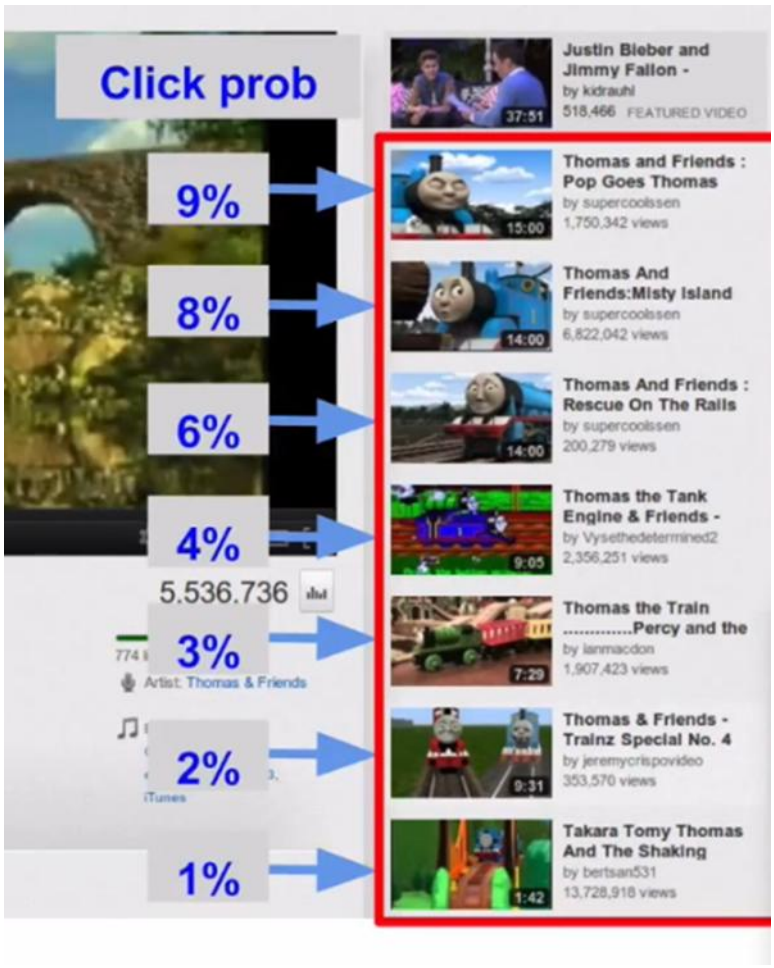
729. Google's secret virtual dossiers on its users, including child users, fuel its algorithms. The company relies on this data—including data plainly reflecting use by children—to train its algorithms. A Google engineer explained in a 2014 presentation:

What do I mean by a training example? It's a single-user experience. On YouTube, perhaps it's that one [Thomas the Tank Engine] webpage my son saw six months ago, along with all the recommendations that we showed him. We also record the outcome to know whether the recommendations we made are good or whether they're bad. That's a single training exercise. On a large property, you can easily get into hundreds of billions of these.[896]

The engineer illustrated this with a slide, excerpted below, presenting how algorithmic analysis both structured the format of recommendations of Thomas the Tank Engine YouTube videos and provided information to inform algorithmic training through user engagement:[897]

[896] Alex Woodie, *Inside Sibyl, Google's Massively Parallel Machine Learning Platform*, Datanami (July 17, 2014), https://www.datanami.com/2014/07/17/inside-sibyl-googles-massively-parallel-machine-learning-platform/.

[897] *Id.*



730. Through these and other efforts, YouTube has delivered massive amounts of advertising revenue to Google. In 2021 alone, YouTube generated about $29 billion in revenue selling ads on its site.[898]

3. Google intentionally designed platform features to addict children and adolescents.

731. Google devised and continues to employ interrelated platform features to increase usage and maximize engagement by teenagers and children. Simply put, YouTube's platform features are engineered to induce excessive use and to addict adolescents and children to the platform.

[898] Andrew Hutchinson, *YouTube Generated $28.8 Billion in Ad Revenue in 2021, Fueling the Creator Economy*, Soc. Media Today (Feb. 2, 2022), https://www.socialmediatoday.com/news/youtube-generated-288-billion-in-ad-revenue-in-2021-fueling-the-creator/618208/; Jennifer Elias, *YouTube is a media juggernaut that could soon equal Netflix in revenue*, CNBC (Apr. 27, 2021), https://www.cnbc.com/2021/04/27/youtube-could-soon-equal-netflix-in-revenue.html.

a. Google's age-verification measures and parental controls are ineffective.

732. Google's strategy to entrench minor users begins with access. The company purports to impose a minimum age requirement and claims to verify the age of its users. But those features are ineffective, as they do little to prevent children and teenagers from using the platform.

733. Anyone with access to the Internet, regardless of age, can use YouTube and access every video available through the platform without registering an account or verifying their age. YouTube does not even ask for age information before allowing users to consume YouTube videos.

734. A user needs an account to post videos or like (or comment) on videos. But to get one, a user needs only enter a valid email address and a birthday. Google does nothing to verify the birthday entered by users in the U.S.—and the platform freely permits users to change their birthdays in their account settings after creating an account.

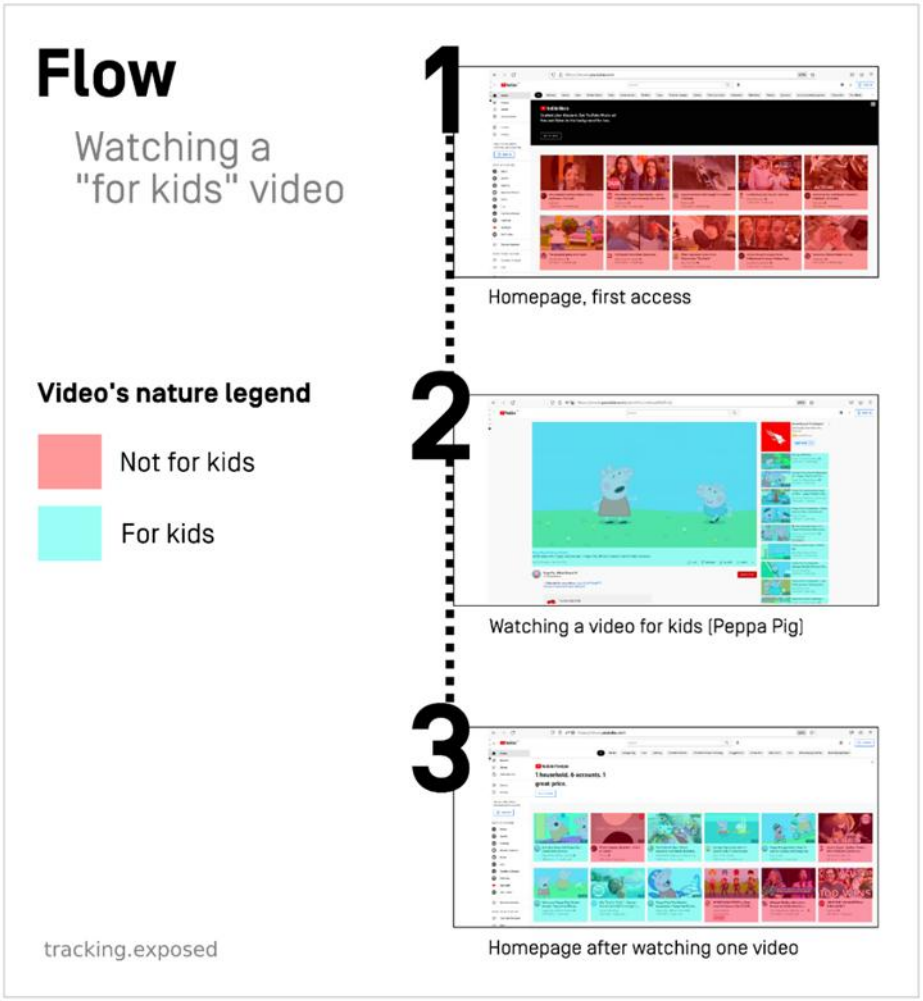
735. YouTube's ineffective age verification feature means that Google fails to protect children from other platform features discussed below that Google knows to be harmful to kids.

736. For example, for users 13–17 years old, Google claims to disable YouTube's autoplay feature. However, that measure is virtually meaningless because children can use YouTube without logging into any account or by logging in but misreporting their age.

737. Even if children use YouTube Kids, that platform contains many of the same problems YouTube does, including a harmful, manipulative algorithm, as discussed below.

738. Google cannot credibly claim that it is unaware of the fact and extent of youth usage of YouTube. Google's system can "identify children as being much younger than 13[.]"[899] According to *Tracking Exposed*, YouTube can rapidly identify a user as a child.[900]

[899] *Tracking Exposed Special Report: Non-logged-in children using YouTube* at 6, 19, Tracking Exposed (July 1, 2022), https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf.
[900] *Id.* at 15, 18.



739. Google engineers have publicly admitted YouTube's algorithm tracks user age. As Google engineers outlined in a 2016 paper on YouTube's recommendation system:

Demographic features are important for providing priors so that the recommendations behave reasonably for new users. The user's geographic region and device are embedded and concatenated. Simple binary and continuous features such as the user's gender, logged-in state and age are input directly into the network as real values normalized to [0, 1].[901]

[901] Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, 2016 Proc. of the 10th ACM Conf. on Recommender Sys. 191–196, 193, https://dl.acm.org/doi/pdf/10.1145/2959100.2959190.

740. The *Tracking Exposed Special Report* indicates that there is "strong evidence" that Google's systems continue to refine and develop a more precise estimate for under 18 users, but the platform does not "redirect them to YouTube Kids."[902]

b. YouTube is designed to inundate users with features that use intermittent variable rewards and reciprocity.

741. Google uses a series of interrelated design features that exploit known mental processes to induce YouTube's users to use the platform more frequently, for more extended periods, and with more intensity (i.e., providing more comments and likes). Google knows children and adolescents, whose brains are still developing, are particularly susceptible to these addictive features.

742. Google designed its YouTube platform so that when children and teenagers use it, they are inundated with interface design features specifically designed to dominate their attention and encourage excessive use. Every aspect of how YouTube presents the format of a given page with a video is structured to ensure unimpeded viewing of the videos, alongside Download, Like, and Share buttons, plus recommendations for more videos to watch. The organization of these features is carefully calibrated to adjust to the space constraints of a user's device, such that minimal effort is needed to watch a video unimpeded. YouTube even has an ambient mode that uses dynamic color sampling so that the YouTube platform adapts to the video being watched and the user is not distracted by the video's borders.[903]

743. Like the other Defendants, Google has designed YouTube with features that exploit neuropsychology to maximize the time users (including children) spend using the platform.

744. IVR features, such as notifications and Likes, compel YouTube creators and consumers, particularly children, to use the platform habitually and excessively. For example, in order to create and upload videos to YouTube, a user under 13 may submit a fictitious birthdate to gain access to posting privileges. Once the young user has a logged–in account, they can receive notifications and Likes. For example, the logged in user can subscribe to various YouTube channels, which in turn will send them

[902] *Tracking Exposed Special Report: Non-logged-in children using YouTube* at 6,19, Tracking Exposed (July 1, 2022), https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf.

[903] Abner Li, *YouTube rolling out black dark theme, 'Ambient Mode,' and other video player updates*, 9To5Google (Oct. 24, 2022), https://9to5google.com/2022/10/24/youtube-ambient-mode/

notifications from various channels they follow. Similarly, young creators who upload videos to YouTube can track the Likes received by the video. These features psychologically reward creators who upload videos to YouTube. As explained above, receiving a "Like" shows others' approval and activates the brain's reward region.[904] Thus, users' ability to Like videos encourages creators to use the platform compulsively, seeking additional pleasurable experiences.

745. Google engineers also deploy strategies to induce "flow" state among users of YouTube, which, as described above, is dangerous to children because it induces excessive use and poses a risk of addiction, compulsive use, and sleep deprivation.

746. YouTube uses two design features that induce flow state. The first is its panel of recommended videos. YouTube recommends videos both on the home page and on each video page in the "Up Next" panel.[905] This panel pushes an endless stream of videos that YouTube's algorithm selects and "suggests" to keep users watching by teasing a pipeline of upcoming videos.

747. The second feature is Autoplay, which complements the Up Next panel and seamlessly takes users through the list of upcoming videos without users having to affirmatively click on or search for other videos. This constant video stream—comprised of videos recommended by YouTube's algorithm—is the primary way Google increases the time users spend using its platform. This endless video succession induces users to enter a flow state of consumption, which is particularly dangerous for children.

748. In an April 2021 letter to YouTube CEO Susan Wojcicki, the House Committee on Oversight and Reform criticized the Autoplay feature:

This places the onus on the child to stop their viewing activity, rather than providing a natural break or end point. Without that natural stopping point, children are likely to continue watching for long periods of time.[906]

---

[904] *See, e.g.*, Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Ass'n Psych. Sci. 1027–1035, (2016), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf.

[905] *Recommended Videos*, YouTube, https://www.youtube.com/howyoutubeworks/product-features/recommendations/.

[906] Letter from Raja Krishnamoorthi, H. Rep., Chairman, Subcomm. on Econ. & Consumer Pol'y, to Susan Wojcicki, CEO, YouTube at 4–5 (Apr. 6, 2021),

749. This is particularly acute for Google's recently launched YouTube Shorts. YouTube Shorts enables users to create short videos up to 60 seconds in length, in a full-screen format popularized by TikTok and copied by Instagram Reels. As in Reels and TikTok, Shorts are presented in an algorithmically generated feed; users can watch new videos by swiping up on their smartphones. Instead of presenting videos chronologically, they are organized in a manner to drive the most watch time, as dictated by the algorithm. Indeed, Google hired TikTok's North American head, Kevin Ferguson, and other TikTok engineers to develop YouTube Shorts.[907]

750. An important target audience for YouTube Shorts is children. For example, YouTube Shorts features videos, such as child "influencers," that appeals to children. YouTube Shorts contains dangerous features similar to other Defendants' short form platforms, including the ability to scroll continuously through YouTube Shorts, inducing a "flow-state" that distorts users' sense of time and facilitates extended use, and dangerous exploitation of "social comparison" techniques by promoting misleadingly idealized portrayals from influencers and others who are rewarded for posting popular material.

751. Almost immediately upon launch, Google began marketing YouTube Shorts to children. For example, Google launched an advertisement featuring images of children and teenagers (like in the screenshot below) engaging with the YouTube Shorts platform. [908]

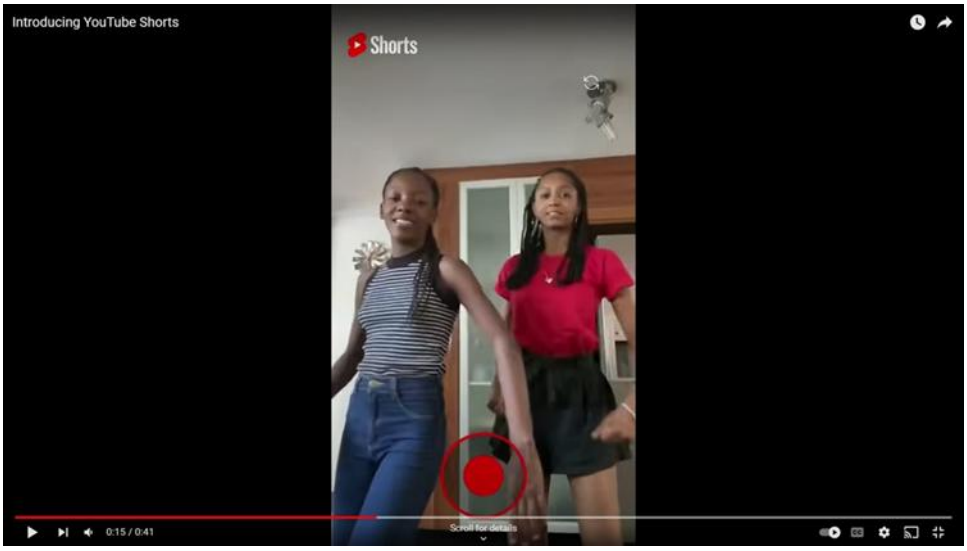
https://oversightdemocrats.house.gov/sites/democrats.oversight.house.gov/files/2021-04-06.RK%20to%20Wojcicki-YouTube%20re%20YouTube%20Kids%20Content.pdf.

[907] Richard Nieva, *In the Age of TikTok, YouTube Shorts Is a Platform in Limbo*, Forbes (Dec. 20, 2022), https://www.forbes.com/sites/richardnieva/2022/12/20/youtube-shorts-monetization-multiformat/ [https://perma.cc/9GSC-WSSE].

[908] *Made on YouTube: New ways to join YPP, Shorts Monetization & Creator Music*, YouTube (Sept. 20, 2022), https://www.youtube.com/watch?v=h6TrvCV3NdU.



752. Similarly, another advertisement for Shorts explains how creators on YouTube can keep revenue generated by their Shorts' viewership, while an image of a video creator young enough to be in braces appears on screen.[909]



753. Shorts is one of YouTube's interrelated design features that exploit known mental processes to induce YouTube users to use the platform more frequently, for more extended periods, and with more intensity, i.e., providing more comments and Likes. Not surprisingly, given its copycat origin,

[909] *Introducing YouTube Shorts*, YouTube (Aug. 27, 2021), https://www.youtube.com/watch?v=J38Yq85ZoyY.

the issues with Shorts replicate the issues with TikTok and Instagram Reels, discussed above. Google knows or should have known that children, whose brains are still developing, are particularly susceptible to such addictive features.

754. YouTube has monetized users' susceptibility to IVR by allowing creators who obtain more than a thousand subscribers with four-thousand valid public watch hours to qualify for the YouTube Partner Program. Once a creator obtains this elite status, they are rewarded with "Super Chat" and "Super Stickers"—special images or distinct messages that other users can purchase and place on a creator's channel.[910] Paid messages, including the amount donated, are visible to all users. And the more a user pays for these promotions, the more prominent and longer the image is displayed. Both features are intended to allow a user to show support for, or connect with, their favorite YouTube creators. Similar to the "Likes" feature, this paid support activates the reward center of the creator's brain and releases dopamine while the creator is generating revenue for YouTube.

c. Google's algorithms are designed to maximize "watch time."

755. Google engineers algorithms to recommend videos to YouTube users.

756. YouTube began building its algorithms in 2008.[911] Its goal was to maximize how long users spent watching YouTube videos.[912]

757. These algorithms select videos that populate the YouTube homepage, rank results in user searches, and push videos for viewers to watch through the "Up Next" feature.

758. YouTube designed its algorithms to manipulate users and induce them to use YouTube excessively.

759. A former YouTube engineer explained that when he designed YouTube's algorithm, YouTube wanted to optimize for one key metric, "watch time."[913] The engineer elaborated that

---

[910] *How to Make Money on YouTube: YouTube Partner Program*, YouTube, https://www.youtube.com/intl/en_us/creators/how-things-work/video-monetization/.

[911] Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021), https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/.

[912] Ben Popken, *As algorithms take over, YouTube's recommendations highlight a human problem*, NBC News (Apr. 19, 2018), https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596.

[913] William Turton, *How YouTube's algorithm prioritizes conspiracy theories*, Vice (Mar. 5, 2018), https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories.

"[i]ncreasing users' watch time is good for YouTube's business model" because it increases advertising revenue.[914]

760. In 2012, the YouTube Head of Content Creator Communications similarly explained: "When we suggest videos, we focus on those that increase the amount of time that the viewer will spend watching videos on YouTube, not only on the next view, but also successive views thereafter."[915]

761. The current algorithm uses deep-learning neural networks, a type of software that returns outputs based on data fed into it.[916] The VP of Engineering at YouTube explained:

> To provide such custom curation, our recommendation system doesn't operate off of a "recipe book" of what to do. It's constantly evolving, learning every day from over 80 billion pieces of information we call signals. That's why providing more transparency isn't as simple as listing a formula for recommendations, but involves understanding all the data that feeds into our system. A number of signals build on each other to help inform our system about what you find satisfying: clicks, watchtime, survey responses, sharing, likes, and dislikes.[917]

762. YouTube's algorithm may also "use data from your Google Account activity to influence your recommendations[.]"[918]

763. The algorithm "develops dynamically" to predict which posts will hold the user's attention.[919] That is, it can also determine which "signals" are more important to individual users. For example, if a user shares every video they watch, including those they rate low, the algorithm learns to discount the significance of the user's shares when recommending videos.[920]

---

[914] Jesselyn Cook & Sebastian Murdock, *YouTube Is a Pedophile's Paradise*, Huffington Post (Mar. 21, 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db

[915] Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012), https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/.

[916] Alexis C. Madrigal, *How YouTube's Algorithm Really Works*, Atl. (Nov. 8, 2018), https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/ [https://perma.cc/3UHM-HAY9]; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, 2016 Proc. of the 10th ACM Conf. on Recommender Sys. 191–196, https://dl.acm.org/doi/pdf/10.1145/2959100.2959190.

[917] Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021), https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/.

[918] *Manage your recommendations & search results*, Google, https://support.google.com/youtube/answer/6342839?hl=en&co=GENIE.Platform%3DAndroid.

[919] Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021), https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/.

[920] *Id.*

764. Besides the algorithm's self-learning capability, Google also consistently refines the algorithm, updating it "multiple times a month[.]"[921]

765. In 2017, the former technical lead for YouTube recommendations explained that "one of the key things [the algorithm] does is it's able to generalize[.]"[922] While older iterations "were pretty good at saying, here's another [video] just like" ones the user had watched, by 2017, the algorithm could discern "patterns that are less obvious[,]" identifying "adjacent relationships" of "similar but not exactly the same" videos.[923]

766. Over time, the algorithm became increasingly successful in getting users to watch recommended videos. By 2018, YouTube Chief Product Officer Neal Mohan said that the YouTube algorithm was responsible for more than 70% of users' time using the platform.[924] That is, more than 70% of the time users spend on YouTube was from recommendations Google's algorithm pushed to them rather than videos identified by users through independent searches.

767. The algorithm also keeps users watching for longer periods. For instance, Mohan explained that mobile device users watch for more than 60 minutes on average per session "because of what our recommendations engines are putting in front of [them]."[925]

768. The algorithm is particularly effective at addicting teenagers to the platform. In 2022, *Pew Research Center* found that "[a]bout three-quarters of teens visit YouTube at least daily, including 19% who report using the site or app almost constantly."[926]

---

[921] Nilay Patel, *YouTube chief product officer Neal Mohan on the algorithm, monetization, and the future for creators*, Verge (Aug. 3, 2021), https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview.

[922] Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017), https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed.

[923] *Id.*

[924] Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan. 10, 2018), https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/.

[925] *Id.*

[926] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.

769. A software engineer explained that the algorithm is "an addiction engine[.]"[927] He raised concerns with YouTube staff, who said they had no intention to change the algorithms. After all, the engineer explained, the algorithm works as intended, "it makes a lot of money."[928]

770. Because users watch more than one billion hours of YouTube videos daily and approximately 70% of the time is spent on videos pushed to users by YouTube's "recommendation engines[,]" Google's algorithms are responsible for hundreds of millions of hours users spend watching videos on YouTube each day.[929]

771. Google's "recommendation engines" are designed to prioritize the distribution of videos that are more likely to be addictive and more likely to lead to harm. For example, "fear-inducing videos cause the brain to receive a small amount of dopamine," which acts as a reward and creates a desire to do something over and over.[930] That dopaminergic response makes it more likely that a user will watch the harmful video, which the algorithm interprets as signaling interest and preference. Former Google engineers told *The Wall Street Journal* that "[t]he algorithm doesn't seek out extreme videos . . . but looks for clips that data show are already drawing high traffic and keeping people on the site. Those videos often tend to be sensationalist."[931] An investigation by *Bloomberg* put it simply: "[I]n the race to one billion hours, a formula emerged: Outrage equals attention."[932]

---

[927] Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, Bloomberg (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant [https://perma.cc/2RTW-XYVB].

[928] *Id.*

[929] *See* Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan. 10, 2018), https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/.

[930] Josephine Bila, *YouTube's Dark Side Could be Affecting Your Child's Mental Health*, CNBC (Feb. 13, 2018), https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html.

[931] *Why is YouTube Suggesting Extreme and Misleading Content*, YouTube (Feb. 7, 2018), https://www.youtube.com/watch?v=7AjA3Df6i6o; *see also* Josephine Bila, *YouTube's Dark Side Could be Affecting Your Child's Mental Health*, CNBC (Feb. 13, 2018), https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html.

[932] Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*, Bloomberg (Apr. 2, 2019), https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant [https://perma.cc/2RTW-XYVB].

772. Google's algorithm pushes users down "rabbit hole[s]," addicting them to YouTube and keeping them on the platform for longer.[933]

773. YouTube's "recommendation engines" create a vicious cycle in its ruthless quest to grow view time. Users who get pushed down rabbit holes then become *models* for the algorithm. And the algorithm consequently emphasizes keeping youth on the platform for as long as possible, it applies these patterns to more and more users. That is, because Google designed the algorithm to "maximize engagement," uncommonly engaged users become "models to be reproduced."[934]

774. In 2021, the Mozilla Foundation studied 37,000 YouTube users, finding that 71% of all reported negative user experiences came from videos recommended to users by Google's algorithm.[935] And users were 40% more likely to report a negative experience from a video recommended by YouTube's algorithm than from one they searched for.[936] Importantly, videos that elicited those negative experiences "acquired 70% more views per day than other videos watched by [study] volunteers."[937]

775. These problems combine to compel children and teenagers to overuse a platform that adversely affects their mental health. Mental health experts have warned that YouTube is a growing source of anxiety Natasha Daniels, a child psychotherapist, has also seen increased rates of anxiety[938] among children using YouTube. And because of that anxiety, those children "exhibit loss of appetite, sleeplessness, crying fits and fear."[939] Ultimately, she says, "YouTube is an ongoing conversation in my therapy practice, which indicates there's a problem[.]"[940]

---

[933] Max Fisher & Amanda Taub, *On YouTube's Digital Playground, an Open Gate for Pedophiles*, N.Y. Times (June 3, 2019), https://www.nytimes.com/2019/06/03/world/americas/youtube-pedophiles.html [https://perma.cc/47KY-RJ8L].

[934] Guillaume Chaslot, *The Toxic Potential of YouTube's Feedback Loop*, Wired (July 13, 2019), https://www.wired.com/story/the-toxic-potential-of-youtubes-feedback-loop/ [https://perma.cc/V76L-MCUY].

[935] *YouTube Regrets: A crowdsourced investigation into YouTube's recommendation algorithm* at 13, Mozilla Found. (July 2021), https://assets.mofoprod.net/network/documents/Mozilla_YouTube_Regrets_Report.pdf.

[936] *Id.* at 3.

[937] *Id.* at 13.

[938] Josephine Bila, *YouTube's Dark Side Could be Affecting Your Child's Mental Health*, CNBC (Feb. 13, 2018), https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html.

[939] *Id.*

[940] *Id.*

776. One study determined that using Google's platform was "consistently and negatively related to sleep outcomes."[941] Specifically, for every 15 minutes teens spent using YouTube, they were 24% less likely to get seven hours of sleep. According to Dr. Alon Avidan, director of the UCLA Sleep Disorders Center, YouTube is particularly sleep disruptive because its recommendation algorithm and Autoplay feature make it "so easy to finish one video" and watch the next.[942] Similarly, a signal that the YouTube algorithm relied on was the "time of day" a user was watching—a signal that, when used to maximize length of duration with the YouTube platform, induces sleep deprivation. [943]

777. Sleep deprivation is, in turn, associated with poor health outcomes. For example, "insufficient sleep negatively affects cognitive performance, mood, immune function, cardiovascular risk, weight, and metabolism."[944]

778. Compulsive YouTube use can also harm brain development. According to Donna Volpitta, Ed.D, "[c]hildren who repeatedly experience stressful and/or fearful emotions may under develop parts of their brain's prefrontal cortex and frontal lobe, the parts of the brain responsible for executive functions, like making conscious choices and planning ahead."[945]

779. Google's algorithm also promotes the creation of and pushes children towards extremely dangerous "challenges", which often garner thousands of "Likes," adding to the pressure students feel to

---

[941] Meg Pillion *et al.*, *What's 'app'-ning to adolescent sleep? Links between device, app use, and sleep outcomes*, 100 Sleep Med. 174–182, 179 (Dec. 2022), https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub [https://perma.cc/PJ5C-CTMP].

[942] Cara Murez, *One App Is Especially Bad for Teens' Sleep*, U.S. News & World Rep. (Sept. 13, 2022), https ://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep.

[943] *Recommended videos: How does YouTube's recommendation system work?*, YouTube (July 28, 2023), https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content [https://web.archive.org/web/20230728074151/https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content].

[944] Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance among young adults*, 85 Preventive Med. 36–41, 36 (2016), https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025 [https://perma.cc/QYE5-92M4].

[945] Josephine Bila, *YouTube's Dark Side Could be Affecting Your Child's Mental Health*, CNBC (Feb. 13, 2018), https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html.

participate. The neurological and psychological techniques by which Google, like other Defendants, fosters excessive, addictive use of YouTube in turn foster "challenges".

780. Even though Google knew or should have known of these risks to its youth users, Google's platform lacks any warnings that foreseeable platform use could cause these harms.

781. And despite all the evidence that YouTube's design and algorithms harm millions of children, Google continues to manipulate users and compel them to use the platform excessively, to enhance Google's bottom line, often resulting in significant harm.

d. YouTube's features include impediments to discontinuing use.

782. As with other Defendants, Google has intentionally designed its platforms so that adolescent users, including students in Plaintiff's schools and community, face significant navigational obstacles and hurdles when trying to delete or deactivate their accounts, in contrast to the ease with which users can create those accounts.

783. *First,* because YouTube is accessible without a user needing to log in, YouTube users cannot prevent themselves from being able to access YouTube by deleting their YouTube account.

784. *Second,* YouTube accounts are linked to a user's broader Google account. These accounts are structured such that, for a user to delete a YouTube account, the user must also delete the user's entire Google account. This means that if a YouTube user uses Google's other platforms, such as the popular email service Gmail, those accounts will be lost as well. This structure holds hostage user data—if a child needs to keep their email account through Google (for instance, if that is a requirement of their school), they cannot delete their YouTube account, even if they want to. If a user stores family photos in Google Photos, but wants to delete their YouTube account, they must choose between storage for their photos or deleting their YouTube account. Similarly, if a user has purchased books or movies through Google's digital market Google Play, the user's copy of those books or movies will be deleted if the user deletes their Google account to rid themselves of YouTube. Google explicitly threatens users with this consequence on the page where users can delete their account, listing every associated account Google will delete and providing examples of the kinds of videos that will be deleted if a user deletes their YouTube account.

785. *Third,* Google intentionally designed its platform so that to delete a user's Google account, a user must locate and tap on six different buttons (through six different pages and popups) from YouTube's main feed to delete an account successfully. This requires navigating away from YouTube and into the webpages of other Google platforms. As with Meta, users are still able to recover their accounts after deletion—though unlike Meta, Google does not tell users when their accounts will become unrecoverable, just that they will sometime after deletion.

4. Google failed to adequately warn Plaintiff about the harm its platform causes or provide instructions regarding safe use.

786. Since YouTube's inception, Google has failed to adequately warn the public, including Plaintiff and its students, about the physical and mental health risks its platform poses. These risks include, but are not limited to, platform abuse, addiction, and compulsive use; dissociative behavior; damage to body image; social isolation; impaired brain development; and a plethora of mental health disorders like body dysmorphia, eating disorders, anxiety, depression, insomnia, ADD/ADHD exacerbation, suicidal ideation, self-harm, and death.

787. Google targets adolescent users via advertising and marketing materials distributed throughout digital and traditional media platforms. Its advertising and marketing campaigns fail to provide adequate warnings to potential adolescent consumers of the physical and mental risks associated with using YouTube.

788. Google further fails to adequately warn adolescents during the platform registration process. At account setup, Google's platform contains no warning labels, banners, or conspicuous messaging to adequately inform adolescent users of the known risks and potential physical and mental harms associated with usage of its platform. Instead, Google allows adolescents to easily create an account (or multiple accounts), and to access YouTube with or without an account.

789. Google's lack of adequate warnings continues once an adolescent uses YouTube. Google does not adequately inform adolescent users that their data will be tracked, used to help build a unique algorithmic profile, and potentially sold to Google's advertising clients.

790. Google's failure to warn adolescent users and the public continues even as adolescents exhibit problematic signs of addictive, compulsive use of YouTube. Google does not adequately warn

users when their screen time reaches harmful levels or when adolescents are accessing the platform on a habitual and uncontrolled basis.

791. Not only does Google fail to adequately warn users regarding the risks associated with YouTube, it also does not provide adequate instructions on how adolescents can safely use its platform. A reasonable and responsible company would instruct adolescents on best practices and safety protocols when using a platform known to pose health risks.

792. Google's failure to properly warn and instruct adolescent users or their parents has proximately caused significant harm to Plaintiff, who has expended and continues to expend significant resources addressing the impact of Google's conduct on Plaintiff's operations, including providing additional support to impacted students.

F. Youth Social Media Use and Addiction Has Disrupted this Country's Public Schools.

793. School districts have been, and continue to be, uniquely harmed by Defendants' actions and students' addiction to social media. Students' compulsive, problematic use of Defendants' platforms results in significant disruption to schools' operations and public educational mission, greatly frustrates their ability to achieve their mandate of educating students in a safe and healthy environment, and forces school districts to expend or divert significant resources in response.

1. Schools across the country are grappling with the impact of social media use and addiction.

794. A recent report released by the *American Federation of Teachers*, a teachers union representing 1.7 million educators, "details how school districts across the country are experiencing significant burdens as they respond to tech's predatory and prevalent influence in the classroom[.]"[946] An article describing the report, *Likes vs. Learning: The Real Cost of Social Media for Schools*,—noted:

> School districts have mustered significant resources to mitigate in-classroom disruptions and grapple with an increase in depression and suicidal ideation among students, dangerous and disruptive behavior, and bullying and harassment by and directed at students, as well as the popularity of dangerous viral challenges that originate from social

[946] *New Report Calls Out Social Media Platforms for Undermining Schools, Increasing Costs, Driving Youth Mental Health Crisis*, Am. Fed'n Teachers (July 20, 2023), https://www.aft.org/press-release/new-report-calls-out-social-media-platforms-undermining-schools-increasing-costs.

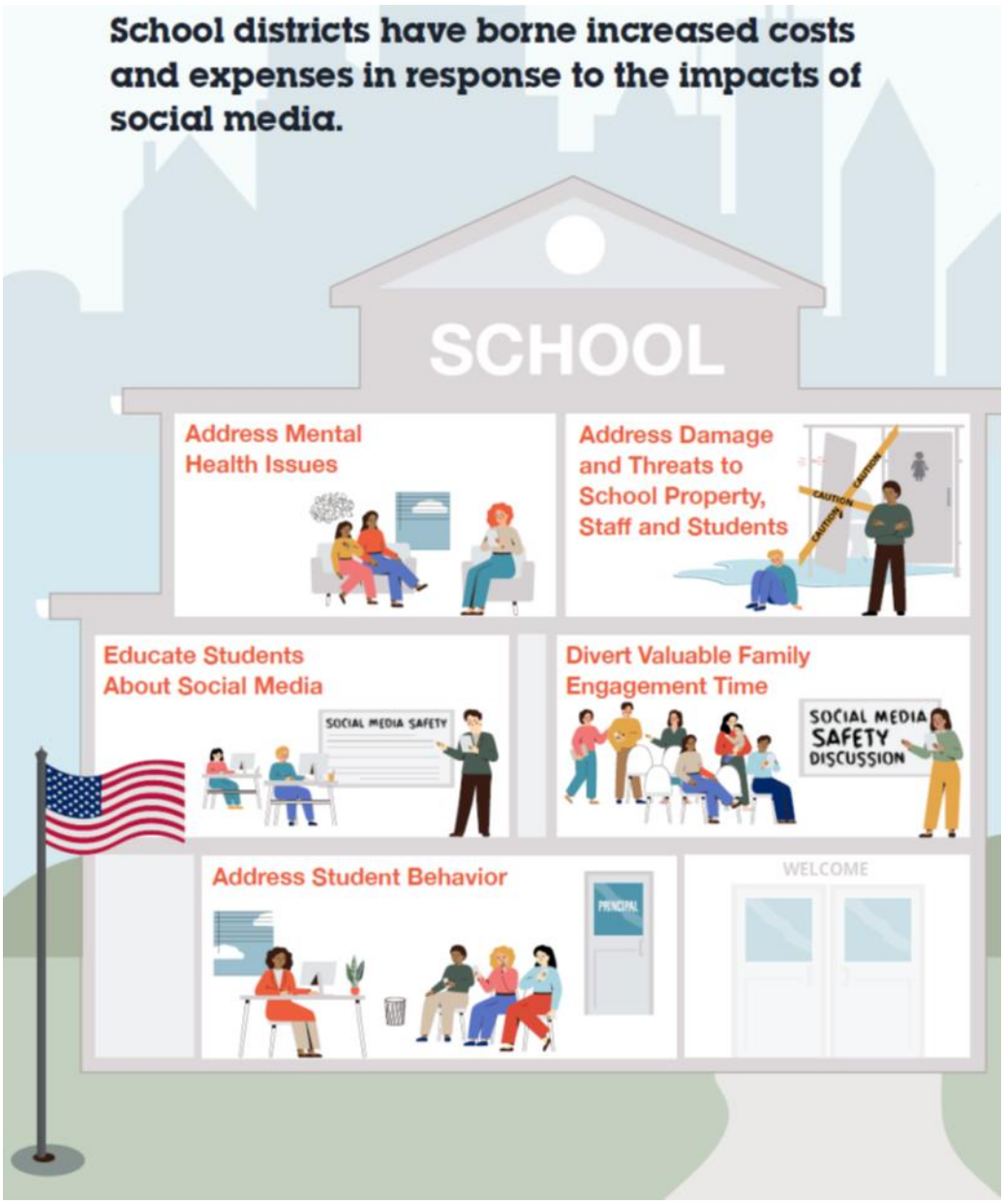
> media. Notably, the increased attention to tackling tech companies' omnipresent role in children's lives has pulled resources away from the core mission of education.[947]

795. The report itself, published by the *American Federation of Teachers*, the *American Psychological Association*, *Design It For Us*, *Fairplay*, and *ParentsTogether*, highlights the impact of students' social media use on the educational environment, noting the "dramatic disruption in the teaching and learning ecosystems of all our nation's schools[.]"[948] The report confirms that "[d]ealing with social media-related issues detracts from the primary mission of our schools, which is to educate our children," and details the myriad ways in which "[s]chool districts have borne increased costs and expenses in response to the impacts of social media."[949]

[947] *Id.*

[948] *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed'n Teachers (2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf

[949] *Id.* at 3–4.



796. Schools are one of the main providers for mental health services for school-aged children.[950] Indeed, over 3.7 million children ages 12–17 received mental health services through an education setting in 2019, more than any other non-specialty mental health service setting.[951]

[950] *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020), https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables [https://perma.cc/NA32-JYQX].
[951] *Id.*

797. Most schools offer mental health services to students. In the 2021–22 school year, 96% of public schools reported offering at least one type of mental health service to their students.[952] But 88% "of public schools did not strongly agree that they could effectively provide mental health services to all students in need."[953] The most common barriers to providing effective mental health services in public schools are: (1) insufficient number of mental health professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate funding.[954] Student opinions also reflect that schools are unable to provide adequate mental health services. Less than a quarter of students in grades 6–12 report accessing counseling or psychological services when they are upset, stressed, or having a problem.[955] And of the students who access mental health services, only 41% of middle schoolers and 36% of high schoolers are satisfied with the services they receive.[956]

798. In part, schools are struggling to provide adequate mental health services because of the increase in students seeking these services. More than two-thirds of public schools reported an increase in the percent of students seeking mental health services from school since the start of the pandemic.[957]

799. During this same period, adolescents increased their social media use, also raising levels of excessive and problematic use of digital media.[958] And these higher rates of social media use are related to higher "ill-being."[959] Thus, the increase in adolescent social media use during the pandemic has caused an increase in adolescents experiencing mental health problems.

---

[952] *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [https://perma.cc/P4K9-4HF7].

[953] *Id.*

[954] *Id.*

[955] *Insights From the Student Experience, Part I: Emotional and Mental Health* at 8, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf [https://perma.cc/UHV7-RNQ6].

[956] *Id.* at 10.

[957] *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [https://perma.cc/P4K9-4HF7].

[958] Laura Marciano *et al.*, *Digital Media Use and Adolescents' Mental Health During the Covid-19 Pandemic: A Systematic Review and Meta-Analysis*, 9 Frontiers Pub. Health, Feb. 1, 2022, at 6–8, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/pdf/fpubh-09-793868.pdf.

[959] *Id.*

800. That relationship is reflected in reports from public schools. Over 75% of public schools reported an increase in staff expressing concerns about student depression, anxiety, and other disturbances since the start of the pandemic.[960] Students receiving mental health services in educational settings predominately do so because they "[f]elt depressed[,]" were "thinking about or attempt[ed] suicide" or "[f]elt very afraid and tense."[961]

801. Anxiety disorders are also up, affecting 31.9% of adolescents between 13 and 18 years old.[962] "Research shows that untreated teenagers with anxiety disorders are at higher risk to perform poorly in school, miss out on important social experiences, and engage in substance abuse."[963]

802. According to the National Alliance on Mental Illness, "[s]tudents aged 6–17 with mental, emotional or behavioral concerns are **3x times more likely** to repeat a grade[,]" and "[h]igh school students with significant symptoms of depression are more than twice as likely to drop out compared to their peers[.]"[964]

803. Schools are struggling not only to provide students with mental health services but also to deliver an adequate education because of the youth mental health crisis. Students in grades 6–12 identify depression, stress, and anxiety as the most prevalent obstacles to learning.[965] These negative mental health outcomes are also the most common symptoms of excessive social media use. Most middle school and high school students also fail to get enough sleep on school nights, which contributes to poor

---

[960] *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022), https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [https://perma.cc/P4K9-4HF7].

[961] Rachel N. Lipari *et al.*, *Adolescent Mental Health Service Use and Reasons for Using Services in Specialty, Educational, and General Medical Settings* at 6, SAMHSA (May 5, 2016), https://www.ncbi.nlm.nih.gov/books/NBK362074/pdf/Bookshelf_NBK362074.pdf.

[962] *Anxiety Disorders: Facts and Statistics, Anxiety & Depression Ass'n Am.*, https://adaa.org/understanding-anxiety/facts-statistics.

[963] *Id.*

[964] *Mental Health By the Numbers, Nat'l All. Mental Illness* (Apr. 2023), https://www.nami.org/mhstats (citing *2020–2021 National Survey of Children's Health*, Data Res. Ctr. Child & Adolescent Health, https://www.childhealthdata.org/browse/survey/results?q=9463&r=1&g=1023; Véronique Dupèrè *et al.*, *Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of Exposure Matters*, J. Adolescent Health 62 (2018) 205-211 (2017), https://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext [https://perma.cc/48WF-NRX4]).

[965] *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf [https://perma.cc/UHV7-RNQ6].

academic performance.[966] Compulsive social media use is linked to reduced sleep time and quality[967]. Social media use also contributes to poor academic performance by distracting students during class or study time, and it causes procrastination on school assignments. Defendants' conduct has undermined students' rights to public education by undermining school districts' ability to provide students with a safe and high-quality public education.

804. The youth mental health crisis has also caused a wide range of other behavioral issues among students that interfere with schools' ability to teach. In 2022, 60% of public schools saw an increase in classroom disruptions from student misconduct compared to school years before the pandemic.[968] In that same year, 57% of public schools also saw an increase in rowdiness outside of the classroom, 67% saw increases in tardiness, 28% saw increases in students skipping classes, 54% saw increases in the use of electronic devices when not permitted, 38% saw an increase in physical fights between students, and 45% saw an increase in threats of fights between students.[969]

805. Another major problem for schools and school districts is that students are skipping school. Indeed, student absenteeism has greatly increased as the youth mental health crisis has intensified as a result of youth addiction to social media platforms. In the 2021–22 school year, 39% of public schools experienced an increase in chronic student absenteeism compared to the 2020–21 school year, and 72% of public schools saw increased chronic student absenteeism compared to school years

---

[966] Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-United States, 2015*, 67(3) Morbidity & Mortality Wkly. Rpt. 85–90 (2018), https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6703a1-H.pdf.

[967] Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of undergraduate medical students*, 77 Med. J. Armed Forces India 37–41 (2021), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf (citing Aryn C. Karpinski *et al.*, *An exploration of social networking site use, multitasking, and academic performance among United States and European university students*, 29(3) Comput. Hum. Behav. 1182–1192 (2013), https://www.sciencedirect.com/science/article/abs/pii/S0747563212002798 [https://perma.cc/C43P-J8V9]; Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) BMC Psychiatry 28 (2019), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf); *see* Yubo Hou *et al.*, Yubo Hou *et al.*, *Social media addiction: Its impact, mediation, and intervention*, 13(1) J. Psychosocial Rsch. Cyberspace, 2019, https://cyberpsychology.eu/article/view/11562/10369

[968] *School Pulse Panel: Student Behavior*, Inst. Educ. Scis., https://ies.ed.gov/schoolsurvey/spp/.

[969] *Id.*

before the pandemic.[970] In many instances, students choose to stay home from school after Defendants' platforms have amplified an interaction or event.

806. Vandalism also increased in 2022, with 35% of public schools reporting increased acts of student vandalism on school property.[971] Schools have seen a rise in vandalism of school property coinciding with the youth mental health crisis that Defendants' platforms have been a substantial factor in bringing about, and at the same time specific aspects of the platforms encourage users to participate in escalating, attention-seeking behaviors that have led to damage of school property.

807. Further, social media distraction "moderates the relationship between students' cognitive engagement and their evaluation of teaching faculty."[972] Social media distractions "disrupt student engagement inside the classroom," leading to wrong or biased assessments of a teacher's performance while also exacerbating struggles with academic achievement.[973] Declines in academic performance can affect school district funding, governmental review metrics, and teacher reviews, in addition to taxing students' mental health. These issues and others stemming from students' social media use, discussed above, also drive declining teacher and staff morale, making retaining and hiring qualified staff more difficult for school districts.[974]

---

[970] *School Pulse Panel: Absenteeism*, Inst. Educ. Scis., https://ies.ed.gov/schoolsurvey/spp/.

[971] *School Pulse Panel: Student Behavior*, Inst. Educ. Scis., https://ies.ed.gov/schoolsurvey/spp/.

[972] Priyanka Nema, *Impact of social media distraction on student evaluation of teacher effectiveness*, 37 Int'l J. Educ. Mgmt. 300–313, 308 (2023), https://www.emerald.com/insight/content/doi/10.1108/IJEM-10-2022-0389/full/html [https://perma.cc/2FK2-ZP6P].

[973] *Id.* at 300; Teun Sivers, *Social Media and Distraction: An Experience Sampling Study among Adolescents*, 25(3) Med. Psych. 343–366 (2021), https://www.tandfonline.com/doi/epdf/10.1080/15213269.2021.1959350?needAccess=true; Jia-Qiong Xie *et al.*, *The association between excessive social media use and distraction: An eye movement tracking study*, 58 Info. & Mgmt., Mar. 2021, https://www.sciencedirect.com/science/article/abs/pii/S0378720620303530 [https://perma.cc/3E76-5UUT]; META3047MDL-003-00096266 at META3047MDL-003-00096266 (Facebook employee recognized, "lots of cross-sectional studies that can't tell whether teens feel like their time on their phones causes worse mental health / problems in school or whether their mental health and feelings about school drive them to spend more time on their phones. It's probably both.").

[974] *See* Rebecca Ruiz, *How social media in the classroom is burning teachers out*, Mashable (Sept. 16, 2023), https://mashable.com/article/teacher-burnout-social-media-in-the-classroom (teacher noting feeling "burnt out and demoralized" trying to deal with "tectonic shifts in classroom behavior" from students' social media use and "rank[ing] the issue among the top factors contributing to teacher burnout in her educator community" and that due to "the emotional and mental strain on teachers managing this problem won't lessen until the technology driving it changes").

808. School districts have contacted one or more of Defendants and asked for assistance relating to problems caused by Defendants' platforms and often received inadequate responses or no response at all.[975] For example, Meta reported internally that a middle school in Oakland asked Facebook to implement a "hotline in which real people could help school officials (deans of discipline, administrators, [and/or] teacher leaders)" solve problems being caused by social media, but that it would "[p]robably not [be] cheap[.]"[976] Another Meta employee noted they had been "having a lot of conversations lately with Principals at schools and school districts."[977]

809. Some of the costs and resource expenditures of school districts forced to address students' problematic social media use include, but are not limited to:

a. Diverting time and resources from instruction activities to address unauthorized in-classroom use of social media by students;

b. Increasing disciplinary services and hiring additional personnel for disciplinary services in response to increased behavior issues caused by students' social media use;

c. Addressing property damaged as a result of students' addiction to social media and compulsive participation in social media challenges that direct destruction or theft of school property;

d. Addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct caused;

e. Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance problems;

f. Investigating and responding to threats made against schools and students over social media that are pushed by Defendants' platforms to drive user engagement;

g. Adding additional information technology resources in an attempt limit students' access to social media platforms and mitigate risks posed by students' social media use;

---

[975] *See Likes vs. Learning: The Real Cost of Social Media for Schools* at 12, Am. Fed'n Teachers (2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf ("it is nearly impossible to get a timely response from a platform when there is a social media-enabled crisis[]").

[976] META3047MDL-003-00047518 at META3047MDL-003-00047518.

[977] META3047MDL-003-00021695.

h. Investing in physical barriers (such as magnetic pouches) to keep students from accessing social media platforms on school property;

i. Developing new and revised teaching plans to address students' altered learning habits, e.g., reduced attention span, inability to communicate effectively;

j. Providing additional learning support to address students' declining achievement, e.g., after school support, as a result of the negative impact of problematic social media use on students' ability and capacity to learn;

k. Hiring additional mental health personnel (41% of public schools added staff to focus on student mental health);[978]

l. Developing additional mental health resources (46% of public schools created or expanded mental health programs for students, 27% added student classes on social, emotional, and mental health and 25% offered guest speakers for students on mental health);[979]

m. Training teachers to help students with their mental health and expending, and diverting time and resources to increase staff and train staff to identify students and youth exhibiting symptoms of mental health issues (56% of public schools offered professional development to teachers on helping students with mental health);[980]

n. Updating student handbooks and similar materials to address use of Defendants' platforms; and

o. Updating school policies to address use of Defendants' platforms.

810. Defendants knew their actions were having a serious impact on school districts and have nonetheless refused to change their conduct.[981]

811. This impact on schools is no surprise. Defendants have deliberately targeted school-aged children, while knowing the impact this could have on schools. In fact, Defendants counted on use of

---

[978] *Id.*
[979] *Id.*
[980] *Id.*
[981] *See, e.g.*, META3047MDL-003-00084526 at META3047MDL-003-00084528 ("More than half of U.S. school principals say they're extremely concerned about children's use of social media outside of school[.]").

their addictive platforms spreading through entire school communities. For example, Meta set out to infiltrate schools specifically, noting in a presentation reviewed by Mark Zuckerberg himself that "[h]igh school is the key driver of U.S. teen social activity and occupies 6+ hours per day[.]"[982] Meta knew that getting into high schools was key, reporting that that "[r]esearch indicates that we have 'FB' and 'non-FB' high schools; tipping schools may be high impact" and "[i]n the United States, per-high school adoption is a crucial driver of teen Facebook engagement[.]"[983] For example, Meta conducted a school analysis and concluded that "'FB High Schools' (>75% adoption) have ... 22% more [Time Spent] per [Monthly Active Person] . . . compared to high schools with 5-30% FB adoption[.]"[984] As a result of this research, Meta set out to make "big 2017 bets" on "High School Communities" to attract "teens."[985] The goal of this work was to "[g]row [Monthly Active Person], [Daily Active Person], and time spent among U.S. teens."[986] The same presentation stated that Meta planned to "emphasize 'social entertainment' market opportunities to win back teen interaction."[987] Meta noted, "we should bet big on Instagram Direct + stories to beat Snapchat" and that the goal was to "increase U.S. teen time spent."[988]

812. Meta adopted similar policies for Instagram, noting that "[n]early everyone attends high school" and "[t]he school someone attends is a big part of their life[.]"[989] In their own words "[w]inning schools is the way to win with teens because an individual teen's engagement is highly correlated with school [Monthly Active Person] penetration."[990] The Instagram "teen's team" also discussed how to study "teen penetration and engagement on [a] school level in [the] US" and noted their capability to tell when teens "open the app AT school" and geolocate "which high school they go to."[991] Similarly, a

[982] META3047MDL-003-00134688 at META3047MDL-003-00134706.
[983] *Id.*; *Id.* at META3047MDL-003-00134714-715.
[984] *Id.* at META3047MDL-003-00134715.
[985] *Id.* at META3047MDL-003-00134708.
[986] *Id.* at META3047MDL-003-00134706
[987] MDL AG Compl. at 27, ¶ 147.
[988] *Id.*
[989] META3047MDL-003-00023595.
[990] *Id.*
[991] META3047MDL-003-00022355 at META3047MDL-003-00022355, META3047MDL-003-00022356.

2017 presentation detailed how Meta planned to increase time spent by teens while teens are in school, including live broadcasts of high school sports.[992]

813. Instagram also intentionally reached into schools by partnering with the National PTA and Scholastic to get materials into the hands of "parents, grandparents, and educators at scale" and to "integrate [their] parent's guide and [Instagram] programming into the 500 back to school nights" across the country.[993] Instagram reported that partnering with "Scholastic gives us the ability to win educators and the school community, creating a ripple effect to allow us to win parents and families" and let them reach out to "20,000 classrooms across the U.S." and to "250K+" teachers.[994] While Instagram may try to characterize this work as helpful to addressing youth mental health problems, they were more candid in other documents about using this as a strategy to get more teen users, explaining that the goal of the parents plan was to get "parents to think, ['] my kids are on social media, and my FAVORITE app for them to be on is Instagram, bar none." Thus, "[w]hat winning looks like" for Instagram is to have "[p]arents believe Instagram is the social media platform of choice for their kids."[995] Instagram also tested new features by high school, noting that "getting critical mass in a high school very quickly (e.g., in the same afternoon) is extremely important" and one way to do this was "a (hacky) way to use push notifications from their [Instagram] account to tell students 'we just shipped this for your school[.]'"[996] They explained "[w]e want to learn as much as we can from these High School tests about what levers we have for driving teen engagement[.]"[997] Schools are so important to Meta because "[e]ngaging the vast majority of teens in an area / school with our products is crucial to driving overall time spent in the same area[.]"[998] Meta boiled it down to a simple message: "Winning Teens = Winning High Schools[.]"[999]

[992] MDL AG Compl. at 27, ¶ 147.
[993] META3047MDL-003-00084526 at META3047MDL-003-00084527–META3047MDL-003-00084527.
[994] *Id.* at META3047MDL-003-00084528.
[995] META3047MDL-003-00082536 at META3047MDL-003-00082538.
[996] META3047MDL-003-00138616 at META3047MDL-003-00138617.
[997] *Id.*
[998] META3047MDL-003-00021467.
[999] META3047MDL-003-00023583.

814. TikTok is likewise well aware of school-age children using its platform. When TikTok decides to age verify youth users, one of the tools it uses is "school ID."[1000] TikTok created and shared a chart with its staff showing how age correlated to grade in school and birth year.[1001]

815. The company also admits that "TikTok is particularly popular with younger users, who are seen as more vulnerable to online harms and the negative impacts of compulsive use."[1002] Internal research confirmed that users try to "mitigate TikTok's interference with their obligations and productivity" including "school."[1003] However, the same research noted that the "aspects of TikTok that contributed to participants' challenges with managing their time including the continuous scroll, few or no breaks between content, short videos, and not knowing what the next video will be[,]" the same types of features at issue in this complaint.[1004]

816. TikTok acknowledged that users believe its "platform is addictive," and that "compulsive usage interferes with essential personal responsibilities" such as "sufficient sleep," "school responsibilities," and "connecting with loved ones."[1005] TikTok admitted that it is interfering with the school day and student sleep, stating, "we send notifications to users during the school day and in some cases, up until midnight which could interfere with sleep."[1006] Therefore, it stated, "[w]e should therefore be prepared to implement product changes to address concerns in [the wellbeing] area if needed, including . . . [a]voiding sending users push notifications around bedtime and (for younger users) during the school day[.]"[1007]

817. TikTok also sought to directly enter schools, noting that "we have about 80 high schools across the country" that it would be sending its TikTok toolkit to for "back to school nights" and that it was "coordinating with the Department of Education and they plan to send a PDF of the toolkit in their August newsletter, which is going out on Friday to nearly 30K subscribers."[1008] As with Meta, TikTok

---

[1000] TIKTOK3047MDL-001-00060190.
[1001] *Id.*
[1002] TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-0006161327.
[1003] *Id.* at TIKTOK3047MDL-001-00061324.
[1004] *Id.*
[1005] TIKTOK3047MDL-001-00060485.
[1006] TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-00061327.
[1007] *Id.* at TIKTOK3047MDL-001-00061333.
[1008] TIKTOK3047MDL-001-00005239.

recognized the importance of controlling the narrative, noting in a different document that recent years had been "fraught with PR and GR [Government Relations] issues for ByteDance and TikTok" which "reduced advertiser trust, user loyalty, investor confidence, and [TikTok's] ability to consistently hire top talent." Combating these issues would "ensure the long term success of the ByteDance ecosystem and help further [the TikTok] brand."[1009]

818. Similarly, a large part of Snapchat's success has been its virality on school campuses.[1010] According to an interview regarding Snapchats' early adoption, "the app started catching on with high schoolers in LA as they could send digital notes back and forth during classes."[1011] Snapchat "grew very quickly in tight-knit communities at high schools and colleges, where students interact at a very high frequency and can (and did) tell each other to download Snapchat in between classes."[1012] Once Snapchat knew it had appeal among school-aged children, Snapchat "ran with it and never looked back."[1013]

819. Snapchat has long been aware of its connection to schools and the large impact it has had on classrooms. After Snapchat added new features to the app, news organizations noted the havoc it was wrecking on classrooms: "No one was more excited about the update than Snapchat's target demographic: teens. And no one could have used a warning about the huge in-app changes more than high-school teachers," one of whom noted that "[i]n 16 years of teaching I can't think of anything that has ever disrupted my classroom more than today's Snapchat update."[1014] The teacher explained that during class kids were so focused on updating their Snapchat, "you would have thought it was crack. They seriously could not keep away from it. I even had one girl crawl under the table with her phone."[1015]

[1009] TIKTOK3047MDL-001-00060485.

[1010] *How Snapchat Gained Success By Going Viral At High Schools Across Los Angeles*, Forbes (Feb. 16, 2018), https://www.forbes.com/sites/quora/2018/02/16/how-snapchat-gained-success-by-going-viral-at-high-schools-across-los-angeles/?sh=6f1676083b36 [https://perma.cc/M7LP-ZUAT].

[1011] *Id.*

[1012] *Id.*

[1013] *Id.*

[1014] Caroline Moss, *HIGH-SCHOOL TEACHER: In 16 Years Of Teaching, Nothing Has Disrupted My Classroom More Than Snapchat's New Update*, Bus. Insider (May 2, 2014), https://www.businessinsider.com/high-school-teacher-on-snapchat-update-2014-5.

[1015] *Id.*



820. Snapchat also highlights its connection to schools when communicating with advertisers, promoting "Back to School on Snapchat"[1016] and "Snap to School."[1017] The company explained that it had an "unparalleled student and parent audience"[1018] and noted that 90% of students (ages 13-24) in the U.S. and UK are on Snapchat.[1019] Last year, Snapchat promoted new features and the ability to access Snapchat from a desktop computer, not just a phone, "just in time for back to school" to let students "keep conversations with friends going from any device[,]" underscoring the importance of student users and further emphasizing Snapchat's desire to maximize user engagement, i.e., continuous interaction with the platform, by this key group.[1020]

821. Similarly, YouTube is well aware of both its high levels of use by school age children and the impact on schools. YouTube is the most popular social media platform with students. Ninety-five percent of children ages 13–17 have used YouTube.[1021] Seventy-seven percent of teens report using YouTube every day and nearly 20% of teens report using YouTube almost constantly, the most of any of Defendants platforms.[1022]

[1016] *See, e.g.*, *Back to School on Snapchat*, Snap Inc., https://forbusiness.snapchat.com/back-to-school-2021.
[1017] *Snap to School is in Session*, Snap Inc., https://forbusiness.snapchat.com/back-school.
[1018] *Id.*
[1019] *See, e.g.*, *Back to School on Snapchat*, Snap Inc., https://forbusiness.snapchat.com/back-to-school-2021.
[1020] *Fresh Features for Fall!*, Snap Inc. (Sept. 15, 2022), https://newsroom.snap.com/fresh-fall-features.
[1021] Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/.
[1022] *Id.*

822. YouTube has also advertised itself for use in schools, creating youtube.com/Teachers which provides "tips and tricks for bringing YouTube into the classroom[.]"[1023]

823. YouTube has leveraged its popularity among school children to increase its revenue from advertisements by marketing its platform to popular brands of children's products. For example, Google pitched Mattel, the maker of Barbie and other popular kids' toys, by telling its executives that "YouTube is today's leader in reaching children age 6–11 against top TV channels."[1024] When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other kids' toys, Google touted that "YouTube [was] unanimously voted as the favorite website for kids 2-12," and that "93% of tweens visit YouTube to watch videos."[1025] In a different presentation to Hasbro, YouTube was referred to as "the "#1 website regularly visited by kids."[1026]

824. Compulsive use of YouTube by school children is causing serious problems for students and school districts, as students struggle with their mental health, become sleep deprived, and act out. Public reporting has confirmed that students are "glued to the[ir] devices during class — posting on social media [and] searching YouTube."[1027] As a result, school districts across the country have been imposing bans on the cellphones used to access Defendants' platforms to attempt to "to curb student obsession, learning disruption, disciplinary incidents and mental health worries."[1028]

2. Plaintiff has expended significant resources addressing student social media use and addiction.

825. Plaintiff Western Placer Unified School District ("Plaintiff" or the "District") is a school district located in Placer County, California, serving nearly 8,300 students across fourteen sites: 8 elementary schools, 2 middle schools, 2 comprehensive high schools, 1 continuation high school, and 1 independent study program.

[1023] *Teachers: About*, YouTube, https://www.youtube.com/Teachers.

[1024] Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibits A–C at Exhibit A, *FTC v. Google LLC*, No. 1:19-cv-02642-BAH (D.D.C. Sept. 6, 2019), ECF No. 3-1, https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_exhibits_a-c.pdf.

[1025] *Id.* at Exhibit B

[1026] *Id.* at Exhibit C.

[1027] Donna St. George, *Students can't get off their phones. Schools have had enough*, Wash. Post (May 9, 2023), https://www.washingtonpost.com/education/2023/05/09/school-cellphone-ban-yondr/ [https://perma.cc/8LV6-6WQ2].

[1028] *Id.*

826. In addition to traditional elementary, middle, and high school programs, the District also offers a variety of other educational services, including preschool, college and career readiness programs, language programs, adult continuing education programs, GED preparation, and career technical education.

827. Plaintiff has been directly impacted by the mental health crisis among youth in its community.

828. There has been an increase in the proportion of youth in Plaintiff's community, like youth across California, who report experiencing anxiety, depression, and suicidal ideation.

829. Across California, more and more youth are experiencing anxiety, depression, and suicidal ideation. The results of the 2017–19 California Healthy Kids Survey reflect that 30 percent of 7th graders, 33 percent of 9th graders, and 37 percent of 11th graders reported feelings of "incapacitating, chronic sadness or hopelessness[.]"[1029] In all grades, these are the highest rates reported in the past decade.[1030] Further, 17 percent of 9th graders and 16 percent of 11th graders contemplated suicide over the past twelve months.[1031] Other reports show that the percentage of children in California ages 3–17 who had anxiety or depression increased by 70 percent from 2016 to 2020.[1032] The severity of these increases cannot be understated; a 2020 report shows that mental illness is the primary reason children in California ages birth-to-17 are hospitalized.[1033]

830. These increases in anxiety and depression also impact the number of students attending school, which directly impacts school districts' mission to educate students. The 2017–19 California Healthy Kids Survey also reflects that 5 percent of 7th graders, 8 percent of 9th graders and 11 percent

---

[1029] Gregory Austin *et al.*, *California Healthy Kids Survey: School Climate and Student Engagement and Well-being in California, 2017/19. Results of the Seventeenth Biennial State California Healthy Kids Survey, Grades 7, 9, and 11* at 27, WestEd for Cal. Dep't Educ. (2020), https://data.calschls.org/resources/Biennial_State_1719.pdf [https://perma.cc/YD63-Z9ZU].

[1030] *Id.*

[1031] *Id.*

[1032] *2022 Kids Count Data Book: State Trends in Child Well-Being* at 7, Annie E. Casey Found. (2022), https://assets.aecf.org/m/resourcedoc/aecf-2022kidscountdatabook-2022.pdf [https://perma.cc/G8WQ-QBZC].

[1033] *2020 California Children's Report Card* at 15, Child. Now (2020), https://files.eric.ed.gov/fulltext/ED603021.pdf [https://perma.cc/N74E-QY4V].

of 11th graders reported missing school in the past thirty days because they felt "very sad, hopeless, anxious, stressed, or angry."[1034]

831. The toll of students' social media use is evident across Plaintiff's schools, and Plaintiff has been forced to devote substantial resources to measuring and confronting it, including commissioning district-wide student climate surveys administered by YouthTruth, a national nonprofit, in April 2026. Those surveys captured feedback from 2,270 of Plaintiff's high school students, an 86 percent response rate,[1035] and 1,635 of Plaintiff's middle school students, a 90 percent response rate.[1036] The results from the YouthTruth surveys confirm that anxiety, depression, and related distress are widespread not only across the other 1,123 middle and high schools surveyed by YouthTruth, but also rampant among Plaintiff's students.

832. In the April 2026 YouthTruth Student Survey, 36 percent of Plaintiff's middle school students reported feeling depressed, stressed, or anxious.[1037] High school students in the District reported similarly troubling numbers: 36 percent reported that feeling depressed, stressed, or anxious.[1038] Students reported that such feelings of depression, stress, and anxiety are obstacles that affect their ability to engage fully in their learning environment, making it hard for them to do their best in school.[1039] In the 2025 YouthTruth survey, 51 percent of Plaintiff's high school students reported that feelings of depression, stress, or anxiety were obstacles to engaging fully in school.[1040]

833. Much of that distress is inseparable from students' online lives. Harassment that follows Plaintiff's students onto social media and their devices is pervasive. In the same April 2026 YouthTruth Student Survey, 29 percent of Plaintiff's middle school students and 19 percent of Plaintiff's high school

---

[1034] Gregory Austin *et al.*, *California Healthy Kids Survey: School Climate and Student Engagement and Well-being in California, 2017/19. Results of the Seventeenth Biennial State California Healthy Kids Survey, Grades 7, 9, and 11* at 27, WestEd for Cal. Dep't Educ. (2020), https://data.calschls.org/resources/Biennial_State_1719.pdf [https://perma.cc/YD63-Z9ZU].

[1035] *Western Placer Unified School District – High Schools, "Student Survey" District Report* (hereinafter "YouthTruth High School Report") at 4, YouthTruth (Apr. 2026).

[1036] *Id.* at 4.

[1037] *Western Placer Unified School District – Middle Schools, "Student Survey" District Report* (hereinafter "YouthTruth Middle School Report") at 112, YouthTruth (Apr. 2026).

[1038] YouthTruth High School Report at 112.

[1039] *Id.*

[1040] *Id.*

students reported that other students had bullied or harassed them in the past year.[1041] Among the high school students who reported being bullied, 34 percent reported that they were bullied through cyberbullying, including by spreading rumors on social media sites, posting mean pictures, or creating a fake social media profile of the bullied student.[1042]

834. Students' mental, emotional, and social health has declined as students' use of Defendants' platforms has increased, both in frequency and intensity. Administrators and teachers alike have noted that social media use among Plaintiff's students is ubiquitous. Students access social media during class time, between classes, and during lunch.

835. In lockstep with these increases in anxiety, depression, and suicidal ideation, student behavior problems have also increased in Plaintiff's schools, including disciplinary incidents tied to social media. Many of these disciplinary incidents are connected to social media, according to administrators.

836. While Plaintiff's schools and its staff must deal with increased behavioral issues on the one hand, they must deal with increased absenteeism on the other. And even when Plaintiff's students attend school, there is still a significant amount of lost instructional time. For example, administrators have seen an increasing number of students leaving class to go to the bathroom where they stay to access social media.

837. To curb the distraction that cell phone and social media use poses, the District enacted a policy in 2020 requiring phones be turned off and put away during instructional time. Despite this policy, students continue to use their personal cell phones and other mobile devices to access Defendants' social media platforms at school during instructional time.

838. The pandemic and corresponding increase in time youth spend on Defendants' platforms have intensified the youth mental health crisis and the behavioral issues Plaintiff's students are experiencing.

839. The current youth mental health crisis has led to a marked increase in the number of Plaintiff's students in crisis, acting out, and in need of mental health services.

[1041] *See* YouthTruth Middle School Report at 82; YouthTruth High School Report at 93.
[1042] YouthTruth High School Report at 95.

840. This increase has adversely impacted the educational experience for Plaintiff's staff, teachers, students, and their families. Staff and teachers cannot ignore students who are in crisis and need to support those students, even if this comes at the expense of the educational goals and experience for the larger student body. School campuses are public spaces, and classes and activities are communal experiences. Increases in anxiety, depression, suicidal ideation, and other mental health crises impact both the students suffering from these problems and the other students, teachers, and staff who need to interact with these students.

841. The pernicious effects of Defendants' platforms are inescapable and have fundamentally changed the learning and teaching environment at Plaintiff's schools.

842. In an attempt to address the decline in students' mental, emotional, and social health, Plaintiff has been forced to divert resources and expend additional resources to:

a. hire additional personnel, including counselors and school psychologists, to address mental, emotional, and social health issues;

b. re-direct resources to address mental, emotional, and social health issues;

c. increase training for teachers and staff to identify students exhibiting symptoms affecting their mental, emotional, and social health;

d. educate teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;

e. develop lesson plans to teach students about the dangers of using Defendants' platforms;

f. educate students about the dangers of using Defendants' platforms;

g. update its student handbook to address use of Defendants' platforms; and

h. update school policies to address use of Defendants' platforms.

843. Additionally, more students have been acting out as a result of the decline Defendants caused in students' mental, emotional, and social health. Resultingly, Plaintiff has been forced to divert resources and expend additional resources to:

a. repair property damaged as a result of the exploitive and harmful content Defendants directed to students;

b. increase disciplinary services;

c. confiscate devices Defendants' conduct compelled students to use to access Defendants' platforms while in class or on school campus;

d. meet with students and the parents of students caught using Defendants' platforms at school; and

e. divert time and resources from instructional activities to notify parents and guardians of students' behavioral issues and attendance.

844. Plaintiff employs a variety of school-based mental and behavioral support staff across its elementary, middle, and high schools, including school a Mental Health Specialist, school psychologists, behavior specialists, PCOE Wellness Center community liaisons, PCOE family therapists, parent liaisons, wellness coaches, and other positive-behavior and social-emotional-learning employees. In addition, Plaintiff employs three full-time behaviorists and 6 full-time behavior support specialists, who are assigned according to individual student need under their Individualized Education Programs. Plaintiff continues to expand its mental and behavioral support staff to meet substantially increased needs. Over the past ten years, Plaintiff has added school psychologists and a Mental Health Specialist. Plaintiff is currently in the process of hiring and onboarding a team of wellness coaches, hiring additional elementary school counselors, and adding further counselor positions. Upon filling those various new positions, Plaintiffs' school-based mental and behavioral support staff will represent more than a 150% increase since 2016, when there were only fifteen employees dedicated to school based mental health and behavior support. Meanwhile, during that same period, Plaintiff's student population has increased by just 21%.

845. Plaintiff's staff directly offer mental health services to its students. These services include, but are not limited to, direct counseling, group counseling, social skills exercises, and classroom education. Additionally, Plaintiff's staff assist students and their families in accessing mental health services from community service providers.

846. Despite these efforts, the District is unable to maintain pace with the increased need for mental health services.

847. As a result, the rest of Plaintiff's staff must fill in the cracks to help students with mental health concerns.

848. Ultimately, Plaintiff requires significant and long-term funding to address the nuisance Defendants have created and amplified. Plaintiff cannot ignore the ever-increasing mental health needs of its students, even if this means diverting resources away from important school functions and lessening the educational experience for all students and the families. Such funding should not come at the expense of the students and fall at the foot of the public. Rather, Defendants must bear the burden of remedying their wrongs. It is time, as President Biden declared, to get "all Americans the mental health services they need."

V. CAUSES OF ACTION

COUNT ONE — CALIFORNIA PUBLIC NUISANCE

849. Plaintiff incorporates by reference all preceding paragraphs.

850. Under California law, "anything which is injurious to health…or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property…is a nuisance."[1043] "A public nuisance is one which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."[1044]

851. Defendants have created a crisis of social media addiction in Plaintiff's schools, injuring the public health and safety in Plaintiff's community, disrupting the educational mission of Plaintiff, and interfering with the operations, use, and enjoyment of the property of Plaintiff.

852. Defendants, by designing, developing, marketing, supplying, promoting, advertising, operating, and distributing their respective social media platforms for use by students in Plaintiff's schools in the manner described above, have engaged in conduct that substantially and unreasonably interferes with the health and safety of Plaintiff's students; substantially and unreasonably interferes with the functions and operations of Plaintiff's schools, including the public educational mission of Plaintiff; harms the health, safety, and welfare of the Plaintiff's community; and adversely impacts Plaintiff's use and enjoyment of its property.

853. Each Defendant has created or assisted in the creation of a condition that is injurious to the health, safety, and welfare of Plaintiff's community and interferes with the educational environment

[1043] Cal. Civ. Code § 3479.
[1044] Cal. Civ. Code § 3480.

for students, teachers, and administrators in Plaintiff's schools. Defendants have each created or assisted in the creation of a condition that significantly disrupts the daily operations and functioning of Plaintiff's public schools.

854. The health and safety of Plaintiff's students, including those who use, have used, or will use Defendants' platforms, as well as those affected by others' use of their platforms, are matters of substantial public interest and of legitimate concern to Plaintiff.

855. Defendants' conduct has affected and continues to affect a substantial number of people within Plaintiff's community and is likely to continue causing significant harm.

856. Defendants' conduct is ongoing and continues to produce permanent and long-lasting damage.

857. Defendants' conduct substantially and unreasonably interferes with public health, safety, and the right to a public education in a safe and healthy environment.

858. The public nuisance created or maintained by Defendants impacts Plaintiff's property and its use and enjoyment of the same, including but not limited to school buildings and other public spaces connected to the schools.

859. This harm to youth mental health and the corresponding impacts to public health, safety, and the welfare of Plaintiff's public schools and community outweigh any social utility of Defendants' wrongful conduct.

860. The rights and interests of, and inconvenience to, Plaintiff's public schools and community far outweigh the rights and interest of, and inconvenience to, Defendants, who have profited tremendously from their wrongful conduct.

861. Defendants' social media platforms have caused a massive disruption to the educational process in schools throughout the United States. As noted above, a report by the *American Federation of Teachers* "details how school districts across the country are experiencing significant burdens as they respond to tech's predatory and prevalent influence in the classroom[.]"[1045] These same problems are borne by Plaintiff.

[1045] *New Report Calls Out Social Media Platforms for Undermining Schools, Increasing Costs, Driving Youth Mental Health Crisis*, Am. Fed'n Teachers (July 20, 2023), https://www.aft.org/press-release/new-report-calls-out-social-media-platforms-undermining-schools-increasing-costs.

862. For these reasons, Defendants have caused an unreasonable interference with the educational process—including the health, welfare, and safety of students, teachers, and staff members, as well as educators' ability to teach and students' ability to learn—in the Plaintiff's District.

863. By interfering with the educational process in public schools, the Defendants' conduct unreasonably interferes with the health, safety, peace, comfort, or convenience of the general community.

864. In additional to the impact on the public health and safety, the nature of Defendants' conduct causes a substantial interference with the entire educational process in the public schools, as described above. Students' compulsive use of Defendants' social media platforms greatly frustrates schools' ability to achieve their mandate of educating their students in a safe and healthy environment.

865. The right to a public education is a right common to the general public. This right is codified in the California Constitution. *See* Cal. Const. art. IX, § 1 ("A general diffusion of knowledge and intelligence [is] ... essential to the preservation of the rights and liberties of the people[.]"); Cal. Const. art. IX, § 5 ("The Legislature shall provide for a system of common schools by which a free school shall be kept up and supported in each district[.]"). "[T]he right to an education in [California] public schools is a fundamental interest[.]"[1046]

866. Whether they choose to avail themselves of the right or not, all California residents have the opportunity to utilize the public education system.

867. Further, the entire state of California benefits from having a strong educational system that results in a well-educated citizenry. Thus, the right to a public education is a right common to the general public, and a right that has an impact on all citizens of California, whether they utilize the public school system directly or not.

868. Additionally, by taking unreasonable actions that increase the costs of mental health services and other services provided by California school districts, including Plaintiff, Defendants have interfered with a right common to the general public by diverting tax dollars into projects required to

[1046] *Serrano v. Priest*, 487 P.2d 1241, 1244 (Cal. 1971); *see also Slayton v. Pomona Unified Sch. Dist.*, 207 Cal. Rptr. 705, 711 (Cal. Ct. App. 1984) ("California has extended the *right* to an education by virtue of two constitutional provisions[.])".

abate the nuisance caused by the Defendants' conduct, rather than having that tax money spent on other public programs.

869. All Defendants maintain control, at all times, over their social media platforms, including each design feature thereof, and these platforms are used by students in Plaintiff's District.

870. Because all Defendants maintain control over their platforms, Defendants have the power and the ability, at all times, to change the design features, such that Defendants could change the features and user experience that is presently causing harm to Plaintiff and Plaintiff's students.

871. Because they control their social media platforms and their design features, Defendants could modify those features and the user experience that feeds users' social media addiction, and which is harmful to users' mental and psychological health.

872. Because of the nature of social media platforms, Defendants never lose control over the instrumentality that causes the nuisance. The Defendants cause the nuisance, and maintain the nuisance, by constantly inundating users, including Plaintiff's students, with addictive product features.

873. Because of the nature of social media platforms, the instrumentality of the nuisance never leaves the Defendants' hands. Defendants always have the ability to modify their platforms—and, thereby, modify the user experience. Correspondingly, Defendants always have the power to abate the nuisance that they have caused and continue to cause.

874. But for Defendants' actions, Plaintiff's students would not use social media platforms as frequently or long as they do today and would not have their mental health and ability to learn and participate in public school adversely affected to the same degree. The associated harms suffered by Plaintiff would not be incurred, and the public health crisis that currently exists as a result of Defendants' conduct would have been averted.

875. Logic, common sense, justice, policy, and precedent indicate Defendants' unfair and deceptive conduct has caused the damage and harm complained of herein. Defendants knew or had reason to known that their design, development, marketing, supply, promotion, advertisement, operation, and distribution of their platforms would cause students to use their platforms excessively, that their marketing methods were designed to appeal to youth, and that their active efforts to increase youth use

of their platforms were causing harm to youth and to schools, including youth who attend Plaintiff's schools.

876. Thus, the public nuisance caused by Defendants was reasonably foreseeable, including the financial and economic losses incurred by Plaintiff.

877. Defendants' conduct was a substantial factor in bringing about the public nuisance. By designing, developing, marketing, supplying, promoting, advertising, operating, and distributing their platforms in a manner intended to maximize the time youth spend on their respective platforms—despite knowledge of the harms to youth from their wrongful conduct—Defendants directly facilitated the widespread, excessive, and habitual use of their platforms and the public nuisance affecting Plaintiff. By seeking to capitalize on their success by refining their platforms to increase the time youth spend on their platforms, Defendants directly contributed to the public health crisis and the public nuisance affecting Plaintiff.

878. Defendants' conduct is especially injurious to Plaintiff because, as a direct and proximate cause of Defendants' conduct creating or assisting in the creation of a public nuisance, the educational environment within Plaintiff's schools and the ability of Plaintiff to operate its public schools has been, and will continue to be, substantially harmed.

879. As noted above, a report from the *American Federation of Teachers*, the *American Psychological Association*, *Design It For Us*, *Fairplay*, and *ParentsTogether*, highlights the impact of students' social media use on the educational environment, noting the "dramatic disruption in the teaching and learning ecosystems of all our nation's schools[.]"[1047] The report confirms that "[d]ealing with social media-related issues detracts from the primary mission of our schools, which is to educate our children," and it details the myriad ways in which "[s]chool districts have borne increased costs and expenses in response to the impacts of social media."[1048] The same is true in Plaintiff's District. Defendants' conduct has caused a substantial disruption to the learning environment in schools throughout the district, and has caused increased costs, expenses, and diversion of resources to mitigate the impacts of social media.

[1047] *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed'n Teachers (2023), https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf.
[1048] *Id.* at 3–5.

880. As noted above, school districts are uniquely harmed by the current crisis of youth social media addiction, including the negative impact on students' mental, social, and emotional health. This is because schools are one of the main providers of mental health services for school-aged children.

881. Schools nationally and in the Plaintiff's District are struggling not only to provide students with mental health services but also to deliver an adequate education because of the youth mental health crisis. Students in grades 6–12 are suffering from depression, stress, and anxiety, which are serious obstacles to learning. Most middle school and high school students also fail to get enough sleep on school nights, which contributes to poor academic performance. Use of Defendants' social media platforms causes or contributes to cause these problems for students, which in turn creates a nuisance for the school districts.

882. The youth mental health crisis has also caused a wide range of other behavioral issues among students that interfere with schools' ability to teach. There has been a substantial increase in behaviors such as classroom disruptions, students skipping class, the use of electronic devices during class, and bullying and fights, both nationally and in the Plaintiff's District. Defendants' social media platforms cause these behaviors and, therefore, cause the nuisance that exists in the Plaintiff's District.

883. Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants' conduct, including the following:

a. hiring additional personnel to address mental, emotional, and social health issues;

b. developing additional resources to address mental, emotional, and social health issues;

c. increasing training for teachers and staff to identify students exhibiting symptoms affecting their mental, emotional, and social health;

d. training teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;

e. developing lesson plans to teach students about the dangers of using Defendants' platforms;

f. educating students about the dangers of using Defendants' platforms;

g. addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;

h. increasing disciplinary services;

i. confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;

j. meeting with students and the parents of students caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;

k. diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;

l. updating its student handbook to address use of Defendants' platforms; and

m. updating school policies to address use of Defendants' platforms.

884. Fully abating the nuisance resulting from Defendants' conduct will require much more than these steps. In addition to actions already taken and funds already spent, Plaintiff needs to take additional actions and spend additional funds to address the harm caused by Defendants and abate the nuisance. For instance, with additional funding, Plaintiff would consider strategies like purchasing additional learning materials to aid students who are behind on their progress due in whole or in part to their social media addiction and purchasing faraday bags (or something similar) to disable phones, to attempt to reduce the disruption caused by social media addiction during the school day.

885. As detailed herein, Plaintiff has suffered special damage different in kind or quality from that suffered by the public in common. Plaintiff has a unique responsibility to operate its public schools. The damages suffered by Plaintiff have been greater in degree and different in kind than those suffered by the general public including, but not limited to, costs arising from: expending, diverting, and increasing personnel to provide mental health services; expending, diverting, and increasing resources to address mental health issues; expending, diverting, and increasing staff time to confiscate cell phones and other devices; expending, diverting, and increasing staff time to communicate and engage with parents; expending, diverting, and increasing staff time associated with student discipline; expending, diverting, and increasing staff time associated with routing students to counselors; expending, diverting, and increasing staff time to train staff to identify students exhibiting symptoms affecting their mental health; expending, diverting, and increasing resources for modifications to mental health curriculum; expending, diverting, and increasing resources for creating education materials addressing social media

addiction and harm for students, parents, and staff; and expending, diverting, and increasing resources to repair property damages as a result of Defendants' addictive platform directed to students.

886. As a result of Defendant's conduct, Plaintiff has incurred damages and is entitled to compensation therefor. Plaintiff requests all the relief to which it is entitled in its own right and relating to the special damage or injury it has suffered, including actual and compensatory damages in an amount to be determined at trial, an order providing for the abatement of the public nuisance that Defendants have created or assisted in the creation of, and an order enjoining Defendants from future conduct contributing to the public nuisance described above. Plaintiff's claim is not brought in any representative or *parens patriae* capacity on behalf of students.

887. Defendants engaged in conduct, as described above, that constituted malice and/or intentional, wanton, willful, or reckless disregard of Plaintiff's rights, being fully aware of the probable dangerous consequences of the conduct and deliberately failing to avoid those consequences.

888. Defendants' conduct, as described above, was intended to serve their own interests despite having reason to know and consciously disregarding a substantial risk that their conduct might significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a course of conduct knowing that it created a substantial risk of significant harm to others, including Plaintiff. Defendants regularly risk the health of consumers and users of their platforms with full knowledge of the dangers of their platforms. In doing so, Defendants knowingly and intentionally placed the burden of that risk on others, including Plaintiff and other school districts. Defendants consciously decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants' willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive damages.

889. Defendants are jointly and severally liable. As alleged throughout this Complaint, Defendants' actions were intentional, and Plaintiff has suffered property damage as a result.

COUNT TWO — CALIFORNIA NEGLIGENCE

890. Plaintiff incorporates by reference all preceding paragraphs.

891. California law establishes the general duty of each person to exercise, in his or her activities, reasonable care for the safety of others. Cal. Civ. Code § 1714.

892. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm, and to act with reasonable care as a reasonably careful person and/or company would act under the circumstances.

893. Public policy factors support the imposition of a duty on Defendants to exercise reasonable care toward Plaintiff and other school districts because any social utility of Defendants' conduct is greatly outweighed by the harms of addicting youth to social media, causing a massive disruption to the learning process and requiring additional expenditures at public schools throughout Plaintiff's community and elsewhere.

894. Another reason Defendants owed a duty of care to Plaintiff is that the harms to Plaintiff and other school districts were clearly foreseeable to Defendants. Defendants not only were aware of the risk that their products would addict school children, but they were also actively seeking that result, as laid out above. Defendants wanted children using their products during the school day. They also understood that their products could be addictive and harmful to children. Thus, the economic costs and severe disruption to the learning process that have harmed Plaintiff and other school districts were also foreseeable to all Defendants, as they are a natural and probable consequence of massive numbers of children becoming addicted to social media platforms, as well as the youth mental health crisis that those platforms foreseeably caused.

895. At all times relevant to this litigation, Defendants owed a duty to consumers and the general public, including Plaintiff, to exercise reasonable care in the design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of Defendants' social media platforms, including the duty to take all reasonable steps necessary to design, research, market, advertise, promote, operate, and/or distribute their platforms in a way that is not unreasonably dangerous to consumers users, including youth.

896. At all times relevant to this litigation, Defendants owed a duty to consumers and the general public, including Plaintiff, to exercise reasonable care providing accurate, true, and correct information about the risks of using Defendants' platforms; and appropriate, complete, and accurate warnings about the potential adverse effects of extended social media use.

897. At all times relevant to this litigation, Defendants knew, or in the exercise of reasonable care should have known, of the hazards and dangers of their respective social media platforms and specifically, the health hazards their platforms posed to youth in particular, especially extended or problematic use of such platforms and social media addiction.

898. At all times relevant to this litigation, Defendants knew, or in the exercise of reasonable care should have known, that excessive use and addiction of students to their platforms would result in disruption and adverse impacts on schools. In fact, as described above, Defendants deliberately targeted students and their schools as a key customer group.

899. Accordingly, at all times relevant to this litigation, Defendants knew, or in the exercise of reasonable care should have known, that use of Defendants' social media platforms by youth could cause Plaintiff's injuries and thus created a dangerous and unreasonable risk of injury to Plaintiff.

900. Defendants also knew, or in the exercise of reasonable care should have known, that users and consumers of Defendants' social media platforms were unaware of the risks and the magnitude of the risks associated with the use of Defendants' platforms—including but not limited to the risks of extended or problematic social media use and social media addiction and the likelihood that algorithm-based recommendations would harm youth mental health.

901. As such, Defendants, by action and inaction, representation and omission, breached their duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably careful person and/or company would act under the circumstances in the design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms, in that Defendants designed, researched, developed, tested, marketed, supplied, promoted, advertised, operated, and distributed social media platforms that Defendants knew or had reason to know would negatively impact the mental health of consumers, particularly youth, and failed to prevent or adequately warn of these risks and injuries. This negative impact on youth foreseeably harmed Plaintiff and other school districts, as described above.

902. Despite their ability and means to investigate, study, and test their social media platforms and to provide adequate warnings, Defendants have failed to do so. Defendants have wrongfully

concealed information and have made false and/or misleading statements concerning the safety and use of Defendants' social media platforms.

903. Defendants' negligence includes, but is not limited to:

a. Designing, researching, developing, marketing, supplying, promoting, advertising, operating, and distributing their social media platforms without thorough and adequate pre- and post-market testing; design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution;

b. Failing to sufficiently study and conduct necessary tests to determine whether or not their social media platforms were safe for youth users;

c. Failing to use reasonable and prudent care in the research, design, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms, so as to avoid the risk of encouraging extended social media use;

d. Designing their social media platforms to maximize the amount of time users spend on the platform and causing excessive and problematic use of their platforms, particularly among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;

e. Failing to implement adequate safeguards in the design and operation of their platforms to ensure they would not encourage excessive and problematic use of their platforms;

f. Designing and manufacturing their platforms to appeal to minors and young people who lack the same cognitive development as adults and are particularly vulnerable to social rewards like IVR and social reciprocity;

g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;

i. Failing to disclose to, or warn, Plaintiff, users, consumers, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;

j. Failing to disclose to Plaintiff, users, consumers, and the general public that Defendants' platforms are designed to maximize the time users, particularly youth, spend on Defendants' platforms and cause negative mental health consequences;

k. Representing that Defendants' platforms were safe for child and adolescent users when, in fact, Defendants knew or should have known that the platforms presented acute mental health concerns for young users;

l. Failing to alert users and the general public, including students at Plaintiff's schools, of the true risks of using Defendants' platforms;

m. Advertising, marketing, and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, youth use of Defendants' platforms;

n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and distribute Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to youth mental health;

o. Failing to modify Defendants' algorithms in a manner that would no longer prioritize maximizing the amount of time users spend on Defendants' platforms over the safety of its youth users; and

p. Committing other failures, acts, and omissions set forth herein.

904. Defendants knew or should have known that it was foreseeable that Plaintiff would suffer injuries as a result of Defendants' failure to exercise reasonable care in designing, researching, developing, testing, marketing, supplying, promoting, advertising, operating, and distributing Defendants' platforms, particularly when Defendants' platforms were designed, developed, operated and marketed to maximize the time youth spend on Defendants' platforms.

905. Defendants could have reasonably foreseen the probable harm caused by their negligence. Each Defendant's acts and omissions were a substantial factor in causing harm to Plaintiff. The harms suffered by the Plaintiff and other school districts, as laid out above, would not have occurred if not for Defendants' negligence.

906. Plaintiff did not know the nature and extent of the injuries that could result from the intended use of Defendants' social media platforms by Plaintiff's students.

907. Defendants' negligence helped to and did produce, and was the proximate cause of, the injuries, harm, and economic losses that Plaintiff suffered and will continue to suffer, and such injuries, harm, and economic losses would not have happened without Defendants' negligence as described herein.

908. The mental health crisis caused and/or significantly contributed to by Defendants has caused an ongoing behavioral disruption in Plaintiff's schools, and Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants' conduct, including the following:

a. hiring additional personnel to address mental, emotional, and social health issues;

b. developing additional resources to address mental, emotional, and social health issues;

c. increasing training for teachers and staff to identify students manifesting mental, emotional, and social health issues;

d. training teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;

e. developing lesson plans to teach students about the dangers of using Defendants' platforms;

f. educating students about the dangers of using Defendants' platforms;

g. addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;

h. increasing disciplinary services;

i. confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;

j. meeting with students and the parents of students caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;

k. diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;

l. updating its student handbook to address use of Defendants' platforms; and

m. updating school policies to address use of Defendants' platforms.

909. In addition to actions already taken and funds already spent, Plaintiff needs to take additional actions and spend additional funds to address the damages caused by Defendants and abate the nuisance. For instance, with additional funding, Plaintiff would consider strategies like purchasing additional learning materials to aid students who are behind on their progress due in whole or in part to their social media addiction and purchasing faraday bags (or something similar) to disable phones, to attempt to reduce the disruption caused by social media addiction during the school day.

910. Defendants' conduct, as described above, was intended to serve their own interests despite having reason to know and consciously disregarding a substantial risk that their conduct might significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a course of conduct knowing that it created a substantial risk of significant harm to others, including Plaintiff. Defendants regularly risk the health of consumers and users of their platforms with full knowledge of the dangers of their platforms. Defendants consciously decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants' willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive damages.

COUNT THREE — CALIFORNIA GROSS NEGLIGENCE

911. Plaintiff incorporates by reference all preceding paragraphs.

912. California law establishes the general duty of each person to exercise, in his or her activities, reasonable care for the safety of others. Cal. Civ. Code § 1714.

913. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm, and to act with reasonable care as a reasonably careful person and/or company would act under the circumstances.

914. Defendants owed a duty to users and the general public, including Plaintiff, to exercise reasonable care in the design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of Defendants' social media platforms, including the duty to take all reasonable steps necessary to design, research, market, advertise, promote, operate, and/or distribute their platforms in a way that is not unreasonably dangerous to users, including children.

915. Defendants owed a duty to users and the general public, including Plaintiff, to exercise reasonable care in the design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms, including the duty to provide accurate, true, and correct information about the risks of using Defendants' platforms; and appropriate, complete, and accurate warnings about the potential adverse effects of extended social media use.

916. Defendants knew or, in the exercise of reasonable care, should have known of the hazards and dangers of their respective social media platforms and specifically, the health hazards their platforms posed to youth in particular, especially extended or problematic use of such platforms and social media addiction.

917. Defendants' platforms were the of the type that could endanger others, particularly youth, if negligently made, promoted, or distributed. Defendants knew the risks that young people would be attracted to their platforms yet would be unable to appropriately limit their use of Defendants' platforms because of their still-developing brains. Further, Defendants knew the risks their platforms posed to youth, especially extended or problematic use of such platforms and social media addiction.

918. Defendants were grossly negligent in designing, researching, developing, testing, marketing, supplying, promoting, advertising, operating, and distributing their social media platforms.

919. As developers of widely used platforms backed by powerful algorithms designed to maximize the amount of time users spend on the platform, Defendants knew or should have known their platforms needed to be designed, researched, developed, tested, marketed, supplying, promoted, advertised, operated, and distributed with due care to avoid causing needless harm. Defendants knew or should have known their platforms could cause serious risk of harm, particularly to young persons like students in Plaintiff's schools.

920. Defendants engaged in grossly negligent, willful, and/or wanton conduct that lacked any care and amounted to an extreme departure from what a reasonably careful person would do in the same situation to prevent harm to others. Defendants' willful and wanton conduct caused Plaintiff to suffer harm.

921. The grossly negligent, willful, and wanton conduct of Defendants includes, but is not limited to, the following:

a. Designing researching, developing, marketing, supplying, promoting, advertising, operating, and distributing their social media platforms without thorough and adequate pre- and post-market testing; design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution;

b. Failing to sufficiently study and conduct necessary tests to determine whether or not their social media platforms were safe for youth users;

c. Failing to use reasonable and prudent care in the research, design, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms so as to avoid the risk encouraging extended social media use;

d. Designing their social media platforms to maximize the amount of time users spend on the platform and causing excessive and problematic use of their platforms, particularly among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;

e. Failing to implement adequate safeguards in the design and operation of their platforms to ensure they would not encourage excessive and problematic use of their platforms;

f. Designing and manufacturing their platforms to appeal to minors and young people who lack the same cognitive development as adults and are particularly vulnerable to social rewards like IVR and social reciprocity;

g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;

i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;

j. Failing to disclose to Plaintiff, users, and the general public that Defendants' platforms are designed to maximize the time users, particularly youth, spend on Defendants' platforms and cause negative mental health consequences;

k. Representing that Defendants' platforms were safe for child and adolescent users when, in fact, Defendants knew or should have known that the platforms presented acute mental health concerns for young users;

l. Failing to alert users and the general public, including students at Plaintiff's schools of the true risks of using Defendants' platforms;

m. Advertising, marketing, and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, youth use of Defendants' platforms;

n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and distribute Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to youth mental health;

o. Failing to modify Defendants' algorithms in a manner that would no longer prioritize maximizing the amount of time users spend on Defendants' platforms over the safety of its youth users; and

p. Committing other failures, acts, and omissions set forth herein.

922. Defendants breached the duties they owed to Plaintiff and in doing so were wholly unreasonable.

923. Defendants breached their duties through their false and misleading statements and omissions in the course of designing, manufacturing, distributing, and marketing their social media platforms.

924. As a foreseeable consequence of Defendants' breaches of their duties, Plaintiff has suffered and will continue to suffer direct and consequential economic and other injuries as a result of dealing with the youth mental health crisis in Plaintiff's schools, as described herein.

925. Defendants engaged in conduct, as described above, that constituted malice, oppression, or fraud, with intent to cause injury and/or with willful and knowing disregard of the rights or safety of another, being fully aware of the probable dangerous consequences of the conduct and deliberately failing to avoid those consequences.

926. Defendants regularly risk the health and lives of users of its platforms with full knowledge of the dangers of its platforms. Defendants made conscious decisions not to redesign their platforms, or warn the unsuspecting public, including Plaintiff and Plaintiff's students. Defendants' willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive damages.

VI. DEMAND FOR A JURY TRIAL

927. Plaintiff hereby demands a trial by jury.

VII. PRAYER FOR RELIEF

928. Entering an Order that the conduct alleged herein constitutes a public nuisance under California law;

929. Entering an Order that Defendants are jointly and severally liable;

930. Entering an Order requiring Defendants to abate the public nuisance described herein and to deter and/or prevent the resumption of such nuisance;

931. Enjoining Defendants from engaging in further actions causing or contributing to the public nuisance as described herein; and

932. Awarding equitable relief to fund prevention education and addiction treatment;

933. Awarding actual and compensatory damages;

934. Awarding punitive damages;

935. Awarding statutory damages in the maximum amount permitted by law;

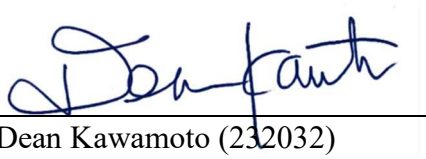
936. Awarding reasonable attorneys' fees and costs of suit;

937. Awarding pre-judgment and post-judgment interest; and

938. Such other and further relief as the Court deems just and proper under the circumstances.

RESPECTFULLY SUBMITTED this 21st day of October, 2026.

KELLER ROHRBACK L.L.P.

By 

Dean Kawamoto (232032)
Felicia J. Craick
Chris N. Ryder
Patrick T. Marriott
Kylie Fisher
1201 Third Avenue, Suite 3400
Seattle, WA 98101-3052
(206) 623-1900; Fax (206) 623-3384
Email: dkawamoto@kellerrohrback.com
fcraick@kellerrohrback.com
cryder@kellerrohrback.com
pmarriott@kellerrohrback.com
kfisher@kellerrohrback.com

Attorneys for Plaintiff