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Superior Court of California,
County of Los Angeles
4/15/2024 2:59 PM
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SUPERIOR COURT OF THE STATE OF CALIFORNIA
COUNTY OF LOS ANGELES
UNLIMITED JURISDICTION

PORTERVILLE 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. **24STCV09424**

COMPLAINT

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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

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

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

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

17 7. The United States Surgeon General (“Surgeon General”) recently explained that children
18 versus Big Tech is “just not a fair fight.”² He further stated:

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

24 8. Over the past decade, Defendants have relentlessly pursued a strategy of growth-at-all-
25 costs, recklessly ignoring the impact of their platforms on children’s mental and physical health and
26

27 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/>.

28 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>.

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

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

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

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

21
22 ³ See, e.g., Haugen_00000934 at Haugen_00000934 (admission by a Software Engineer at Meta: “It’s
23 not a secret that we’ve often resorted to aggressive tactics in the name of growth, and we’ve been
24 pretty unapologetic about it.”).

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

28 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-](https://www.sec.gov/ix?doc=/Archives/edgar/data/0001564408/000156440823000013/snap-20221231.htm)
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->

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

3 In these digital public spaces, which are privately owned and tend to be run for profit,
4 there can be tension between what’s best for the technology company and what’s best for
5 the individual user or for society. Business models are often built around maximizing
6 user engagement as opposed to safeguarding users’ health and ensuring that users engage
7 with one another in safe and healthy ways[.]

8 **[T]echnology companies must step up and take responsibility for creating a safe**
9 **digital environment for children and youth.** Today, most companies are not
10 transparent about the impact of their products, which prevents parents and young people
11 from making informed decisions and researchers from identifying problems and
12 solutions.¹³

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

22 16. These statements by President Biden and the Surgeon General are in line with a
23 substantial body of peer-reviewed scientific literature documenting the harmful impact that Defendants’
24

25 2021T22:28/[https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-](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)
26 youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html.

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

¹⁴ President Biden, *State of the Union Address* (Mar. 1, 2022), [https://www.whitehouse.gov/state-of-the-](https://www.whitehouse.gov/state-of-the-union-2022/)
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-](https://www.wsj.com/articles/unite-against-big-tech-abuses-social-media-privacy-competition-antitrust-children-algorithm-11673439411)
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.

1 schools.”²⁰ In addition, the rates of mental health issues among children have climbed steadily since
2 2010. By 2018, suicide was the second leading cause of death for youth.²¹ As some of the largest
3 providers of youth counseling in the country, school districts have been forced to devote ever-increasing
4 resources to mental health and learning support.

5 20. Defendants’ conduct has left schools nationwide, including Plaintiff’s schools, struggling
6 to provide the support students need, from emotional and mental health support to new and increased
7 learning support programs. School districts are the primary providers of mental health services to
8 youth²² and are charged with the important public service of educating youth. As a result of Defendants’
9 choices, students and schools are in crisis; responding to this crisis is stealing resources from schools’
10 primary objective of educating youth in a safe and healthy environment. In addition to teaching our
11 children how to read and write, Plaintiff and Plaintiff’s schools are tasked with teaching our children
12 how to lead healthy lives, from nutrition to navigating the digital world we live in. Schools cannot
13 ignore the importance of the online world in today’s society. But teaching youth how to avoid the
14 pitfalls of that world, including the addictive and dangerous features of Defendants’ platforms, requires
15 ever-increasing time and resources. In that fight, schools’ limited resources are pitted against
16 Defendants’ virtually unlimited resources. This is also not a fair fight, and despite considerable effort,
17 schools are losing the battle.

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

22 ²⁰ *Id.*

23 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>.

24 ²² *K-12 Schools Now Primary Providers of Mental Health Services for Adolescents*, EAB (Feb. 13,
25 2020), [https://eab.com/insights/press-release/district-leadership/k12-schools-primary-provider-mental-](https://eab.com/insights/press-release/district-leadership/k12-schools-primary-provider-mental-health/)
26 [health/](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),
27 <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables> (reporting that over 3.7 million
28 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.

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

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

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

22
23 ²⁴ See, e.g., META3047MDL-003-00134688 at META3047MDL-003-00134706; META3047MDL-
003-00022355 at META3047MDL-003-00022355.

24 ²⁵ See, e.g., TIKTOK3047MDL-001-00061318.

25 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>].

26 ²⁷ *Teachers: About, YouTube*, <https://www.youtube.com/Teachers>.

27 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.

28 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").

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

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

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

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

25 **II. JURISDICTION AND VENUE**

26 32. This Court has jurisdiction over this action pursuant to Cal. Code Civ. Proc. §§ 395 and
27 410.10.

1 **B. Meta Defendants**

2 38. Defendant Meta Platforms, Inc. (“Meta”) is a multinational technology conglomerate,
3 having its principal place of business in Menlo Park, California. Meta designs, develops, owns, operates,
4 and markets social media products, communication products, and electronic devices, including
5 Facebook and Instagram, which are available to minors throughout the United States.³³ Meta was
6 originally incorporated in Delaware on July 29, 2004, as “TheFacebook, Inc.” On September 20, 2005,
7 the company changed its name to “Facebook, Inc.” On October 28, 2021, the company assumed its
8 current designation. While Plaintiff has attempted to identify the specific Meta subsidiary(s) that
9 committed each of the acts alleged in this Complaint, Plaintiff was not always able to do so, in large part
10 due to ambiguities in Meta’s and its subsidiaries’ own documents, public representations, and lack of
11 public information. However, upon information and belief, Meta oversees the operations of its various
12 platforms and subsidiaries, some of which have been identified and are listed below. For this reason,
13 unless otherwise specified, the shorthand “Meta” contemplates the apparent control that Meta wields
14 over its subsidiaries’ overall operations and, therefore, further refers to its various subsidiaries and
15 predecessors. To the extent this assumption is incorrect, the knowledge of which Meta subsidiary,
16 current or former, is responsible for specific conduct is knowledge solely within Meta’s possession, the
17 details of which Plaintiff should be permitted to elucidate during the discovery phase.

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

21 40. Defendant Facebook Holdings, LLC (“Facebook Holdings”) was incorporated in
22 Delaware on March 11, 2020, and is a wholly owned subsidiary of Meta. Facebook Holdings is
23 primarily a holding company for entities involved in Meta’s supporting and international endeavors, and
24 its principal place of business is in Menlo Park, California.

25 41. Defendant Facebook Operations, LLC (“Facebook Operations”) was incorporated in
26 Delaware on January 8, 2012, and is a wholly owned subsidiary of Meta. Facebook Operations is likely

27 ³³ These products include Facebook (its self-titled app, Messenger, Messenger Kids, Marketplace,
28 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”).

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

3 42. Defendant Meta Payments Inc. (“Meta Payments”) is a wholly owned subsidiary of Meta.
4 Meta Payments processes and manages payments made through Meta. Meta Payments’ principal place
5 of business is in Menlo Park, California. Meta Payments was incorporated in Florida on December 10,
6 2010, as Facebook Payments Inc. In July 2022, the entity’s name was amended to Meta Payments Inc.

7 43. Defendant Siculus, Inc. (“Siculus”) was incorporated in Delaware on October 19, 2011.
8 Siculus is a wholly owned subsidiary of Meta. Siculus constructs data facilities that support Meta’s
9 platforms. Siculus’s principal place of business is in Menlo Park, California.

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

15 **C. Defendant Snap Inc.**

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

21 **D. TikTok Defendants**

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

1 47. Defendant ByteDance Inc. (“ByteDance”) is incorporated in Delaware and its principal
2 place of business is in Mountain View, California. ByteDance design, owns, develops, markets, and/or
3 operates TikTok, and design, owns, develops, markets, and/or operates the TikTok social media
4 platform.

5 48. Defendant TikTok Pte. Ltd. (“TikTok Pte.”), a related corporate entity, is headquartered
6 in Singapore. TikTok Pte. is nominally listed in the Apple App Store, Google Play Store, and Microsoft
7 Store.

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

12 **E. YouTube Defendants**

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

21 51. Defendant YouTube, LLC (“YouTube”) is a limited liability company incorporated in
22 Delaware, and its principal place of business is in San Bruno, California. YouTube is a wholly owned
23 subsidiary of Google. YouTube transacts or has transacted business in this County and throughout the
24 United States. At all times material to this Complaint, acting alone or in concert with defendant Google,
25 YouTube has designed, developed, operated, advertised, marketed, and distributed its YouTube social
26 media platform to consumers throughout the United States. At all times material to this Complaint,
27 acting alone or in concert with Google, YouTube formulated, directed, controlled, had the authority to
28 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.

52. 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."³⁴

53. 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.

54. Recognizing the vulnerability of children under 13, particularly in the Internet Age, Congress enacted the Children's Online Privacy Protection Act ("COPPA") in 1999.³⁵ 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.³⁶ Even apart from COPPA, it is well

³⁴ *Social Media Addiction: What is Social media Addiction?*, Addiction Ctr., <https://www.addictioncenter.com/drugs/social-media-addiction/>.

³⁵ See 15 U.S.C. §§ 6501–6506.

³⁶ 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

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

3 55. COPPA was enacted precisely because Congress recognized that children under age 13
4 are particularly vulnerable to being taken advantage of by unscrupulous website operators. As a June
5 1998 report by the FTC observed, “[t]he immediacy and ease with which personal information can be
6 collected from children online, combined with the limited capacity of children to understand fully the
7 potentially serious safety and privacy implications of providing that information, have created deep
8 concerns about current information practices involving children online.”³⁷ The same report observed that
9 children under the age of 13 “generally lack the developmental capacity and judgment to give
10 meaningful consent to the release of personal information to a third party.”³⁸

11 56. Contemporaneous testimony by the Chairman of the FTC observed that the Internet
12 “make[s] it easy for children to disclose their personal information to the general public without their
13 parents’ awareness or consent. Such public disclosures raise safety concerns.”³⁹ Further, “the practice of
14 collecting personal identifying information directly from children without parental consent is clearly
15 troubling, since its [sic] teaches children to reveal their personal information to strangers and
16 circumvents parental control over their family’s information.”⁴⁰

17 57. None of the Defendants conduct proper age verification or authentication. Instead, each
18 Defendant relies on users to self-report their age. This unenforceable and facially inadequate system
19 allows children under 13 to easily create accounts on Defendants’ platforms. Defendants know this,
20

21
22 the primary account holder; (c) connecting to trained personnel via video-conference; (d) calling a toll-
23 free number staffed by trained personnel; (e) asking knowledge-based challenge questions; or (f)
24 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-](https://www.ftc.gov/business-guidance/resources/complying-coppa-frequently-asked-questions)

³⁷ *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>.

³⁸ *Id.* at 5.

³⁹ *S. 2326, Children’s Online Privacy Protection Act of 1998: Hearing Before the Subcomm. on*
Comm’n’s 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).

⁴⁰ *Id.* at 11.

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

3 58. This is particularly egregious for two reasons. First, Defendants have long been on notice
4 of the problem. For instance, in May 2011, *Consumer Reports* reported the “troubling news” that 7.5
5 million children age 12 and younger were on Facebook.⁴¹ Second, given that Defendants have developed
6 and utilized age-estimation algorithms for the purpose of selling user data and targeted advertisements,
7 Defendants could readily use these algorithms to prevent children under 13 from accessing their
8 platforms, but choose not to do so. Instead, they have turned a blind eye to collecting children’s data in
9 violation of COPPA and leave school districts, including Plaintiff, to fund treatment and services to
10 remedy the harms that Defendants cause.

11 59. Defendants have done this because children are financially lucrative, particularly when
12 they are addicted to or compulsively using Defendants’ platforms.

13 **2. Children are uniquely susceptible to harm from Defendants’ platforms.**

14 60. The frontal lobes of the brain—particularly the prefrontal cortex—control higher-order
15 cognitive functions. This region of the brain is central to planning and executive decision-making,
16 including the evaluation of future consequences and the weighing of risk and reward. It also helps
17 inhibit impulsive actions and “regulate emotional responses to social rewards.”⁴²

18 61. Children and adolescents are especially vulnerable to developing harmful behaviors
19 because their prefrontal cortex is not fully developed.⁴³ Indeed, it is one of the last regions of the brain to
20 mature.⁴⁴ In the images below, the blue color depicts brain development.⁴⁵ \

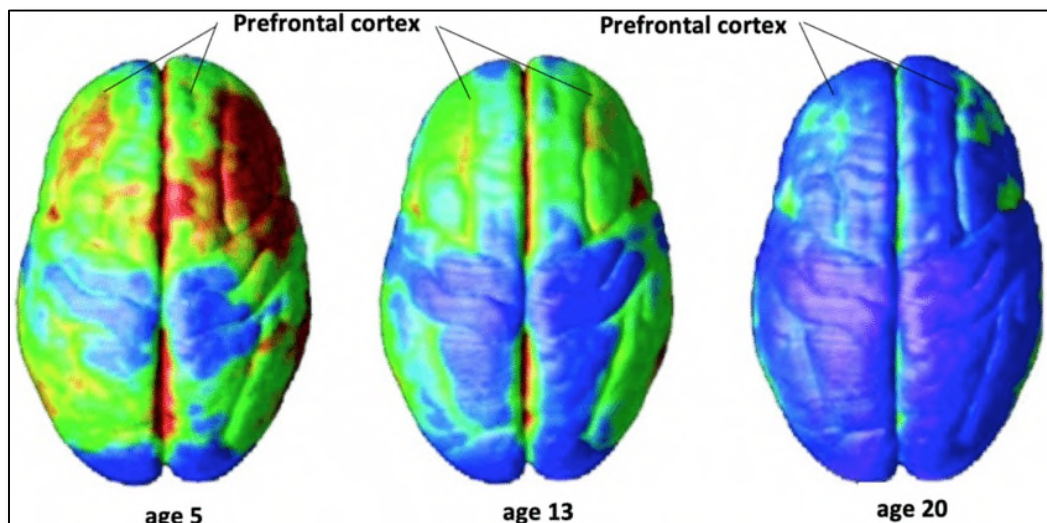
21
22 ⁴¹ Emily Bazelon, *Why Facebook is After Your Kids*, N.Y. Times (Oct. 12, 2011),
23 <https://www.nytimes.com/2011/10/16/magazine/why-facebook-is-after-your-kids.html>
24 [<https://perma.cc/7EY7-KFF5>].

25 ⁴² Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n (Aug.
26 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>.

27 ⁴³ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation*
28 *model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC Psychiatry 279
(2022), <https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf>.

⁴⁴ *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>].

⁴⁵ 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),



62. 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.

63. Social rewards deliver a rush of dopamine and oxytocin, sometimes called the “happy hormones,” to the part of the brain called the ventral striatum.⁴⁶ Dopamine is a neurotransmitter that is central to the brain’s reward system.⁴⁷ 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.”⁴⁸

64. 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.⁴⁹

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

⁴⁶ 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>.

⁴⁷ *Id.*

⁴⁸ *Id.*

⁴⁹ *Id.*

65. 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.⁵⁰ Adolescents are at a stage where their personalities and identities are forming, much of which “is now reliant on social media.”⁵¹

66. 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.⁵² 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.⁵³ As a result, the individual develops tolerance, and the brain requires increasingly more of a stimulus to experience the same feeling of reward.

67. 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.”⁵⁴

68. 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.⁵⁵

⁵⁰ *Id.*

⁵¹ Betül 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>.

⁵² 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>.

⁵³ 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>.

⁵⁴ *Id.* at 8.

⁵⁵ 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.

69. 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[.]”⁵⁶ In other words, the anticipation of a reward can itself trigger a dopamine rush.

70. 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.⁵⁷ 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.⁵⁸ 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.

71. 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.”⁵⁹ 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[.]”⁶⁰ 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>.

⁵⁶ 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>.

⁵⁷ *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.

⁵⁸ 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>.

⁵⁹ 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>].

⁶⁰ *Id.*

accounts, which is why so many children are heavy users of Instagram, Snapchat, and TikTok by age 10 or 11.”⁶¹

72. 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.⁶² Dopamine receptors were found reduced in the striatum (central component of the reward system) of the brain in individuals with Internet addiction.⁶³ Like other addicting products, Defendants’ platforms hook their users by disrupting their brains’ reward circuitry.

73. 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.

74. “Everyone innately responds to social approval, but some demographics, in particular teenagers, are more vulnerable to it than others.”⁶⁴ 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.⁶⁵

75. 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

⁶¹ *Id.*

⁶² 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>.

⁶³ 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>].

⁶⁴ 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>.

⁶⁵ Betül 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>.

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

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

9 77. In short, children find it particularly difficult to exercise the self-control required to
10 regulate their use of Defendants' platforms, given the stimuli and rewards embedded in those platforms,
11 and as a foreseeable and probable consequence of Defendants' design choices tend to engage in
12 addictive and compulsive use.⁶⁶ Defendants engaged in this conduct even though they knew or should
13 have known that their design choices would have a detrimental effect on school operations and youth in
14 schools, including those in Plaintiff's district, leading to serious problems in schools.

15 78. Adding to the harm caused to children and teens, Defendants' social media platforms
16 generate never-ending and heightened social comparison. The need to compare oneself to other
17 individuals is a hard-wired characteristic of being human and is biologically powerful. But Defendants'
18 platforms create an unnatural environment of constant social comparison due to filters and other features
19 that Defendants have designed and developed. This is by design: social comparison is yet another aspect
20 of human psychology that Defendants intentionally manipulate through the design of their platforms and
21 features to maximize "user engagement" and, in turn, profits. For children and teens, this has significant
22 public health consequences. As the Surgeon General warned, "[s]ocial comparison driven by social
23 media is associated with body dissatisfaction, disordered eating, and depressive symptoms."⁶⁷ This has
24 significant consequences for Plaintiff and other school districts, as described below.

25
26 ⁶⁶ Fulton Crews *et al.*, *Adolescent cortical development: A critical period of vulnerability for addiction*,
86 Pharmacology Biochemistry & Behav. 189–199, 194 (2007),
27 <https://doi.org/10.1016/j.pbb.2006.12.001> [<https://perma.cc/Z26H-JKYN>].

28 ⁶⁷ *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-](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf)
advisory.pdf.

1 79. These consequences of Defendants’ conduct are no surprise. Since the early 2000s,
2 studies have shown that frequent upward social comparison results in lower self-esteem and reduced
3 overall mental health.⁶⁸

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

17 81. Defendants’ image-altering filters cause mental health harms in multiple ways.⁶⁹ First,
18 because of the popularity of these editing tools, many of the images teenagers see have been edited by
19 filters, and it can be difficult for teenagers to remain cognizant of the use of filters. This creates a false
20 reality wherein all other users on the platforms appear better looking than they actually are, often in an
21 artificial way. As children and teens compare their actual appearances to the edited appearances of
22 themselves and others online, their perception of their own physical features grows increasingly
23

24 ⁶⁸ Claire Midgley *et al.*, *When Every Day is a High School Reunion: Social Media Comparisons and*
25 *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.

26 ⁶⁹ Anna Haines, *From ‘Instagram Face’ To ‘Snapchat Dysmorphia’: How Beauty Filters Are Changing*
27 *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>
28 [<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.

82. 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 13.⁷⁰ 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.⁷¹ Filters, especially in combination with other design features, directly cause body image issues, eating disorders, body dysmorphia, and related issues.⁷² 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.⁷³

⁷⁰ *Id.*

⁷¹ *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.”).

⁷² 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>.

⁷³ 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[.]”⁷⁴

83. 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.”⁷⁵

84. In a recent article, clinical psychologists predicted social media addiction will become a formal diagnosis, with many of the same effects as substance abuse.⁷⁶ 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.⁷⁷ 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.⁷⁸ 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.⁷⁹

85. Defendants’ platforms are highly addictive because Defendants intended them to be so.

86. 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>.

⁷⁴ 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>.

⁷⁵ 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>.

⁷⁶ 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>.

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Id.*

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

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

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

9 89. By measuring and exploiting every aspect of content agnostic user interaction with their
10 platforms—from click patterns to location to social networks⁸⁰—the Defendants' algorithms and
11 recommendation systems are optimized to maximize the amount of time users spend on Defendants'
12 platforms without consideration for actual information being served.⁸¹

13 90. This automated attention farming weaponizes user interaction to fuel Defendants'
14 addiction engines.⁸²

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

17 92. Meta, for example, explains that “[w]e combine predictions of different events using an
18 arithmetic formula, called value model, to capture the prominence of different signals in terms of
19 deciding whether the content is relevant. We use a weighted sum of predictions such as $[w_like * P(\text{Like}) + w_save * P(\text{Save}) - w_negative_action * P(\text{Negative Action})]$. If, for instance, we think the
20 importance of a person saving a post on Explore is higher than their liking a post, then the weight for the
21 save action should be higher.”⁸³ At no point does this process examine the information conveyed by the
22 content.

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26 ⁸⁰ MC ¶¶ 250, 265, 509, 585–591, 747–49.

27 ⁸¹ See *Id.* ¶¶ 250, 509, 585–591, 747–749.

28 ⁸² See *Id.* ¶ 755.

⁸³ *Powered by AI: Instagram's Explore recommender system*, Meta (Nov. 25, 2019)
<https://ai.meta.com/blog/powered-by-ai-instagrams-explore-recommender-system/>.

93. 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.⁸⁴

- a. a user’s demographics;⁸⁵
- b. what posts a user clicks on;⁸⁶
- c. how long a user reads or watches a post;⁸⁷
- d. which posts a user hovers their mouse over—and for how long they do so;⁸⁸
- e. which posts users don’t engage with—i.e., which posts fail to draw attention or engagement;⁸⁹
- f. what times of day users access the product;⁹⁰
- g. physical location where users access the product;⁹¹
- h. devices connected to the Wi-Fi networks a user connects through;⁹²
- 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.”

94. 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.

⁸⁴ Discovery is likely to reveal Defendants’ use of other content agnostic interaction data.

⁸⁵ See *Id.* ¶ 250–52, 747.

⁸⁶ See *Id.* ¶¶ 207, 242, 589–591, 747.

⁸⁷ See *Id.* ¶¶ 242, 589–591, 747.

⁸⁸ See *Id.* ¶ 250.

⁸⁹ See *Id.* ¶ 250, 509, 589–591, 747.

⁹⁰ See *Id.* ¶ 242.

⁹¹ See *Id.* ¶¶ 242, 252, 509, 289; 656, 711.

⁹² See *Id.* ¶¶ 242, 711.

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

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

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

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

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

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

22 101. While not identical, the Defendants’ platforms operate—and harm users—in similar
23 ways. Instagram, Facebook, TikTok, Snapchat, and YouTube employ many similar features that are
24 engineered to induce more use by young people—creating an unreasonable risk of compulsive use and
25 addiction.⁹³ For instance, all five platforms harvest user data and use this information to generate and
26

27 ⁹³ See Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*,
28 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

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

5 102. Far from avoiding this risk, Defendants ran toward it, knowing that child addiction to
6 their platforms would drive their revenue. For example, an internal presentation: *2017 Teens Strategic*
7 *Focus*, explicitly stated Meta’s “goal: retain [Monthly Active People] and [Daily Active People], [and]
8 grow teen time spent” by “rebuild[ing] social Facebook to work better for teens, including
9 entertainment.”⁹⁴ Similarly, an internal Meta planning document from November 2018 stated,
10 “[w]inning schools is the way to win with teens because an individual teen’s engagement is highly
11 correlated with school [Monthly Active People] penetration.”⁹⁵ “Solving jobs related to school and
12 building school network effects is a way to increase overall teen usage.”⁹⁶

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

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

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

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

27 ⁹⁴ 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.

28 ⁹⁵ MDL AG Compl. at 27, ¶ 147.

⁹⁶ *Id.*

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

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

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

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

23 110. Slot machines are a pertinent example of how IVR works in an addictive product to keep
24 users coming back.⁹⁷ Users pull a lever to win a prize and with each pull, the user may or may not win a
25 prize (i.e., an intermittent reward that varies in value).

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28 ⁹⁷ 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>.

111. 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.”⁹⁸ 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.”⁹⁹ Meta also delays the time it takes to load the feed. “This is because without that three-second delay, Instagram wouldn’t feel variable.”¹⁰⁰ 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.”¹⁰¹

112. 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[.]”¹⁰²

113. 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

⁹⁸ 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>.

⁹⁹ *Id.*

¹⁰⁰ 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>.

¹⁰¹ *Id.*

¹⁰² 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>].

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

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

6 115. Defendants also manipulate young users through their exploitation of “reciprocity”—the
7 psychological phenomenon by which people respond to positive or hostile actions in kind. Reciprocity
8 means that people respond in a friendly manner to friendly actions, and with negative retaliation to
9 hostile actions.¹⁰³ In the 1970s, sociologists Phillip Kunz and Michael Woolcott famously illustrated the
10 powerful effect of reciprocity through an experiment using holiday cards. They sent cards to a group of
11 complete strangers, and included a return address indicating that they were from either “Dr. and Mrs.
12 Kunz” or “Joyce and Phil.”¹⁰⁴ People whom Kunz had never met before reciprocated, flooding him with
13 holiday cards in return, some even including hand-written notes and pictures of their families.¹⁰⁵ Most of
14 the responses did not even ask who “Dr. Kunz” was—they simply responded to his initial gesture with a
15 reciprocal action.¹⁰⁶

16 116. Platforms such as Instagram and Snapchat exploit reciprocity by, for example,
17 automatically telling the sender when their message is seen, instead of letting the recipient avoid
18 disclosing whether it was viewed. Consequently, the recipient feels more obligated to respond
19 immediately, keeping users on the product.¹⁰⁷ Similarly, alerts and notifications of delivered messages or
20 comments compel the recipient to return to the product to respond.

23 ¹⁰³ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J. Econ.
24 Persps. 159181, 159 (2000), <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.14.3.159>.

25 ¹⁰⁴ Phillip R. Kunz & Michael Woolcott, *Season’s greetings: From my status to yours*, 5(3) Soc. Sci.
26 Rsch. 269–278, 270–271 (1976), [https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X)
[<https://perma.cc/5KLP-MC34>].

26 ¹⁰⁵ *Id.*

27 ¹⁰⁶ *Id.*

28 ¹⁰⁷ 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>.

117. Defendants’ platforms and design features also addict young users by preying on their already heightened need for social comparison and interpersonal feedback-seeking.¹⁰⁸ Because of their developmental stage, adolescents are primed to focus on social status, social comparisons, and a desire for social validation.¹⁰⁹ Defendants’ platforms encourage repetitive usage by dramatically amplifying those insecurities.

118. Professor Prinstein has explained that online and real-world interactions are fundamentally different.¹¹⁰ 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[.]”¹¹¹ By contrast, a design like the “Snap Streak” creates exactly such artificial forms of feedback.¹¹² On Defendants’ platforms, friends and even complete strangers can publicly deliver (or withhold) dopamine-laced likes, comments, views, and follows.¹¹³

119. 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.¹¹⁴ That an image was highly liked—regardless of its content—instinctively caused the

¹⁰⁸ 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>.

¹⁰⁹ 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).

¹¹⁰ 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>.

¹¹¹ *Id.*

¹¹² 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.

¹¹³ 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>.

¹¹⁴ 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.

1 girls to prefer it. As the researchers put it, teens react to perceived “endorsements,” regardless of
2 whether they know the source.¹¹⁵

3 120. Other features of Defendants’ platforms also amplify the heightened awareness of status
4 and appearance that is part of adolescence. Built into Defendants’ platforms are appearance-altering
5 filters, which underscore conventional (and often racially biased) standards of beauty, by allowing users
6 to remove blemishes, make bodies and faces appear thinner, and lighten skin tone. Those features
7 contribute to a harmful body image among adolescents, who begin to negatively perceive their own
8 appearance and believe their bodies, and indeed their lives, to be comparatively worse.¹¹⁶

9 121. Defendants’ respective product features work in combination to create and maintain a
10 user’s “flow-like state”: a hyper-focused, hypnotic state, where bodily movements are reflexive, and the
11 user is totally immersed in smoothly rotating through aspects of the social media product.¹¹⁷ This
12 experience of “flow,” as psychologists describe it, “fully immerse[s]” users, distorts their perception of
13 time, and is associated with excessive use of social media sites.¹¹⁸

14 122. As discussed in more detail below, features like the ones just described can cause or
15 contribute to the following injuries in young people: eating and feeding disorders; depressive disorders;
16 anxiety disorders; sleep disorders; trauma- and stressor-related disorders; obsessive-compulsive and
17 related disorders; disruptive, impulse-control, and conduct disorders; suicidal ideation; self-harm; and
18 suicide.¹¹⁹

21 ¹¹⁵ *Id.*

22 ¹¹⁶ *Id.*; see also Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated*
23 *mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC
24 *Psychiatry* 279 (2022), <https://bmcpyschology.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”).

25 ¹¹⁷ See, e.g., Sophia Petrillo, *What Makes TikTok so Addictive?: An Analysis of the Mechanisms*
26 *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).

27 ¹¹⁸ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation*
28 *model of problematic Facebook use, age, neuroticism, and extraversion* at 3, 10 BMC *Psychiatry* 279
(2022), <https://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf>.

¹¹⁹ See, e.g., *Id.*

123. 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.

124. Defendants have been staggeringly successful in their efforts to attract young users to their platforms. In 2021, 32% of 7- to 9-year-olds,¹²⁰ 49% of 10- to 12-year-olds,¹²¹ and 90% of 13- to 17-year-olds in the United States have used social media.¹²² 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.¹²³

125. 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.¹²⁴ 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.¹²⁵ Nearly half of U.S. teens use TikTok at least "several times a day."¹²⁶ 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.¹²⁷ Many

¹²⁰ *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.

¹²¹ *Id.*

¹²² *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.

¹²³ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 31, Common Sense Media (2022), https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

¹²⁴ *Id.*

¹²⁵ 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/>.

¹²⁶ *Id.*

¹²⁷ 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.

1 children are spending four or more hours on TikTok every day.¹²⁸ In one study, U.S. teenage users
2 reported checking Snapchat thirty times a day on average.¹²⁹

3 126. Many teenagers know they are addicted to Defendants' platforms: 36% admit they spend
4 too much time on social media.¹³⁰ Yet they cannot stop. Of the teens who use at least one social media
5 product "almost constantly," 71% say quitting would be hard. Nearly one-third of this population—and
6 nearly one-in-five of all teens—say quitting would be "very hard."¹³¹

7 127. Notably, the more teens use Defendants' platforms, the harder it is to quit. Teens who say
8 they spend too much time on social media are almost twice as likely to say that giving up social media
9 would be hard, compared to teens who see their social media usage as about right.¹³²

10 128. Despite using social media frequently, most young people don't particularly enjoy it. In
11 2021, only 27% of boys and 42% of girls ages 8–18 reported liking social media "a lot."¹³³ Moreover,
12 one survey found that young people think social media is the main reason youth mental health is getting
13 worse.¹³⁴ About twice as many of the surveyed youth believed that social media is the main reason for
14 declining mental health than the next likely cause, and over seven times more believed it to be the main
15 cause rather than drugs and alcohol.¹³⁵

16 129. The most recent data shows these trends persist. According to a 2023 report, 45% of teen
17 girls who use TikTok say they feel addicted to it or use it more than intended at least weekly.¹³⁶
18 Similarly, 37% of teen girls said they felt addicted to Snapchat, 34% said they felt addicted to YouTube,

19 ¹²⁸ *Id.*

20 ¹²⁹ Erinn Murphy *et al.*, Fall 2021: *Taking Stock with Teens at 13*, Piper Sandler (2021),
21 https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-4424-8fb1-0e3adfcdbd1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top.

22 ¹³⁰ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),
23 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

24 ¹³¹ *Id.*

25 ¹³² *Id.*

26 ¹³³ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 34,
27 Common Sense Media (2022), https://www.common Sense Media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

28 ¹³⁴ *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>.

¹³⁵ *Id.*

¹³⁶ Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media* at 6, Common Sense Media (2023), https://www.common Sense Media.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.¹³⁷ Notably, teenage girls reported higher rates of feeling addicted to these social media platforms than messaging apps.¹³⁸

130. 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.¹³⁹ 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[.]”¹⁴⁰

131. 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.”¹⁴¹ 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.¹⁴²

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

132. 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.¹⁴³

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ 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.

¹⁴⁰ *Id.* at 6.

¹⁴¹ *Id.* at 27.

¹⁴² *Id.*

¹⁴³ 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

1 133. Defendants’ platforms employ features that are designed for ease of access, rewards and
2 reinforcement, gamification, escapism, and lack of regulation.¹⁴⁴ These features cause online social
3 media experiences to become addictive such that adolescents experience depression, anxiety, loneliness,
4 and lower self-esteem and life satisfaction.¹⁴⁵

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

15 135. Each Defendant has long been aware of research connecting use of their apps with harm
16 to its users’ wellbeing, but chose to ignore or brush it off.¹⁴⁶ For example, in 2018, a Meta employee
17 mocked it as “BS . . . psedu [sic] science,” and “a bunch of people trying to get air time.”¹⁴⁷ Yet, as
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21 Disorders 755-766 (2020), <https://onlinelibrary.wiley.com/doi/epdf/10.1002/eat.23256>
22 [<https://perma.cc/L9TN-SZKP>].

23 ¹⁴⁴ Puruesh Chaudhary, *A Slow Scroll Into Addiction*, Aurora Dawn (Sept. 4, 2023),
<https://aurora.dawn.com/news/1144883>.

24 ¹⁴⁵ *Id.*

25 ¹⁴⁶ In August 2019, a social psychologist, and leading expert on the effects that technology devices have
26 on the mental health of their users, wrote to Mr. Zuckerberg ahead of a meeting to note that a new
27 study “point[ed] heavily to a connection, not just from correlational studies but from true experiments,
28 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).

¹⁴⁷ 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.¹⁴⁸

136. 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.¹⁴⁹ 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).¹⁵⁰

137. Social media addiction is more prevalent among younger age groups.¹⁵¹ 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.”¹⁵²

¹⁴⁸ 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).

¹⁴⁹ 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>].

¹⁵⁰ 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>.

¹⁵¹ 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/pdf?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.

¹⁵² 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/pdf?md5=80609bc4e3f2c451b0a8eb3edd861e8b&pid=1-s2.0-S0306460321000307-main.pdf> <https://tinyurl.com/364c2trt>.

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

3 139. Subsequent literature has shown that social media addiction causes a wide range of
4 negative effects. These negative effects generally fall into four categories, as further discussed below:
5 (1) emotional; (2) relational; (3) health related; and (4) performance problems.¹⁵³

6 140. In 2014, a study of 10- to 12-year-old girls found that increased use of Facebook was
7 linked with body image concerns, the idealization of thinness, and increased dieting.¹⁵⁴ This study was
8 sent to Mark Zuckerberg in 2018, in a letter signed by 118 public health advocates.¹⁵⁵

9 141. In 2016, a study demonstrated that young people who frequently use Defendants’
10 platforms are more likely to suffer sleep disturbances than their peers who use them infrequently.¹⁵⁶
11 Defendants’ platforms, driven by IVR and fueled by data-gathering algorithms, deprive users of sleep
12 using a variety of design features that prompt children to re-engage with the platforms when they should
13 be sleeping. Disturbed and insufficient sleep is associated with poor health outcomes,¹⁵⁷ including
14 increased risk of major depression—by a factor of more than three¹⁵⁸—and future suicidal behavior in
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17 ¹⁵³ Cecilie S. Andreassen, *Online Social Network Site Addiction: A Comprehensive Review*, 2 Current
18 Addiction Rep. 175-184, 179 (2015), [https://link.springer.com/content/pdf/10.1007/s40429-015-0056-](https://link.springer.com/content/pdf/10.1007/s40429-015-0056-9.pdf)
19 9.pdf.

20 ¹⁵⁴ Marika Tiggemann & Amy Slater, *NetTweens: The Internet and Body Image Concerns in Preteenage*
21 *Girls*, 34(5) J. Early Adolescence 606–620 (2014), [https://journals.sagepub.com/](https://journals.sagepub.com/doi/epub/10.1177/0272431613501083)
22 doi/epub/10.1177/0272431613501083 [<https://perma.cc/TSG5-RZAY>].

23 ¹⁵⁵ Letter from Campaign for a Commercial-Free Childhood to Mark Zuckerberg, CEO, Facebook, Inc.
24 (Jan. 30, 2018), <https://fairplayforkids.org/wp-content/uploads/archive/develop/gaw/FBMessengerKids.pdf>.

25 ¹⁵⁶ Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance among*
26 *young adults*, 85 Preventive Med. 36–41 (2016),
27 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025> [[https://perma.cc/QYE5-](https://perma.cc/QYE5-92M4)
28 92M4].

¹⁵⁷ *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-](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)
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>.

¹⁵⁸ 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.¹⁵⁹ 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.¹⁶⁰ 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”).¹⁶¹

142. 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.¹⁶² 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.¹⁶³

143. 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 13.¹⁶⁴ 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.¹⁶⁵

¹⁵⁹ 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>].

¹⁶⁰ 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>

¹⁶¹ 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>.

¹⁶² Jacqueline Nesi *et al.*, *Teens and Mental Health: How Girls Really Feel about Social Media at 26*, Common Sense Media (2023), https://www.common Sense Media.org/sites/default/files/research/report/how-girls-really-feel-about-social-media-researchreport_web_final_2.pdf.

¹⁶³ *Id.*

¹⁶⁴ 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>].

¹⁶⁵ *Id.*

144. 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.¹⁶⁶ 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.

145. 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.¹⁶⁷

146. 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.”¹⁶⁸ 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.”¹⁶⁹ 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.¹⁷⁰

147. 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-

¹⁶⁶ #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].

¹⁶⁷ 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/jsoc.2018.37.10.751> [https://perma.cc/E2FL-3B34].

¹⁶⁸ 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>.

¹⁶⁹ *Id.*

¹⁷⁰ *Id.*

view (such as taking selfies or asking others to “rate one’s looks”). This effect was more pronounced among girls than boys.¹⁷¹

148. 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.¹⁷² 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.¹⁷³ This study also showed that “[a]dolescents who engage in high levels of social media use may experience poorer quality sleep[.]”¹⁷⁴ Further, the study noted “negative[.] . . . body image,” “anxiety” and “depression” as connected to social media use.¹⁷⁵

149. 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.¹⁷⁶

150. 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.¹⁷⁷ Other studies examining

¹⁷¹ 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>].

¹⁷² 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>].

¹⁷³ *Id.*

¹⁷⁴ *Id.* at 1271.

¹⁷⁵ *Id.*

¹⁷⁶ 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>].

¹⁷⁷ 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.¹⁷⁸

151. 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.¹⁷⁹ This causes youth to engage in negative comparisons with their peers.¹⁸⁰ Specifically, adolescents are likely to engage in harmful upward comparisons with others they perceive to be more popular.¹⁸¹

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>).

¹⁷⁸ 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>].

¹⁷⁹ 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>.

¹⁸⁰ *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://bmcpyschology.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”).

¹⁸¹ *Id.*

152. In 2020, clinical research demonstrated an observable link between youth social media use and disordered eating behavior.¹⁸² The more time young girls spend using Defendants’ platforms, the more likely they are to develop disordered eating behaviors.¹⁸³ And the more social media accounts adolescents have, the more disordered eating behaviors they exhibit.¹⁸⁴

153. Eating disorders often occur simultaneously with other self-harm behaviors such as cutting and are often associated with suicide.¹⁸⁵

154. 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.¹⁸⁶ 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.

155. In 2023, a study of magnetic resonance images demonstrated that compulsive use of Defendants’ platforms measurably alters children’s brains.¹⁸⁷ 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.¹⁸⁸

¹⁸² 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>

¹⁸³ *Id.* at 101–103.

¹⁸⁴ *Id.*

¹⁸⁵ 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>).

¹⁸⁶ 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>.

¹⁸⁷ 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>].

¹⁸⁸ *Id.*

156. Problematic social media use is also linked to self-reported and diagnosed attention-deficit/hyperactivity disorder (“ADHD”) in adolescents.¹⁸⁹ 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.¹⁹⁰ 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.”¹⁹¹

157. 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.¹⁹² Such poor academic performance is often linked to (1) distraction from multitasking on social media, thereby adversely affecting learning,

¹⁸⁹ 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>.

¹⁹⁰ 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>.

¹⁹¹ 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>.

¹⁹² 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) Computs. 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/pdf?md5=b16529034494af5780843d4990768894&pid=1-s2.0-S1319562X21000103-main.pdf>.

1 and (2) high enough usage to amount to addiction, which increases academic procrastination and
2 reduces sleep time and quality, increasing academic stress.¹⁹³ And studies show that the amount of time
3 a student spends on social media is negatively correlated with their academic performance, meaning the
4 more a student spends on social media the worse their grades are.¹⁹⁴ In fact, 82% of Gen Z students say
5 social media “has distracted them from their schoolwork.”¹⁹⁵ Noting the “negative and significant
6 relationship between the overall use of social networks and academic performance of students,” one
7 study author has stated it is “imperative” for school authorities to “take interventional steps to help
8 students who are dependent on these [social media] networks and, through workshops, inform them
9 about the negative consequences of addiction to social networks.”¹⁹⁶ This places a large burden on
10 districts like Plaintiff’s.

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

17 ¹⁹³ Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of undergraduate*
18 *medical students*, 77 Med. J. Armed Forces India 37–41 (2021),
19 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf> (citing Aryn C. Karpinski *et al.*,
20 *An exploration of social networking site use, multitasking, and academic performance among*
21 *United States and European university students*, 29(3) *Computs. Hum. Behav.* 1182–1192 (2013),
22 <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*
23 *academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) *BMC*
24 *Psychiatry* 28 (2019),
25 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf); *see*
26 Yubo Hou *et al.*, *Social media addiction: Its impact, mediation, and intervention*, 13(1) *J. Psychosocial*
27 *Rsch. Cyberspace*, 2019, <https://cyberpsychology.eu/article/view/11562/10369>.

24 ¹⁹⁴ Jamal Al-Menayes, *Social Media Use, Engagement and Addiction as Predictors of Academic*
25 *Performance*, 7(4) *Int’l J. Psych. Stud.* 86–94 (2015), <http://dx.doi.org/10.5539/ijps.v7n4p86>
26 [<https://perma.cc/4A7V-4RMD>].

26 ¹⁹⁵ Karen D’Souza, *Eight out of 10 Gen Zers say social media distracts from schools*, EdSource (Dec. 8,
27 2021), <https://edsources.org/updates/eight-out-of-10-gen-zers-say-social-media-distracts-from-school>.

27 ¹⁹⁶ Seyyed Mohsen Azizi *et al.*, *The relationship between social networking addiction and academic*
28 *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.

159. 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).¹⁹⁷ The share of kids who seriously considered suicide increased by 36%, and those that created a suicide plan increased by 44%.¹⁹⁸

160. From 2007 to 2019, suicide rates among youth aged 10-24 in the United States increased by 57%.¹⁹⁹ By 2018, suicide was the second leading cause of death for youth ages 10–24.²⁰⁰

161. 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.²⁰¹

162. By 2019, one-in-five children aged 3–17 in the United States had a mental, emotional, developmental, or behavioral disorder.²⁰² Mental health issues are particularly acute among females.²⁰³

¹⁹⁷ *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>.

¹⁹⁸ *Id.*

¹⁹⁹ *Id.*

²⁰⁰ *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/>.

²⁰¹ 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.

²⁰² 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>.

²⁰³ *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).

1 163. In December 2021, the Surgeon General issued an advisory on the youth mental health
2 crisis.²⁰⁴ The Surgeon General explained, “[m]ental health challenges in children, adolescents, and
3 young adults are real and widespread. Even before the pandemic, an alarming number of young people
4 struggled with feelings of helplessness, depression, and thoughts of suicide—and rates have increased
5 over the past decade.”²⁰⁵ Those “mental health challenges were the leading cause of disability and poor
6 life outcomes in young people.”²⁰⁶

7 164. In February 2023, the CDC released new statistics revealing the extent of the public
8 health crisis in this country regarding youth mental health.²⁰⁷

9 165. This CDC survey showed that “[i]n 2021, 42% of high school students felt so sad or
10 hopeless almost every day for at least two weeks in a row that they stopped doing their usual activities”;
11 57% of female high school students reported feeling “persistent feelings of sadness or hopelessness” in
12 2021, compared to 36% in 2011; 41% of female respondents and 29% of all respondents report
13 experiencing “poor mental health” in the past 30 days; 30% of female high school students had
14 “seriously considered attempting suicide” in 2021, compared to 19% in 2011.²⁰⁸

15 166. In 2022, an analysis of datasets comprising 84,011 participants found that the cross-
16 sectional relationship between use of Defendants’ platforms and life satisfaction ratings is most negative
17 in younger adolescents.²⁰⁹ Longitudinal analyses revealed windows of sensitivity to social media and
18
19

20 ²⁰⁴ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health & Hum.
21 Servs. (2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)
22 [advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf).

23 ²⁰⁵ Press Release, U.S. Dep’t Health & Hum. Servs., *U.S. Surgeon General Issues Advisory on Youth*
24 *Mental Health Crisis Further Exposed by COVID-19 Pandemic* (Dec. 7, 2021),
[https://public3.pagefreeser.com/browse/HHS.gov/13-12-](https://public3.pagefreeser.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)
[2021T22:28/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-](https://public3.pagefreeser.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)
[youth-mental-health-crisis-further-exposed-by-covid-19-pandemic.html](https://public3.pagefreeser.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).

25 ²⁰⁶ *Id.*

26 ²⁰⁷ Azeen Ghorayashi & Roni Caryn Rabin, *Teen Girls Report Record Levels of Sadness*, C.D.C. Finds,
27 N.Y. Times (May 10, 2023), [https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-](https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html?searchResultPosition=1)
[violence.html?searchResultPosition=1](https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html?searchResultPosition=1) [<https://perma.cc/9CE6-4E4>].

28 ²⁰⁸ *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.

²⁰⁹ 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.²¹⁰

167. 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.”²¹¹ In other words, these results showed that “teens who grow up checking social media more often are hypersensitive to feedback from their peers.”²¹² 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).²¹³ 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.

168. 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.²¹⁴

169. Use of Defendants’ platforms by adolescent females significantly affects their wellbeing.²¹⁵ Moreover, the use of specific features on Defendants’ platforms is a strong predictor of

²¹⁰ *Id.*

²¹¹ 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>].

²¹² 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>].

²¹³ 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>.

²¹⁴ 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>.

²¹⁵ 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.²¹⁶

170. 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.²¹⁷

171. 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.”²¹⁸ 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[.]”²¹⁹

172. In May 2023, the Surgeon General issued an advisory: Social Media and Youth Mental Health.²²⁰ The advisory “calls attention to the growing concerns about the effects of social media on youth mental health.”²²¹ 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>].

²¹⁶ *Id.*

²¹⁷ 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>].

²¹⁸ 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>.

²¹⁹ *Id.*

²²⁰ *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>.

²²¹ *Id.* at 3.

1 maximum engagement.²²² Consistent with Defendants having known of the harm their platforms cause
2 users, particularly youth, the Surgeon General’s advisory noted “[t]here is broad concern ... that a lack of
3 access to data and lack of transparency from technology companies have been barriers to understanding
4 the full scope and scale of the impact of social media on mental health and well-being.”²²³ Put another
5 way, Defendants have gone to great lengths to prevent the public from gaining knowledge of the serious
6 harms that result from excessive use of social media.

7 173. Also in May 2023, the American Psychological Association issued a health advisory on
8 social media use in adolescence due to the harmful effects of social media use on adolescents’ social,
9 educational, psychological, and neurological development.²²⁴ Both visible and unknown features built
10 into social media platforms inform adolescent experiences on such platforms. The American
11 Psychological Association recommends that Defendants’ platforms tailor features such as the “Like”
12 button, recommended posts, unrestricted time limits, endless scrolling, notices, and alerts to the social
13 and cognitive abilities of adolescent users.²²⁵

14 174. The scientific literature recognizes that design features of social media platforms cause
15 problematic social media use, social media addiction, and resulting negative mental health outcomes.²²⁶
16 These harms result from the Defendants’ conduct in designing, developing, producing, operating,
17 promoting, distributing, and marketing their social media platforms to attract and addict minors.

21 ²²² *Id.* at 9.

22 ²²³ *Id.* at 11.

23 ²²⁴ *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>.

24 ²²⁵ *Id.* at 5.

25 ²²⁶ Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium*
26 *Games against the Background of Psychological and Economic Theories*, 16(14) Int’l J. Env’t Rsch. &
27 Pub. Health 2612 (2019), [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6679162/pdf/ijerph-16-02612.pdf)
28 [02612.pdf](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>; Maëva 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>].

1 175. Further, “[n]early all researchers now agree that there are correlations between ... time
2 spent on social media and ... mental health problems.”²²⁷ The literature indicates that higher use and
3 higher social media addiction scores are more positively associated with more severe health
4 outcomes.²²⁸

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

11 177. Defendants’ actions have led to a national youth mental health crisis. Notably, the
12 American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the
13 Children’s Hospital Association declared a national emergency based on the current state of youth
14 mental health.²²⁹ Moreover, in 2021, the U.S. Surgeon General issued an advisory alerting the public
15 that “[r]ecent national surveys of young people have shown alarming increases in the prevalence of
16 certain mental health challenges” and that “in 2019 one in three high school students and half of female
17

18
19 ²²⁷ Jonathan Haidt *et al.*, *Social Media and Mental Health: A Collaborative Review* at 11, N.Y.U. (Nov.
20 1, 2023) (unpublished manuscript available at tinyurl.com/SocialMediaMentalHealthReview).

21 ²²⁸ See Yaoguo Geng *et al.*, *Smartphone addiction and depression, anxiety: The role of bedtime*
22 *procrastination and self-control*, 293 *J. Affective Disorders* 415–421, 417 (2021),
23 <https://doi.org/10.1016/j.jad.2021.06.062> [<https://perma.cc/U8CV-L63C>]; Pu Peng & Yanhui Liao, *Six*
24 *Addiction Components of Problematic Social Media Use in Relation to Depression, Anxiety, and Stress*
25 *Symptoms: a Latent Profile Analysis and Network Analysis*, 23 *BMC Psychiatry* 321 (2023),
<https://bmcpsy psychiatry.biomedcentral.com/counter/pdf/10.1186/s12888-023-04837-2.pdf>; Anthony
26 Robinson *et al.*, *Social comparisons, social media addiction, and social interaction: An examination of*
27 *specific social media behaviors related to major depressive disorder in a millennial population*, 24 *J.*
28 *Applied Biobehavioral Rsch.*, Jan. 8, 2019, <https://doi.org/10.1111/jabr.12158> [<https://perma.cc/938C-SD59>].

²²⁹ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health & Hum.
26 Servs. (2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)
27 *advisory.pdf*; *AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent*
28 *Mental Health*, *Am. Acad. Pediatrics* (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-](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/)
adolescent-healthy-mental-development/aapaacap-cha-declaration-of-a-national-emergency-in-child-
and-adolescent-mental-health/.

1 students reported persistent feelings of sadness or hopelessness, an overall increase of 40% from
2 2009.”²³⁰

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

7 **6. Defendants’ conduct has significantly disrupted the learning environment in schools**
8 **and diverted resources from other student needs.**

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

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

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

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

27 ²³⁰ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* at 3, U.S. Dep’t Health &
28 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.

183. 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.

184. 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.

185. 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.

186. 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 addiction 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.

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

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

189. 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.²³¹

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

191. 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.

192. 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.

²³¹ 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.

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

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

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

7 196. Each Defendant knew or should have known that many of its users are under the age of
8 13, despite the limitations set out in COPPA.

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

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

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

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

201. 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.

202. 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.²³² This enormous reach has been accompanied by enormous damage for adolescent users.

203. Meta understands that its platforms are used by kids under 13: “[T]here are definitely kids this age on [Instagram][.]”²³³ 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].”²³⁴ Meta also understands that addictive use leads to problems: “it just keeps people coming back even when it stops being good for them[.]”²³⁵ 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.²³⁶

204. 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[.]”²³⁷ “We’ve consistently deprioritized addiction as a work area[.]”²³⁸ Zuckerberg himself was personally warned: “We are not on track to succeed for our core well-being topics (problematic use, bullying & harassment, connections,

²³² 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>].

²³³ META3047MDL-003-00123666 at META3047MDL-003-00123666.

²³⁴ META3047MDL-003-00157036 at META3047MDL-003-00157036.

²³⁵ META3047MDL-003-00011760 at META3047MDL-003-00011761.

²³⁶ META3047MDL-003-00119838 at META3047MDL-003-00119838.

²³⁷ META3047MDL-003-00011697 at META3047MDL-003-00011698.

²³⁸ 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[.]”²³⁹

205. Yet Meta did nothing. Like with considering actions to protect children in other ways, “the growth impact was too high.”²⁴⁰ 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.”²⁴¹

206. Meta’s gestures toward youth safety were never serious and always driven by public relations, “it’s all theatre.”²⁴² 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.”²⁴³ 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[.]”²⁴⁴ 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.

207. 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.²⁴⁵ This was precisely the point of Facemash, as its homepage made clear: “Were we let in for

²³⁹ 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.

²⁴⁰ META3047MDL-003-00013254 at META3047MDL-003-00013254.

²⁴¹ META3047MDL-003-00030070 at META3047MDL-003-00030071.

²⁴² META3047MDL-003-00053803 at META3047MDL-003-00053803.

²⁴³ META3047MDL-003-00157133 at META3047MDL-003-00157133.

²⁴⁴ META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-00082166.

²⁴⁵ 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,

1 our looks? No. Will we be judged on them? Yes.”²⁴⁶ When interviewed about Facemash, Zuckerberg
2 stated, “I’m a programmer and I’m interested in the algorithms and math behind it[.]”²⁴⁷ Zuckerberg was
3 summoned to appear before Harvard College’s disciplinary body.

4 208. After narrowly escaping expulsion, Zuckerberg began writing code for a new website,
5 thefacebook.com. The growth of the product that subsequently became Facebook has been extensively
6 documented and was the subject of an Academy Award-winning film.²⁴⁸ By the end of 2005, Facebook
7 had expanded its reach to thousands of colleges and high schools in the United States and abroad. Over
8 the coming years, Facebook grew well beyond campuses, reaching over 100 million total active users by
9 Fall 2008. By the end of 2011, Facebook’s photo collection from its users was projected to include 140
10 billion photos and reach 800 million users.²⁴⁹ By the end of 2011, Facebook, Inc. had also turned its
11 initial losses into immense profitability, bringing in annual revenues of \$3.7 billion and working with an
12 operating cash of \$1.5 billion.²⁵⁰

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

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

20 *Everything to know about Facemash, the site Zuckerberg created in college to rank ‘hot’ women*,
21 Metro (Apr. 12, 2018), [https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-](https://www.metro.us/everything-to-know-about-facemash-the-site-zuckerberg-created-in-college-to-rank-hot-women/)
22 [created-in-college-to-rank-hot-women/](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>].

23 ²⁴⁶ 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/>.

24 ²⁴⁷ *Id.*

²⁴⁸ *The Social Network*, Columbia Pictures (2010).

25 ²⁴⁹ 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_](https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook_mobile_usage_set_to_explode.php)
26 [mobil](https://web.archive.org/web/20120520003847/http://www.readwriteweb.com/archives/facebook_mobile_usage_set_to_explode.php)
27 [e_usage_set_to_explode.php](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-](https://www.nbcnews.com/news/world/one-third-years-digital-photos-are-facebook-flna120576)
28 [digital-photos-are-facebook-flna120576](https://www.nbcnews.com/news/world/one-third-years-digital-photos-are-facebook-flna120576).

²⁵⁰ 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.²⁵¹

210. 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.²⁵²

211. 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 11.²⁵³

212. 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.

213. 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.²⁵⁴ In 2005, Facebook was opened to high school students,

²⁵¹ 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.

²⁵² *Id.* at 13.

²⁵³ 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/>.

²⁵⁴ 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.²⁵⁵ By September 2006, Facebook was preparing to open membership to all users.²⁵⁶ At the time, Meta claimed that it was open only to persons aged 13 and older with a valid email address.²⁵⁷ 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.

214. 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."²⁵⁸ 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.

215. In 2005, Facebook began allowing users to upload an unlimited number of photos, making it the first photo hosting website to do so.²⁵⁹

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/>.

²⁵⁵ 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>].

²⁵⁶ 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>].

²⁵⁷ *Id.*; Jennifer Van Grove, *Facebook then and now (pictures)*, CNET (Feb. 13, 2014), <https://www.cnet.com/pictures/facebook-then-and-now-pictures/>.

²⁵⁸ 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>].

²⁵⁹ Craig Kanalley, *A History of Facebook Photos (Infographic)*, Huffington Post (Aug. 2, 2011), https://www.huffpost.com/entry/facebook-photos-infographic_n_916225.

216. In 2006, Meta introduced the Newsfeed to Facebook.²⁶⁰ While previously “[e]very browsing session was like a click-powered treasure hunt[.]”²⁶¹ 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.²⁶² It was the first “social feed” of its kind, and, as intended, increased time spent on the product.²⁶³ Users immediately decried this feature as an invasion of privacy.²⁶⁴ 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.”²⁶⁵ 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.”²⁶⁶ Despite this knowledge, Meta continued to focus on maximizing sessions, including for teens,²⁶⁷ even prioritizing the metric over “integrity” improvements to its platforms.²⁶⁸

217. In May 2007, Meta launched a video service on Facebook, which allowed it to compete with YouTube and the then-popular MySpace.²⁶⁹ Users could upload videos or record them from a webcam.

²⁶⁰ *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/>.

²⁶¹ 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>.

²⁶² *Id.*

²⁶³ *Id.*

²⁶⁴ Moneywatch, *Facebook Under Fire for New Feature*, CBS News (Sept. 7, 2006), <https://www.cbsnews.com/news/facebook-under-fire-for-new-feature/>.

²⁶⁵ 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>.

²⁶⁶ Haugen_00010114 at Haugen_00010121.

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

²⁶⁹ Pete Cashmore, *Facebook Video Launches: YouTube Beware!*, Mashable (May 24, 2007), <https://mashable.com/archive/facebook-video-launches>.

1 218. In April 2008, Meta launched Facebook Chat, which later became Facebook Messenger,
2 allowing users to have private conversations with each other.²⁷⁰ Facebook Chat appeared as a permanent
3 bar across the bottom of users' screens; it also provided users the ability to see which friends were
4 "online" and presumably available to chat. Facebook Chat allowed users to immerse themselves even
5 deeper into Meta's product; one commentator noted that "[b]y making Facebook more real
6 time/presence oriented, Facebook session length should go up a lot."²⁷¹

7 219. In May 2008, Meta added a "People You May Know" feature to the product, touting it as
8 a way to "connect [users] to more of your friends" on Facebook.²⁷² Facebook's algorithms utilize the
9 vast amount of data it collects from its users to make personalized suggestions to users for
10 "friending."²⁷³ It utilizes information such as a user's friends list, their friends' friends list, education
11 information, and work information, along with other data, to make these suggestions.²⁷⁴ Some users
12 dislike the feature, complaining that it constantly shows them people they do not want to friend, or even
13 suggests people in sexually explicit poses[,]²⁷⁵ but Facebook does not provide the option to disable this
14 feature.

15 220. In February 2009, Meta launched the "Like" button on Facebook.²⁷⁶ The button allowed
16 users to provide a quick reaction, as opposed to typing out a comment. Facebook's algorithm counts and
17 displays Likes to other users. The measure also served as a social measuring stick, by which users could
18 gauge the success of their posts, photographs, and videos. Soon after, Meta expanded the Like feature to
19 comments as well. Users could also use the Like button to follow public figures, such as brands or
20 publishers. When a user Liked a brand, for example, Meta would use that information to show ads for
21

22 ²⁷⁰ Dan Farber, *Facebook Chat begins to roll out*, CNET (Apr. 6, 2008),
23 <https://www.cnet.com/culture/facebook-chat-begins-to-roll-out/>.

24 ²⁷¹ *Id.*

25 ²⁷² 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>.

26 ²⁷³ *Id.*

27 ²⁷⁴ *Id.*

28 ²⁷⁵ *Id.*

²⁷⁶ 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>.

1 that brand to the user's friends on Facebook.²⁷⁷ In April 2010, Meta launched "social plug-ins" that
2 would allow people to "Like" things on the Internet outside of Facebook. Meta used the button to track
3 Facebook users' engagement across the Internet, leveraging the data it gathered to sell targeted ads and
4 fuel the Newsfeed algorithm.²⁷⁸ The button also shaped users' own behavior, as they were conditioned
5 to act and interact in whatever ways would generate the Like rewards, or risk having their activity
6 hidden from their friends' Newsfeeds.²⁷⁹

7 221. Also in 2009, Meta changed the Newsfeed experience from chronological to algorithmic
8 ordering, with Meta now dictating which posts users would see by highlighting "top stories" in each
9 user's Newsfeed.²⁸⁰

10 222. In December 2010, Meta began using facial recognition to identify people in users'
11 Facebook photos and suggest that users tag them.²⁸¹ Rather than letting users opt-in to the feature, Meta
12 automatically enabled it for all users.²⁸²

13 223. Meta also debuted infinite scrolling in 2010, initially for photos, but later for its core
14 Newsfeed, ensuring that users would never reach the bottom of a page and would, instead, keep
15 scrolling without end or limits, leading to excessive and compulsive product use.²⁸³

16 224. In August 2012, Meta introduced the Facebook Messenger app, a feature that allowed
17 users to see when their friends were last active on the product.²⁸⁴

18
19
20 ²⁷⁷ *Id.*

21 ²⁷⁸ *Id.*

22 ²⁷⁹ *Id.*

23 ²⁸⁰ Alex Hern, *Facebook to restore chronological feed of posts from friends*, Guardian (July 21, 2022),
24 [https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-](https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-from-friends)
25 [from-friends](https://www.theguardian.com/technology/2022/jul/21/facebook-to-restore-chronological-feed-of-posts-from-friends).

26 ²⁸¹ Ben Parr, *Facebook brings facial recognition to photo tagging*, Mashable (Dec. 16, 2010),
27 <http://www.cnn.com/2010/TECH/social.media/12/16/facebook.facial.recognition.mashable/index.html>.

28 ²⁸² 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-](https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-recognition?INTCMP=SRCH)
[recognition?INTCMP=SRCH](https://www.theguardian.com/technology/2011/jun/08/facebook-privacy-facial-recognition?INTCMP=SRCH).

²⁸³ 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>.

²⁸⁴ 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-](https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-schawbel_art&blogger=dan-schawbel#)
[specific-uploads-to-standalone-camera-app/?icid=tc_dan-schawbel_art&blogger=dan-schawbel#](https://techcrunch.com/2012/08/28/facebook-brings-notifications-album-specific-uploads-to-standalone-camera-app/?icid=tc_dan-schawbel_art&blogger=dan-schawbel#).

225. In August 2015, Meta launched Facebook Live, which allowed users to live-stream videos.²⁸⁵ 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.²⁸⁶

226. In February 2016, Meta expanded Facebook’s “Like” feature for posts, adding “Reactions” such as “like,” “love,” “haha,” “wow,” “sad,” and “angry.”²⁸⁷ The following year, reactions were extended to comments.²⁸⁸ In a manner similar to Likes, these reactions further manipulated adolescents’ behavior, preying on their psychological vulnerabilities to produce compulsive use.

227. 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.²⁸⁹ With Stories, users could post short, ephemeral videos that appeared for 24-hours at the top of friends’ Newsfeeds.²⁹⁰ 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.

228. Later that year, in December 2017, Meta rolled out Messenger Kids, a messaging app designed for kid’s ages 6 to 12,²⁹¹ 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.²⁹² Meta touted it as a way to “give[] parents more control.”²⁹³ The app, however, still collects an extraordinary amount of data about its child users,

²⁸⁵ Joe Lazauskus, *The Untold Story of Facebook Live*, *Fast Co.* (Sept. 29, 2016), <https://www.fastcompany.com/3064182/the-untold-story-of-facebook-live>.

²⁸⁶ *Id.*

²⁸⁷ 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>.

²⁸⁸ 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>.

²⁸⁹ 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>.

²⁹⁰ *Id.*

²⁹¹ 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>.

²⁹² *Id.*

²⁹³ 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/>.

1 including their messages, any photos they send, and what features they use on the app.²⁹⁴ Currently,
2 there are no other official Facebook platforms marketed publicly by Meta as intended for children under
3 13 (despite the proliferation of such users on Instagram and Facebook). However, as of April 2021,
4 Meta was actively seeking to develop ways for children as young as six to use the product.²⁹⁵

5 229. In August 2020, Meta introduced “Reels” on Instagram.²⁹⁶ Reels are short videos posted
6 by other Instagram users, presented in an algorithmically generated feed, and in a full-screen format
7 popularized by TikTok. Meta subsequently introduced Reels to Facebook in 2021.²⁹⁷ As explained more
8 fully below, Meta committed to making videos more and more prevalent on of their platforms to attract
9 and keep younger users in the face of competition from TikTok.

10 **c. Facebook’s acquisition and control of Instagram.**

11 230. On or around April 6, 2012, Zuckerberg called Kevin Systrom, one of the co-founders of
12 Instagram, offering to purchase his company.²⁹⁸

13 231. Instagram launched as a mobile-only app that allowed users to create, filter, and share
14 photos. On the first day of its release in October 2010, it gained a staggering 25,000 users.²⁹⁹ By April
15 2012, Instagram had approximately 27 million users. When Instagram released an Android version of its
16 app—right around the time of Zuckerberg’s call—it was downloaded more than a million times in less
17

18
19 ²⁹⁴ Nitasha Tiku, *Facebook for 6-Year-Olds? Welcome to Messenger Kids*, Wired (Dec. 5, 2017),
20 <https://www.wired.com/story/facebook-for-6-year-olds-welcome-to-messenger-kids/>.
21 [https://perma.cc/WYE3-UBY].

22 ²⁹⁵ Ezra Kaplan & Jo Ling Kent, *Documents reveal Facebook targeted children as young as 6 for*
23 *consumer base*, NBC News (Oct. 29, 2021), [https://www.nbcnews.com/tech/social-media/facebook-](https://www.nbcnews.com/tech/social-media/facebook-documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma)
24 [documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma](https://www.nbcnews.com/tech/social-media/facebook-documents-reveal-company-targeted-children-young-6-rcna4021?cid=sm_npd_nn_tw_ma).

25 ²⁹⁶ Instagram, *Introducing Instagram Reels*, Meta (Aug. 5, 2020),
26 <https://about.fb.com/news/2020/08/introducing-instagram-reels/>.

27 ²⁹⁷ Facebook, *Launching Reels on Facebook in the US*, Meta (Sept. 29, 2021),
28 <https://about.fb.com/news/2021/09/launching-reels-on-facebook-us/>.

²⁹⁸ 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-](https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)
26 [into-spending-1-billion-on-instagram-2012-4](https://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4)
27 [https://web.archive.org/web/20230313191032/http://www.businessinsider.com/heres-the-chart-that-scared-zuckerberg-into-spending-1-billion-on-instagram-2012-4].

28 ²⁹⁹ 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-](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram)
[photo0sharing-app.asp#:~:text=History%20of%20Instagram](https://www.investopedia.com/articles/investing/102615/story-instagram-rise-1-photo0sharing-app.asp#:~:text=History%20of%20Instagram).

1 than a day.³⁰⁰ Instagram’s popularity is so widespread and image-based, a new term has grown up
2 around it for the perfect image or place, “Instagrammable.”³⁰¹ Its users also use a variety of slang
3 derived from the product, such as “IG”; “The Gram”; “Do it for the Gram”, a phrase used by a user
4 performing a risky or unusual action to garner attention; “Finsta,” a contraction of fun or fake Instagram
5 used to refer to secondary accounts; among other slang.

6 232. On April 9, 2012, just days after Zuckerberg’s overture to Systrom, Facebook, Inc.
7 purchased Instagram, Inc. for \$1 billion in cash and stock. This purchase price was double the valuation
8 of Instagram implied by a round of funding the company had closed days earlier.³⁰²

9 233. Facebook, Inc. held its initial public offering less than two months after acquiring
10 Instagram, Inc.³⁰³

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

14 235. This was prescient. Instagram’s revenue grew exponentially from 2015 to 2022.³⁰⁴ A
15 study conducted in the second quarter of 2018 showed that, over the prior year, advertisers’ spending on
16 Instagram grew by 177%—more than four times the growth of ad spending on Facebook.³⁰⁵ Likewise,
17 visits to Instagram rose by 236%, nearly thirty times the growth in site visits experienced by Facebook
18

19 ³⁰⁰ Kim-Mai Cutler, *From 0 To \$1 Billion In Two Years: Instagram’s Rose-Tinted Ride To Glory*,
20 TechCrunch (Apr. 9, 2012), <https://techcrunch.com/2012/04/09/instagram-story-facebook-acquisition/>.

21 ³⁰¹ Sarah Frier, *No Filter: The Inside Story of Instagram* (Simon & Schuster 2020).

22 ³⁰² Alexia Tsotsis, *Right Before Acquisition, Instagram Closed \$50M At A \$500M Valuation From Sequoia, Thrive, Greylock And Benchmark*, TechCrunch (Apr. 9, 2012),
23 <https://techcrunch.com/2012/04/09/right-before-acquisition-instagram-closed-50m-at-a-500m-valuation-from-sequoia-thrive-greylock-and-benchmark/>.

24 ³⁰³ Evelyn Rusli & Peter Eavis, *Facebook Raises \$16 Billion in I.P.O.*, N.Y. Times (May 17, 2012),
25 <https://archive.nytimes.com/dealbook.nytimes.com/2012/05/17/facebook-raises-16-billion-in-i-p-o/>
26 [https://perma.cc/6GQV-TEY8].

27 ³⁰⁴ See Josh Constine, *Instagram hits 1 billion monthly users, up from 800M in September*, TechCrunch
28 (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).

³⁰⁵ 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].

1 during the same period.³⁰⁶ By 2021, Instagram accounted for over half of Meta’s \$50.3 billion in net
2 advertising revenues.³⁰⁷

3 236. Meta has claimed credit for Instagram’s success since its acquisition. Zuckerberg told
4 market analysts that Instagram “wouldn’t be what it is without everything that we put into it, whether
5 that’s the infrastructure or our advertising model[.]”³⁰⁸

6 237. Instagram has become the most popular photo-sharing social media product among
7 teenagers and young adults in the United States. 62% of American teens use, with 10% of users
8 reporting that they use it “almost constantly.”³⁰⁹ Instagram’s young user base has become even more
9 important to Meta as the number of teens using Facebook has decreased over time.³¹⁰

10 238. Facebook’s and Instagram’s success, and the riches they have generated for Meta, have
11 come at an unconscionable cost in human suffering.

12 239. In September 2021, The Wall Street Journal began publishing internal documents leaked
13 by former Facebook product manager, Frances Haugen.³¹¹ The documents are disturbing. They reveal
14 that, according to Meta’s researchers, 13.5% of U.K. girls reported that Instagram made suicidal
15 thoughts worse, and 17% of teen girls reported worsening eating disorders after using Instagram.³¹² Over
16

17 ³⁰⁶ *Id.*

18 ³⁰⁷ Sara Lebow, *For the first time, Instagram contributes over half of Facebook’s US ad revenues*,
19 Insider Intel. (Nov. 1, 2021), [https://www.emarketer.com/content/instagram-contributes-over-half-of-](https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues)
20 [facebook-us-ad-revenues](https://www.emarketer.com/content/instagram-contributes-over-half-of-facebook-us-ad-revenues).

21 ³⁰⁸ Salvador Rodriguez, *Mark Zuckerberg is adamant that Instagram should not be broken off from*
22 *Facebook*, CNBC (Oct. 30, 2019), [https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-](https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html)
23 [that-instagram-should-remain-with-facebook.html](https://www.cnbc.com/2019/10/30/mark-zuckerberg-is-adamant-that-instagram-should-remain-with-facebook.html).

24 ³⁰⁹ Emily A. Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),
25 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>; *see also*
26 Erinn Murphy *et al.*, *Fall 2021: Taking Stock with Teens* at 19, Piper Sandler (2021),
27 [https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-44248fb10e3adfcdb1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top)
28 [44248fb10e3adfcdb1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-44248fb10e3adfcdb1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top)
[axiosam&stream=top](https://piper2.bluematrix.com/docs/pdf/3bad99c6-e44a-44248fb10e3adfcdb1d4.pdf?utm_source=newsletter&utm_medium=email&utm_campaign=newsletter_axiosam&stream=top) (81% of teens use Instagram at least once a month).

³¹⁰ 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>].

³¹¹ *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).

³¹² 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,³¹³ and 32% of teen girls who already felt bad about their bodies felt even worse because of the app.³¹⁴

240. 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[;]’”³¹⁵ “Mental health outcomes related to this can be severe[;]”³¹⁶ and “Aspects of Instagram exacerbate each other to create a perfect storm.”³¹⁷

241. 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.

242. 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>.

³¹³ 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>.

³¹⁴ 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/>.

³¹⁵ 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>].

³¹⁶ *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>.

³¹⁷ 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>].

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

3 243. In January 2011, Instagram added hashtags, which allowed users to group together posts
4 about particular topics.³¹⁸

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

7 245. In June 2013, in addition to the still, filtered images for which the product was known,
8 Instagram began to support videos of up to 15 seconds.³¹⁹ This feature also included 13 new, specially
9 created filters that could be applied to the videos.³²⁰ At the time, this feature satisfied what some
10 characterized as the “years-long search for an ‘Instagram for video,’”³²¹ and allowed Instagram to
11 compete with a popular video-sharing product at the time, Vine. It also allowed users posting videos to
12 select their “favorite” scene from the video to be displayed as the cover image on video posts. According
13 to Systrom, this ensured that user’s videos were “beautiful even when they’re not playing.”³²² Despite
14 this, Instagram remained largely a photo-sharing app.

15 246. In December 2013, Meta added Instagram Direct, a feature that allows users to send
16 messages or posts to specific people directly from the app.³²³ This function allowed Instagram to
17 compete against messaging platforms like Snapchat that were gaining popularity among teens and pre-
18 teens.

19 247. In June 2015, Meta opened Instagram to all advertisers, weaving advertisements into
20 users’ Feeds.³²⁴

21
22 ³¹⁸ Jonah Madrigallos, *Diving Deep into the Science of the Instagram Algorithm*, Signalytics (Sept. 1,
2021), <https://www.signalytics.ai/instagram-algorithm/>.

23 ³¹⁹ 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/>.

24 ³²⁰ *Id.*

25 ³²¹ *Id.*

26 ³²² Kevin Systrom, *Introducing Video on Instagram*, Instagram (June 20, 2013),
<https://about.instagram.com/blog/announcements/introducing-video-on-instagram>.

27 ³²³ Jordan Crook, *Instagram Introduces Instagram Direct*, TechCrunch (Dec. 12, 2013),
<https://techcrunch.com/2013/12/12/instagram-messaging/>.

28 ³²⁴ 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-](https://www.nytimes.com/2015/06/03/technology/instagram-to-announce-plans-to-expand-advertising.html)
[advertising.html \[https://perma.cc/RMQ9-KSCJ\]](https://perma.cc/RMQ9-KSCJ).

248. In March 2016, Meta did away with Instagram’s chronological feed and implemented engagement-based ranking algorithms.³²⁵ 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[.]”³²⁶

249. 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.³²⁷ Later that year, in December 2016, Instagram added the ability to “Like” comments to posts (symbolized by a heart emoji).³²⁸ Both features became a source of additional motivation by users to seek social acceptance and validation.

250. In August 2016, Meta introduced Instagram Stories,³²⁹ 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.”³³⁰ Later that year, in November 2016, Meta introduced Instagram Live,³³¹ 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.

³²⁵ 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>.

³²⁶ *Id.*

³²⁷ 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/>.

³²⁸ 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>].

³²⁹ *Introducing Instagram Stories*, Instagram (Aug. 2, 2016), <https://about.instagram.com/blog/announcements/introducing-instagramstories#:~:text=Today%2C%20we're%20introducing%20Instagram,a%20slideshow%20form at%3A%20your%20story>.

³³⁰ Rachel Kraus, *Instagram Founder Admits He Blatantly Stole Stories from Snapchat*, Mashable (Mar. 11, 2019), <https://mashable.com/article/kevin-systrom-instagram-stories-snapchat>.

³³¹ Josh Constine, *Instagram launches disappearing Live video and messages*, TechCrunch (Nov. 21, 2016), <https://techcrunch.com/2016/11/21/instagram-live/>.

251. 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).”³³²

252. In December 2016, Meta introduced a product feature that allowed users to “save” posts from other users.³³³ 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.

253. 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,³³⁴ 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.

254. 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.

255. 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.³³⁵ IGTV was intended to rival YouTube. IGTV allowed users to upload videos up to one-hour long.

256. 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.

257. 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

³³² MDL AG Compl. at 21, ¶ 106.

³³³ 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/>.

³³⁴ Josh Constine, *Instagram on Android gets offline mode*, TechCrunch (Apr. 18, 2017), <https://techcrunch.com/2017/04/18/instagram-offline/>.

³³⁵ Kevin Systrom, *Welcome to IGTV, our New Video App*, Instagram (June 20, 2018), <https://about.instagram.com/blog/announcements/welcome-to-igtv>.

1 school.”³³⁶ According to Meta, these users represent the platform’s “teen foothold” for its “US
2 pipeline.”³³⁷ “Youth and [t]eens are critically important to Instagram. While Instagram has strong
3 market-fit with [t]eens, we know we need to constantly ‘re-win’ this segment[.]”³³⁸ Meta has expressly
4 sought to maximize metrics like “teen time spent” on the Instagram product.³³⁹

5 258. One way Meta sought to increase its teen metrics was through its launch of “Reels” in
6 August 2020, which mimicked the format of videos on TikTok. As noted, Reels mirrors TikTok by
7 algorithmically presenting short, “full-screen” videos posted by other Instagram users. Like TikTok,
8 Reels counts and displays the number of likes, follows, comments, shares, and views of a video. The
9 following year, Meta did away with IGTV, which had allowed longer videos to be posted by users in a
10 more traditional format. In late July 2022, Mosseri announced that “more and more of Instagram is
11 going to become video over time[.]”³⁴⁰

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

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

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

22 ³³⁶ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
23 Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
24 [<https://perma.cc/SSL6-QUN2>].

24 ³³⁷ *Id.*

25 ³³⁸ META3047MDL-003-00030070 at META3047MDL-003-00030071.

26 ³³⁹ Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y.
27 Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>
28 [<https://perma.cc/SSL6-QUN2>].

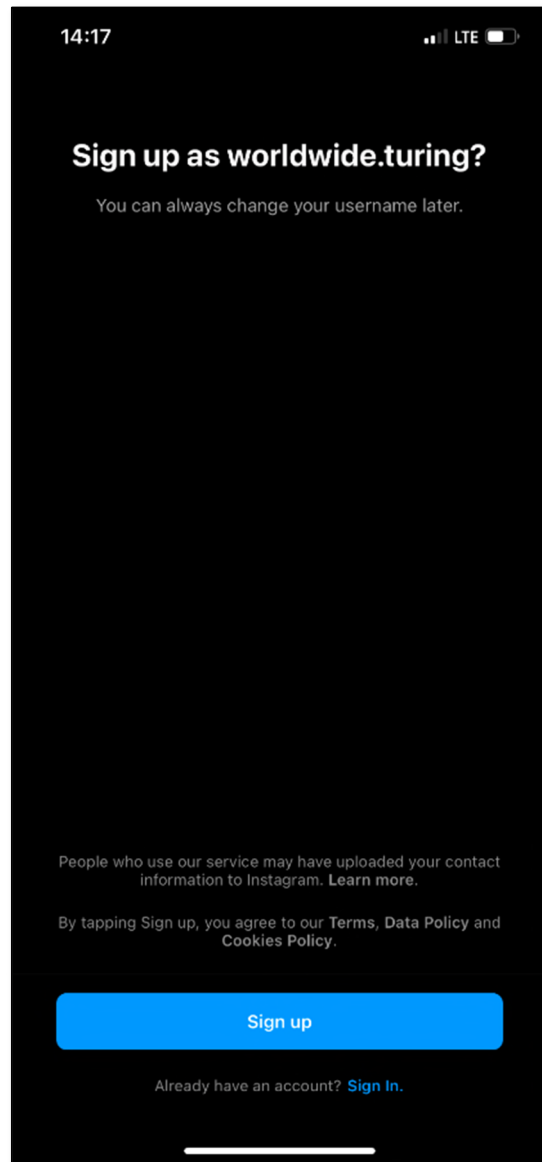
³⁴⁰ Marisa Dellatto, *Instagram Exec Defends Shift to Video Despite Complaints from Creators like Kylie Jenner*, Forbes (July 26, 2022), <https://www.forbes.com/sites/marisadellatto/2022/07/26/instagram-exec-defends-shift-to-video-despite-complaints-from-creators-like-kylie-jenner/?sh=4099badd5c6e>
[<https://perma.cc/AZH9-MEMX>].

1 261. Meta describes the Instagram product as a “mobile-first experience.”³⁴¹ Indeed, the great
2 majority of Instagram users in the U.S. access Instagram through a mobile application for either the iOS
3 or Android operating systems.

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

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

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28 ³⁴¹ Yorgos Askalidis, *Launching Instagram Messaging on Desktop*, Instagram (Sept. 25, 2020),
<https://about.instagram.com/blog/engineering/launching-instagram-messaging-on-desktop>.



264. Meta’s Data Policy (rebranded as a “Privacy Policy” in 2022), which applies to a range of Meta apps, including Facebook and Instagram,³⁴² 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”;

³⁴² *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.”

265. 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.

266. 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)[.]”³⁴³

³⁴³ *Id.*

1 267. The Data Policy does not inform users that the more time individuals spend using
2 Facebook and Instagram, the more ads Meta can deliver and the more money it can make; or that the
3 more time users spend on Facebook and Instagram, the more Meta learns about them, and the more it
4 can sell to advertisers the ability to micro-target highly personalized ads.³⁴⁴

5 268. Meta monetizes its users and their data by selling ad placements to marketers. Meta
6 generated \$69.7 billion from advertising in 2019, more than 98% of its total revenue for the year.³⁴⁵

7 269. Given its business model, Meta has every incentive to—and knowingly does—addict
8 users to Facebook and Instagram. It accomplishes this through the algorithms that power its apps, which
9 are designed to induce compulsive and continuous scrolling for hours on end, operating in conjunction
10 with the other dangerous features described throughout this Complaint.³⁴⁶

11 270. Indeed, even Mark Zuckerberg confirmed Meta’s core business model relies on
12 increasing the amount of time its users stay on their platforms. Zuckerberg wrote he hoped to see time
13 spent on Instagram increase by 10% between 2016 and 2021.³⁴⁷

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16 ³⁴⁴ Nor does it inform users that Meta previously allowed third-party apps to harvest from Facebook
17 “vast quantities of highly sensitive user and friends permissions.” Order Granting in Part Plaintiffs’
18 Motion for Sanctions at 9, *In Re: Facebook, Inc. Consumer Privacy User Profile Litigation*, No. 18-
19 md-02843-VC (N.D. Cal. Feb. 9, 2023), ECF No. 1104. This has included an app called Sync. Me,
20 which—according to Meta’s internal investigative documents—“had access to many ‘heavyweight’
21 permissions, including the user’s entire newsfeed, friends’ likes, friends’ statuses, and friends’
22 hometowns.” *Id.* It has included Microstrategy, Inc., which accessed data from “16 to 20 million”
23 Facebook users, despite only being installed by 50,000 people. *Id.* And it has included one Yahoo app
24 that made “‘billions of requests’” for Facebook user information, including “personal information
25 about those users’ friends, including the friends’ education histories, work histories, religions, politics,
26 ‘about me’ sections, relationship details, and check-in posts.” *Id.* at 9–10.

27 ³⁴⁵ Rishi Iyengar, *Here’s how big Facebook’s ad business really is*, CNN (July 1, 2020),
28 <https://www.cnn.com/2020/06/30/tech/facebook-ad-business-boycott>.

³⁴⁶ 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).

³⁴⁷ MDL AG Compl. at 12, ¶ 57.

1 271. As Meta noted in its 2021 Annual Report to the SEC, “[t]he size of our user base and our
2 users’ level of engagement across our products are critical to our success.”³⁴⁸ It noted that factors
3 affecting Meta’s revenue generation include: (1) “user engagement, including time spent on [Meta’s]
4 products”; (2) increasing “user access to and engagement with [Meta’s] products”; (3) Meta’s ability “to
5 maintain or increase the quantity or quality of ads shown to users”; (4) maintaining traffic to monetized
6 features like the “Feed” and “Stories”; (5) the “effectiveness of [Meta’s] ad targeting”; and (6) the
7 degree to which users engage with Meta’s ads.³⁴⁹

8 272. Accordingly, Meta constantly collects and reviews data on young users’ activity on its
9 platforms. As a Director of Product Management at Instagram stated in January 2020, he was “focused
10 on getting a very clear understanding of our current US [Daily Active People] and [Monthly Active
11 People] growth situation, opportunities, and challenges because 1) US Teens are our #1 cohort for both
12 long-term growth of [Instagram] and [Facebook] Family incrementality.”³⁵⁰

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

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

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27 ³⁴⁸ 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>.

28 ³⁴⁹ *Id.* at 15–16.

³⁵⁰ MDL AG Compl. at 14, ¶ 69.

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

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

21 277. Currently, advertisers can target Instagram and Facebook ads to young people based on
22 age, gender, and location.³⁵¹ According to U.S.-based non-profit Fairplay, Meta did not actually cease
23 collecting data from teens for advertising in July 2021, as Meta has claimed.³⁵²

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

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27 ³⁵¹ Andrea Vittorio, *Meta’s Ad-Targeting to Teens Draws Advocacy Group Opposition*, Bloomberg
28 (Nov. 16, 2021), <https://news.bloomberglaw.com/privacy-and-data-security/metad-targeting-to-teens-draws-advocacy-group-opposition>.

³⁵² *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.”³⁵³ 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.³⁵⁴

279. 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.³⁵⁵ 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.”³⁵⁶

280. 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].”³⁵⁷ 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.”³⁵⁸

281. 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.³⁵⁹

282. 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

³⁵³ 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.

³⁵⁴ 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>].

³⁵⁵ MDL AG Compl. at 19, ¶ 84.

³⁵⁶ *Id.*

³⁵⁷ MDL AG Compl. at 19, ¶ 85.

³⁵⁸ *Id.*

³⁵⁹ META3047MDL-003-00171899 at META3047MDL-003-00171904.

1 career-focused social media product LinkedIn fills for adults.³⁶⁰ According to the summary of a 2018
2 meeting, Meta’s expressed goal was to have users “move through” Meta’s platforms “as they grow, i.e.
3 Messenger Kids → Instagram → Facebook.”³⁶¹

4 283. To create this cycle, Meta embarked on a “major investment in youth,” researching and
5 pursuing platforms targeted at kids as young as six.³⁶² The centerpiece of these efforts is Messenger
6 Kids.³⁶³ In 2019, Meta conducted at least two research projects on growing Messenger Kids. One study
7 explored how to use “Playdates as a Growth Lever for Messenger Kids.”³⁶⁴ During this study, Meta
8 sought to understand better how playdates might be an area to increase usage among kids by
9 interviewing parents of active users. Investigators suggested there was an opportunity to “brainstorm
10 features and/or prompts encouraging use of³⁶⁵ the app, prior and after playdates to improve [sic] retention
11 and active threads.”³⁶⁶ Later that year, they released a finding from a second investigation of parents and
12 children who used Messenger Kids and those who did not.³⁶⁷ To drive Messenger Kids growth, the study
13 recommended “encourag[ing] more [kid-to-kid] connections in [Messenger Kids]” by “surfac[ing] and
14 develop[ing] additional in-app activities that involve others,” while emphasizing to parents the “play-
15 based messaging” and the “play aspect of [Messenger Kids] — camera filters, games, filters via
16 notif[ication]s and QPs.”³⁶⁸ These are many of the same features found in Instagram.

17 284. Meta was also eager to market its platforms to tweens—users aged 10-12. Although Meta
18 employees publicly denied using children as “guinea pigs” to develop product features, internally Meta
19 was intensely interested in children’s use of their apps.³⁶⁹ Meta conducted research projects, with titles

21 ³⁶⁰ *Id.* at META3047MDL-003-00171909.

22 ³⁶¹ META3047MDL-003-00003731 at META3047MDL-003-00003732.

23 ³⁶² Haugen_00017238 at Haugen_00017238.

24 ³⁶³ 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-](https://www.theverge.com/2017/12/4/16725494/facebook-messenger-kids-app-launch-ios-iphone-preview)
25 preview.

26 ³⁶⁴ Haugen_00023087 at Haugen_00023087.

27 ³⁶⁵ *Id.* at Haugen_00023088.

28 ³⁶⁶ *Id.* at Haugen_00023090.

³⁶⁷ Haugen_00023066 at Haugen_00023067.

³⁶⁸ *Id.* at Haugen_00023085.

³⁶⁹ 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>.

1 such as, *Tweens JTBD Survey*,³⁷⁰ and *Exploring Tweens' Social Media Habits*.³⁷¹ In the latter study,
2 Meta compared tween perceptions of their competitors' platforms to understand "tween product
3 needs,"³⁷² noting that tweens can "connect and have fun using existing apps, even though they're not
4 made with a 10-to-12-year-old in mind."³⁷³ Meta's takeaway was to "use entertainment/interests as a
5 starting point for engagement" and to "highlight fitting in."³⁷⁴

6 285. In 2019, Meta conducted a series of interviews in Los Angeles and Denver with tween
7 friend groups, friend pairs, and individuals.³⁷⁵ Meta used this research to craft "product
8 recommendation[s]" to appeal to tweens, suggesting features to help "decrease friction in the digital
9 interaction funnel."³⁷⁶ The recommendations included developing ways to "provide automatic signals
10 that indicate whether friends are available to interact," "[e]nable tweens to instrumentally signal their
11 availability," "[p]rovide lightweight conversation starters that tweens can use to test the reciprocity of an
12 interaction (e.g., poking, waves)," and "build in a way that enables quick communication across all
13 messaging modalities."³⁷⁷

14 286. Meta's interest, efforts, and success in expanding the presence of its platforms in
15 children's lives is clear. Given the delicate, developing nature of the young brain and Meta's creation of
16 social media platforms designed to promote repetitive, compulsive use, it is not surprising that American
17 society is now grappling with the ramifications of Meta's growth-at-any-cost approach. In a candid
18 moment, a Software Engineer at Meta admitted that "[i]t's not a secret that we've often resorted to
19 aggressive tactics in the name of growth, and we've been pretty unapologetic about it."³⁷⁸

20 287. Meta has studied features and designs from its other platforms to make Instagram as
21 attractive and addictive as possible to young users. Meta's flagship product Facebook was the original
22 testing ground for many of Instagram's addictive and otherwise harmful features, which the two
23

24 ³⁷⁰ "JTBD" appears to stand for "Jobs to Be Done." Haugen_00024450 at Haugen_00024454.

25 ³⁷¹ Haugen_00023849 at Haugen_00023850.

26 ³⁷² *Id.* at Haugen_00023888.

27 ³⁷³ *Id.* at Haugen_00023886.

28 ³⁷⁴ *Id.* at Haugen_00023888.

³⁷⁵ Haugen_00024450 at Haugen_00024450.

³⁷⁶ *Id.* at Haugen_00024466.

³⁷⁷ *Id.*

³⁷⁸ 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.

288. 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.

289. 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.

290. 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.

291. 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:

When's Your Birthday?

December 31, 2022

You can choose who can see this from your profile.
Why do I need to provide my birthday?

Continue

September	28	2019
October	29	2020
November	30	2021
December	31	2022
January	1	2023
February	2	2024

(Facebook, January 2023)

Add your birthday

This won't be part of your public profile.
Why do I need to provide my birthday?

December 31, 2022

Use your own birthday, even if this account is for a business, a pet or something else.

Next

September	28	2019
October	29	2020
November	30	2021
December	31	2022
January	1	2023
February	2	2024
March	3	2025

(Instagram, January 2023)

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

When's Your Birthday?

December 22, 2018

Please enter a valid birthday.

Continue

September	19	2015
October	20	2016
November	21	2017
December	22	2018
January	23	2019
February	24	2020

(Facebook, January 2023)

Join Facebook

We'll help you create an account in a few easy steps.

Get Started

Error

We are not able to process your registration at this time. Please try again later.

OK

Already have an account?

(Facebook, January 2023)

Add your birthday

This won't be part of your public profile.
Why do I need to provide my birthday?

October 14, 2014 8 years old

We Couldn't Create an Account for You

OK

Use your own birthday, even if this account is for a business, a pet or something else.

Next

July	11	2011
August	12	2012
September	13	2013
October	14	2014
November	15	2015
December	16	2016
January	17	2017

(Instagram, January 2023)

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

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

13 295. Other online platforms employ substantially more effective and reliable age verification
14 schemes before granting children access. These include, but are not limited to, connecting new users to
15 parents' accounts, credit card verification, verification by presentation of an identification card (or other
16 government-issued document), or linking a verified undergraduate or professional email, among other
17 methods. Meta chooses not to implement any of these systems, even though they are technologically
18 feasible, used by many companies across the Internet, and could be employed at relatively low cost.
19 Indeed, Meta itself uses an age verification technique for its Facebook Dating product that it claims can
20 verify ages without identifying users—but does not use the same technology at account startup for
21 Facebook or Instagram.³⁷⁹

22 296. For most of its history, Meta has known that children under the age of 13 are using its
23 apps. This was clearly evidenced by, for example, posted photos of elementary school age users. Yet
24 Meta continued to promote and usher Facebook and Instagram to children. As long as a new user simply
25 clicked a box confirming that they were at least 13 years old, Meta asked no questions, engaged in zero
26 follow-up, and let the user access the platforms indefinitely. This did not go unnoticed by certain of its
27

28 ³⁷⁹ Erica Finkle, *Bringing Age Verification to Facebook Dating*, Meta (Dec. 5, 2022),
<https://about.fb.com/news/2022/12/facebook-dating-age-verification/>.

1 employees who criticized the company’s policy: “[I]f we collected age on [Instagram] we could age-gate
2 [suicide and self-injury (“SSI”)] content. . . and if we used age classifiers we could detect under 13s and
3 kick them off the platform[.]”³⁸⁰

4 297. Indeed, Meta did not ask for the age of new Instagram users until December 2019, after
5 Instagram had been on the market for more than seven years.³⁸¹ Even then, Meta did not ask *existing*
6 users to disclose their ages, effectively grandfathering in underage users. Indeed, an internal document
7 confirms that, in April 2020, Meta had an age for only approximately 55% of its users,³⁸² which Meta
8 did not attempt to correct until August 30, 2021. Meta did not begin requiring age verification for users
9 who attempt to change their age from under to over 18 until 2022.³⁸³

10 298. There can be no serious debate about whether Meta has more effective age verification
11 tools at its disposal. Meta has internal age identification models, such as the “teen_non_teen” model or
12 the “dim_ig_age_prediction_adult_classifier” that can estimate a user’s age.³⁸⁴ Although tools like this
13 could be used to identify when a user is under 13 (or, for that matter, if a user is a teenager and should
14 therefore be safeguarded from particularly injurious aspects of Meta’s platforms), Meta does not use this
15 safeguard.³⁸⁵

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

20 ³⁸⁰ META3047MDL-003-00086015 at META3047MDL-003-00086015.

21 ³⁸¹ META3047MDL-003-00157020 at META3047MDL-003-00157020 (“[W]e have very limited age
22 information on [Instagram] (we only started collecting age in December at registration).”).

23 ³⁸² META3047MDL-003-00042548 at META3047MDL-003-00042551–META3047MDL-003-
00042552.

24 ³⁸³ Instagram, *Introducing New Ways to Verify Age on Instagram*, Meta (June 23, 2022),
25 <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.

26 ³⁸⁴ Haugen_00003463 at Haugen_00003463–Haugen_00003465; *see also* Ibrahim Mousa Al-Zuabi *et*
27 *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>
28 (discussing generally how a similar age prediction algorithm works).

³⁸⁵ Haugen_00003463 at Haugen_00003463–Haugen_00003465.

4:07 5G

Help Us Verify Your Age

You must be at least 13 years old to have an Instagram account. We disabled your account because you are not old enough yet. If 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.

Full name

Email address
 Please provide the email address connected to your account.

Instagram username

Date of birth

Your ID
 no file selected

Please provide a photo of a [valid ID](#).

Your photo ID must include your face and date of birth so we can verify your age. After you send us a copy of your ID, it'll be encrypted and stored securely. Your ID won't be visible on your profile, to friends or to other people on Instagram and will be deleted 30 days after submission.

Any additional info

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help.instagram.com

300. 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.

301. 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 13.³⁸⁶ 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

³⁸⁶ Report an Underage User on Instagram, Instagram, <https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctH0wkaIXtfJ1ft9O09Q>; Report an Underage Child, Facebook, <https://www.facebook.com/help/contact/209046679279097>.

1 get confirmation that the account has been deleted, but you should no longer be able to
2 view it on Instagram. Keep in mind that complete and detailed reports (example:
3 providing the username of the account you're reporting) help us take appropriate action.
4 If the reported child's age can't reasonably be *verified as under 13*, then we may not be
5 able to take action on the account.³⁸⁷

6 Facebook's reporting page contains almost identical language.³⁸⁸ By choosing to implement age
7 verification only before deleting accounts of users suspected to be children, but not when those accounts
8 are first created, Meta makes it more difficult to prove a user is under age 13 than it does for a minor to
9 pretend to be over 13.

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

12 303. Zuckerberg has stated that he believes children under 13 should be allowed on
13 Facebook,³⁸⁹ so Meta's lax approach to age verification appears to reflect true company policy.

14 304. Meta's approach to underage users has consistently been one of feigned ignorance. On
15 October 10, 2021, Senator Marsha Blackburn reported that a young celebrity told Instagram CEO Adam
16 Mosseri that she had been active on Instagram since she was eight. Mosseri replied that he "didn't want
17 to know that."³⁹⁰

18 305. But Meta *does* know that its age-verification protocols are inadequate to keep minors off
19 Facebook and Instagram. According to a May 2011 *ABC News* report, "about 7.5 million [Facebook]
20 users in the U.S. are under the age of 13, and about 5 million are under the age of 10[.]"³⁹¹ Meta knows

21 ³⁸⁷ *Report an Underage User on Instagram*, Instagram,
22 <https://help.instagram.com/contact/723586364339719?fbclid=IwAR3E5rZo8zvp9Uw3giRoQRMy5qFmIGpy-NOLLtpctH0wkaIXtfJ1ft9O09Q> (emphasis added).

23 ³⁸⁸ *Report an Underage Child*, Facebook, <https://www.facebook.com/help/contact/209046679279097>.

24 ³⁸⁹ Kashmir Hill, *Mark Zuckerberg Is Wrong About Kids Under 13 Not Being Allowed on Facebook*,
25 *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>
26 [https://perma.cc/6TZX-EKE6].

27 ³⁹⁰ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
28 *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>.

³⁹¹ 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>.

1 through retrospective cohort analyses that “up to 10 to 15% of even 10-year-olds in a given cohort may
2 be on Facebook or Instagram.”³⁹²

3 306. Meta knows that its chosen method of registration does not adequately protect minor
4 users from reporting inaccurate and implausible age information. As one product engineer cautioned
5 while analyzing the age of Facebook users, “Don’t believe anything in the stated age graph for under 30.
6 They are all mixed up . . . We have way more people who say they are born in the early 90s than exist in
7 the population.”³⁹³

8 307. Meta’s internal studies confirm its knowledge that kids, tweens, and teens use its
9 platforms. In one study, Meta researched children as young as seven and found that, in the fifth grade,
10 “social media becomes a part of their digital diets.”³⁹⁴ Moreover, they identified that 24% of children
11 ages 7-9 and 55% of tweens ages 10-12 have at least one social media account,³⁹⁵ and specifically stated
12 that Instagram’s perceived user base included middle schoolers.³⁹⁶

13 308. Another internal post reveals Meta’s knowledge of the widespread use of Instagram by
14 preteens, as well as its targeting of children under the age of 13. In a study from around January 2021:
15 *The Role of the Teen in Shaping a Household’s Experience of Instagram*, Meta expressed a desire to
16 utilize teenagers as the doorway into capturing an entire household of users, including children under
17 age 13.³⁹⁷ The study explains that teens can be used to teach their preteen siblings how to join while
18 underage, and to help them develop a habit of using and posting indiscriminately.³⁹⁸ The study expresses
19 concern that some teens may teach their preteen siblings to post less, and recommends that Meta combat
20 this by changing perceptions among teens so that they will instruct their preteen siblings to use
21 Instagram more spontaneously.³⁹⁹ Key discussion points from this document include:

22
23 ³⁹² *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
24 *on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
25 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

26 ³⁹³ Haugen_00012303 at Haugen_00012314.

27 ³⁹⁴ Haugen_00023849 at Haugen_00023855; Haugen_00023849 at Haugen_00023858910.

28 ³⁹⁵ *Id.* at Haugen_00023866.

³⁹⁶ *Id.* at Haugen_00023879.

³⁹⁷ Haugen_00016728 at Haugen_00016728.

³⁹⁸ *See Id.* at Haugen_00016731–Haugen_00016734.

³⁹⁹ *Id.* at Haugen_00016736–Haugen_00016740.

1 Teens strongly influenced preteens' understanding of what and how frequently to share
2 on [Instagram], even discouraging them from sharing. . . . We need to understand
3 [Instagram] myths circulating among teens to inform comms and shift the perception of
4 sharing on [Instagram]. . . .

5 Historically, teens have been a key focus for [Instagram]. Acquiring and maintaining
6 them continues to be a priority, reflected by investment in new features like Reels.
7 Additionally, capturing the teen user cohort on [Instagram] is critical as we think about
8 Instagram's role within the broader family of apps. . . . [Teens] are typically the first
9 within a household to join. In many cases, they're also critical to the onboarding process
10 for parents and preteens alike. . . .⁴⁰⁰

11 Older teens were [Instagram] catalysts for preteens. Most preteens became curious about
12 and wanted an [Instagram] account because of their older sibling. In some cases, preteens
13 even relied on their older sibling to create and set up their account, seeking their guidance
14 on a username, profile photo, and accounts to [f]ollow. . . . If we're looking to acquire
15 (and retain) new users we need to recognize a teen's influence within the household to
16 help do so, and the potential ripple effect. . . .

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

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

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

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

312. 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.

⁴⁰⁰ *Id.* at Haugen_00016731–Haugen_00016734.

1 313. Meta’s platforms largely lack readily available parental controls, despite their
2 affordability and ease of implementation. For example, Meta has chosen not to: (a) require children’s
3 accounts on Facebook and Instagram to be linked to their parents’, as it does with another one of its
4 platforms—Messenger Kids;⁴⁰¹ (b) send reports of a child’s activity to parents; (c) allow parents to
5 implement maximum daily usage limitations or to prohibit use during certain hours (e.g., school and
6 sleep hours); (d) notify parents about interactions with accounts associated with adults; or (e) require
7 parental approval before a minor can follow new accounts.

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

14 315. Meta creates a foreseeable risk to Plaintiff’s schools and students through its design
15 choices, and then attempts to shift the burden of protection from those platforms onto parents.
16 Meanwhile, Meta intentionally designs Facebook and Instagram to aid children’s efforts to undermine
17 parental supervision. For example, Instagram and Facebook allow children to create a limitless number
18 of anonymous accounts without parental approval or knowledge and allows kids to block parent
19 profiles.⁴⁰² On Instagram, children can post stories to “Close Friends Only,” i.e., to a select group of
20 followers, excluding their parents. On Facebook, children can place their parents on a “restricted list” of
21 people who are unable to view their stories. Meta has intentionally designed many aspects of Instagram

22
23 ⁴⁰¹ 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/>.

24 ⁴⁰² In 2018, Meta observed that “the participation rate of multiple account switching (basically the
25 equivalent of finstas) [was] going up,” with 36% of teens engaging in multiple account switching.
26 Haugen_00017698 at Haugen_00017784. “Finsta,” a widely used slang term, is a contraction of “fake”
27 and “Insta” (short for Instagram). “It is neither an official designation nor a type of account offered by
28 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-](https://www.nytimes.com/2021/09/30/style/finsta-instagram-accounts-senate.html)
[senate.html \[https://perma.cc/T737-UG7V\]](https://perma.cc/T737-UG7V).

1 and Facebook to undermine parental supervision in an effort to maximize teen usage: “If Mom starts
2 using an app all the time, the app can lose a ‘cool’ factor, if we’re not conscious of separation.”⁴⁰³ “[W]e
3 should be thinking about how having parents being on Instagram might affect graph management and
4 teen engagement over time. Discovery/usage of additional accounts could prove critical for authentic
5 sharing by teens.”⁴⁰⁴

6 316. As one internal document described the issue:

7 [A]re teens able to maintain spaces that feel sacred to them (and their friends) or do we
8 see decreased usage or new behavior patterns emerge as household members join? . . .
9 Preservation of protected spaces will require: [1] Learning how to create spaces within
10 the app where teens feel like they have privacy both from their own parents but also
11 privacy from non-peers (e.g., Aunt Sally, neighbor down the street, teachers, etc.). [2]
12 Finding opportunities, such as [“]close friends[”] where teens have their own, protected
13 peer communities. [3] Understanding the value of certain features being more complex
14 (i.e., indirectly made for teens because more challenging for parents or preteens). Both
15 Snapchat and TikTok are somewhat confusing to parents, in turn affording teens a
16 protected place to play/engage.⁴⁰⁵

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

20 The other big reason that parents aren’t a source of support has to do with parents’ ability
21 (or really, their inability) to understand what adolescence in the age of social media looks
22 and feels like. The parents of today’s teens came of age before social media, so they don’t
23 know and *can’t* know what it’s like to live in what feels like a constant spotlight. When
24 today’s parents were teens, social comparison was much more limited both in terms of
25 scope and scale. Teens today compare themselves to many more people, much more
26 often, and about more parts of life than their parents did during their adolescence. In
27 addition, today’s parents were able to turn it off when they went home, while teens feel
28 compelled to be on social media all the time.⁴⁰⁶

25 ⁴⁰³ Haugen_00016728 at Haugen_00016735.

26 ⁴⁰⁴ Haugen_00011969 at Haugen_00011975. “Graph management” apparently refers to efforts by a user
27 to unfollow accounts, i.e., “prun[e].” META3047MDL-003-00146492 at META3047MDL-003-
28 00146496; META3047MDL-003-00178437 at META3047MDL-003-00178437–META3047MDL-
003-00178438.

⁴⁰⁵ Haugen_00016728 at Haugen_00016735.

⁴⁰⁶ Haugen_00017069 at Haugen_00017173.

1 318. When employees have raised the possibility of additional safeguards—“could we offer a
2 parental control feature so that parents and kids could learn and cope together?”—Meta has consistently
3 ignored them.⁴⁰⁷

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

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

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

15 321. To drive user engagement (and thereby drive data collection and advertising revenue),
16 Facebook and Instagram utilize a series of design features that are carefully calibrated to exploit users’
17 neurobiology, especially aspects unique to minors. Indeed, Meta’s product design team’s research with
18 respect to “long-term retention” confirmed that “the young ones are the best ones . . . You want to bring
19 people to your service young and early.”⁴⁰⁸ These features work in tandem with algorithmic ranking,
20 discussed below, to promote addictive engagement. Meta understands this, “teens tell us that they try to
21 take a break but feel compelled back onto the app.”⁴⁰⁹ But it does not warn prospective or current users
22 about the following features or their safety risks, which are particularly harmful to children and result in
23 serious problems in Plaintiff’s schools.

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

27 ⁴⁰⁷ *Id.* at Haugen_00017172.

28 ⁴⁰⁸ Mass. AG Compl. at 39, ¶ 146.

⁴⁰⁹ 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.

323. *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.⁴¹⁰ Instagram launched in 2010 with the Like feature built-in—a user can “Like” a post simply by tapping a heart-shaped button.

324. 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.⁴¹¹ In that research, Meta acknowledged how much younger users care about the number of “Likes” they received.⁴¹²

325. 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.⁴¹³ 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.

⁴¹⁰ 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/>.

⁴¹¹ See Haugen_00008207 at Haugen_00008210 (summarizing 2020 research and referencing 2018 research regarding the stress and anxiety that “Likes” cause teens).

⁴¹² *Id.* at Haugen_00008232.

⁴¹³ 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>.

1 326. Meta’s research confirms that hiding “Likes” for all its users would decrease social
2 comparison on the apps.⁴¹⁴ Yet its research also demonstrated that hiding “Likes” would decrease the
3 rates at which users click on advertisements (and thereby lower Meta’s ad revenue).⁴¹⁵

4 327. For that reason—despite its ability to alleviate the negative impact of “Likes” on younger
5 users—Meta chose only to implement ineffective, nominal measures as a public relations strategy. Meta
6 first created the option for users to hide “Like” counts in May 2021, but it made this an optional setting
7 left off by default.⁴¹⁶ Moreover, even when hidden, the number of “Likes” remains visible to the poster.
8 These changes stop short of resolving the issue of negative social comparison and compulsive use that
9 these score-keeping features cause.

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

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

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

26 _____
27 ⁴¹⁴ Haugen_00008207 at Haugen_00008232.

⁴¹⁵ *Id.* at Haugen_00008250.

28 ⁴¹⁶ Instagram, *Giving People More Control on Instagram and Facebook*, Meta (May 26, 2021),
<https://about.fb.com/news/2021/05/giving-people-more-control/>.

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

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

5 We have been investing effort in researching time spent to find opportunities. By
6 comparing long-term tests that always or never auto-play videos, we find that auto-play
7 increases overall time spent for some people and cannibalizes time spent for others.
8 Using SmartScorer, we found that auto-play increases time spent for people with high
9 inventory utilization and younger people (college and late high school), and decreases
10 time spent for other people. This shows there is opportunity to grow time spent by
11 personalizing auto-play rules in feed (details).⁴¹⁷

12 332. *Fourth*, Meta carefully calibrates the notifications it sends outside of the Facebook and
13 Instagram apps, to maximize success in drawing back users who are not presently using the platforms
14 and engaging in unrelated activities, such as attending school. Internal company documents outline
15 Meta's strategy of pursuing "Teen Growth" by "leverag[ing] teens' higher tolerance for notifications to
16 push retention and engagement."⁴¹⁸ By default, Facebook and Instagram notify users through text and
17 email about activity that might be of interest, which prompts users to open and reengage with the
18 platforms. However, Meta intentionally chooses to use "clickbait"⁴¹⁹ to display only a limited amount of
19 information in notifications, in order to trigger curiosity and manipulate the user to click or tap through
20 to the product. In December 2020, Meta internally acknowledged that the goal of this feature was to
21 optimize engagement at the expense of value to users: "A few years ago we stopped sending out emails
22 telling you what happened - e.g., telling you what your friend did - instead we just say 'someone
23 comment [sic] on your post,' in the hope that you'll click through. This a clear value-engagement
24 tradeoff."⁴²⁰ Similarly, Meta stopped sending push notifications telling users about friend activities,
25 finding that, without notifications, users were forced to go to the product itself to "check what's
26 happening," thereby initiating a new session, increasing engagement, and improving Meta's bottom

27 ⁴¹⁷ MDL AG Compl. at 27, ¶ 145.

28 ⁴¹⁸ MDL AG Compl. at 52, ¶ 304.

⁴¹⁹ *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").

⁴²⁰ Haugen_00010114 at Haugen_00010117.

line.⁴²¹ Meta designed these features despite knowledge that they would increase addictive behaviors,⁴²² and in disregard of safer alternative designs.⁴²³

333. 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.⁴²⁴

334. 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.⁴²⁵ Indeed, Meta’s research noted that teen brains have “insatiable” need for these “feel good dopamine effects.”⁴²⁶

335. 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.⁴²⁷

336. 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

⁴²¹ *Id.*

⁴²² See Haugen_00016893 at Haugen_00016899–Haugen_00016902.

⁴²³ 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).

⁴²⁴ Mass. AG Compl. at 28, ¶ 93.

⁴²⁵ Mass. AG Compl. at 27, ¶ 91.

⁴²⁶ Mass. AG Compl. at 35, ¶ 129.

⁴²⁷ *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>.

1 young users by “caus[ing] inattention and hyperactivity among teens,” and “reduc[ing] productivity and
2 well-being.”⁴²⁸

3 337. Similarly, in a November internal presentation: *[Instagram] Notification Systems*
4 *Roadshow*, Meta’s employees acknowledged that some of its users are “overloaded because they are
5 inherently more susceptible to notifications dependency.”⁴²⁹ Despite acknowledging users’ concern that
6 Instagram’s push notifications had the potential to “constantly harm . . . mental health,” the presentation
7 did not propose any product changes to protect young users’ mental health—and instead deferred the
8 “harmful effect on teen usage” for further investigation.⁴³⁰

9 338. *Fifth*, the “Stories” feature of both Facebook and Instagram is designed to create artificial
10 urgency so that users return to the apps from frequently. “Stories” was added by Meta in response to the
11 growing popularity of Snapchat with teenagers in 2016. “Stories” appear at the top of a user’s home
12 page upon opening the app and are available to view for only 24 hours, after which they disappear. This
13 creates pressure to use the product daily, or else risk missing out on dopamine-causing stimuli or social
14 interactions. This feature is particularly addictive to adolescent users, like Plaintiff’s students, who feel
15 increased social pressure to view all their contacts’ stories each day before they disappear, thus
16 increasing their compulsive usage and potential addiction to the product.⁴³¹ The ephemeral nature is a
17 ploy intended to inspire urgent perusal, and it works.⁴³²

18 339. Meta’s internal data shows that its “Stories” feature successfully increased the amount of
19 time users spend on Instagram. Internal data from 2018 touted statistics that 72% of people on Instagram
20 viewed Stories each day, that “[g]rowth is especially strong” among U.S. teens, and that based on these
21 viewership rates “Stories Ads Revenue” had grown to be “20% of daily Instagram revenue.”⁴³³ Internal

22
23 ⁴²⁸ Haugen_00021690 at Haugen_00021708.

24 ⁴²⁹ MDL AG Compl. at 53, ¶ 312.

25 ⁴³⁰ *Id.*

26 ⁴³¹ Sarah Lempa, *Science Behind [sic] Why Instagram Stories Are So Addicting*, Healthline (Apr. 5,
27 2021), <https://www.healthline.com/health/why-are-instagram-stories-so-addicting#The-story-behind-the-Stories>.

28 ⁴³² 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>.

⁴³³ 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.”⁴³⁴

340. 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.⁴³⁵ As the feature’s name suggests, these videos are only accessible and can be interacted with during the time that user is going “Live.”

341. 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!”⁴³⁶ 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.

342. 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.”⁴³⁷

343. 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).”⁴³⁸

344. 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.⁴³⁹

⁴³⁴ MDL AG Compl. at 21, ¶ 101.

⁴³⁵ *Live*, Instagram Help Ctr., https://help.instagram.com/272122157758915/?helpref=hc_fnav.

⁴³⁶ *Notification Settings*, Instagram Help Ctr., <https://help.instagram.com/105448789880240>.

⁴³⁷ Mass. AG Compl. at 33–34, ¶ 122.

⁴³⁸ MDL AG Compl. at 21, ¶ 106.

⁴³⁹ META3047MDL-003-00087111 at META3047MDL-003-00087112.

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

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

5 346. Meta has long been aware of this compounding likelihood of injury posed by its
6 platforms.

7 347. In 2017, Meta investigated Facebook users who were addicted to the product—that is,
8 those who “cannot stop using [the] product to the point where it can cause them harm.”⁴⁴⁰ The research
9 found that “[i]n a given week, approximately 5.9 million people leave Facebook” because they “spent
10 too much time” or because they were taking a temporary break and “planned to return.”⁴⁴¹ “This subset
11 provided a good signal for people who could be addicted, who ultimately leave Facebook as a
12 solution.”⁴⁴² The analysis also found that this subset had a higher number of sessions per day, received
13 more notifications, and responded quicker to notifications compared to all users.⁴⁴³ In 2018, Meta
14 examined the issue of “Facebook addiction” through a study: *Problematic Facebook use: When people*
15 *feel like Facebook negatively affects their life.*⁴⁴⁴ The investigators defined “problematic use” as
16 meaning: “Serious problems with sleep, work, or relationships that they attribute to Facebook AND
17 concerns or preoccupations about how they use Facebook (e.g., a fear of missing out (FOMO) or lack of
18 control)[.]”⁴⁴⁵ Notably, the investigators did not target the heaviest Facebook users in their research.⁴⁴⁶

19 348. The study found that approximately 5% of teens ages 13-20 were problematic users.⁴⁴⁷
20 “Problematic use is highest among teens and people in their 20s, consistent with previous findings that
21 younger people generally have more problems with self-regulation.”⁴⁴⁸ Additionally, “problematic
22 users” evidenced common tendencies, such as: (a) accessing and spending more time on Facebook; (b)

23 ⁴⁴⁰ Haugen_00016893 at Haugen_00016895. This group’s investigation also included meeting with Nir
24 Eyal, author of the book: *Hooked: How to Build Habit-Forming Products*.

25 ⁴⁴¹ Haugen_00016893 at Haugen_00016898.

26 ⁴⁴² *Id.*

27 ⁴⁴³ Haugen_00016893 at Haugen_00016899–Haugen_00016902.

28 ⁴⁴⁴ Haugen_00021690 at Haugen_00021690.

⁴⁴⁵ *Id.* at Haugen_00021692.

⁴⁴⁶ *Id.* at Haugen_00021697.

⁴⁴⁷ *Id.* at Haugen_00021699.

⁴⁴⁸ *Id.* at Haugen_00021697.

1 using Facebook late at night; (c) receiving more and responding more quickly to push notifications; (d)
2 temporarily deactivating their account in the past; and (e) sending far more messages per minute with a
3 higher ratio of messages sent to messages received.⁴⁴⁹ Meta understands that “teens feel addicted to
4 [Instagram] and feel a pressure to be present” and “like addicts, they feel that they are unable to stop
5 themselves from being on [Instagram][.]”⁴⁵⁰

6 349. A study into Instagram user behaviors from that same year similarly found that “high
7 time spent users do tend to be disproportionately younger users, and these users may warrant extra
8 attention.”⁴⁵¹ The study found that “[a]s time spent increases, we see a larger proportion of users that are
9 high school, college or early work life-stages, with additional increases in high school when we zoom in
10 on the top 1% of time spent users.”⁴⁵²

11 350. Meta knows that “problematic use” of Facebook and Instagram leads to real problems. In
12 one internal company document, Meta acknowledged that the pressure to be present and obtain
13 validation on Instagram meant that teens lacked the capacity to “switch off and shut down,” noting that
14 teens “can get addicted to things that make them feel bad.”⁴⁵³ One of Meta’s data scientists did not
15 mince words when describing this phenomenon to their colleagues:

16 I worry that driving sessions incentivizes us to make our product more addictive, without
17 providing much more value. How to keep someone returning over and over to the same
18 behavior each day? Intermittent rewards are most effective (think slot machines),
19 reinforcing behaviors that become especially hard to extinguish—even when they provide
20 little reward, or cease providing reward at all.⁴⁵⁴

21 Another Meta employee was clear-eyed that “little reward” was too charitable—and that addictive use
22 was actively harming kids’ mental health:

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

25 ⁴⁴⁹ *Id.* at Haugen_00021703–Haugen_00021704; Haugen_00021708–Haugen_00021710,
26 Haugen_00021715–Haugen_00021716.

26 ⁴⁵⁰ META3047MDL-003-00157036 at META3047MDL-003-00157036.

27 ⁴⁵¹ Haugen_00017177 at Haugen_00017181.

27 ⁴⁵² *Id.*

28 ⁴⁵³ Haugen_00017069 at Haugen_00017128, Haugen_00017132.

⁴⁵⁴ Haugen_00010114 at Haugen_00010127.

1 [A]bout 30% (and even larger proportions of those who are unsatisfied with their lives)
2 said that the amount of time they spend on social media makes them feel worse. About
3 half of teens in both [the U.S. and UK] want Instagram to encourage them to take a break
4 or to get off the app[.]

5 [In another survey,] we found that time spent is among one of the most negative
6 experiences for [Instagram] (25%+ say they spend too much time on social media, and
7 it's worst on Instagram and Facebook). At the same time, they didn't think there was
8 anything they could do about it and had fairly negative things to say about the time spent
9 tools we have (particularly that the tools are easy to ignore).⁴⁵⁵

10 351. In January 2021, another Meta employee wrote: "No one wakes up thinking they want to
11 maximize the number of times they open Instagram that day. But that's exactly what our product teams
12 are trying to do."⁴⁵⁶

13 352. Meta failed to invest in adequate tools to limit the harm their platforms inflicted on users.
14 As their internal documents reveal, "the tools we currently have aren't effective at limiting [users'] time
15 on the ap [sic][.]"⁴⁵⁷ Nonetheless, Meta publicly presented certain of these tools as solutions, despite
16 knowing of their ineffectiveness. For example, Meta offered its users a feature that purported to show
17 how much time users had spent on Instagram, and Meta touted this feature "when speaking to
18 consumers, the press, and stakeholders about our efforts to combat social media addiction."⁴⁵⁸ But
19 internally, Meta acknowledged that the data reported by this tool was fundamentally "incorrect":

20 It's not just that Apple / Google have better data. Ours is wrong. Far worse. We're
21 sharing bad metrics externally. We've been unable to right it despite several person-
22 months of efforts. . . . So it's wrong (bad enough in itself), can't be fixed easily (we've
23 tried), has been half-rolled-out for a while . . . the group that audits metrics we provide to
24 the outside world[] has called us out on it. . . . The reason this is relevant is we vouch for
25 these numbers. Any day they're out there is a legal liability.⁴⁵⁹

26 353. Meta's failure to prevent, and indeed pursue, compulsive use by children, and the harms
27 resulting therefrom, are a function of its misplaced priorities. One "integrity researcher" at Facebook
28 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:

26 ⁴⁵⁵ Haugen_00017069 at Haugen_00017171.

27 ⁴⁵⁶ META3047MDL-003-00161686.

28 ⁴⁵⁷ META3047MDL-003-00157036 at META3047MDL-003-00157036.

⁴⁵⁸ *Id.*

⁴⁵⁹ META3047MDL-003-00157133 at META3047MDL-003-00157133.

1 Integrity teams are facing increasing barriers to building safeguards. . . . [T]ime and time
2 again I’ve seen promising interventions from integrity product teams, with strong
3 research and data support, be prematurely stifled or severely constrained by key decision
4 makers—often based on fears of public and policy stakeholder responses. Similarly
5 (though even more concerning), I’ve seen already built & functioning safeguards being
6 rolled back for the same reasons While mountains of evidence is (rightly) required to
7 support a new intervention, none is required to kill (or severely limit) one. . . . [This] is
8 intended as a call to reflection for those decisions-makers [sic] imposing constraints.⁴⁶⁰

9 354. Meta’s decision to addict teenage users by rewiring their brains has not aged well for
10 some of its former employees. Chamath Palihapitiya, the former Vice President of User Growth at
11 Facebook, admitted that he feels “tremendous guilt” about his contributions to social media, saying
12 “[t]he short-term, dopamine-driven feedback loops that we have created are destroying how society
13 works[.]”⁴⁶¹

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

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

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

24 357. As discussed above, in their original forms, Meta’s Facebook and Instagram algorithms
25 were ranked chronologically, meaning that a particular user’s feed was organized according to when
26 material was posted or sent by the people the user followed. In 2009, Meta did away with Facebook’s
27 chronological feed in favor of engagement-based ranking; in 2016, it did the same on Instagram. This
28

⁴⁶⁰ Haugen_00021096 at Haugen_00021097 (emphasis omitted).

⁴⁶¹ 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>].

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

10 358. In algorithmically generating users’ feeds, Meta draws upon the vast amount of data it
11 collects about and from its users. Meta’s algorithms combine the user’s profile (e.g., the information
12 posted by the user on the product) and the user’s dossier (the data collected and synthesized by Meta, to
13 which it assigns categorical designations) along with a dossier of similar users.⁴⁶² Meta’s algorithms
14 identify and rank recommended posts to optimize for various outcomes, such as for time-spent by a user
15 or for user engagement. This can have serious mental health consequences, and associated impact on
16 Plaintiff’s operations, because Meta knows that teens “can get addicted to things that make them feel
17 bad.”⁴⁶³

18 359. Much of what Meta shows users is material that they did not sign up for but cannot avoid.
19 In a 2019 internal document, a Meta data scientist explained that “users have told us the pages they
20 would like to see content from, but we often override those explicit preferences because our predictions
21

22
23 ⁴⁶² 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.

24 ⁴⁶³ Haugen_00006798 at Haugen_00006799 (observing that Meta’s recommendation algorithms “are
often prone to recommending bad content”); Haugen_00024997 at Haugen_00024997 (conducting
25 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
26 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
27 (“[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.”);
28 Haugen_00017069 at Haugen_00017128.

1 of what will get shared and engaged with disagree.”⁴⁶⁴ This same employee pointed to additional data
2 demonstrating that users get relatively few connected posts (from pages they chose to like) as opposed to
3 unconnected posts that are reshared by others, even as Meta knows that such material is less valued by
4 users.⁴⁶⁵

5 360. Meta also optimizes the design of its platforms for overall “network value”—that is, what
6 will get the most downstream engagement by other users—rather than what that specific user would
7 like.⁴⁶⁶ As the Meta data scientist put it, “we show things to users that we think they have a small chance
8 of sharing, leading to comments between people who see it downstream, over things that have a greater
9 chance of being explicitly liked by that user.”⁴⁶⁷

10 361. Through these algorithms, Meta intentionally supplants the material that users have
11 elected to see with items that it believes will drive more use and engagement. Thus, the platforms that
12 Meta touts as “[g]iv[ing] people the power to build community and bring[ing] the world closer
13 together[,]” are designed in a way that prioritizes not social connection but product use at all costs, even
14 to the detriment of the health and safety of young people⁴⁶⁸. The result for Meta is an increase in its
15 bottom line. The result for young users is platforms that are so addictive that they return again and again,
16 even when their mental and physical health suffers greatly.

17 362. Meta knew that its engagement-based ranking algorithm (and its subsequent, iterative
18 MSI ranking algorithm) was structured so that posts which produces intense reactions (i.e., strong
19 engagement) triggers amplification by the apps. This propels users into the most reactive experiences,
20 favoring posts that generate engagement because they are extreme in nature. Zuckerberg publicly
21 recognized this in a 2018 post, in which he demonstrated the correlation between engagement and
22 sensational content that is so extreme that it impinges upon Meta’s own ethical limits, with the following
23
24

25 ⁴⁶⁴ Haugen_00021247 at Haugen_00021248; *see also* Haugen_00006798 at Haugen_00006799 (Meta
26 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.”).

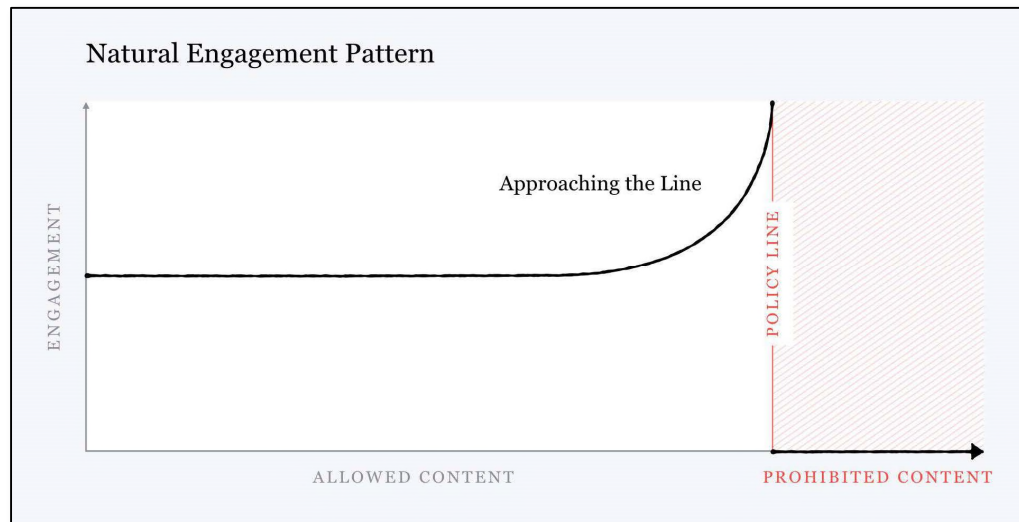
27 ⁴⁶⁵ Haugen_00021247 at Haugen_00021248.

28 ⁴⁶⁶ *Id.* at Haugen_00021251.

⁴⁶⁷ *Id.*

⁴⁶⁸ *Our Mission*, Meta, <https://about.meta.com/company-info/>.

chart.⁴⁶⁹ 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.



363. 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.”⁴⁷⁰

364. Meta intentionally designed its MSI-focused algorithms to collect and analyze several users’ data⁴⁷¹ to predict what posts will capture users’ attention. Meta also tracks and utilizes data from

⁴⁶⁹ 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).

⁴⁷⁰ Haugen_00001033 at Haugen_00001033.

⁴⁷¹ Haugen_00017177 at Haugen_00017177.

1 various other sources, such as a users' off-product activities and the activities on websites that contain
2 Facebook or Instagram "Like" or share buttons.⁴⁷²

3 365. Meta's algorithmic ranking is utilized in a variety of product features that are designed by
4 Meta to maximize user engagement. For example, the Instagram product consists primarily of a never-
5 ending and user-specific Feed, which Instagram's data-driven algorithms generate for each user. In the
6 app's "Home" pane, this feed includes (but is not limited to) photos and videos posted by Instagram
7 users that the user has elected to "follow," as well as recommended photos and videos. In the app's
8 "Explore" pane, the feed consists almost exclusively of photos and videos from users the user has *not*
9 elected to "follow." In both cases, Instagram's algorithms evaluate each user's data to predict what
10 material will maximize their attention and time spent using the product, irrespective of what the user
11 wants to see.

12 366. Other "recommendation" features that are similarly algorithmically powered to drive
13 compulsive use include Facebook's Newsfeed, Instagram's Feed, Instagram Reels, Facebook Reels,
14 Facebook Watch (and its "For You" page), Accounts to Follow, People You May Know (introductions
15 to persons with common connections or backgrounds), Groups You Should Join, and Discover
16 (recommendations for Meta groups to join).

17 367. While Meta has publicly attempted to cast MSI as making time spent on its platforms
18 more "meaningful," MSI was just another way for Meta to increase user engagement on Instagram and
19 Facebook. While the feature increases the chance that product interaction will be "meaningful" by
20 Meta's definition—more "Likes," comments, and interactions—it does not consider whether
21 recommended posts are welcomed by the user. This sets up users who may have rejected upsetting or
22 dangerous posts to see more of the same, resulting in what Meta itself calls a "horrible feedback loop /
23 downward spiral."⁴⁷³ Also referred to as "feeding the spiral,"⁴⁷⁴ the MSI algorithm increases the

24
25 ⁴⁷² Allen St. John, *How Facebook Tracks You, Even When You're Not on Facebook*, Consumer Reps.
26 (Apr. 11, 2018), <https://www.consumerreports.org/privacy/how-facebook-tracks-you-even-when-youre-not-on-facebook-a7977954071/>.

27 ⁴⁷³ META3047MDL-003-00068860 at META3047MDL-003-00068860.

28 ⁴⁷⁴ 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.

1 likelihood that a user sees posts “that makes them feel bad, they engage with it [even if only to reject it],
2 and then their [user experience] is flooded w[ith] it.”⁴⁷⁵ Because Meta’s algorithm prioritizes
3 engagement above all else, any harmful feeling or impulse that users have are amplified by Instagram—
4 which becomes an echo chamber screaming their most upsetting thoughts back at them.

5 368. This feedback-loop dynamic was cast into vivid reality when 14-year-old Molly Russell
6 took her own life.⁴⁷⁶ During an official inquest investigating the role that social media platforms played
7 in her death, the coroner found that:

8 The platform operated in such a way using algorithms as to result, in some circumstances,
9 of binge periods of images, video clips and text some of which were selected and
10 provided without Molly requesting them. These binge periods . . . are likely to have had a
11 negative effect on Molly The sites normalised her condition focusing on a limited
12 and irrational view without any counterbalance of normality.⁴⁷⁷

13 369. The coroner further observed that “[t]here was no age verification when signing up to the
14 on-line platform” and that Molly’s parents “did not have access, to the material being viewed or any
15 control over that material.”⁴⁷⁸

16 370. Disturbingly, years before Meta sent an executive to the inquest to tout its platforms as
17 “safe,” Meta had conducted internal research which warned that there was a risk of “similar incidents
18 like Molly Russell” due to the operation of algorithmic product features.⁴⁷⁹

19 371. Despite Molly’s death, and notwithstanding Meta’s research into dangerous spirals—at
20 one point dubbed the “Rabbithole project”—the company did nothing to stop harm to its young users.
21 Meta has been clear about the problem: “[O]ur recommendations algorithms will start pushing you down
22 a rabbit hole[.]”⁴⁸⁰ They have been clear about potential solutions: targeted changes to the algorithm do

23 ⁴⁷⁵ META3047MDL-003-00121808 at META3047MDL-003-00121808.

24 ⁴⁷⁶ 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>.

25 ⁴⁷⁷ Andrew Walker, *Regulation 28 Report to Prevent Future Deaths* at 2, ¶ 4, N. London Coroner’s
26 Serv. (Oct. 13, 2022), https://www.judiciary.uk/wp-content/uploads/2022/10/Molly-Russell-Prevention-of-future-deaths-report-2022-0315_Published.pdf.

27 ⁴⁷⁸ *Id.* at 3 ¶ 5.

28 ⁴⁷⁹ META3047MDL-003-00043617 at META3047MDL-003-00043644.

⁴⁸⁰ META3047MDL-003-00077939 at META3047MDL-003-00077939; *see also* META3047MDL-
003-00068860 at META3047MDL-003-00068860; META3047MDL-003-00087111 at

lead to meaningful changes.⁴⁸¹ But they have been resistant to making changes, citing an explicit, profit-minded reason that such tweaks “came with a clear engagement cost[.]”⁴⁸²

f. Meta’s dangerous and harmful features cause negative body image and harmful impacts on youth mental health.

372. Meta has known since at least 2018 that Instagram has a corrosive effect on the mental health of pre-teen and teenage users.⁴⁸³ 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.⁴⁸⁴

373. 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;⁴⁸⁵
- b. 32% of teenage girls said that when they felt bad about their bodies, Instagram made them feel worse;⁴⁸⁶

META3047MDL-003-00087112 (acknowledging that a majority of “negative experiences” come from algorithmically-powered features like explore and hashtags).

⁴⁸¹ META3047MDL-003-00077939.

⁴⁸² *Id.*

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> [<https://perma.cc/AK48-E6HH>]; META3047MDL-003-00146240 at META3047MDL-003-00146256.

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>; Haugen_00017069; META3047MDL-003-00000029.

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>; META3047MDL-003-00000029 at META3047MDL-003-00000043.

⁴⁸⁶ 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;”⁴⁸⁷
- d. “Frequent social comparison is a key driver of subjective well-being and teens say [Instagram] makes this problem worse;”⁴⁸⁸
- e. One in five teens said that Instagram made them feel worse about themselves or their mental health;⁴⁸⁹
- f. Two-thirds of teen girls on Instagram experienced negative social comparison;⁴⁹⁰
- g. 17% of teen girl Instagram users said the product made “[e]ating [i]ssues” worse;⁴⁹¹
- h. About a quarter of teens who reported feeling “[n]ot good enough” said the feeling started on Instagram;⁴⁹²
- i. About a quarter of teens said that Instagram undermined their confidence in the strength of their friendships;⁴⁹³
- j. Teenagers who struggle with mental health said that Instagram worsened those problems;⁴⁹⁴
- 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”;⁴⁹⁵

⁴⁸⁷ Haugen_00016699 at Haugen_00016707.

⁴⁸⁸ Haugen_00019219 at Haugen_00019226.

⁴⁸⁹ 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.

⁴⁹⁰ Haugen_00019219 at Haugen_00019226.

⁴⁹¹ Haugen_00020135 at Haugen_00020162.

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>; META3047MDL-003-00000029 at META3047MDL-003-00000043.

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.*

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-003-00000053.

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-003-00000052.

1 l. Among teens who reported suicidal thoughts, 13% of British users and 6% of American
2 users traced the desire to kill themselves to Instagram,⁴⁹⁶ and

3 m. 13.5% of teen girls on Instagram said the product made⁴⁹⁷ thoughts of “suicide and self-
4 injury” worse.⁴⁹⁸

5 374. Further, in Meta’s October 2019 *Teen Mental Health Deep Dive* research, which
6 surveyed over 2,500 teenagers who use Instagram on at least a monthly basis, Meta researchers found
7 that “[y]oung people are acutely aware that Instagram can be bad for their mental health, yet are
8 compelled to spend time on the app[.]”⁴⁹⁹

9 375. Meta’s researchers were clear in explaining that Instagram product features were
10 responsible for these problems. In one chart illustrating the “High” amount of “Body, Appearance
11 Comparison” on Instagram, researchers cited as contributing factors “Product mechanics (addicting)”
12 and “Explore, discover, stalk (down the rabbit hole)[.]”⁵⁰⁰ In another slide, researchers noted the
13 particular problems with Instagram’s Explore feature, as it contains “[t]ons of body image triggers” that
14 are “[i]ntimidating” to users.⁵⁰¹

15 376. Children are developmentally unprepared for the psychological ramifications of peer
16 judgment and online comparisons.

17 377. Meta’s internal researchers were not only clear about the fact that Instagram causes a
18 high level of social comparison for teenagers; they were clear-eyed about the dire consequences. They
19 observed that the addictive nature of the Instagram product, combined with a pressure to match
20 unrealistic beauty ideals, can send teens into a downward spiral that includes anger, withdrawal,
21 insecurity, and body dysmorphia—“a series of emotions that in many ways mimic stages of grief.”⁵⁰²
22 They further warned that “[u]sers[’] experience of [this] downward spiral is exacerbated by our
23

24 ⁴⁹⁶ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids,*
25 *Documents Show*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-instagram-kids-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
26 [tweens-attract-11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) ; *Id.* at META3047MDL-003-00000043.

27 ⁴⁹⁷ MDL AG Compl. at 37, ¶ 204.

28 ⁴⁹⁸ Haugen_00016699 at Haugen_00016707.

⁴⁹⁹ Mass. AG Compl. at 34, ¶ 124.

⁵⁰⁰ Haugen_00015958 at Haugen_00015987.

⁵⁰¹ *Id.* at Haugen_00015989.

⁵⁰² *Id.* at Haugen_00015985.

platform[.]”⁵⁰³ “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.”⁵⁰⁴ 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]oneliness.”⁵⁰⁵

378. 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.⁵⁰⁶ The mental health of tween and teen users bears the cost of Meta’s manufacturing and emphasizing influence and celebrity.⁵⁰⁷ 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.⁵⁰⁸

379. 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.⁵⁰⁹

380. 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

⁵⁰³ *Id.* at Haugen_00015990.

⁵⁰⁴ *Id.* at Haugen_00015983.

⁵⁰⁵ *Id.* at Haugen_00015992.

⁵⁰⁶ *See* Haugen_00015958 at Haugen_00015996.

⁵⁰⁷ Haugen_00002527 at Haugen_00002555–Haugen_00002556, Haugen_00002564–Haugen_00002565.

⁵⁰⁸ META3047MDL-003-00159559 at META3047MDL-003-00159560; *see also* Haugen_00002527 at Haugen_00002555.

⁵⁰⁹ Haugen_00017263 at Haugen_00017263.

“improvements.”⁵¹⁰⁵¹¹ 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.⁵¹²

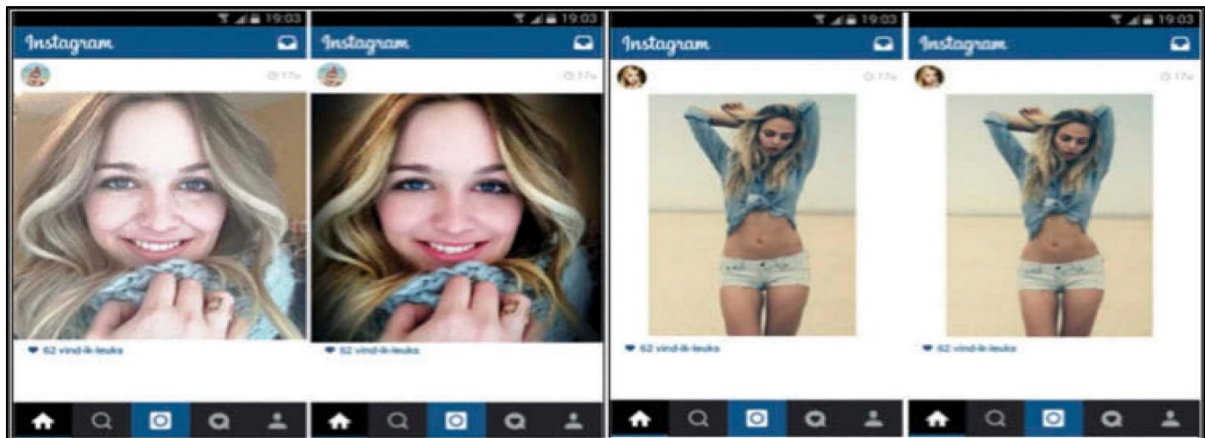


Figure 1. Examples of original versus manipulated Instagram photos emphasizing face, skin, and hair (left), or body (right).

381. First, the easy accessibility of filters, combined with features such as “Likes,” encourages adolescents to artificially change their appearance.⁵¹³ 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.⁵¹⁴ These young people, including youth in Plaintiff’s schools and community, begin to prefer

⁵¹⁰ 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/>.

⁵¹¹ 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>.

⁵¹² 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].

⁵¹³ 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/>.

⁵¹⁴ *Id.*

1 how they look using filters, not as they appear naturally.⁵¹⁵ In a 2016 study, 52% of girls said they use
2 image filters every day, and 80% have used an app to change their appearance before age 13.⁵¹⁶ Meta's
3 own findings showed teen girls spend hours editing images by altering their appearance before posting
4 on Instagram,⁵¹⁷ and that "teen girls in particular" are "some of the biggest users of these filters."⁵¹⁸
5 Pictures must be "Instagrammable" to be worthy of posting.

6 382. *Second*, Instagram causes youth to compare their real-life appearances to the edited
7 appearances only achievable by filters and Meta's tools.⁵¹⁹ These false and unrealistic body image
8 standards further lead teenagers like Plaintiff's students to develop negative perceptions of their
9 appearance. Seventy-seven percent of girls reported trying to change or hide at least one part of their
10 body before posting a photo of themselves, and 50% believe they did not look good without editing.⁵²⁰

11 383. *Third*, the specific changes filters make to an individual's appearance can cause negative
12 obsession or self-hatred surrounding aspects of their appearance.⁵²¹ The filters alter specific facial
13 features such as eyes, lips, jaw, face shape, and slimness, which often require medical intervention to
14 alter in real life.⁵²² The pervasiveness of Meta-designed filters through the algorithm permeates
15 Instagram and cause adolescent users to negatively compare their real appearances against a false

16 ⁵¹⁵ Pooja Shah, *How Social Media Filters Are Affecting Youth*, Parents (Apr. 28, 2022),
17 <https://www.parents.com/kids/health/childrens-mental-health/how-social-media-filters-are-affecting-youth/>.

18 ⁵¹⁶ Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing*
19 *The Way We See Ourselves*, Forbes (Apr. 27, 2021),
20 <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>].

21 ⁵¹⁷ See Haugen_00019219 at Haugen_00019255; Haugen_00019257–Haugen_00019259.

22 ⁵¹⁸ META3047MDL-003-00157020 at META3047MDL-003-00157020–META3047MDL-003-
00157021.

23 ⁵¹⁹ 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).

24 ⁵²⁰ Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing*
25 *The Way We See Ourselves*, Forbes (Apr. 27, 2021),
26 <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>].

27 ⁵²¹ 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>.

28 ⁵²² *Id.*

1 physical reality.⁵²³ In one recent study, even users who reported a higher initial self-esteem level felt
2 they looked 44% worse before their image was edited using a filter.⁵²⁴ “[W]hen the . . . filter increased
3 the gap between how participants wanted to look and how they felt they actually looked, it reduced their
4 self-compassion and tolerance for their own physical flaws.”⁵²⁵ As one psychodermatologist summed it
5 up: “[T]hese apps subconsciously implant the notion of imperfection and ugliness, generating a loss of
6 confidence[.]”⁵²⁶

7 384. *Fourth*, Meta intentionally designed its platforms to not alert adolescent users when
8 images have been altered through filters or edited. Meta has therefore designed its platforms so that
9 users, including youth in Plaintiff’s schools and community, cannot know which images are real and
10 which are fake, deepening obsessive, negative appearance comparison.

11 385. *Fifth*, Meta uses social comparison to keep young users engaged with and addicted to its
12 platforms.

13 386. Heavily edited and unrealistic beauty, modeling, fitness, talent, and success related posts
14 are highly amplified by Meta’s algorithms, especially on the Feeds of young users.

15 387. Social comparisons on social media are frequent and are especially likely to be upward,
16 as social media provides a continuous stream of information about other people’s accomplishments.
17 Research suggests that social comparisons occur automatically; when individuals encounter information
18 about another person, their self-perceptions will be affected. The sheer number of posts in a News Feed,
19 each offering a thumbnail sketch of each person’s carefully curated and predominantly ostentatious
20 lives, yields numerous opportunities for social comparison. Although people do not typically post false
21 information about themselves online, they engage in selective self-presentation. As a result, individuals
22 browsing their News Feeds are more likely to see posts about friends’ exciting social activities rather
23 than dull days at the office, affording numerous opportunities for comparisons to people seemingly
24

25 ⁵²³ *Id.*

26 ⁵²⁴ 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>.

27 ⁵²⁵ *Id.*

28 ⁵²⁶ 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>.

1 better-off. Individuals with vacillating levels of self-esteem and certitude, characteristics notoriously
2 endemic to the adolescent cohort, are particularly oriented to making frequent and extreme upward
3 social comparisons on social media. Social-media-induced social comparison often results in a
4 discrepancy between the ideal self and the real self, thus evoking a sense of depression, deprivation, and
5 distress, resulting in an overall aggravation of a person's mental state. Since the early 2000s, studies
6 have shown that frequent upward social comparison results in lower self-esteem and reduced overall
7 mental health. It is well-established that individuals who are more likely to engage in self-comparison
8 are likewise more likely to suffer harm when using social media. Meta's design choices have amplified
9 this dynamic to psychologically harmful levels, as discussed in further detail below.

10 388. The impact of the negative social and appearance comparison caused by Meta's design
11 choices is profound. Instagram-induced social comparison creates a schism between the ideal self and
12 the real self, leading to distress and depression. Filters, especially in combination with other product
13 features, cause body image issues, eating disorders, body dysmorphia, and related harms.⁵²⁷

14 389. Again, Meta has long been aware of the harms Instagram inflicts on youth by
15 perpetuating social comparison. In one study from 2019, teens explained that Instagram harms their
16 mental health by creating pressure to conform to social stereotypes, the need for validation through
17 views, "Likes" and followers, and the over-sexualization of girls.⁵²⁸ These and other harmful impacts
18 were associated with isolation, adopting unhealthy habits, depression, anxiety, insecurity, and
19 loneliness.⁵²⁹

20 390. In its "Social Comparison Exploratory Research" conducted in 2020, Meta acknowledged
21 that body image comparisons are formed in part by its features—filters that flood its app with seemingly

22
23 ⁵²⁷ See Sian McLean *et al.*, Photoshopping the selfie: Self photo editing and photo investment are
24 associated with body dissatisfaction in adolescent girls, 48 *Int'l J. Eating Disorders* 1132–1140, 1133
25 (2015), <https://pubmed.ncbi.nlm.nih.gov/26311205/> [<https://perma.cc/PE83-EKV4>] (presenting a 2015
26 study involving 101 adolescent girls, which found that more time spent editing and sharing selfies on
27 social media raised their risk of experiencing body dissatisfaction and disordered eating habits); Scott
28 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>.

⁵²⁸ Haugen_00017069 at Haugen_00017122.

⁵²⁹ *Id.* at Haugen_00017126.

unattainable looks like flawless skin, made worse by posters “using hashtags like no-filters but actually using filters.”⁵³⁰ 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.⁵³¹ In a related survey, Meta found that around the age of 30, the role of Instagram in social comparison begins to diminish.⁵³²

391. 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.⁵³³ Most users wished Instagram gave them better user controls.⁵³⁴ 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.⁵³⁵

392. 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.”⁵³⁶ “Posting ‘For the Gram’” creates a “Pressure to Look Perfect.”⁵³⁷ The ability of influencers to “Monetiz[e] face + body” creates a “Highlight Reel Norm.”⁵³⁸ And the “Vortex of Feed + Profile and Explore” promotes a “Hate to love” dynamic for users, which *“Feed[s] the Spiral” of compulsive*

⁵³⁰ 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.

⁵³¹ Haugen_00007080 at Haugen_00007082.

⁵³² *Id.* at Haugen_00007095.

⁵³³ Haugen_00017069 at Haugen_00017145.

⁵³⁴ Haugen_00020135 at Haugen_00020137, Haugen_00020171.

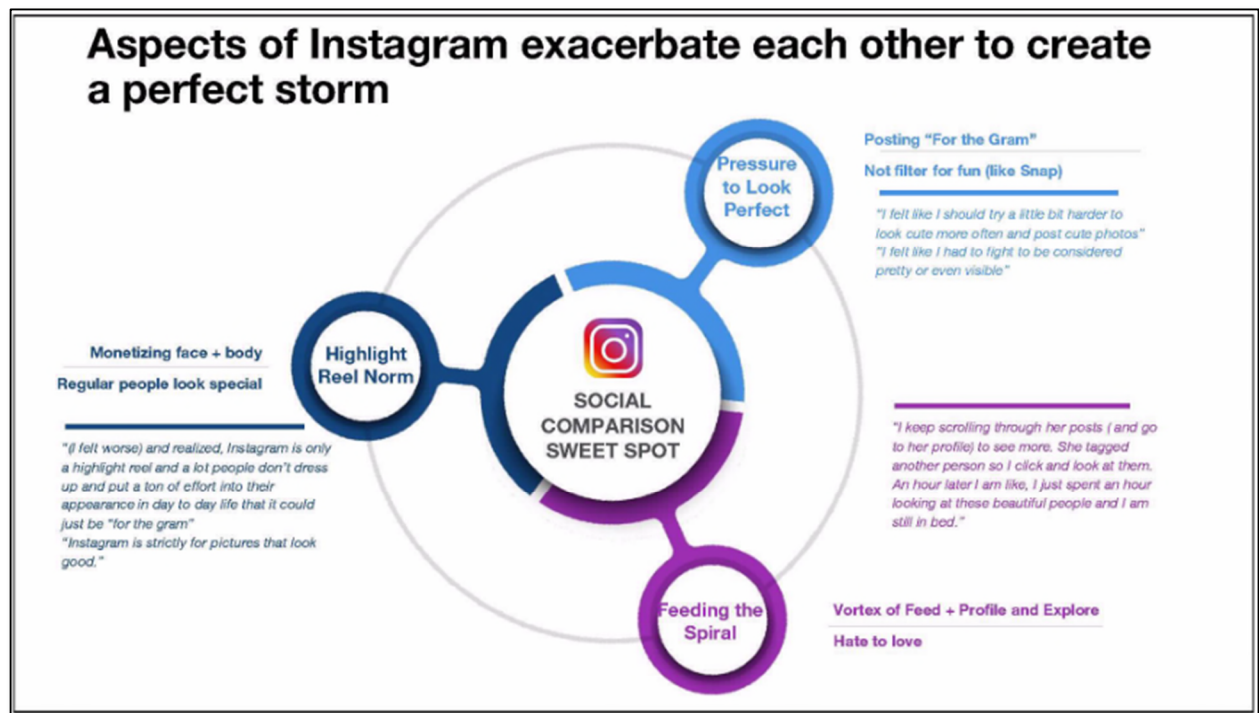
⁵³⁵ Haugen_00002527 at Haugen_00002529, Haugen_00002555.

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>; Haugen_00015958 at Haugen_00015991.

⁵³⁷ 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>.

⁵³⁸ See *Id.*; Haugen_00015958 at Haugen_00015991.

use.⁵³⁹ Taken together, these three features—all driven by design features of Instagram—create a “Social Comparison Sweet Spot.”⁵⁴⁰



393. 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[.]”⁵⁴¹ 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.⁵⁴² Meta observed that long-term, constant self-critique and scrutiny permanently shape how

⁵³⁹ *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 *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.

⁵⁴¹ Haugen_00017069 at Haugen_00017127.

⁵⁴² *Id.* at Haugen_00017127–Haugen_00017128.

1 teens view themselves in all relationships, on and offline.⁵⁴³ Moreover, they found that the incessant
2 social pressure Instagram inflicted on teens led “to obsessive control of what goes on social media and
3 often to attention-seeking [behavior] (often in negative ways)” to obtain social validation.⁵⁴⁴ In other
4 words, Instagram’s design features resulted in an insidious cycle of harm where teens believed they
5 could only find reprieve by increased Instagram use.

6 394. Meta has the technological capabilities to mitigate social comparison harms significantly,
7 but actively chooses to ignore leading research (including its own) and its product engineers’
8 recommendations. One internal presentation recommended several “[t]argeted [i]nterventions” for
9 changes to Instagram that could mitigate these harms, such as a recommendation that users take a break
10 during a long use session.⁵⁴⁵ In another, computational social researchers and engineers at Meta
11 proposed numerous, feasible product design changes, including: demotions on Explore and Reels using
12 topic and image and video features from an FBLeanner model, separating top-account feed from close-
13 friend feed, and not recommending celebrities to follow that post primarily fashion/beauty material as
14 users “can find these accounts on their own, but [Meta] shouldn’t amplify their influence through
15 recommendations.”⁵⁴⁶

16 395. Despite its vast knowledge of the harms that Instagram’s features were causing to
17 adolescents, in Meta’s 2021 Milestone Tracker, the action item of reducing the negative effects from
18 social comparison through controls had yet to be started.⁵⁴⁷ In other words, despite awareness that the
19 deliberate design of Instagram was drastically damaging teen mental and physical health, Meta ignored
20 the problem, failing to implement its own researchers’ recommendations.

21 **g. Facebook’s and Instagram’s dangerous and harmful features include**
22 **impediments to discontinuing use.**

23 396. Once the addicted child realizes the injury Meta’s platforms are inflicting, and wants to
24 quit using, Meta shifts the full force of its genius product design teams to prevent the child’s escape.

26 ⁵⁴³ *See Id.* at Haugen_00017128.

27 ⁵⁴⁴ *Id.* at Haugen_00017130.

28 ⁵⁴⁵ Haugen_00019219 at Haugen_00019272.

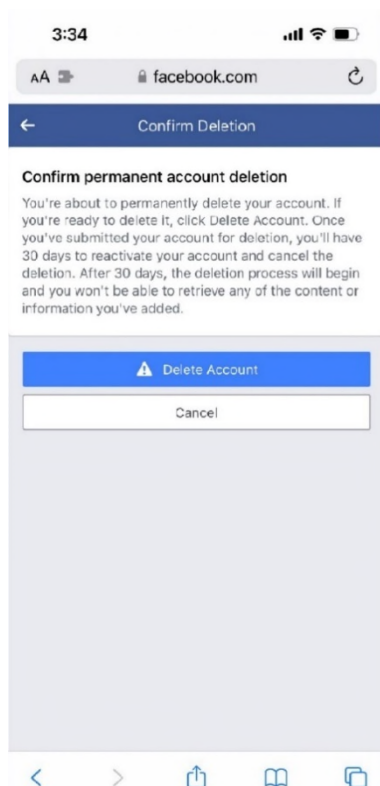
⁵⁴⁶ Haugen_00002527 at Haugen_00002565.

⁵⁴⁷ Haugen_00025741 at Haugen_00025763.

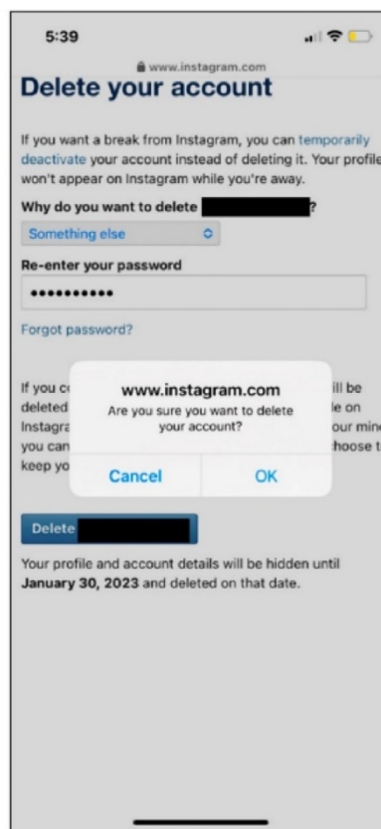
Meta has intentionally designed its platforms so that adolescent users face significant navigational obstacles and hurdles when trying to delete or deactivate their accounts, in stark contrast to the ease with which users can create those accounts.

397. 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.

398. 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)

1 399. Moreover, the deletion process includes what Meta readily acknowledges are
2 “aggressive” attempts to dissuade users from deleting their accounts.⁵⁴⁸ Before a user can delete their
3 Facebook account, Meta “lists some of your friends to remind you that they will no longer be able to
4 contact you through the site and more importantly, [requires] the user to choose a reason for why they’re
5 leaving.”⁵⁴⁹ Meta also requires users attempting to leave Instagram to select a reason why they are
6 leaving.

7 400. As an additional barrier to deletion, Meta urges users of both platforms to deactivate,
8 rather than delete, their accounts. For example, Instagram users who choose to delete their accounts are
9 immediately shown a screen with their profile picture and asked: “Deactivate your account instead of
10 deleting?” The option to deactivate is conspicuously highlighted. Similarly, Facebook displays a screen
11 that automatically selects the option of deactivating rather than deleting a user account.

12 401. Meta’s aggressive efforts to prevent users from discontinuing their use of Facebook and
13 Instagram is particularly problematic because unsuccessful efforts to discontinue use are a hallmark of
14 addiction, incorporated as the sixth criteria in the *Bergen Social Media Addiction Scale*, discussed
15 above.

16 **4. Meta has concealed from Plaintiff, the public, and Congress the harmful effects that**
17 **Instagram’s and Facebook’s design have on children.**

18 402. Meta represents to the public that it prioritizes safety. At the same time, Meta has
19 engaged in a years-long pattern of concealing critical information about the safety of Instagram and
20 Facebook from the public, including Plaintiff and its students. In one internal document from February
21 2018, employees at Meta communicated about how best to “refin[e] counter-messaging around the
22 addiction narrative that’s been propagating.”⁵⁵⁰ This effort to conduct “message testing around addiction
23 PR responses” included the ideas that “[t]he whole dopamine thing is completely made up and based on
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25
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27 ⁵⁴⁸ Haugen_00016893 at Haugen_00016898.

28 ⁵⁴⁹ *Id.*

⁵⁵⁰ META3047MDL-003-00082165 at META3047MDL-003-00082165–META3047MDL-003-00082166.

1 no research,” “[t]here’s no agreement on what is meant by addiction,” and (contradictorily) “[w]e’re
2 taking it seriously, doing research, [and] launching new tools to help people[.]”⁵⁵¹

3 403. Meta knew that none of this was true. For instance, in the summer of 2019, Zuckerberg
4 met with a psychologist and leading expert on the mental health effects of social media on young people.
5 This leading expert countered Zuckerberg’s contention that harms from social media are trivial and
6 explained how, to the contrary, Instagram and other platforms have been a major contributor to the spike
7 in young girls’ mental health problems since 2012. The psychologist addressed his research “on the
8 dramatic rise in rates of teenage anxiety, depression, and self-harm” and explained how the research on
9 social media’s role “points heavily to a connection, not just from correlational studies but from true
10 experiments, which strongly indicate causation, not just correlation.”⁵⁵²

11 404. Instead of “taking [this] seriously” and “launching new tools” to protect kids,⁵⁵³ Meta did
12 the opposite. By late 2019, Meta’s “mental health team stopped doing things[.]” “it was defunded” and
13 “completely stopped[.]”⁵⁵⁴ And, as noted, Meta allowed safety tools it knew were broken to be held out
14 as fixes. All the while, Meta ignored cries from their well-being researchers to aggressively confront its
15 youth safety problem: “[T]here’s so much more we could have done here. . . . [But] there was the
16 explicit decision last half not to fund this anymore.”⁵⁵⁵ And Meta even internally researched the extent
17 of its platforms’ harmful effects on youth mental health.

18 405. In June 2018, an internal presentation recognized that “[i]t may be a problem if Facebook
19 seems rewarding [to users] based on the principle of unpredictability, while the inherent value of the
20 reward is lacking.”⁵⁵⁶ This includes “[n]otifications with little or no relevance, and that come at
21 unpredictable times.”⁵⁵⁷ The same document warned that dopamine “rewards available through
22 Facebook may contribute to problems for some people.”⁵⁵⁸

23 ⁵⁵¹ *Id.*

24 ⁵⁵² META3047MDL-003-00089174 at META3047MDL-003-00089176.

25 ⁵⁵³ META3047MDL-003-00082165 at META3047MDL-003-00082165.

26 ⁵⁵⁴ 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”).

27 ⁵⁵⁵ *See* META3047MDL-003-00103260.

28 ⁵⁵⁶ MDL AG Compl. at 30, ¶ 164.

⁵⁵⁷ *Id.*

⁵⁵⁸ *Id.*

1 406. For example, in October 2019, Meta conducted a “Teen Mental Healthy Deep Dive” to
2 “get a nuanced understanding of teens’ perception of how Instagram effects their mental health.”⁵⁵⁹ The
3 results of this research showed that Instagram’s teen users “have an addicts’ narrative about their use,”
4 “recognize the amount of time they spend online isn’t good for them,” “but at the same time know they
5 lack the willpower to control the time spent themselves.”⁵⁶⁰

6 407. Similarly, in June 2020, Meta’s Senior User Experience (“UX”) Researcher noted in an
7 internal report: *What Makes Teens Tick?*, that “our own product foundation research has shown teens are
8 unhappy with the amount of time they spend on our app” and that “[d]ue to the immature [teen] brain,
9 they have a much harder time stopping even though they want to.”⁵⁶¹ The report further noted that
10 because “[t]een brains are much more sensitive to dopamine,” the risk of “addiction” is higher and that
11 is what “keeps them scrolling and scrolling.”⁵⁶²

12 408. The presentation also noted teens often go down “rabbit holes” because of the “especially
13 ‘plastic’” nature of their brains, and asked how Instagram could satisfy “teen[s]’ insatiable appetite for
14 novelty” through features on the app.⁵⁶³ The presentation further discussed teens’ “increased sensitivity”
15 and “concerns about being judged,” along with teens’ desire for reward, which “makes them predisposed
16 to impulse, peer pressure, and potentially harmful risky behavior.”⁵⁶⁴

17 409. Meta has researched and analyzed addictive or “problematic use” reported by young
18 users on its platforms. According to Meta’s 2019 research: *Hard Life Moments—Mental Health Deep*
19 *Dive*, which studied “the reach, intensity, [and] impact of Instagram” “[a]cross 13 mental health and
20 well-being issues,” “[over 30% of users across age cohorts” told Meta that “Instagram made problematic
21 use worse.”⁵⁶⁵ Meta researchers defined “problematic use” as “when people feel a lack of control over
22 how they use technology, and this leads to negative life impact (e.g., sleep, parenting, social
23 relationships, or productivity).”⁵⁶⁶ An internal presentation also showed that 55% of Facebook’s U.S.

24 ⁵⁵⁹ Mass. AG Compl. at 37, ¶ 135.

25 ⁵⁶⁰ *Id.*

26 ⁵⁶¹ *Id.* at ¶ 136.

27 ⁵⁶² *Id.*

28 ⁵⁶³ MDL AG Compl. at 66, ¶ 407.

⁵⁶⁴ *Id.*

⁵⁶⁵ Mass. AG Compl. at 37, ¶ 137.

⁵⁶⁶ *Id.*

1 users suffered from problematic use, which Meta described as “serious” and as having “negative impacts
2 on sleep, relationships, work, or lives.”⁵⁶⁷ Another internal Meta post from July 2018 showed that
3 problematic use was highest among teens and people in their twenties.⁵⁶⁸

4 410. Meta also knows young users’ physical health is harmed by compulsive “problematic
5 use” induced by its platform design features. Specifically, Meta’s researchers noted that “sleep
6 problems” can “be part of [Facebook] addiction” and confirmed “it is true that negative impacts on sleep
7 is one possible outcome of problematic social media use.”⁵⁶⁹ Another data scientist explained “the only
8 insight I see . . . is that teens are really into using [Instagram] at 11pm when they probably should be
9 sleeping[]” and “it is true that negative impacts on sleep is one possible outcome of problematic social
10 media use (or even non-problematic use).”⁵⁷⁰

11 411. In February 2019, Meta’s VP of Research, David Ginsberg circulated a summary of
12 external and internal research on Instagram and “Teen Well-Being” to executives, including then-COO
13 Sheryl Sandberg and Head of Instagram Adam Mosseri, that acknowledged “[w]hen social media use
14 displaces sleep in adolescents (via nighttime social media use), it is negatively correlated to indicators of
15 mental health.”⁵⁷¹

16 412. Moreover, Meta knows that is addictive features, such as infinite scroll, and autoplay in
17 Stories and Reels, harm young users because they encourage passive consumption. As one Meta
18 employee stated in October 2021, “because [Stories are] so passive—you can just sit there and watch
19 without interacting with the poster or other people much, and we know that passive consumption is
20 generally worse for wellbeing.”⁵⁷²

21 413. Based on its own research, Meta found that “passive consumption—passively watching
22 videos, [and] scrolling [is] not associated w[ith] well-being [and is] more negative psychologically”
23 compared with “active engagement.”⁵⁷³

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25 ⁵⁶⁷ MDL AG Compl. at 90–91, ¶ 539.

26 ⁵⁶⁸ *Id.*

27 ⁵⁶⁹ Mass. AG Compl. at 38, ¶ 138.

28 ⁵⁷⁰ MDL AG Compl. at 91, ¶ 542.

⁵⁷¹ Mass. AG Compl. at 38, ¶ 139.

⁵⁷² Mass. AG Compl. at 38, ¶ 140.

⁵⁷³ MDL AG Compl. at 69, ¶ 421.

1 414. Meta is also aware of the effect its platforms have on teens experiencing negative social
2 comparison. For example, Meta researchers concluded that a “majority of teen girls experience negative
3 social comparison and a significant share of them think [Instagram] makes it worse.”⁵⁷⁴ Similarly, Meta
4 knows that 13.5% of teen girls on Instagram say the platform makes thoughts of suicide and self-injury
5 worse.⁵⁷⁵ Further, in a January 2020 study Meta conducted, it noted that social comparison is “higher
6 among younger than older people. Younger people are more susceptible to peer influence and social
7 comparison.”⁵⁷⁶

8 415. Three months later, Meta conducted another study revealing 1 in 4 people “think that
9 Instagram makes social comparison worse” and that “[s]eeing high Like counts is associated with
10 feeling worse (more negative, less positive comparison).”⁵⁷⁷

11 416. Instagram researchers have also observed that “[s]ocial comparison exacerbates problems
12 teens are dealing with” in that “[a]lthough others’ behaviors online can hurt, the self-scrutiny and
13 anxiety associated with personal consumption patterns is more damaging to mental health.”⁵⁷⁸

14 417. In addition to knowing that social comparison exacerbates teens’ mental health problems,
15 Meta also knows through an internal report that “social comparison was also associated with greater
16 time spent” on Meta’s platforms.⁵⁷⁹ Indeed, Meta’s researchers stated they were “confident of a causal
17 link between [seeing] Like counts and social comparison.”⁵⁸⁰ And an internal email from 2020 explains
18 that “[Meta] know[s] from previous internal and external research that social comparison is linked to
19 multiple negative well-being outcomes (e.g., increased loneliness, worse body image, and negative
20 mood or affect)[.]”⁵⁸¹

21 418. A 2021 internal presentation also notes that teens suffer from “constant negative
22 comparisons” on Instagram because Meta recommended triggering content to them and continued
23

24 ⁵⁷⁴ MDL AG Compl. at 37, ¶ 203.

25 ⁵⁷⁵ *Id.* at ¶ 204.

26 ⁵⁷⁶ MDL AG Compl. at 42, ¶ 233.

27 ⁵⁷⁷ *Id.* at ¶ 234.

28 ⁵⁷⁸ MDL AG Compl. at 38, ¶ 207.

⁵⁷⁹ MDL AG Compl. at 41, ¶ 229.

⁵⁸⁰ *Id.* at ¶ 231.

⁵⁸¹ MDL AG Compl. at 42, ¶ 232.

1 showing them Like counts.⁵⁸² Other internal documents reflect that “the mechanics of Instagram amplify
2 the impact of social comparison.”⁵⁸³

3 419. Despite knowing better, Meta’s high-ranking executives then began pushing intentionally
4 misleading talking points to the public. Instead of informing the public about Meta’s internal research
5 demonstrating Instagram’s and Facebook’s negative impacts on the health and well-being of the nation’s
6 youth, Meta repeatedly omitted key facts and misrepresented its platforms in service of an overall
7 message touting the safety of its platforms for children.

8 420. Because of Meta’s concealment, Plaintiff, Plaintiff’s students, the public, and Congress
9 were left in the dark and reasonably relied on Meta’s reassurances. Had Meta disclosed the truth
10 regarding its platforms, Plaintiff may not have suffered the harms it did, and the harms it continues to
11 suffer resulting from students’ use of its platforms. Instead, Meta pursued a knowing pattern of
12 concealment to Plaintiff’s detriment.

13 421. In the year leading up to Meta’s acquisition of Instagram, Meta publicly acknowledged
14 its duty to children and worked to create false expectations about its platforms’ safety. For example:

15 a. Zuckerberg (3/25/2011): “So, we’re really focused on, on safety, especially children’s
16 safety. So we’re having folks under the age of 18, um we, we just take a lot of extra
17 precautions for it, to make sure that it’s just a safe environment for them um, to use this
18 service that you know, the default for, for people sharing things isn’t that they’re sharing
19 with everyone but that they’re sharing with a smaller community But I think, I think
20 that’s a lot of it. We really try to build a safe environment. Um, and um, that’s gonna be
21 the key long term.”⁵⁸⁴

22 b. Zuckerberg (3/25/2011): “Right, and they, they feel like Facebook is this really secure
23 place and that it’s a hundred percent safe, and um, we’re always thinking about little and
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26

27 ⁵⁸² *Id.* at ¶ 236.

⁵⁸³ MDL AG Compl. at 45, ¶ 259.

28 ⁵⁸⁴ *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.”⁵⁸⁵

- 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.”⁵⁸⁶

422. 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.”⁵⁸⁷
- 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.”⁵⁸⁸
- 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

⁵⁸⁵ *Id.*

⁵⁸⁶ Maurice Levy, *Conversation with Mark Zuckerberg at E-G8 Forum*, YouTube (May 25, 2011), <http://www.youtube.com/watch?v=Gy0bq9FAJR>.

⁵⁸⁷ Mark Zuckerberg, Facebook (Dec. 1, 2015), <https://www.facebook.com/zuck/posts/10153375081581634> [<https://perma.cc/W99E-QTZQ>].

⁵⁸⁸ *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>].

1 how we set up our product teams. We want our products to be valuable to people, and if
2 they're valuable, then people choose to use them."⁵⁸⁹

3 d. Zuckerberg (7/12/2018): "There are really two core principles at play here. There's
4 giving people a voice, so that people can express their opinions. Then, there's keeping the
5 community safe, which I think is really important."⁵⁹⁰

6 e. Zuckerberg (7/25/2018): "[W]e will continue to invest heavily in security and privacy
7 because we have a responsibility to keep people safe. But as I've said on past calls, we're
8 investing so much in security that it will significantly impact our profitability."⁵⁹¹

9 f. Zuckerberg (8/21/2018): "One of the most important responsibilities we have as a
10 company is to keep people safe and stop anyone from abusing our service."⁵⁹²

11 g. Zuckerberg (9/7/2018): "What I've learned so far is that when you build services that are
12 used by billions of people across countries and cultures, you will see all of the good
13 humanity is capable of, and people will try to abuse those services in every way possible.
14 It is our responsibility to amplify the good and mitigate the bad."⁵⁹³

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19 ⁵⁸⁹ *Facebook, Social Media Privacy, and the Use and Abuse of Data: Hearing Before the S. Comm. on*
20 *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-](https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data)
21 [data](https://www.commerce.senate.gov/2018/4/facebook-social-media-privacy-and-the-use-and-abuse-of-data).

22 ⁵⁹⁰ 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>.

23 ⁵⁹¹ *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.

24 ⁵⁹² Mark Zuckerberg, Facebook (Aug. 21, 2018),
25 https://www.facebook.com/zuck/posts/10105188590724391?__tn__=K-R [<https://perma.cc/RUV3-5AJB>].

26 ⁵⁹³ Mark Zuckerberg, Facebook (Sept. 7, 2018),
27 [https://www.facebook.com/zuck/posts/10105224999156601?__xts__=%5B0%5D=68.ARB273c8TJkMqNAclfl-](https://www.facebook.com/zuck/posts/10105224999156601?__xts__=%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkzJ_dTLszwUZ3H6b3Q4biIc&__tn__)
28 [i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjaEF50Uxo](https://www.facebook.com/zuck/posts/10105224999156601?__xts__=%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkzJ_dTLszwUZ3H6b3Q4biIc&__tn__)
[UqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-](https://www.facebook.com/zuck/posts/10105224999156601?__xts__=%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkzJ_dTLszwUZ3H6b3Q4biIc&__tn__)
[aXjkjNdS21XzaAThg9PfkzJ_dTLszwUZ3H6b3Q4biIc&__tn__](https://www.facebook.com/zuck/posts/10105224999156601?__xts__=%5B0%5D=68.ARB273c8TJkMqNAclfl-i0UB6fVWHZ_hO4k0KASCy8XfVdyC9XEVqoPLsPUPDh94zSHboQiB1t3mSlP9yEUyjaEF50UxoUqVca4ZcM4nnkQ3MWz3dBGRQYm7lJMj_Cbl25p7a9-HX-aXjkjNdS21XzaAThg9PfkzJ_dTLszwUZ3H6b3Q4biIc&__tn__) [<https://perma.cc/L5C4-XUYY>].

- 1 h. Zuckerberg (11/15/2018): “[W]e have a responsibility to keep people safe on our
2 services.”⁵⁹⁴
- 3 i. Zuckerberg (1/1/2019): “We ended 2018 with more than 30,000 people working on
4 safety and security -- up from 10,000 people a couple of years ago.”⁵⁹⁵
- 5 j. Zuckerberg (1/30/2019): “[O]n all the content and safety and security issues, there’s more
6 to do here but I’m proud of the work that we have done to get in front of a lot more of
7 these issues.”⁵⁹⁶
- 8 k. Zuckerberg (3/30/2019): “[W]e have a responsibility to keep people safe on our
9 services.”⁵⁹⁷
- 10 l. Zuckerberg (4/24/2019): “You should expect we’ll do everything we can to keep you safe
11 on our services, within the bounds of an encrypted service.”⁵⁹⁸
- 12 m. Sheryl Sandberg, COO, Meta (1/29/2020): “[We] have to keep people safe and give them
13 control over their experience on our apps. And we are.”⁵⁹⁹
- 14 n. Sheryl Sandberg (10/29/2020): “While we continue to invest in helping businesses, we
15 are equally focused on keeping our platform safe.”⁶⁰⁰
- 16 o. Meta (12/23/2020), when asked by the Senate Committee on the Judiciary whether it
17 could “determine whether increased use of its platform among teenage girls has any
18

19 ⁵⁹⁴ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement* at 1, Facebook,
20 <https://www.facebook.com/notes/751449002072082/> [<https://perma.cc/LS86-A943>] (last edited May 5,
2021).

21 ⁵⁹⁵ *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.

22 ⁵⁹⁶ *Id.* at 26.

23 ⁵⁹⁷ 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>].

24 ⁵⁹⁸ Mark Zuckerberg, Facebook (Apr. 24, 2019),
25 <https://www.facebook.com/zuck/posts/10107243286682221> [<https://perma.cc/YVG5-GMQJ>].

26 ⁵⁹⁹ *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.

27 ⁶⁰⁰ *Q3 2020 Earnings: Earnings Call Transcript* at 6, Meta Inv. Rels. (Oct. 29, 2020),
28 https://s21.q4cdn.com/399680738/files/doc_financials/2020/q3/FB-Q3-2020-Earnings-Call-Transcript.pdf.

1 correlation with increased signs of depression [or anxiety][,]" responded: "No."⁶⁰¹ And,
2 when asked what research Meta had conducted internally on the mental health impacts of
3 social media use, Meta responded: "[t]he effects of social media are still being
4 studied."⁶⁰²

5 p. Zuckerberg (3/25/21), when asked by members of the U.S. House of Representatives
6 Committee on Energy and Commerce, "Do you believe that your platform harms
7 children?": "I don't believe so. This is something that we study and we care a lot about;
8 designing products that [improves] peoples' well-being is very important to us. And what
9 our products do is help people stay connected to people they care about, which I think is
10 one of the most fundamental and important human things that we do, whether that is for
11 teens or for people who are older than that."⁶⁰³

12 q. David Wehner, CFO, Meta (4/28/2021): "I mean, the only thing I'd add . . . is that, I
13 think more than anyone else in the industry, we invest on the safety and security side to
14 sort of keep bad content off the site before it gets ranked and put into what people see. So
15 we've got 35,000 -- over 35,000 people on the safety and security side. We've got the
16 most robust set of content policies out there. We do a quarterly call, public call around
17 our content review process and procedures. So I think that on the front, before it even
18 gets into the algorithm, I think we really do more than anyone else in the industry on the
19 safety and security front to prevent things like misinformation and a bad content going
20 into the system in the first place."⁶⁰⁴

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22 ⁶⁰¹ *Breaking the News: Censorship, Suppression, and the 2020 Election: Facebook, Inc. Responses to*
23 *Questions for the Record from the Comm. on the Judiciary's November 17, 2020 Hearing*, 116th Cong.
124 (2020),

24 <https://www.judiciary.senate.gov/imo/media/doc/Zuckerberg%20Responses%20to%20QFRs.pdf>.

25 ⁶⁰² *Id.* at 50–51

26 ⁶⁰³ *Disinformation Nation: Social Media's Role in Promoting Extremism and Misinformation: Hearing*
27 *Before the H. Subcomm. on Commc'ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm.*
28 *on Energy & Com.*, 117th Cong. 175:4166–4175 (2021),

<https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf>.

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/>.

1 r. Adam Mosseri (5/2021), in a statement to reporters, dismissing concerns around
2 Instagram’s negative impact on teens as “quite small.”⁶⁰⁵

3 423. On each of the above occasions, and many others, Meta falsely touted the safety of its
4 platforms; it could have but failed to disclose information it knew concerning the significant risks
5 associated with its platforms, even though it knew that the public lacked access to this information. For
6 instance, in a December 2019 memo, Meta’s Chief Technology Officer remarked that the media has
7 “limited information to work with” about the company and that this limitation is by Meta’s “own
8 design.”⁶⁰⁶

9 424. In 2018, Sandberg’s talking points prepared for conversations with reporters included the
10 statement that Meta “do[es] not optimize [its] systems to increase amount of time spent in News Feed”
11 and “explicitly do[es]n’t give [its] teams goals around time spent.”⁶⁰⁷

12 425. During a November 2020 Congressional hearing, Mark Zuckerberg was asked whether he
13 believed Meta’s platforms can be addictive. In response, Zuckerberg stated, “we certainly do not design
14 the product in that way.”⁶⁰⁸

15 426. Then in his March 2021 testimony before Congress, Zuckerberg was asked whether he
16 agreed that Meta makes money off creating an addiction to its platforms. Again, Zuckerberg responded,
17 “No. I don’t agree with that.”⁶⁰⁹

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19 ⁶⁰⁵ Taylor Hatmaker, *Facebook Knows Instagram Harms Teens. Now its Plan to Open the App to Kids*
20 *Looks Worse than Ever*, TechCrunch (Sept. 16, 2021), [https://techcrunch.com/2021/09/16/facebook-](https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/)
21 [instagram-for-kids-mosseri-wsj-teen-girls/](https://techcrunch.com/2021/09/16/facebook-instagram-for-kids-mosseri-wsj-teen-girls/).

22 ⁶⁰⁶ Haugen_00007350 at Haugen_00007350 (December 30, 2019 memo by Andrew Bosworth: *Thoughts*
23 *for 2020*).

24 ⁶⁰⁷ MDL AG Compl. at 25, ¶ 135.

25 ⁶⁰⁸ *Breaking the News: Censorship, Suppression, and the 2020 Election: Hearing Before the S. Comm.*
26 *on the Judiciary*, 116th Cong. (2020), [https://www.judiciary.senate.gov/committee-](https://www.judiciary.senate.gov/committee-activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election)
27 [activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election](https://www.judiciary.senate.gov/committee-activity/hearings/breaking-the-news-censorship-suppression-and-the-2020-election) (testimony of Mark
28 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>.

⁶⁰⁹ *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-](https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf)
[20210325.pdf](https://www.congress.gov/117/meeting/house/111407/documents/HHRG-117-IF16-Transcript-20210325.pdf) (testimony of Mark Zuckerberg).

1 427. Further, Zuckerberg’s talking points included the following statement: “The impact that
2 our products have on the well-being of everyone is a top priority. It’s not how much time you spend
3 online, it’s how you spend it.”⁶¹⁰ Zuckerberg denied that Meta designed its platforms to be addictive to
4 maximize time spent.⁶¹¹

5 428. Similarly, Zuckerberg told Congress on March 25, 2021, that “it is a common
6 misconception that our teams—our goals, or even have goals, of trying to increase the amount of time
7 that people spent” and that “I don’t give our News Feed team or our Instagram team goals around
8 increasing the amount of time that people spend.”⁶¹²

9 429. In September 2021, Meta’s Global Head of Safety Antigone Davis told Congress, “I
10 disagree with calling our product addictive [T]hat’s not how we build products.”⁶¹³

11 430. In December 2021, Head of Instagram Adam Mosseri told Congress, “I don’t believe that
12 research suggests that our products are addictive.”⁶¹⁴

13 431. Meta’s pattern of intentional concealment came to a head in August 2021, just weeks
14 before Frances Haugen dropped her bombshell revelations on the public. On August 4, 2021, Senators
15 Marsha Blackburn and Richard Blumenthal wrote to Mark Zuckerberg. The Senators’ letter observed
16 that “[a]n expanding volume of scientific research shows that social media platforms can have a
17 profoundly harmful impact on young audiences” and noted “grave concerns about [Meta’s] apparent
18 effort to ensnare children into social media platforms at earlier and earlier ages.”⁶¹⁵ The letter concluded
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21 ⁶¹⁰ MDL AG Compl. at 26, ¶ 137.

22 ⁶¹¹ MDL AG Compl. at 26, ¶ 137.

23 ⁶¹² MDL AG Compl. at 26, ¶ 137.

24 ⁶¹³ See *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing*
25 *Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec., 117th Cong. (2021)*,
26 <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

27 ⁶¹⁴ Taylor Hatmaker, *Instagram’s Adam Mosseri defends the app’s teen safety track record to Congress*,
28 TechCrunch (Dec. 8, 2021), <https://techcrunch.com/2021/12/08/instagrams-adam-mosseri-senate-hearing-teen-safety/>.

⁶¹⁵ 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>.

1 by asking Zuckerberg six “pretty straightforward questions about how the company works and
2 safeguards children and teens on Instagram.”⁶¹⁶

3 432. In its August 17, 2021 written response to Senators Blackburn and Blumenthal, Meta
4 omitted any reference to the internal research it had conducted demonstrating the negative impact
5 Instagram can have on kids’ mental health.⁶¹⁷

6 433. The Senators’ letter asked whether Meta had ever developed products or features “that it
7 had reason to believe could have a negative effect on children’s and teens’ mental health or well-
8 being[.]”⁶¹⁸ Meta responded by claiming it had “built many special protections for teens.”⁶¹⁹ But it failed
9 to mention, for example, that it employed “growth hackers” who internally advised that “we can be very
10 aggressive with our notifications to create a habit[.]”⁶²⁰

11 434. The Senators’ letter also asked if Meta’s research had “ever found that its platforms and
12 products can have a negative effect on children’s and teens’ mental health or well-being[.]”⁶²¹ Meta
13 responded that the matter was “still being studied,”⁶²² that it was challenging to conduct such
14 research,⁶²³ and that the company was “not aware of a consensus among studies or experts about how
15 much screen time is ‘too much.’”⁶²⁴ While Meta reiterated its vague and already public position that

17 ⁶¹⁶ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
18 *on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
19 <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
20 Blackburn, U.S. Senator, to Mark Zuckerberg, CEO, Facebook, Inc. at 2–3 (Aug. 4, 2021),
21 [https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-](https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf)
22 [%20Mental%20Health%20and%20Kids%20Letter.pdf](https://www.blumenthal.senate.gov/imo/media/doc/8.4.21%20-%20Facebook%20-%20Mental%20Health%20and%20Kids%20Letter.pdf).

23 ⁶¹⁷ Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.
24 Senator (Aug. 17, 2021),
25 <https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

26 ⁶¹⁸ *Id.* at 4.

27 ⁶¹⁹ *Id.*

28 ⁶²⁰ Haugen_00016893 at Haugen_00016914 (quoting August 3, 2017 memo: *Have we made people addicted to Facebook?*).

⁶²¹ 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>.

⁶²² *Id.*

⁶²³ *Id.* at 3.

⁶²⁴ *Id.*

1 “passive” use of social media can correlate with “negative outcomes,”⁶²⁵ it failed to disclose any more
2 specific findings.⁶²⁶

3 435. Meta failed to disclose, in response to the Senators’ direct question, its detailed research
4 regarding addiction to its platforms, which the company terms problematic usage;⁶²⁷ its assessment that
5 “[t]he best external research indicates that Facebook’s impact on people’s well-being is negative”;⁶²⁸ its
6 identification of “Problematic Use,” loneliness, and social comparison as the three drivers of this
7 negative impact;⁶²⁹ its finding that up to 25% of people on Facebook experience so-called problematic
8 use;⁶³⁰ its data showing that “high time spent users do tend to be disproportionately younger users”;⁶³¹
9 its conclusion that so-called problematic use causes profound harms, including loss of productivity,
10 sleep disruption, relationship impacts, and safety risks;⁶³² its identification of multiple Meta product
11 features that act as triggers for so-called problematic use;⁶³³ its knowledge that teens who feel addicted
12 to a Meta app “know that what they’re seeing is bad for their mental health but feel unable to stop
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15 ⁶²⁵ *Id.*; see also *Q1 2018 Earnings: Transcript* at 2, Meta Inv. Rels. (Apr. 25, 2018),
16 https://s21.q4cdn.com/399680738/files/doc_financials/2018/Q1/Q1-18-Earnings-call-transcript.pdf.

17 ⁶²⁶ Letter from Facebook, Inc. to Richard Blumenthal, U.S. Senator, and Marsha Blackburn, U.S.
18 Senator at 6 (Aug. 17, 2021),

19 <https://www.blumenthal.senate.gov/imo/media/doc/817.21facebookresponseletter.pdf>.

20 ⁶²⁷ Haugen_00016373 at Haugen_00016379 (March 9, 2020 internal presentation and discussion about
21 problematic use with a slide stating that problematic use “is sometimes referred to as ‘social media
22 addiction’ externally”); *Id.* at Haugen_00016373 (March 9, 2020 internal presentation and discussion
23 regarding problematic use in which a Meta employee shared a post stating, “[i]n Q4 2019, our Well-
24 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*);
25 Haugen_00007055 at Haugen_00007055 (May 6, 2019 Meta employee memo: *Problematic use / time-
spent papers at CHI*).

26 ⁶²⁸ Haugen_00016373 at Haugen_00016381 (March 9, 2020 internal presentation and discussion about
27 problematic use).

28 ⁶²⁹ *Id.*

⁶³⁰ Haugen_00016373 at Haugen_00016383.

⁶³¹ 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).

⁶³² Haugen_00016373 at Haugen_00016414 (March 9, 2020 presentation: *All problematic users were
experiencing multiple life impacts*).

⁶³³ *Id.* at Haugen_00016410 (“We heard about 10+ triggers contributing to PU habits.”).

1 themselves”;⁶³⁴ its studies regarding body image and social comparison;⁶³⁵ its knowledge that Instagram
2 makes body image issues worse “for one in three teen girls”;⁶³⁶ its analysis showing that topics eliciting
3 appearance comparison comprise one third of what teen girls see on Instagram;⁶³⁷ its research
4 concluding that negative social comparison on Instagram gets worse for users over time;⁶³⁸ its awareness
5 that teens report Instagram as a source of increased anxiety and depression;⁶³⁹ its researchers’ conclusion
6 that teens “[h]ave an addict’s narrative about their use” of Instagram;⁶⁴⁰ and its survey finding that
7 “[o]ver one third of teens felt they have only a little control of no control at all over how Instagram
8 makes them feel”⁶⁴¹ —in addition to the other findings described in this Complaint.

9 436. Meta’s years-long concealment of its research was revealed just weeks later, when
10 Frances Haugen released these studies, along with a trove of other internal Meta documents, to *The Wall*
11 *Street Journal*. Even these disclosures did not reveal the full scope and extent of Meta’s
12 misrepresentations, discussed elsewhere in this Complaint.

13 437. On September 21, 2021, Senator Blumenthal confronted a Meta representative about the
14 conspicuous omissions in Meta’s response to his letter:

15 Last month, on August 4, Senator Blackburn and I wrote to Mark Zuckerberg and asked
16 him specifically about this issue. We asked, and I’m quoting, “Has Facebook’s research
17 ever found that its platforms and products can have a negative effect on children’s and
18 teens’ mental health or well-being such as increased suicidal thoughts, heightened

19 ⁶³⁴ Haugen_00017069 at Haugen_00017171 (October 10, 2019 report by Meta employees and
20 discussion about teens’ mental health).

21 ⁶³⁵ Haugen_00005458 at Haugen_00005484 (presentation: *Mental Health Findings*); Haugen_00000797
22 at Haugen_00000797 (November 16, 2018 report: *[Instagram] Social Comparison Research*
23 *Findings*).

24 ⁶³⁶ Haugen_00005458 at Haugen_00005500 (November 5, 2019 presentation containing a slide: *But, We*
25 *Make Body Image Issues Worse for 1 in 3 Teen Girls*).

26 ⁶³⁷ Haugen_00002527 at Haugen_00002527 (March 9, 2021 report: How the topics people see are
27 linked to appearance comparison on [Instagram]).

28 ⁶³⁸ Haugen_00000797 at Haugen_00000875 (November 16, 2018 report containing a page displaying
data about negative social comparison over time).

⁶³⁹ 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).

⁶⁴⁰ 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-](https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms)
health-harms.

⁶⁴¹ *Id.*

1 anxiety, unhealthy usage patterns, negative self-image, or other indications of lower well-
2 being?”

3 It wasn’t a trick question. It preceded the reports in the Journal. We had no idea about the
4 whistleblower documents that were ultimately revealed.

5 Facebook dodged the question. “We are not aware of a consensus among studies or
6 experts about how much screen time is too much.”

7 We are not aware.

8 Well, we all know now that representation was simply untrue.⁶⁴²

9 438. Senator Blumenthal went on to ask the witness, Steve Satterfield, Facebook’s Vice
10 President of Privacy & Public Policy, “why did Facebook misrepresent its research on mental health and
11 teens when it responded to me and Senator Blackburn?” After disputing the characterization, Satterfield
12 responded, “The safety and well-being of the teens on our platform is a top priority for the company.
13 We’re going to continue to make it a priority. This was important research.” Senator Blumenthal then
14 went on: “Why did you conceal it?” Satterfield responded, “we didn’t make it public because we don’t,
15 with a lot of the research we do because we think that is an important way of encouraging free and frank
16 discussion within the company about hard issues.”⁶⁴³

17 439. Meta unilaterally decided to prioritize “free and frank” internal discussion over honest
18 and transparent responses to direct questions from sitting United States Senators. When it “dodged,
19 ducked, sidetracked, [and] in effect misled” Senators Blumenthal and Blackburn, Meta also deceived the
20 public.⁶⁴⁴

22 ⁶⁴² Press Release, Richard Blumenthal, U.S. Senator, *Blumenthal Demands Facebook Appear at Next*
23 *Week’s Consumer Protection Subcomm. Hearing to Explain Coverup of its Platforms’ Negative Impact*
24 *on Teens and Children* (Sept. 21, 2021),
25 [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](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).

26 ⁶⁴³ *Id.*

27 ⁶⁴⁴ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
28 *on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
[https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20
a%20facebook%20whistleblower](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”).

1 440. Moreover, Satterfield’s “free and frank discussion” excuse has been contradicted both
2 internally and publicly by Meta employees. On January 8, 2020, a Meta software engineer participated
3 in an internal “ask me anything” session on the last day of his four-year tenure at the company. When
4 asked how the Meta Defendants should respond to outside pressures and critiques, the software engineer
5 stated, “[r]ight now, many employees feel that if they whistleblow, dissent, give feedback to unethical
6 decisions, etc, then they are at risk for being fired. We can fix that by giving people the safety to speak
7 up when they see something wrong going on.”⁶⁴⁵

8 441. Frances Haugen echoed this sentiment in her testimony before the Senate, citing evidence
9 that Meta “is so scared of even basic transparency that it goes out of its way to block researchers who
10 are asking awkward questions.”⁶⁴⁶ Ms. Haugen further testified that Meta’s culture emphasizes insularity
11 and promotes the idea that “if information is shared with the public, it will just be misunderstood.”⁶⁴⁷

12 442. The above representations of former employees are consistent with reports from
13 Facebook content moderators that there is a “culture of fear and excessive secrecy” within Meta that
14 “prevent[s] [them] from speaking out[.]”⁶⁴⁸

15 443. Notably, Meta’s pattern of concealment did not end after Frances Haugen came forward.
16 On September 30, 2021, Antigone Davis, Facebook’s Head of Safety, testified before the Senate. Ms.
17 Davis represented that, when Instagram “do[es] ads to young people, there are only three things that an
18 advertiser can target around: age, gender, location. We also prohibit certain ads to young people,
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23 ⁶⁴⁵ Haugen_00007481 at Haugen_00007492 (January 8, 2020 report: *Political Ads Announcement*
24 *Preview [Confidential]*).

25 ⁶⁴⁶ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
26 *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>.

27 ⁶⁴⁷ *Id.*

28 ⁶⁴⁸ 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>.

1 including weight-loss ads.”⁶⁴⁹ She further testified, “We don’t allow the sexualization of minors on our
2 platform.”⁶⁵⁰ A study by the Technology Transparency Project proved this was false.⁶⁵¹

3 444. In addition to the litany of misrepresentations and omissions identified above, Meta has
4 repeatedly failed to tell the truth about the age of users on Instagram. In statements to Congress and
5 elsewhere, Zuckerberg has represented that Meta does not allow users under the age of 13 to use the
6 product. For example, in testimony before the U.S. House of Representatives Committee on Energy and
7 Commerce, Zuckerberg stated that “[t]here is clearly a large number of people under the age of 13 who
8 would want to use a service like Instagram. We currently do not allow them to do that.”⁶⁵²

9 445. However, as shown above, Meta has long known that its products are widely used by
10 children under the age of 13. In fact, Meta knows through retrospective cohort analyses that “up to 10 to
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15 ⁶⁴⁹ *Subcomm.: Protecting Kids Online: Facebook, Instagram, and Mental Health Harms: Hearing*
16 *Before the Subcomm. on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
17 <https://www.commerce.senate.gov/2021/9/protecting-kids-online-facebook-instagram-and-mental-health-harms>.

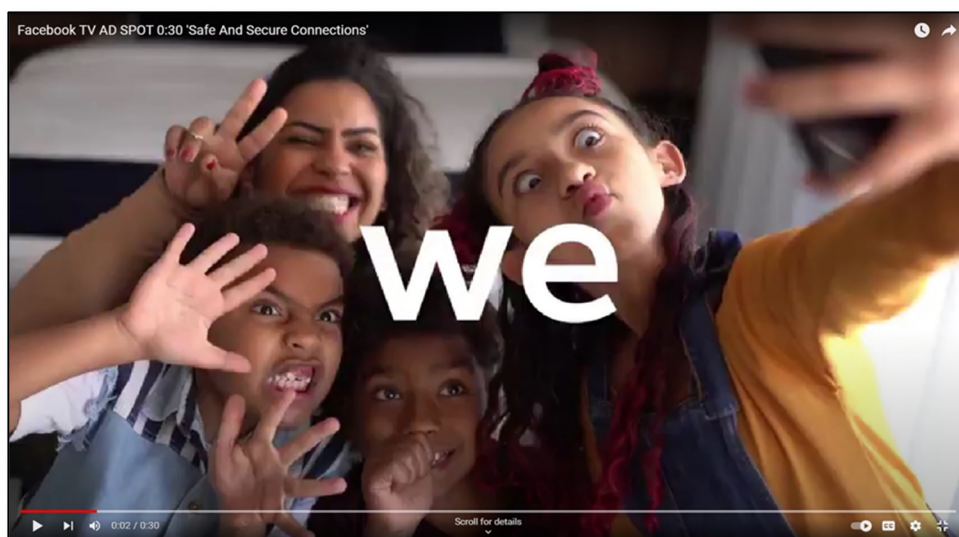
18 ⁶⁵⁰ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
19 *on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
20 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

21 ⁶⁵¹ *See Id.*

22 ⁶⁵² *Disinformation Nation: Social Media’s Role in Promoting Extremism and Misinformation: Hearing*
23 *Before the H. Subcomm. on Commc’ns & Tech., J. with Subcomm. on Consumer Prot. & Com., Comm.*
24 *on Energy & Com.*, 117th Cong. 59:1316–1320 (2021),
25 <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
26 offer generally prohibit people under the age of 13 from using the services.”); *see also Transcript of*
27 *Zuckerberg’s appearance before House committee*, Wash. Post (Apr. 11, 2018),
28 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.”).

1 15% of even 10-year-olds in a given cohort may be on Facebook or Instagram.”⁶⁵³ Meta is also aware
2 that teenagers coach tweens, defined by them as 10- to 12-year-olds, on how to use its platforms.⁶⁵⁴

3 446. Indeed, far from acknowledging the serious problems with its platforms and warning
4 children and parents of the same, Meta has launched advertising campaigns designed to encourage more
5 children to use its platforms—by touting the purported safety of those platforms. For example, in a
6 recent television ad, Meta claimed that it “build[s] technology that gives you more control and helps
7 keep you safe[,]” including through its “industry leading AI” and other “tools that can protect—so you
8 can connect.” This advertisement featured children, as in the screenshot below.



19 Other advertising campaigns have similarly touted Meta’s AI as being a feature that contributes
20 to its platforms’ safety—without disclosing the serious problems identified in this Complaint.

21 447. In another example of advertising that promotes use by children, a Meta 2021 online
22 advertisement actively highlighted the posts available for fifth grade children on its Facebook product,
23 highlighting the experience of an art teacher who used Facebook to communicate with students during
24 the pandemic—an experience the video noted was “a lot to unpack for little, tiny people.”

26 ⁶⁵³ *Protecting Kids Online: Testimony from a Facebook Whistleblower: Hearing Before the Subcomm.*
27 *on Consumer Prot., Prod. Safety, & Data Sec.*, 117th Cong. (2021),
28 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

⁶⁵⁴ Haugen_00016728 at Haugen_00016737–Haugen_00016740.

1 448. And Meta only continues to hide the harms its platforms cause. On November 7, 2023, a
2 second Meta whistleblower, Arturo Bejar, testified before a Senate subcommittee about the ways in
3 which Meta has failed to act to protect its teenage users.⁶⁵⁵ Bejar, a former Facebook engineering
4 director and Instagram consultant, testified that “Meta leadership was aware of prevalent harms to its
5 youngest users but declined to take adequate action” in response.⁶⁵⁶

6 449. Bejar testified that he informed Chief Product Officer Chris Cox of research into platform
7 harms to teens and that Cox acknowledged he was already aware of the statistics. Bejar found this
8 response “heartbreaking because it meant that they knew and they were not acting on it[.]”⁶⁵⁷

9 450. Similarly, Bejar turned over emails that showed he raised similar concerns to top Meta
10 leaders. In an email to Mark Zuckerberg, then-Meta COO Sheryl Sandberg, and Instagram CEO Adam
11 Mosseri dated October 5, 2021, Bejar noted that “51% of Instagram users say ‘yes’ to having had a bad
12 or harmful experience in the last 7 days.”⁶⁵⁸ Bejar also flagged to Zuckerberg that one survey showed
13 almost 40% of 13- to 15-year-olds said “they experienced negative comparison” while on Instagram.⁶⁵⁹

14 451. Less than two weeks later, on October 14, 2021, Bejar raised similar concerns to Adam
15 Mosseri.⁶⁶⁰ Bejar testified that he never received a response from or met with Zuckerberg or
16 Sandberg.⁶⁶¹ He further testified that he thought Meta would “take [his] concerns and recommendations
17 seriously. Yet years have gone by and millions of teens are having their mental health compromised and
18 are still being traumatized.”⁶⁶²

19 ⁶⁵⁵ Lauren Feiner, *Meta failed to act to protect teens, second whistleblower testifies*, CNBC (Nov. 7,
20 2023), <https://www.cnbc.com/2023/11/07/meta-failed-to-act-to-protect-teens-second-whistleblower-testifies.html>.

21 ⁶⁵⁶ *Id.*

22 ⁶⁵⁷ *Id.*

23 ⁶⁵⁸ *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).

24 ⁶⁵⁹ *Id.*

25 ⁶⁶⁰ *Id.* at 112–113.

26 ⁶⁶¹ 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>.

27 ⁶⁶² 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),
28 <https://www.techpolicy.press/transcript-senate-hearing-on-social-media-and-teen-mental-health-with-former-facebook-engineer-arturo-bejar/>.

1 452. Bejar drew three conclusions in his Senate testimony. “One, Meta knows the harm that
2 kids experience on their platform. And executives know that their measures fail to address it. Two, there
3 are actionable steps that Meta could take to address the problem. And three, they are deciding time and
4 time again to not tackle these issues.”⁶⁶³

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

7 453. Meta has failed to adequately warn the public, including Plaintiff and its students and
8 parents, about the physical and mental health risks posed by Instagram and Facebook. These risks
9 include a plethora of mental health disorders, like compulsive use, addiction, eating disorders, anxiety,
10 depression, insomnia, exacerbated executive dysfunction, suicidal ideation, self-harm, and death.

11 454. Meta targets adolescent users via advertising and marketing materials distributed
12 throughout digital and traditional media that fail to provide sufficient warnings to potential adolescent
13 consumers or their parents, teachers, or caregivers, of the physical and mental risks associated with
14 using Facebook and Instagram.

15 455. Meta also fails to adequately warn the public, adolescent users, or their parents during the
16 product registration process. At account setup, neither Instagram nor Facebook contain warning labels,
17 banners, or conspicuous messaging to adequately inform adolescent users or their parents of the known
18 product risks and potential physical and mental harms associated with usage. Instead, Meta allows
19 adolescent users, including those under the age of 13, to easily create an account (or multiple accounts)
20 and fully access these platforms.

21 456. Meta’s failure to warn continues even as adolescents exhibit problematic signs of
22 addiction to and compulsive use of Facebook or Instagram. For example, Meta does not warn users
23 when their screen time reaches harmful levels or when adolescents are accessing the product habitually.

24
25
26 ⁶⁶³ *Former Meta Executive Testifies on Social Media and Youth Mental Health* at 27:30-27:57, C-SPAN
27 (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),
28 <https://www.commerce.senate.gov/2021/10/protecting%20kids%20online:%20testimony%20from%20a%20facebook%20whistleblower>.

457. 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.

458. 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.

459. 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.

460. 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.⁶⁶⁴ Twenty-two percent of parents in the U.S. know their child between the ages of 9 and 11 uses Snapchat.⁶⁶⁵

461. 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.

⁶⁶⁴ 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/>.

⁶⁶⁵ 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/>.

1 462. Snapchat became well-known for its ephemeral nature, which, in effect, removes all
2 accountability what is sent on the platform. Specifically, Snapchat allows users to form groups and share
3 posts or “Snaps” that disappear after being viewed by the recipients. However, the Snapchat social
4 media product quickly evolved from there, as its leadership made design changes and rapidly developed
5 new product features intended to and successfully did increase Snapchat’s popularity among minors.

6 463. In 2012, Snapchat added video capabilities to its product, pushing the number of Snaps to
7 50 million per day. In 2013, Snapchat added “Stories” and “Chat” features; in 2014, live video chat
8 capabilities, text conversations, “Our Story,” Geofilters, and Snapcash; in 2015, Discovery, QR code
9 incorporation, and facial recognition software; and in 2016, Memories and Snapchat Groups.

10 464. By 2015, advertisements were pervasive on Snapchat, and by 2018, 99% of Snapchat’s
11 total revenue came from advertising. In 2022, Snap’s revenue was approximately \$4.6 billion.⁶⁶⁶ Like
12 Meta and Defendants in general, Snapchat decided to monetize its userbase, and changed its product in
13 ways that made it more harmful for users yet resulted in increased engagement and profits for Snapchat.
14 By 2015, Snapchat had over 75 million active users and was the most popular social media application
15 among American teenagers in terms of number of users and time spent using the product.

16 465. To further expand its userbase, Snapchat incorporates several features, as set forth in
17 more detail below, that serve no purpose other than to create dependency on Snapchat’s social media
18 product. These features, in turn, result in sleep deprivation, anxiety, depression, shame, interpersonal
19 conflicts, and other serious mental and physical harms. Snapchat knows, or should know, that its product
20 is harmful to adolescents, but, as with Defendants in general, it consistently opts for increased profit at
21 the expense of the well-being of its youth users. Defendants’ platforms are used by millions of children
22 every day, children who have become addicted to these platforms because of their design and product
23 features, to the point that parents cannot remove all access to the platforms without minor users
24 adamantly protesting, often engaging in self-harm, threatening hunger strikes and/or suicide, and other
25 foreseeable consequences of withdrawal from these platforms, where such cessation would require
26 professional intervention.

27 ⁶⁶⁶ *Snap Inc. Announces Fourth Quarter and Full Year 2022 Financial Results*, Snap Inc. (Jan. 31,
28 2023), <https://investor.snap.com/news/news-details/2023/Snap-Inc.-Announces-Fourth-Quarter-and-Full-Year-2022-Financial-Results/default.aspx>.

1 466. Snap calls itself “a camera company.”⁶⁶⁷ Its “flagship product, Snapchat, is a camera
2 application that was created to help people communicate through short videos and images. [Snap] call[s]
3 each of those short videos or images a Snap.”⁶⁶⁸ Snap’s design of its Snapchat product capitalizes on
4 children’s increasing attachment to quick, instantaneous exchanges. As Snap’s founder and CEO Evan
5 Spiegel has explained, “today. . . pictures are being used for talking. So when you see your children
6 taking a zillion photos of things that you would never take a picture of, it’s cos [sic] they’re using
7 photographs to talk. And that’s why people are taking and sending so many pictures on Snapchat every
8 day.”⁶⁶⁹

9 467. Spiegel’s statement is telling, as Snap has tailored every aspect of its Snapchat product to
10 children rather than adults. Snap designed and implemented dangerous features in Snapchat that exploit
11 children’s need for social acceptance and rewards by pushing its users to maximize their use of and
12 engagement with the app. Snap built Snapchat using manipulative techniques to compel young users to
13 send an ever-increasing number of photographs and videos, and to reward users who maximize their
14 engagement with elevated status. Snap also dangerously encourages adolescents to increase engagement
15 on the app indiscriminately, pushing tools to share sensitive material with an ever-expanding group of
16 friends and strangers.

17 468. Snapchat’s design features cause its young users to suffer increased anxiety, depression,
18 disordered eating, sleep deprivation, suicide, and other severe mental and physical injuries. Snap knows
19 or should have known this. Snap intentionally designed Snapchat to prey on the neuropsychology and

20 ⁶⁶⁷ Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017),
21 <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>; *see also*
22 *Snap Inc. Announces New Augmented Reality Tools and Camera Experiences for Snapchatters,*
23 *Creators, and Businesses*, Snap Inc. (May 20, 2021), [https://investor.snap.com/news/news-](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)
24 [details/2021/Snap-Inc.-Announces-New-Augmented-Reality-Tools-and-Camera-Experiences-for-](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)
25 [Snapchatters-Creators-and-Businesses/default.aspx](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
26 represents our greatest opportunity to improve the way people live and communicate.”); *Join Team*
27 *Snap*, Snap Inc. (Mar. 13, 2023), <https://careers.snap.com/?lang=en-US>
28 [<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.”).

⁶⁶⁸ Snap Inc., Registration Statement (Form S-1) at 1 (Feb. 2, 2017),
<https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

⁶⁶⁹ 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.

469. 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 Senate⁶⁷⁰ Senators from across the ideological spectrum have introduced bills that would ban many of Snapchat’s features that are particularly addictive to adolescents.⁶⁷¹

470. 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.

471. Within five months of launching, Snapchat had 40,000 users.⁶⁷² 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.⁶⁷³ According to Spiegel, Snap’s server data showed peaks of activity during the school day.⁶⁷⁴

⁶⁷⁰ 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>.

⁶⁷¹ See Abigail Cluke, *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).

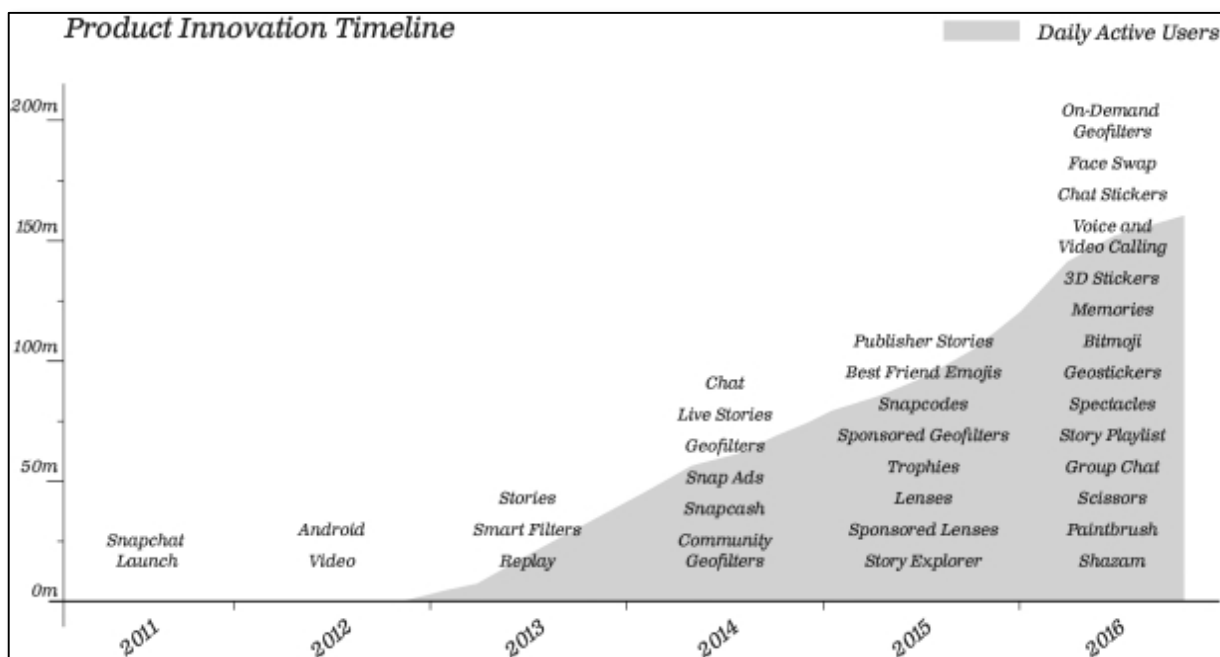
⁶⁷² Ken Auletta, *Get Rich U*, New Yorker (Apr. 30, 2012), <https://www.newyorker.com/magazine/2012/04/30/get-rich-u> [<https://perma.cc/K83B-66MX>].

⁶⁷³ 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/>].

⁶⁷⁴ *Id.*

472. Snap immediately focused on increasing the platform's frequency of use.⁶⁷⁵ By late 2012, Snapchat had over a million active users sending over 20 million Snaps per day.⁶⁷⁶ By 2013, Snapchat users were sending over 60 million Snaps per day⁶⁷⁷. By the end of 2022, this number had risen to over 5 billion Snaps per day.⁶⁷⁸

473. 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.⁶⁷⁹ 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 2011–2016.⁶⁸⁰

⁶⁷⁵ 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/>.

⁶⁷⁶ *Id.*

⁶⁷⁷ 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/>.

⁶⁷⁸ *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>.

⁶⁷⁹ Snap Inc., Registration Statement (Form S-1) at 91 (Feb. 2, 2017), <https://www.sec.gov/Archives/edgar/data/1564408/000119312517029199/d270216ds1.htm>.

⁶⁸⁰ *Id.*

1 474. Today, Snapchat is one of the world’s most widely used apps. By its own estimates,
2 Snapchat has 363 million daily users, including 100 million daily users in North America.⁶⁸¹ Snapchat
3 also “reaches 90% of the 13 to 24-year-old population” in over twenty countries, and reaches nearly half
4 of all smartphone users in the United States.⁶⁸²

5 475. Snapchat’s explosive growth is driven by its key user demographic, 13- to 17-year-olds.
6 In 2022, 59% of U.S. teens used Snapchat and 15% said they used it “almost constantly.”⁶⁸³ Snapchat
7 proudly touts its influence over what it calls the “Snapchat Generation” (“Gen Z”).⁶⁸⁴

8 476. In 2014, Snap began running advertisements on Snapchat.⁶⁸⁵ Snapchat’s entire business
9 model revolves around its advertising revenue. According to internal company records, advertisements
10 were pervasive on Snapchat by 2015 and, by 2018, 99% of Snap’s total revenue came from advertising.
11 Advertising has accounted for 99% of Snap’s revenue each year since 2018.⁶⁸⁶ In 2022, Snap’s revenue
12 was approximately \$4.6 billion.⁶⁸⁷

13 477. Snap attracts advertisers by providing them access to the huge universe of Snapchat users
14 and by collecting immense amounts of data on its users, including its pre-teen and teenage users, which
15 it uses to target advertising to those users. Snap makes no secret of this practice, recently acknowledging
16 that:

17 [Snap] rel[ies] heavily on our ability to collect and disclose data, and metrics to our
18 advertisers so we can attract new advertisers and retain existing advertisers. Any
19 restriction or inability, whether by law, regulation, policy, or other reason, to collect and
20 disclose data and metrics which our advertisers find useful would impede our ability to
 attract and retain advertisers.⁶⁸⁸

21 ⁶⁸¹ Snap Inc. Investor Presentation October 2022 at 5, Snap Inc. Inv. Rels. (Oct. 20, 2022),
22 [https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Deck-](https://s25.q4cdn.com/442043304/files/doc_financials/2022/q3/Snap-Inc.-Q3-2022-Investor-Deck-(10.20.2022).pdf)
 (10.20.2022).pdf.

23 ⁶⁸² *Id.* at 6, 35.

24 ⁶⁸³ 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/>

25 ⁶⁸⁴ SNAP0000137 at SNAP0000139.

26 ⁶⁸⁵ Paul Szoldra, *Here’s The First Ad To Hit Snapchat*, Bus. Insider (Oct. 18, 2014),
 <https://www.businessinsider.com/snapchat-ad-2014-10>.

27 ⁶⁸⁶ Snap Inc., Annual Report (Form 10-K) at 15 (Dec. 31, 2022),
 [https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-](https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf)
 48129de1df54.pdf.

28 ⁶⁸⁷ *Id.* at 57.

⁶⁸⁸ *Id.* at 15.

1 478. Snap’s growth in advertising revenues was driven by changes Snap made to Snapchat
2 that incentivized compulsive and addictive use at the expense of its users’ health. Snap’s internal
3 research indicates the Snapchat experience is “more immersive” than its competitors’ apps. This means
4 users are more likely than on other apps to keep watching videos (and advertising).⁶⁸⁹ The same research
5 shows that Snapchat’s daily active users are constantly using its platform; compared to other apps, users
6 are most likely to use Snapchat “[r]ight when [they] wake up,” “[b]efore work/school,” “[d]uring
7 work/school,” “[a]fter work/school,” “[o]n vacations,” and “[w]hen [they’re] with others[.]”⁶⁹⁰

8 479. Snap understands that its user experience must be immersive and all-encompassing to
9 maximize its advertising revenue. Indeed, Snap recently admitted to its investors that its revenue could
10 be harmed by, among other things, “a decrease in the amount of time spent on Snapchat, a decrease in
11 the amount of content that our users share, or decreases in usage of our Camera, Visual Messaging,
12 Map, Stories, and Spotlight platforms[.]”⁶⁹¹

13 **b. Snap promotes Snapchat to children.**

14 480. Snap specifically promotes Snapchat to children because they are a key demographic for
15 Snap’s advertising business. In its first post on its website, Snapchat observed that “[t]o get a better
16 sense of how people were using Snapchat and what we could do to make it better, we reached out to
17 some of our users. We were thrilled to hear that most of them were high school students who were using
18 Snapchat as a new way to pass notes in class—behind-the-back photos of teachers and funny faces were
19 sent back and forth throughout the day.”⁶⁹²

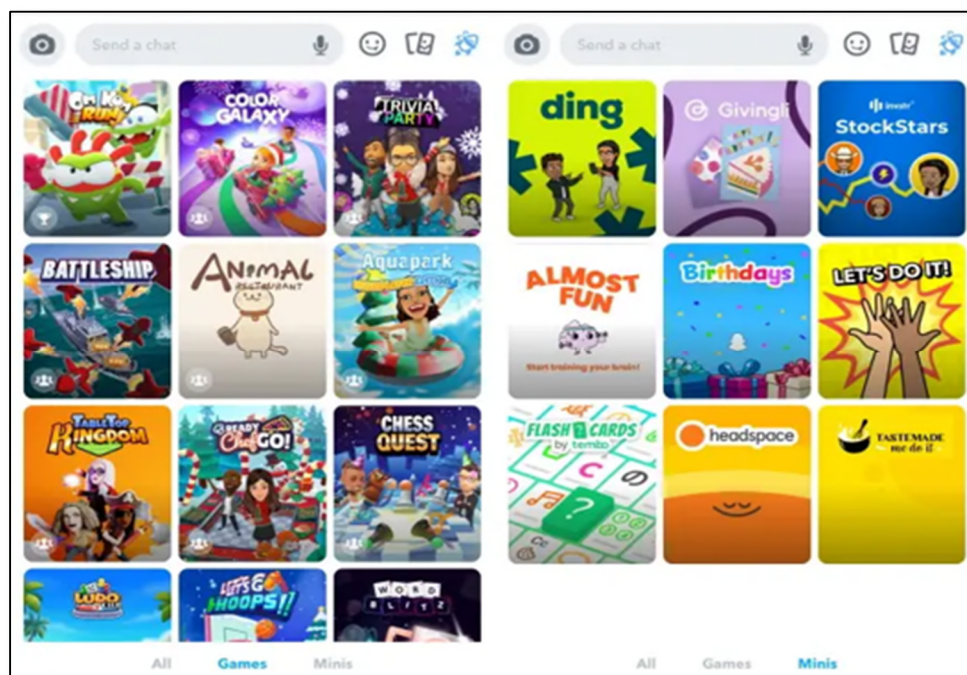
20 481. As shown in this capture of a Snapchat feature page created by Snap, Snap uses bright
21 colors, cartoonish designs, and other features that appeal to younger audiences.

25 ⁶⁸⁹ See SNAP0000103 at SNAP0000122–SNAP0000124, SNAP0000132.

26 ⁶⁹⁰ SNAP0000103 at SNAP0000113.

27 ⁶⁹¹ Snap Inc., Annual Report (Form 10-K) at 16 (Dec. 31, 2022),
28 <https://d18rn0p25nwr6d.cloudfront.net/CIK-0001564408/c22ae9bd-7418-456e-82d4-48129de1df54.pdf>.

⁶⁹² 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/>].



482. Snap also added as a feature the ability for users to create cartoon avatars modeled after themselves.⁶⁹³ By using an artform generally associated with and directed at younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

483. In addition to its marketing, Snap has targeted a younger audience by designing Snapchat in a manner that older individuals find hard to use.⁶⁹⁴ 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[.]"⁶⁹⁵

⁶⁹³ 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>.

⁶⁹⁴ 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>].

⁶⁹⁵ 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>].

1 484. Snap also designed Snapchat as a haven for young users to hide activity from their
2 parents by ensuring that photos, videos, and chat messages quickly disappear. This design further
3 insulates children from adult oversight.

4 485. In an October 2019 interview, Snap’s CEO explained that “we’ve seen a lot of
5 engagement with our 13-34 demographic, which for us is strategically a critical demographic, not only
6 because that’s a demographic that enjoys using new products but also because I think they represent,
7 really, the future . . . So that’s obviously been a group that’s been really fun to build for, and really it
8 started because those are our friends.”⁶⁹⁶

9 486. Snap touts to advertisers its ability to use Snapchat to reach children. In a December 2022
10 statement to advertisers, Snap claimed that “Snapchat delivers on the emotions that Gen Z seeks and it
11 does so consistently across the platform in areas like Discover, Stories and the Camera.”⁶⁹⁷ To prove
12 that, Snapchat “used a neuroscience measurement called ‘immersion’ to measure reactions to different
13 brand messaging—specifically brand purpose messaging vs. non-brand purpose messaging. Immersion
14 captures attention and emotional resonance through variations in heart rate rhythm collected by
15 smartwatches.”⁶⁹⁸ Per Snapchat, “[a]ny brand or marketer can get on any app and *start targeting Gen Z*.
16 After all, Gen Z is digitally native. But to effectively connect and engage with this generation, that takes
17 a different, more intentional type of platform: Snapchat.”⁶⁹⁹

18 487. Advertisers have responded, pouring into Snapchat money clearly intended for
19 advertising aimed at children. Brands like candy manufacturer Sour Patch Kids, children’s toy store
20 ToysRUs, and sugary beverage seller Kool-Aid have all run successful advertising campaigns through
21 Snapchat, frequently using augmented reality tools developed in collaboration with Snapchat.

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26 ⁶⁹⁶ *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>.

27 ⁶⁹⁷ *What Does Gen Z Want From Brands?*, Snap Inc. (Dec. 15, 2022),
<https://forbusiness.snapchat.com/en-US/blog/what-does-gen-z-want>.

28 ⁶⁹⁸ *Id.*

⁶⁹⁹ *Id.* (emphasis added).

1 488. Despite marketing to children, Snapchat’s age verification systems are ineffective at best.
2 For the first two years of its existence, Snap did not even purport to limit user access to those 13 or
3 older.⁷⁰⁰ Users were not required to input a date of birth when creating an account.⁷⁰¹

4 489. In 2013, Snap belatedly introduced age limits (which, as explained below, it does not
5 effectively enforce). At the same time, Snap launched a new feature called “Snapkidz” aimed at and
6 designed to attract younger child users, while hedging against the potential user loss due to the new age
7 limits. The Snapkidz feature allowed children under the age of 13 to take filtered photos, draw on them,
8 save them locally on their devices, send them to others, and upload them to other apps.⁷⁰² Although this
9 version prevented children from sharing “Snaps” on the platform, it nonetheless exposed children to
10 Snapchat’s features, which normalized and acclimatized children to using Snapchat. In addition, nothing
11 prevented children from creating an unrestricted account with a false date of birth on Snapchat and using
12 the platform outside the SnapKidz’s limited features.⁷⁰³

13 490. The SnapKidz feature was discontinued in or around 2016. Snap now purports to prohibit
14 users under the age of 13. But nothing prohibits the minor user from simply altering their birthdate
15 during the same session where they were just denied an account for being an underage user. Snap could
16 have implemented robust, effective age verification protocols. Instead, it has set up its business and
17 platform so that there is no genuine effort to verify the age of its users or to enforce its age limitations.
18 Snap could, but intentionally does not, verify the phone number, email address, or birthdate used to
19 create accounts, and it allows users to create multiple accounts using the same email address or phone
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23 ⁷⁰⁰ Team Snapchat, *iOS Update: Bug Fixes and More!*, Snapchat Blog (June 22, 2013),
24 [http://blog.snapchat.com/](http://blog.snapchat.com/[https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/])
25 [\[https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/\]](https://web.archive.org/web/20130627073951/http://blog.snapchat.com:80/).

26 ⁷⁰¹ *Id.*

27 ⁷⁰² *Id.*

28 ⁷⁰³ 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-](https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a)
[kids-under-13/?sh=7c682a555e5a](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-](https://www.independent.co.uk/tech/snapchat-age-verification-not-work-underage-ageid-a8829751.html)
[a8829751.html](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[.]”⁷⁰⁴

491. Snap’s executives have admitted that Snapchat’s age verification “is effectively useless in stopping underage users from signing up to the Snapchat app.”⁷⁰⁵ Not surprisingly, underage use is widespread. As of 2021, 13% of children ages 8–12 use Snapchat.⁷⁰⁶

492. 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.

493. 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.

494. 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.

495. 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

⁷⁰⁴ *Snap Terms of Service*, Snap Inc. (Aug. 15, 2023), <https://snap.com/en-US/terms>.

⁷⁰⁵ 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>.

⁷⁰⁶ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 5, Common Sense Media (2022), https://www.common Sense Media.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.

496. 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.⁷⁰⁷ 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

497. 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.⁷⁰⁸

498. 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.⁷⁰⁹ The sole purpose of Snapscore is to increase platform use and drive revenue.⁷¹⁰

⁷⁰⁷ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 13, 2015), <https://www.nirandfar.com/psychology-of-snapchat/>.

⁷⁰⁸ 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>

⁷⁰⁹ 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>.

⁷¹⁰ 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.



499. 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*.⁷¹¹

500. 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

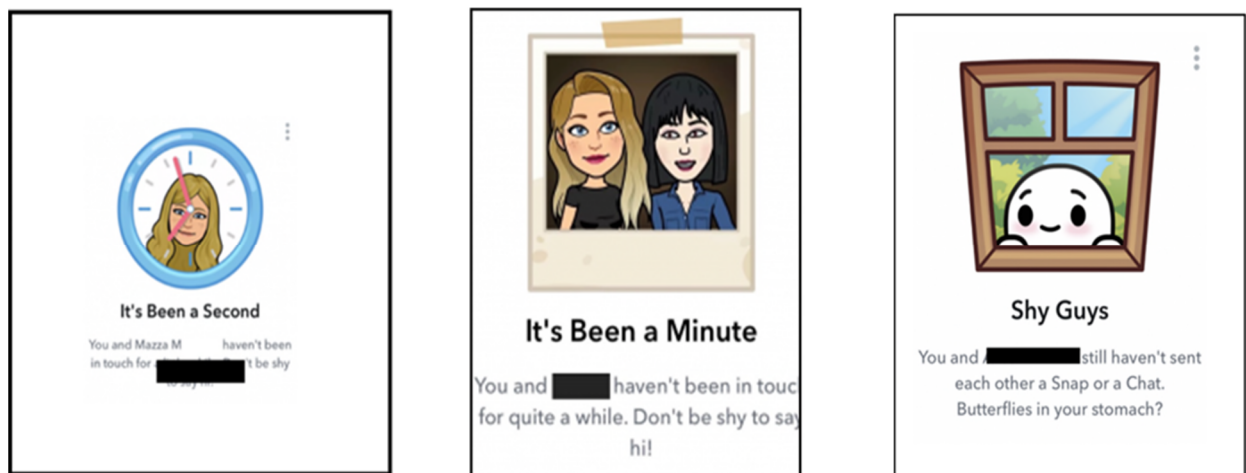
501. Snap has also designed Snapchat to include user rewards, including trophies and other social recognition signals, similar to "Likes" on other apps. These features are highly addictive and drive compulsive use.

⁷¹¹ FozTech, *How to Increase Snapchat Score Fast! (100% Works in 2023)*, YouTube (Oct. 1, 2019), <https://www.youtube.com/watch?v=m7s0hvQdT0k> (*How to Increase Snapchat Score Fast* has 4.4 million views as of Dec. 5, 2023).

502. “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.

503. 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.

504. 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.



505. 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

1 they post. Snap also offers app-specific emojis and animations that users can apply to their photos or
2 videos.

3 506. Time limited features also create a pressure to use the platform daily. Users can post
4 stories that will only be available for 24 hours. Snap's Stories feature includes a running view count and
5 list of viewers for each Story, both of which provide users with dopamine-triggering feedback that
6 encourages users to make their Stories visible to everyone in order to increase the view count. The view
7 count, view list, and ephemeral nature of Stories also reinforces the principle of reciprocity and compels
8 users to monitor Stories, so they do not miss out. Many teens feel an obligation to view all their
9 contact's stories each day before they disappear, or risk hurting the feelings of friends or "missing out."

10 507. Snap designed each of these features to function as rewards for increased engagement,
11 exploit underage users' desire for social validation, and ultimately compel them to use Snapchat
12 excessively. Because many of these rewards and scores are visible to others, these features tap into
13 adolescents' deep-seated need for acceptance. By exploiting this need, Snap increases time spent
14 engaging with its platform and thereby its profits.

15 (iii) Snap Streak

16 508. The "Snap Streak" is unique to Snapchat and is an addictive feature "especially to
17 teenagers[.]"⁷¹² Snapchat streaks provide a reward to users based on how many consecutive days they
18 communicate with another user. In other words, the longer two users are able to maintain a streak by
19 exchanging a communication (a "snap") at least once a day, the more rewarded the users are. The
20 reward comes in the form of a cartoon emoji appearing next to the conversation within Snapchat's
21 interface. The longer the streak is maintained, the more exciting the emoji. Eventually, the emoji will
22

23 ⁷¹² See *Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27, 2017),
24 [https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-](https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296)
25 [streaks/story?id=48778296](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,*
26 *Facebook, Tinder lure you in and get you 'addicted'*, Bus. Insider (Feb. 17, 2018),
27 [https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)
28 [1#snapchat-uses-snapstreaks-to-keep-you-hooked-13](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-](https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction)
[secret-ways-social-media-is-built-for-addiction](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.

What Snapchat's Emojis Mean



Best Friends. This means you're each other's fave person to send Snaps.



You've been each other's best friend for 2 weeks+.



Gettin' serious. You've been each other's best friend for 2 months+.



Jealous much? Your best friend is also this person's best friend.



You're close. Not best-friends close, but you dig each other enough to count.



It's cool. You run in the same circles and share a close friend.



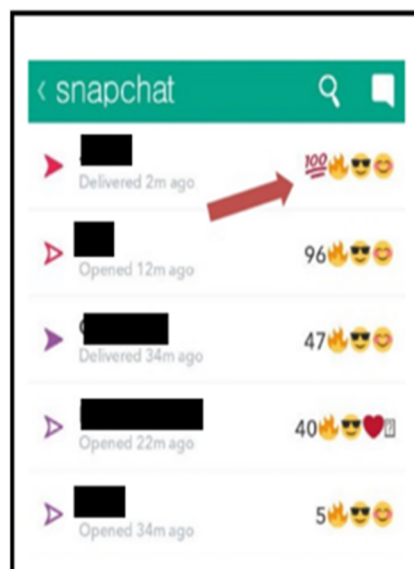
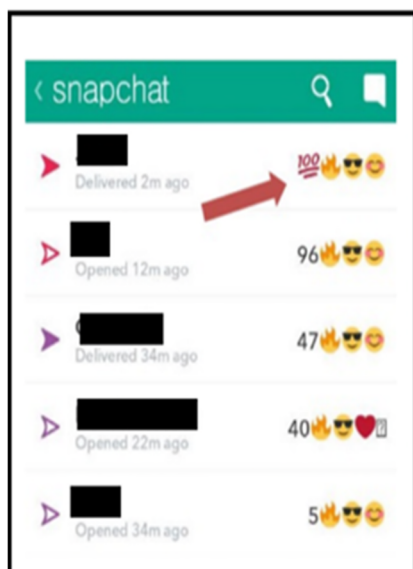
You have the upper hand. They send you more Snaps than anyone, but you send more Snaps to others.



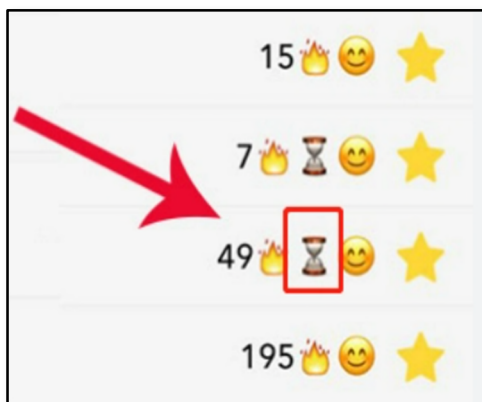
Snapstreak. This appears with a # of days you and your friend have sent each other Snaps within 24 hours. Keep it going and watch the number (and pressure to continue) rise.



Warning! You both better send each other a Snap, or you'll kill your streak.



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.”⁷¹³



509. 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

⁷¹³ 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.”⁷¹⁴ 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.

510. 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.”⁷¹⁵ Nonetheless, Snap continues to provide this feature to its adolescent users.

511. 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.”⁷¹⁶ 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[.]”⁷¹⁷ 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.⁷¹⁸

512. 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

⁷¹⁴ 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>.

⁷¹⁵ Haugen_00008303 at Haugen_00008307.

⁷¹⁶ 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>.

⁷¹⁷ 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>.

⁷¹⁸ Snapchat Support, *Submit a request*, Snap Inc., <https://support.snapchat.com/en-US/i-need-help?start=5695496404336640>.

1 users, especially girls, who reported “negative” feelings when losing a Streak with one of their
2 friends.⁷¹⁹

3 513. In 2018, Snap conducted its own internal research on Snap Streaks, which found that over
4 a third of users reported it was “[e]xtremely” or “[v]ery [important]” to keep a Streak going, and some
5 users reported that the stress level to keep a Streak was “[i]ntolerable” or “[l]arge[.]” Snap’s users
6 reported that Streaks are equally important to Likes on Instagram.⁷²⁰

7 514. As this research demonstrates, Streaks are important to users. However, these design
8 features do not enhance the communication function of the platform, i.e., they provide no value to the
9 user. Instead, they exploit users’ susceptibility to social pressure and to the compulsive accumulation of
10 other rewards, including Snap Score points and Charms, to maximize addiction to the platform.

11 (iv) Snap Map

12 515. “Snap Map,” a feature of Snapchat that shows the location of other users on a map. Like
13 other Snapchat features, it drives adolescent engagement. The human desire to belong to an “ingroup” is
14 powerfully connected to self-worth, especially within teens. In a recent study, young respondents
15 reported that they check Snap Map to see where their friends were to avoid exclusion, followed by an
16 increased amount of anxiety.

17 Snap Map allows users to view content constantly with minimal effort and to check the
18 application to see what they potentially are missing out on. . . . [A]dolescent users
19 reported feeling “sad,” “inadequate,” and “isolated” after checking Snap Map, even if
they were attempting to avoid these feelings in the first place.

20 [P]articipants who were unsure of their friends’ whereabouts or felt excluded (the
21 uncertain situation), were compelled to check Snap Map and reported experiencing
22 higher levels of anxiety and low-self esteem after doing so. This evaluation of self-worth
23 translates to the participant checking Snap Map to confirm or deny their beliefs, and then
24 experiencing negative emotional responses after making a comparison to their friends’
25 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

26 ⁷¹⁹ Dayana Hristoya *et al.*, “Why did we lose our snapchat streak?” *Social media gamification and*
27 *metacommunication*, 5 *Computs. Hum. Behav. Reps.*, Mar. 2022, at 5,
28 [https://www.sciencedirect.com/science/article/pii/S2451958822000069/pdf?md5=f78e5588d33b758c](https://www.sciencedirect.com/science/article/pii/S2451958822000069/pdf?md5=f78e5588d33b758c7f05ddcf606b3827&pid=1-s2.0-S2451958822000069-main.pdf)
[7f05ddcf606b3827&pid=1-s2.0-S2451958822000069-main.pdf](https://www.sciencedirect.com/science/article/pii/S2451958822000069/pdf?md5=f78e5588d33b758c7f05ddcf606b3827&pid=1-s2.0-S2451958822000069-main.pdf).

⁷²⁰ SNAP0000008.

1 feelings that could arise after checking Snap Map, their desire to confirm or deny self-
2 doubt exceeded concerns over these potential consequences.⁷²¹

3 516. Researchers have found that Snap Map causes feelings of sadness and anxiety for some
4 users, as they jealously view their friends' locations.⁷²² Snap Map also functions as a social metric. A
5 report by 5Rights, a United Kingdom-based children's online safety advocacy group highlighted the
6 experience of John, a 14-year-old boy, who explained that "[h]aving more connections on Snapchat
7 makes his Snap Map look more crowded, which he can then show off to people in real life and therefore
8 appear more 'popular.'"⁷²³

9 **(v) Push Notifications**

10 517. In addition to Snapchat's in-app reward features, Snap also sends push notifications and
11 emails to encourage addictive engagement and increase use. Notifications are triggered based on
12 information Snap collects from, and about, its users. Snap "pushes" these communications to users
13 excessively and at disruptive times of day. Snap has even designed the format of these notifications to
14 pull users back onto its app by preying on their fear of missing out—never mind the consequences to
15 their health and well-being.

16 **(vi) Impediments to Discontinuing Use**

17 518. Snap has intentionally designed its platforms so child users face significant navigational
18 obstacles and hurdles when trying to delete or deactivate their Snapchat accounts, despite the ease with
19 which a user can create one. For example, when a user elects to delete their account, they cannot do so
20 on demand. The data and the account are preserved for 30 days. In addition, after initiating the deletion
21 process, the user is presented with a black screen depicting a crying emoji and a message that reads,
22
23

24 ⁷²¹ Jenna Sachs, *Psychological Repercussions of Location-Based Social Networks in Today's Youth*, 9
25 Elon J. Undergraduate Rsch. Commc'ns 64, 72–73 (2018),
26 <https://eloncdn.blob.core.windows.net/eu3/sites/153/2018/12/06-Sachs.pdf>.

27 ⁷²² See Tasha R. Dunn & Michael R. Langlais, "Oh, Snap!": *A Mixed-Methods Approach to Analyzing*
28 *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>.

⁷²³ *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>.

1 “Your account will be deactivated, which means friends won’t be able to contact you on Snapchat.
2 You’ll also lose any Chats you’ve saved and Snaps and Chats you haven’t opened.”⁷²⁴

3 519. This cumbersome process prioritizes user retention and continued use over the well-being
4 of Snapchat’s users.

5 **b. Snap’s features are designed to promote compulsive and excessive use.**

6 **(i) “Stories” and the “Discover” Interface**

7 520. In October 2013, Snap added “Stories,” a feature that generates a compilation of its users’
8 designated photos and videos that expire in 24 hours and can be viewed an unlimited number of times by
9 friends or anyone on Snapchat if the user sets the visibility setting to Everyone.⁷²⁵ Within eight months
10 of launching the Stories feature, users were viewing more Stories per day than Snaps.⁷²⁶

11 521. Snap’s Stories feature includes a running view count and list of viewers for each Story,
12 both of which provide users with dopamine-triggering feedback that encourages users to make their
13 Stories visible to everyone in order to increase the view count. The view count, view list, and ephemeral
14 nature of Stories also reinforces the principle of reciprocity and compels users to monitor Stories, so
15 they do not miss out.

16 522. In 2016, Snap updated the Stories feature to include recommendations based on an
17 algorithm that considers “proximity, time, interestingness, or other such metrics.”⁷²⁷ That same year,
18 Snap introduced ads between Stories and updated Stories to include “Auto-Advance,” a feature that
19 starts a new Story automatically after the preceding one ends.⁷²⁸ This creates an endless cycle of

20 ⁷²⁴ See Snapchat Support, *How do I delete my Snapchat account?*, Snap Inc. (May 31, 2023),
21 <https://support.snapchat.com/en-US/a/delete-my-account> l
22 [[https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-](https://web.archive.org/web/20230531042452/https://help.snapchat.com/hc/en-us/articles/7012328360596)
us/articles/7012328360596].

23 ⁷²⁵ Darrell Etherington, *Snapchat Gets Its Own Timeline With Snapchat Stories, 24-Hour Photo & Video*
24 *Tales*, TechCrunch (Oct. 3, 2013), [https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-](https://techcrunch.com/2013/10/03/snapchat-gets-its-own-timeline-with-snapchat-stories-24-hour-photo-video-ales/)
with-snapchat-stories-24-hour-photo-video-ales/.

25 ⁷²⁶ 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-](https://www.theverge.com/2014/6/20/5827666/snapchat-stories-bigger-than-snaps-electric-daisy-carnival)
daisy-carnival.

26 ⁷²⁷ Snapchat, Inc., *Content Collection Navigation and Autoforwarding*, U.S. Patent Application No.
27 20170289234 (filed Mar. 29, 2016), [https://image-ppubs.uspto.gov/dirsearch-](https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234)
public/print/downloadPdf/20170289234.

28 ⁷²⁸ 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.⁷²⁹ 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.'"⁷³⁰

523. 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.

524. 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"

525. 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.⁷³¹ 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%.⁷³²

Collection Navigation and Autoforwarding, U.S. Patent Application No. 20170289234 (filed Mar. 29, 2016), <https://image-ppubs.uspto.gov/dirsearch-public/print/downloadPdf/20170289234>.

⁷²⁹ 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://bmcpyschology.biomedcentral.com/counter/pdf/10.1186/s40359-022-00990-7.pdf>.

⁷³⁰ Fraser Deans, *Curb Your Snapchat Addiction*, Wholesome Tech. Co. (2018), <https://www.wholesome.design/advent-2018/2-curb-your-snapchat-addiction/>

⁷³¹ 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>.

⁷³² 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>.

1 526. In February 2022, Snap CEO Evan Spiegel told investors that users are spending more
2 time on Spotlight than almost any other aspect of Snapchat. A year prior, Snap announced “Spotlight
3 Challenges,” which provided users with cash prizes for creating Spotlight videos with specific lenses,
4 sounds, or topics, further integrating the user into the Snap ecosystem. Snap claims it paid out more than
5 \$250 million in cash prizes to Spotlight Challenge participants in 2021 alone.⁷³³

6 **4. Snap designed Snapchat with features that harm children directly or expose**
7 **children to harm.**

8 527. Snapchat further contains a number of features which foreseeably cause children harm
9 above and beyond harms inherent in addiction and compulsive use.

10 **a. Disappearing “Snaps” and “My Eyes Only” thwart parental control and**
11 **encourage destructive behavior among Snap’s teen users.**

12 528. As discussed above, Snapchat’s “Snap” feature allows users to send and receive
13 ephemeral, or “disappearing,” audiovisual messages. Prior to sending a Snap, a user can designate the
14 period of time—typically no more than a few seconds—that the recipient will be allowed to view the
15 Snap. According to Snapchat, once the allotted time expires, the Snap disappears forever.

16 529. Disappearing Snaps do not operate as advertised. Although designed to disappear after an
17 allotted time, recipients possess the ability to save or record them at will. This is particularly harmful to
18 adolescents, who rely on Snap’s representations when taking and sending photos, and who only learn
19 after the fact that recipients have the means to save photos or videos.

20 530. Snap could, but does not, warn users, including children and teenagers, that Snaps may
21 not disappear in all instances.

22 531. In addition, and especially for pre-teen users, Snapchat is dangerous because Snap’s
23 parental controls are ill-equipped to mitigate the risks posed by this feature. As set forth below, even
24 with parental controls activated, parents are unable to view a Snap and therefore cannot adequately
25 protect their children and/or deter their children from engaging in dangerous behavior in conjunction
26 with sending Snaps.

27
28 ⁷³³ 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>.

532. “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.

533. 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.

534. 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.

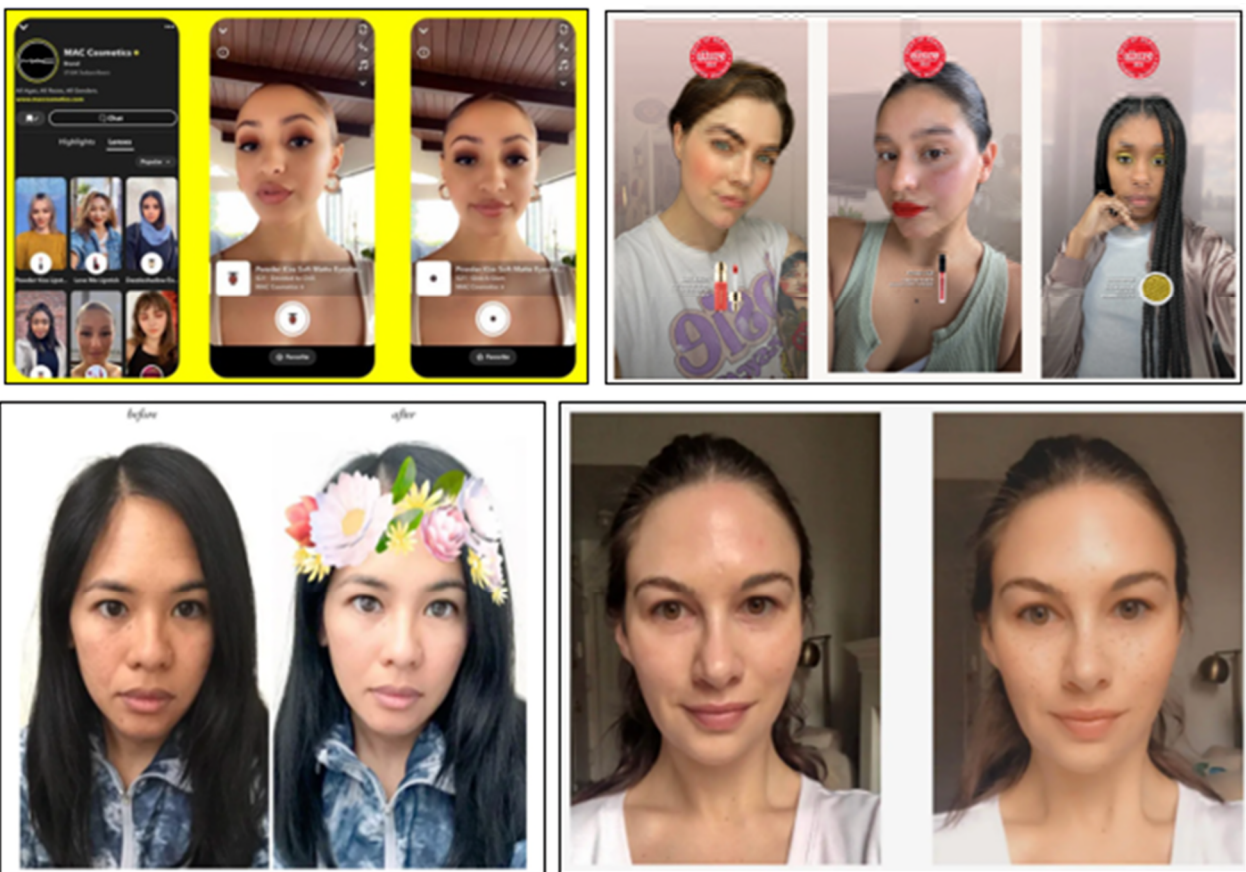
535. Despite these dangers, Snap designed Quick Add because it increases the odds that users will add friends, send more Snaps, and spend more time using Snapchat.

536. 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.**

537. 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.

538. 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."



539. 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.⁷³⁴ 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.⁷³⁵ 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.⁷³⁶ 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.”⁷³⁷

540. Snap also created and promoted “smart filters” that allowed users to stamp date/time, temperature, battery life, altitude, and speed on their Snaps.⁷³⁸ These filters utilize sensor data on users’ devices to provide the desired filter stamp.

541. 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

⁷³⁴ 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>

⁷³⁵ 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>.

⁷³⁶ 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>.

⁷³⁷ *Id.*

⁷³⁸ *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>.

1 and videos of themselves driving at 100 miles-per-hour or more. Tragically, the quest to capture a 100
2 mile-per-hour Snap caused a number of fatal vehicle accidents involving teens and young adults.⁷³⁹

3 542. Snap knew, or should have known, its speed filter created an unreasonable risk of harm to
4 its users and the public. Despite this knowledge, however, as well as pleas from the public to disable the
5 filter, Snap refused to remove speed filter from its application until 2021.⁷⁴⁰

6 543. By including features like lenses, cartoonish filters, and stamps to attract ever-increasing
7 numbers of children to use and engage with its platform, Snap has knowingly created a platform that
8 leads to excessive use by children and teens and causes them to suffer harm.

9 **5. Snap implemented ineffective and misleading parental controls, further**
10 **endangering children.**

11 544. Snap designed and set up Snapchat with inadequate parental controls.

12 545. From Snapchat's launch in 2011 until August 2022, Snapchat had no parental controls
13 even though its core user base was under the age of 18 and a significant number of those users were
14 under the age of 13.

15 546. In August 2022, Snap introduced the "Family Center." The features and processes offered
16 through the Family Center are woefully inadequate to protect teen and pre-teen users. The Family Center
17 allows a parent or guardian to install Snapchat on their phone and then link to the child's account. The
18 parent or guardian can then see who the child user is communicating with. However, the substance of
19 these communications remains hidden and still disappears after the allotted time. In addition, the Family
20 Center does not allow a parent or guardian to block minors from sending private messages, control their
21 child's use or engagement with many of Snapchat's platform features, control their child's use of
22 Snapchat's geolocation feature, or control who their child may add to their friend list. Finally, the

23 ⁷³⁹ *Did Snapchat play role in deaths of 3 young women?*, ABC6 Action News (Feb. 16, 2016),
24 <https://6abc.com/action-news-investigation-snapchat-fatal-car-crash-philadelphia/1196846/>; Manpreet
25 Darroch, *Snapchat and driving . . . you could be sending your last snap*, Youth Rd. Safety (Apr. 25,
26 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/>.

27 ⁷⁴⁰ Bobby Allyn, *Snapchat Ends 'Speed Filter' That Critics Say Encouraged Reckless Driving*, NPR
28 (June 17, 2021), <https://www.npr.org/2021/06/17/1007385955/snapchat-ends-speed-filter-that-critics-say-encouraged-reckless-driving>.

1 Family Center fails to help a parent monitor their child's account when the child has secretly created a
2 Snapchat account without the parents' knowledge in the first place.

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

5 547. Since Snap's inception, it has failed to adequately warn the public, including Plaintiff and
6 its students, about its platforms' physical and mental health risks. These risks include, but are not limited
7 to, addiction, compulsive and excessive use, dissociative behavior, social isolation, and an array of
8 mental health disorders like body dysmorphia, anxiety, depression, and insomnia.

9 548. Snap targets adolescent users via advertising and marketing materials distributed via
10 digital and traditional media, including expensive advertisements placed during high-profile sporting
11 events. Snap fails to warn the targets of these ads—often minors—about the physical and mental risks
12 associated with using Snapchat.

13 549. Snap further fails to warn adolescent users during the platform registration process. At
14 account setup, Snap's platform contains no warning labels, banners, or conspicuous messaging to
15 adequately inform adolescent users of the known risks and potential physical and mental harms
16 associated with usage of its platform. Instead, Snap allows adolescent users to easily create an account
17 (or multiple accounts) and fully access the platform.

18 550. Snap's lack of adequate warnings continues after an adolescent has the Snapchat
19 platform. Snap does not adequately inform adolescent users that their data will be tracked, used to help
20 build a unique algorithmic profile, and potentially sold to Snap's advertising clients, who will in turn use
21 the data to target and profile the user.

22 551. Alarming, Snap also does not warn adolescent users before facilitating adult
23 connections and interactions that adult predators use its platform. It also fails to instruct adolescent users
24 on ways to avoid unknown adults on Snap.

25 552. Snap also fails to warn adolescent users who exhibit problematic signs of addiction or are
26 habitually and compulsively accessing the app. Instead, Snap utilizes push notifications to encourage
27 engagement with Snapchat.

553. 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.

554. 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.

555. 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.

556. 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.

557. 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.

558. 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.⁷⁴¹ 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

⁷⁴¹ 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>].

1 to addict its users and keep them on the platform for as long as possible, despite knowing the harm that
2 can result.

3 559. ByteDance operates TikTok for profit, which creates advertising revenue through
4 maximizing the amount of time users spend on the platform and their level of engagement. The greater
5 the amount of time that young users spend on TikTok, the greater the advertising revenue TikTok earns.

6 560. TikTok Inc. captures vast swaths of information from its users, both on and off the
7 TikTok platform, including Internet and other network activity information—such as location data and
8 browsing and search histories. ByteDance Ltd. exclusively controls and operates the TikTok platform. In
9 his recent testimony before the House Energy and Commerce Committee, TikTok CEO Shou Chew
10 admitted that he reports directly to ByteDance Ltd. CEO Liang Rubo. ByteDance Ltd. Admits that its
11 personnel outside the United States can access information from American TikTok users including
12 public videos and comments. On information and belief, ByteDance Ltd. Also has access to United
13 States TikTok users' private information.

14 561. Despite efforts to portray TikTok as separate from Douyin (the Chinese version of
15 TikTok), the two companies share many overlapping personnel and technologies, as the recent report
16 "TikTok, ByteDance and Their Ties to the Chinese Communist Party," produced by the Australian
17 Senate Select Committee on Foreign Interference Through Social Media, makes clear. TikTok's
18 engineering manager works on both TikTok and Douyin, and TikTok Inc.'s development processes are
19 closely intertwined with Douyin's processes. TikTok Inc.'s employees and data systems are also deeply
20 interwoven into Byte Dance Ltd.'s ecosystem.

21 562. Indeed, TikTok's algorithm was created by ByteDance Ltd. and contains some of the
22 same underlying basic technology as Douyin.⁷⁴²

23 563. TikTok's algorithm still belongs to ByteDance Ltd., which declined to sell the technology
24 to a U.S. company.⁷⁴³

26 ⁷⁴² Letter from Shou Zi Chew, CEO, TikTok to Marsha Blackburn, U.S. Senator, *et al.* at 4 (June 30,
27 2022), <https://www.documentcloud.org/documents/22126313-tiktok-letter-to-senators>.

28 ⁷⁴³ 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->

564. ByteDance Ltd. also plays a role in hiring key personnel at TikTok.⁷⁴⁴

565. 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.⁷⁴⁵

566. 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.

567. 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.

568. 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>].

⁷⁴⁴ 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>.

⁷⁴⁵ 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>].

1 “limited” decision-making power.⁷⁴⁶ Instead, major decisions related to TikTok are made by ByteDance
2 Ltd. Founder Zhang Yiming and other ByteDance Ltd. officials in China.⁷⁴⁷

3 569. Senior TikTok employees hired to head departments have left the company after learning
4 they would not be able to significantly influence decision-making.⁷⁴⁸

5 570. ByteDance Ltd.’s own Internal Audit team prepared a risk assessment in late 2021 and
6 found that numerous senior employees felt “that themselves and their teams are just ‘figureheads’ or
7 ‘powerless ombudsmen’ who are functionally subjection to the control of [China]-based teams.”⁷⁴⁹

8 571. As most recent as 2022, employees that work on product, engineering, and strategy at
9 TikTok said they reported directly to ByteDance leadership in China, bypassing TikTok’s executive
10 suite.⁷⁵⁰ Similarly, former TikTok employees have stated that “nearly 100% of TikTok’s product
11 development is led by Chinese ByteDance employees.”⁷⁵¹

12 572. Other employees have described ByteDance Ltd. as being “heavily involved” in decision-
13 making and operations at TikTok, with “blurry” boundaries between the two companies.⁷⁵² According to
14 employees, these blurred lines included U.S.-based employees working during Chinese business hours
15
16
17

18 ⁷⁴⁶ Ryan Mac & Chang Che, *TikTok’s C.E.O. Navigates the Limits of His Power*, N.Y. Times (Sept. 16,
19 2020), <https://www.nytimes.com/2022/09/16/technology/tiktok-ceo-shou-zi-chew.html>
[<https://perma.cc/YG4N-HP6P>].

20 ⁷⁴⁷ *Id.*

21 ⁷⁴⁸ Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-*
22 *Employees Say*, Forbes (Sept. 21, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
23 [white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
[<https://perma.cc/SK33-HJ4S>].

24 ⁷⁴⁹ Emily Baker-White, *A China-Based ByteDance Team Investigated TikTok’s Global Security Chief,*
25 *Who Oversaw U.S. Data Concerns*, Forbes (Oct. 25, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-cloutier/?sh=3dda7fa26640)
26 [white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-](https://www.forbes.com/sites/emilybaker-white/2022/10/25/bytedance-tiktok-investigation-global-chief-security-officer-roland-cloutier/?sh=3dda7fa26640)
27 [cloutier/?sh=3dda7fa26640](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>].

28 ⁷⁵⁰ Emily Baker-White, *TikTok is Bleeding U.S. Execs Because China is Still Calling the Shots, Ex-*
29 *Employees Say*, Forbes (Sept. 21, 2022), [https://www.forbes.com/sites/emilybaker-](https://www.forbes.com/sites/emilybaker-white/2022/09/21/tiktok-bleeding-us-execs-china-control-bytedance/?sh=7923b7aa9707)
[<https://perma.cc/SK33-HJ4S>].

⁷⁵¹ 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-](https://www.cnbc.com/2021/06/25/tiktok-insiders-say-chinese-parent-bytedance-in-control.html)
chinese-parent-bytedance-in-control.html.

⁷⁵² *Id.*

1 to answer their ByteDance Ltd. counterparts' questions.⁷⁵³ Further, one TikTok employee stated
2 ByteDance Ltd. employees could access U.S. user data.⁷⁵⁴

3 573. Statements from other TikTok employees suggest the lines between the TikTok and
4 ByteDance Ltd. are almost nonexistent, with ByteDance Ltd. being the "central hub for pretty much
5 everything . . . Beijing managers sign off on major decisions involving U.S. operations, including from
6 the teams responsible for protecting Americans' data and deciding which videos should be removed."⁷⁵⁵
7 Further, TikTok employees stated ByteDance Ltd. officials "lead TikTok's design and engineering
8 teams and oversee the software that U.S. employees use to chat with colleagues and manage their work.
9 They're even the final decision-makers on human resources matters, such as whether an American
10 employee can work remotely."⁷⁵⁶ ByteDance continues to make decisions "both large and small" about
11 all aspects of TikTok.⁷⁵⁷ It directs TikTok's budget, operates TikTok's internal document storage
12 platform, and handles media criticism directed at TikTok, as well as enters into contracts on behalf of
13 TikTok to provide key services for the TikTok platform.⁷⁵⁸ In addition, the source code that still makes
14 up TikTok's recommendation algorithm was originally written by ByteDance employees in China.⁷⁵⁹

15 574. One former TikTok employee reported to *Forbes* that their paycheck listed ByteDance as
16 the check's drawer, not TikTok.⁷⁶⁰ And another employee reported their contract listed TikTok as their
17 employer, but their tax returns listed ByteDance.⁷⁶¹

18 575. Since its launch, TikTok has grown exponentially. In late 2021, its owner and creator
19 ByteDance publicly stated that TikTok had 1 billion active global users, up from 55 million in early
20

21 ⁷⁵³ *Id.*

22 ⁷⁵⁴ *Id.*

23 ⁷⁵⁵ Drew Harwell & Elizabeth Dwoskin, *As Washington Wavers on TikTok, Beijing Exerts Control*,
24 Wash. Post (Oct. 30, 2022), <https://www.washingtonpost.com/technology/interactive/2022/bytedance-tiktok-privacy-china/> [<https://perma.cc/4GBZ-6XZJ>].

25 ⁷⁵⁶ *Id.*

26 ⁷⁵⁷ Utah AG Compl. at 53, ¶ 145.

27 ⁷⁵⁸ *Id.* at 53, ¶¶ 145–147.

28 ⁷⁵⁹ *Id.* at 53–54, ¶ 148.

⁷⁶⁰ 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>].

⁷⁶¹ *Id.*

2018 and 700 million in mid-2020.⁷⁶² TikTok CEO Shou Chew recently testified that the app currently has over 150 million monthly active users in the United States.⁷⁶³

576. 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.⁷⁶⁴ 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%.⁷⁶⁵ 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.”⁷⁶⁶ In another recent report, more than 13% of young users declared they “wouldn’t want to live without” TikTok.⁷⁶⁷

577. 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.⁷⁶⁸ 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.⁷⁶⁹ To put that into perspective, almost a quarter of all

⁷⁶² 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>.

⁷⁶³ *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.

⁷⁶⁴ 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\[https://perma.cc/PQR5-GSRJ\]](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]).

⁷⁶⁵ Utah AG Compl. at 10, ¶ 26.

⁷⁶⁶ 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/>.

⁷⁶⁷ 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.

⁷⁶⁸ Utah AG Compl. at 17, ¶ 49.

⁷⁶⁹ *Id.*

1 children using the TikTok platform are spending the equivalent of half of their school day on the
2 platform every day.⁷⁷⁰

3 578. TikTok’s capture of the American youth market is no accident, but instead the result of a
4 carefully executed campaign. Early on, Alex Zhu, one of TikTok’s creators, recognized that “[t]eenagers
5 in the U.S. [were] a golden audience” for this emerging social media platform.⁷⁷¹ To cash in on this
6 gold, ByteDance implemented a series of platform features designed to attract and addict young users.
7 As Zhu explained in 2019, “[e]ven if you have tens of millions of users, you have to keep them always
8 engaged[.]”⁷⁷² This engagement has come at the cost of young users’ health and significant impact to
9 school districts charged with educating those youth in a safe and healthy environment.

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

12 579. ByteDance has designed and aggressively marketed TikTok, the harmful and addictive
13 version of Douyin, to attract and profit from young Americans.

14 580. Like the other Defendants’ platforms, TikTok depends on advertising revenue, which has
15 boomed. TikTok was projected to receive \$11 billion in advertising revenue in 2022, over half of which
16 is expected to come from the United States.⁷⁷³

17 581. The initial iteration of TikTok allowed users to lip sync pop music by celebrities who
18 appealed primarily to teens and tweens (e.g., Selena Gomez and Ariana Grande). It labeled folders with
19 names attractive to youth (e.g., “Disney” and “school”); and included in those folders songs such as
20 “Can You Feel the Love Tonight” from the movie “The Lion King,” “You’ve Got a Friend in Me” from

21 ⁷⁷⁰ *Id.*

22 ⁷⁷¹ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times
23 (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%20Dups,the%20rest%20of%20the%20globe\[https://perma.cc/UR2Q-KEF7\]](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%20Dups,the%20rest%20of%20the%20globe[https://perma.cc/UR2Q-KEF7]).

24 ⁷⁷² Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve*
25 *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>.

26 ⁷⁷³ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr.
27 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.
28

1 the movie “Toy Story,” and other renditions covering school-related subjects or school-themed
2 television shows and movies.⁷⁷⁴

3 582. ByteDance also specifically and intentionally excluded videos that would not appeal to
4 young Americans, instructing TikTok moderators that videos of people with “too many wrinkles” should
5 not be permitted on users’ “For You” pages because such posts were “much less attractive [and] not
6 worth[] . . . recommend[ing][.]”⁷⁷⁵

7 583. Even TikTok’s sign-up process demonstrates that young users are what ByteDance
8 values most. In 2016, the birthdate for those signing up for the app defaulted to the year 2000 (i.e., 16
9 years old).⁷⁷⁶ In December 2016, Zhu confirmed the company had actual knowledge that “a lot of users,
10 especially top users, they are under 13.”⁷⁷⁷

11 584. The FTC alleged that despite the company’s knowledge of these and a “significant
12 percentage” of other users who were under 13, the company failed to comply with the COPPA.⁷⁷⁸

13 585. TikTok settled those claims in 2019 by agreeing to pay what was then the largest ever
14 civil penalty under COPPA and to several forms of injunctive relief.⁷⁷⁹

15 586. In an attempt to come into compliance with the consent decree and COPPA, TikTok
16 made available to users under 13 what it describes as a “limited, separate app experience.”⁷⁸⁰ The child
17

18 ⁷⁷⁴ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 8, ¶¶ 26–27,
19 *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

20 ⁷⁷⁵ Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly”*
21 *People and the Poor to Attract New Users*, Intercept_ (Mar. 16, 2020),
22 <https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>.

23 ⁷⁷⁶ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed with*,
24 *Bus. Insider* (Dec. 7, 2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.

25 ⁷⁷⁷ Jon Russell, *Musical.ly defends its handling of young users, as it races past 40M MAUs*, *TechCrunch*
26 (Dec. 6, 2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>; *see also*
27 *TechCrunch, From Brush to Canvas with Alex Zhu of Musical.ly* at 8:58–11:12, YouTube (Dec. 6,
28 2016), <https://www.youtube.com/watch?v=ey15v81pwII>.

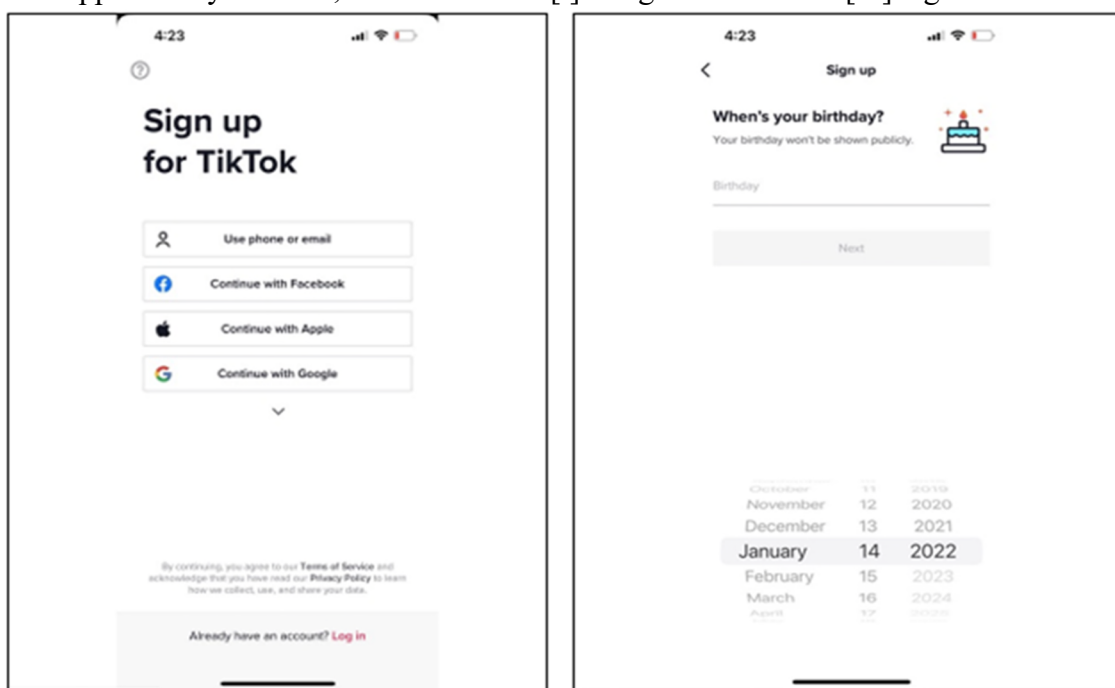
⁷⁷⁸ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief at 6, ¶¶ 13–15,
United States v. Musical.ly, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

⁷⁷⁹ 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-](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune)
27 [musically-change-its-tune](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune).

⁷⁸⁰ 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-](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law)
28 [13-childrens-privacy-law](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.⁷⁸¹ For that reason, experts fear the app is “designed to fuel [kids’] interest in the grown-up version.”⁷⁸²

587. 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.”⁷⁸³ By contrast, Zhu describes “[t]eenagers in the U.S. [as] a golden audience.”⁷⁸⁴



⁷⁸¹ *Id.*

⁷⁸² Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

⁷⁸³ 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%20Dups,the%20rest%20of%20the%20globe> [https://perma.cc/UR2Q-KEF7].

⁷⁸⁴ *Id.*

1 **3. ByteDance intentionally designed platform features to addict children and**
2 **adolescents.**

3 588. TikTok’s growth among young Americans has been further enabled by its ineffective age
4 verification and parental control procedures, which allow children under 13 unfettered access to the
5 platform, without regard to parental consent, despite the fact that TikTok’s terms of service require
6 consent of parents or guardians for minors.

7 **a. TikTok’s age-verification measures are dangerously deficient.**

8 589. When a user first opens TikTok, they are prompted to “Login in to TikTok” or “Sign up”
9 for an account using a phone number or email address. TikTok then asks, “When’s your birthday?”

10 590. ByteDance does not verify the age that TikTok users report. Nor does it use any method
11 to verify that users who acknowledge they are minors have the consent of their parents or legal
12 guardians to use the platform. In fact, at least as of 2020, TikTok still had not developed a company
13 position on age verification.⁷⁸⁵

14 591. ByteDance allows users to utilize TikTok without creating an account, to circumvent age
15 restrictions. Indeed, TikTok allows users, no matter what age, to “browse as [a] guest,” and watch
16 TikTok’s “For You” page, while TikTok’s algorithm collects data about that user and their viewing
17 behavior.⁷⁸⁶

18 592. ByteDance knows that many U.S. TikTok users under the age of 13 fail to report their
19 birth dates accurately.⁷⁸⁷ In July 2020, TikTok reported that more than a third of its 49 million daily
20 users in the United States were 14 years old or younger. While some of those users were 13 or 14, at
21 least one former employee reported that TikTok had actual knowledge of children even younger based
22 on videos posted on the TikTok platform—yet failed to promptly take down those videos or close those
23 accounts.⁷⁸⁸

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⁷⁸⁵ TIKTOK3047MDL-001-00060941 at *85 (“Minor Safety Policy & PnP,” PowerPoint, January
25 2021).

26 ⁷⁸⁶ *Browse as guest*, TikTok Inc., <https://support.tiktok.com/en/log-in-troubleshoot/log-in/browse-as-guest>.

27 ⁷⁸⁷ 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/>.

28 ⁷⁸⁸ 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),

593. 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).”⁷⁸⁹

594. In 2019, the FTC acted on this admission and alleged that ByteDance failed to comply with COPPA.⁷⁹⁰

595. 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.⁷⁹¹

596. To comply with the terms of that settlement, ByteDance created “TikTok for Younger Users,” a “limited app experience” for users under the age of 13.⁷⁹² “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.”⁷⁹³ 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.”⁷⁹⁴

597. 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.⁷⁹⁵ Ms. Kuster indicated that her staff was able to

<https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html>
<https://www.nytimes.com/2020/08/14/technology/TikTok-underage-users-ftc.html>
[<https://perma.cc/PQR5-GSRJ>].

⁷⁸⁹ TIKTOK3047MDL-001-00060811 at *16.

⁷⁹⁰ 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.

⁷⁹¹ 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-privacy.html#:~:text=TikTok%20the%20popular%20app%20for%20making%20and%20sharing,20%20children%E2%80%99s%20and%20consumer%20groups%20said%20on%20Thursday>
[<https://perma.cc/S5Q9-ERWP>].

⁷⁹² *TikTok for Younger Users*, TikTok Inc. (Dec. 13, 2019), <https://newsroom.tiktok.com/en-us/tiktok-for-younger-users>.

⁷⁹³ *Id.*

⁷⁹⁴ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

⁷⁹⁵ *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>.

1 impersonate a minor and create a different account with a more advanced age by merely deleting one
2 and creating another.⁷⁹⁶ The staff members did not even need to switch emails. Chew promised to “look
3 at [this].”⁷⁹⁷

4 598. The absence of effective age verification measures also means that adult users claim to be
5 children—with obvious dangers to the children on ByteDance’s platform.

6 **b. TikTok’s parental controls are dangerously deficient.**

7 599. In April 2020, following the FTC settlement, ByteDance created a “Family Pairing”
8 feature on TikTok. The supposed purpose of that feature was to allow parents to link their accounts to
9 their children’s accounts and enforce certain controls (such as screen time limits and restriction of
10 “content that may not be appropriate for all audiences”).⁷⁹⁸

11 600. “Family Pairing” is supposed to allow parents to prevent their children from direct
12 messaging other TikTok users. But ByteDance has designed TikTok’s “Family Pairing” feature so that it
13 is not mandatory for minor users. To use it, a parent or guardian must create their own TikTok account
14 to pair it with their child’s account. Further, the “Family Pairing” feature is available only on the TikTok
15 mobile app. It provides no protection when a child accesses TikTok through a web browser. Because
16 this feature requires parents to know the name of their child’s account to pair it, youth can easily evade
17 the protections of the “Family Pairing” feature by creating anonymous accounts, again without parental
18 approval or knowledge.

19 601. ByteDance further stymies parents’ ability to supervise minor children’s use of TikTok
20 by permitting minor users to block their parents’ profiles, post ephemeral videos called “Stories” that
21 disappear after 24 hours, and post those Stories to “Friends Only.”

22 602. ByteDance could, but does not, adopt safety features that notify parents when minors are
23 engaging excessively with the platform and are using it during sleeping hours. The company is aware
24 that many youth are using the platform late at night and admits that such use is a “strong indicator” that
25 those users are not getting the recommended eight hours of sleep necessary for their health and well-

26 ⁷⁹⁶ *Id.*

27 ⁷⁹⁷ *Id.*

28 ⁷⁹⁸ Jeff Collins, *TikTok introduces Family Pairing*, TikTok Inc. (Apr. 15, 2020),
<https://newsroom.tiktok.com/en-us/tiktok-introduces-family-pairing>.

1 being.⁷⁹⁹ Internal TikTok documents reveal that more than 20% of children are active on its platform
2 between 12:00 a.m. and 5:00 a.m., when they should be sleeping.⁸⁰⁰ Specifically, 19% of TikTok’s 13 to
3 15-year-old users globally and 25% of users aged 16–17 are active on TikTok between 12:00 a.m. and
4 5:00 a.m.⁸⁰¹ Nevertheless, until August 2021, ByteDance would send push notifications to young users
5 at all hours of the day or night to persuade them to log back on to TikTok. Since then, push notifications
6 have been cut off at 9 pm for users self-identified as 13–15 years old, and after 10 pm for users self-
7 identified as 16 or 17 years of age.

8 603. Until January 13, 2021, ByteDance interfered with parental supervision and endangered
9 children by defaulting all accounts, including those registered to children as young as 13, to “public.”
10 That allowed strangers to contact minor users regardless of age or location. ByteDance also intentionally
11 and actively promoted these types of connections by suggesting accounts to follow through the “Find
12 Friends” or “People You May Know” features.

13 604. For users self-identified as age 16 and over, ByteDance still set the default privacy setting
14 for all registered accounts to “public,” meaning that anyone could view a user’s profile, on or off
15 TikTok, request the user as a friend, or engage with the user’s videos.

16 **c. ByteDance intentionally designed TikTok’s features and algorithms to**
17 **maximize engagement using an endless feed, time-limited experiences,**
18 **intermittent variable rewards, reciprocity, and ephemeral content.**

19 605. Like each of the other Defendants, ByteDance has designed and coded TikTok with
20 features that foster addictive and compulsive use by youth, leading to a cascade of mental and physical
21 injuries.

22 606. One of TikTok’s defining features is its “For You” page (or “FYP”). According to
23 ByteDance, it is “central to the TikTok experience and where most of our users spend their time.”⁸⁰²

24 607. TikTok’s FYP uses ByteDance’s powerful machine-learning algorithms to to maximize
25 user engagement and thereby serve ByteDance’s interests—as opposed to simply responding to searches

26 ⁷⁹⁹ Utah AG Compl. at 16, ¶ 42.

27 ⁸⁰⁰ *Id.* at 3, ¶ 5.

28 ⁸⁰¹ *Id.* at 16, ¶ 42.

⁸⁰² *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
<https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

1 by users. As one industry commentator explained, TikTok uses “a machine-learning system that
2 analyzes each video and tracks user behavior so that it can serve up a continually refined, never-ending
3 stream of TikToks optimized to hold [users’] attention.”⁸⁰³ As another commentator put it, “you don’t
4 tell TikTok what you want to see. It tells you.”⁸⁰⁴

5 608. Zhu has remarked that “[e]ven if you have tens of millions of users, you have to keep
6 them always engaged[.]”⁸⁰⁵ Thus, according to Zhu, TikTok’s algorithms are “focused primarily on
7 increasing the engagement of existing users.”⁸⁰⁶

8 609. TikTok’s internal documents make clear that habit formation is a core “mission” of the
9 company:

10 Pulling in and retaining new-users is difficult because it is causing these users to make
11 behavioral changes to their current habits. The Habit Loop (neurological loop that
12 governs habits) is broken down into 3 stages: the Cue[,] the Routine, the Reward. Prior to
13 downloading TikTok, new-users already established “Routines” for cues (ex[ample]
14 boredom, free-time, bed-time routine) that we may want as cue[s] to bring people onto
15 TikTok. However, changing someone’s routine is not as simple as asking them to. It’s
16 about the reward; the positive reinforcement and benefit that the person feels from doing
17 that routine. TikTok[’]s mission to increase retention is to discover what “rewards” our
18 users are seeking during the cues we want to associate ourselves with.⁸⁰⁷

16 610. An internal document: *TikTok Algo 101*, which TikTok has confirmed is authentic,
17 “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily active users, it has
18
19

20 ⁸⁰³ Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),
21 <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>
22 [<https://perma.cc/A3XU-Y73L>].

23 ⁸⁰⁴ Drew Harwell, *How TikTok Ate the Internet*, Wash. Post. (Oct. 14, 2022),
24 <https://www.washingtonpost.com/technology/interactive/2022/tiktok-popularity/>
25 [<https://perma.cc/R7JJ-CDSF>].

26 ⁸⁰⁵ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve*
27 *probably never heard of*, Bus. Insider (May 28, 2016), [https://www.businessinsider.com/what-is-musically-2016-](https://www.businessinsider.com/what-is-musically-2016-5#:~:text=%22I%20think%20we%20have%20these,now%20we%20can%20lay%20back.%22)
28 [5#:~:text=%22I%20think%20we%20have%20these,now%20we%20can%20lay%20back.%22](https://www.businessinsider.com/what-is-musically-2016-5#:~:text=%22I%20think%20we%20have%20these,now%20we%20can%20lay%20back.%22).

26 ⁸⁰⁶ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen*
27 *Markets*, Inc. (June 2, 2016), [https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-](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)
28 [network-quickly-capturing-the-tween-and-teen-](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)

28 ⁸⁰⁷ Utah AG Compl. at 11–12, ¶ 31.

1 chosen to optimize for two closely related metrics in the stream of videos it serves: ‘retention’—that is,
2 whether a user comes back—and ‘time spent.’”⁸⁰⁸

3 611. “This system means that watch time is key[,]” explained Guillaume Chaslot, the founder
4 of Algo Transparency.⁸⁰⁹ Chaslot noted that “rather than giving [people] what they really want,”
5 TikTok’s “algorithm tries to get people addicted[.]”⁸¹⁰

6 612. To fulfill this goal, the TikTok algorithm responds to a user’s time spent watching and
7 engaging with a video by feeding them similar videos.⁸¹¹ As TikTok describes it, the algorithms
8 populate each user’s FYP feed by “ranking videos based on a combination of factors” that include,
9 among others, any interests expressed when a user registers a new account, videos a user likes, accounts
10 they follow, hashtags, captions, sounds in a video they watch, certain device settings, such as their
11 language preferences and where they are located, and finally, the likelihood of the user’s interest.⁸¹²

12 613. ByteDance has designed TikTok’s algorithm so that certain factors, such as time spent
13 watching a video, are more important to the algorithm than others. For example, TikTok explained that
14 “whether a user finishes watching a longer video from beginning to end, would receive greater weight
15 than . . . whether the video’s viewer and creator are both in the same country.”⁸¹³

18 ⁸⁰⁸ Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),
19 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html> [<https://perma.cc/J3L5-35CL>].

20 ⁸⁰⁹ *Id.*

21 ⁸¹⁰ *Id.*

22 ⁸¹¹ Kaitlyn Tiffany, *I’m Scared of the Person TikTok Thinks I Am*, Atl. (June 21, 2021),
23 <https://www.theatlantic.com/technology/archive/2021/06/your-tiktok-feed-embarrassing/619257/>
24 [<https://perma.cc/5T3M-88ZY>].

25 ⁸¹² *Investigation: How TikTok’s Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
26 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
27 also *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
28 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

⁸¹³ *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>.

1 614. TikTok’s design features are therefore designed to give young users immediate
2 gratification and boost rewards to encourage excessive, “routine use” of the platform.⁸¹⁴ TikTok
3 acknowledges is “utilizes many coercive design tactics that detract from user agency such as infinite
4 scroll, constant notifications, and the ‘slot machine’ effect.”⁸¹⁵

5 615. TikTok knows that its presence in people’s lives monopolizes their time. For example, an
6 internal TikTok Powerpoint: *TikTok Strategy: 2021 Positioning*, shows its awareness of the addictive
7 nature of its platform, noting that TikTok is “in most people’s lives like this: ‘go on tiktok for 5 mins
8 and 3 hours have passed’. . . [o]r even this: ‘my night routine: - watch 3 hours worth of tiktok videos[;] -
9 try to follow the dance steps[;] - realise u suck at dancing n cry about it[;] - continue watching tiktok
10 videos[;] - sleep.’”⁸¹⁶ At its core, TikTok’s success can largely be attributed to design features “which
11 limits user agency.”⁸¹⁷

12 616. TikTok’s revenue is heavily dependent on the amount of time users spend on the platform
13 and their level of engagement. The more time users spend on TikTok, the more advertising revenue
14 TikTok reaps. Upon knowledge, information, and belief, formed after a reasonable inquiry under the
15 circumstances, TikTok has designed its algorithms to addict users through advanced analytics that create
16 a variable reward system, thereby causing users to spend increased amounts of time on the platform.
17 Upon opening the TikTok application, users are automatically shown an endless stream of videos
18 selected by an algorithm(s). TikTok has “stepped over the midpoint between the familiar self-directed
19 feed and an experience based first on algorithmic observation and inference,” or artificial intelligence:

20 The most obvious clue is right there when you open the app: the first thing you see isn’t a
21 feed of your friends, but a page called “For You.” It’s an algorithmic feed based on
22 videos you’ve interacted with, or even just watched. It never runs out of material. It is
23 not, unless you train it to be, full of people you know, or things you’ve explicitly told it
24 you want to see. It’s full of things that you seem to have demonstrated you want to watch,
25 *no matter what you actually say you want to watch* . . . Imagine a version of Facebook

26
27 ⁸¹⁴ Utah AG Compl. at 12, ¶ 32.

⁸¹⁵ *Id.* at 14, ¶ 37.

28 ⁸¹⁶ *Id.* at 12–13, ¶ 32.

⁸¹⁷ *Id.* at 16, ¶ 44.

1 that was able to fill your feed before you'd friended a single person. That's TikTok. . . .
2 [The platform is] incredibly addictive.⁸¹⁸

3 617. TikTok's algorithms are designed to begin working the minute a user opens the platform.
4 The FYP shows the user a single, full-screen stream of videos, then records how the user reacts. "A
5 second of viewing or hesitation indicates interest; a swipe suggests a desire for something else."⁸¹⁹ With
6 each data point collected, TikTok's algorithm winnows a mass of videos to a single feed, continually
7 refined to keep users engaging often and at length.

8 618. This algorithmic encouragement of continuous scrolling and interaction makes it hard for
9 users to disengage from the app. A recent ByteDance-funded study, which imaged the brains of TikTok
10 and other social media platform users, found that users engaged with TikTok about 10 times a minute,
11 twice as often as with peer apps.⁸²⁰

12 619. ByteDance leverages users' inability to disengage as a benefit to attract advertisers, rather
13 than taking steps to address the addictive nature of its platform. A recent TikTok marketing document
14 observed that "the TikTok audience is fully leaned in."⁸²¹ Marketing research commissioned by TikTok
15 found that, compared to other social media platforms, TikTok users evidenced a higher frequency of rate
16 per minute. TikTok boasted, "[o]ur algorithm and shorter video formats create continuous cycles of
17 engagement, making TikTok the leading platform for Information Density."⁸²²

18 620. TikTok's powerful machine-learning algorithms dictate each user's FYP. An estimated
19 90-95% of the videos viewed on TikTok comes from its algorithms (as opposed to user selection), the
20 highest among Defendants' platforms.⁸²³

22 ⁸¹⁸ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019),
23 <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

24 ⁸¹⁹ *Investigation: How TikTok's Algorithm Figures Out Your Deepest Desires*, Wall St. J. (July 21,
25 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>.

26 ⁸²⁰ *TikTok Ads Break Through Better Than TV And Drive Greater Audience Engagement*, TikTok Bus.
(June 2021), <https://www.tiktok.com/business/library/TikTokDrivesGreaterAudienceEngagement.pdf>.

27 ⁸²¹ *Id.*

28 ⁸²² *Id.*

⁸²³ *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>.

621. 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.

622. 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.⁸²⁴ 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.

623. 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[.]”⁸²⁵

624. Once users are in a rabbit hole, it is extremely difficult to climb out.⁸²⁶ 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.

625. 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.

626. Alyssa Moukheiber, a treatment center dietitian, explained that TikTok’s algorithm can push children into unhealthy behaviors or trigger a relapse of disordered eating.⁸²⁷ Indeed, several

⁸²⁴ 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>].

⁸²⁵ Utah AG Compl. at 30–31, ¶ 79.

⁸²⁶ 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>].

⁸²⁷ *Id.*

1 teenage girls interviewed by *The Wall Street Journal* reported developing eating disorders or relapsing
2 after being influenced by TikTok’s algorithm.⁸²⁸

3 627. Their experiences are not unique. Katie Bell, a co-founder of the Healthy Teen Project,
4 explained that “the majority of her 17 teenage residential patients told her TikTok played a role in their
5 eating disorders.”⁸²⁹

6 628. Others, like Stephanie Zerwas, an Associate Professor of Psychiatry at the University of
7 North Carolina at Chapel Hill, could not even recount how many of her young patients told her that
8 “I’ve started falling down this rabbit hole, or I got really into this or that influencer on TikTok, and then
9 it started to feel like eating-disorder behavior was normal, that everybody was doing that[.]”⁸³⁰

10 629. TikTok’s rabbit holes are particularly problematic for young people, whose undeveloped
11 frontal lobes lack the executive function and necessary impulse control to stop watching. The more
12 young users engage by viewing or hesitating on a particular video, the more TikTok’s algorithms learn
13 about the user. The company knows that what it calls “filter bubbles” are harmful but notes it falls
14 within a “grey area” of its policies consisting of material that is not harmful in isolation but “can
15 negatively influence users when the content is consumed in a condensed way.”⁸³¹ ByteDance uses this
16 feature to exploit the vulnerabilities of children and teenagers and addict them to its platform.

17 630. Indeed, ByteDance admits that its recommendation algorithm creates a “risk of
18 presenting an increasingly homogeneous stream of videos[.]” which feeds and creates addiction.⁸³²

19 631. This course of conduct resulted in the United Kingdom’s Information Commissioner’s
20 Office bringing a fine of £12.7 million (\$15.8 million) for breaches of data protection law, including the
21 misuse of children’s personal data.⁸³³ The fine rested on TikTok’s failure to obtain authorization from
22 the appropriate responsible adults before processing and using children’s data, failure to adequately
23

24 ⁸²⁸ *Id.*

25 ⁸²⁹ *Id.*

26 ⁸³⁰ *Id.*

27 ⁸³¹ Utah AG Compl. at 42, ¶ 115.

28 ⁸³² *How TikTok recommends videos #ForYou*, TikTok Inc. (June 18, 2020),
<https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

⁸³³ 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>.

1 inform users about how the platform uses and shares data, and failure “to ensure that U.K. users’
2 information was processed lawfully and transparently.”⁸³⁴

3 632. ByteDance uses a series of interrelated design features that exploit known mental
4 processes to induce TikTok’s users to use the platform more frequently, for more extended periods, and
5 with more intensity (i.e., providing more comments and “Likes”). ByteDance knows or should have
6 known that children, whose brains are still developing, are particularly susceptible to these addictive
7 features.

8 633. ByteDance designed the app so users cannot disable the auto-play function on the FYP.⁸³⁵
9 As noted above, when a user opens the TikTok app or visits the TikTok website, the platform
10 immediately begins playing a video on the user’s FYP. The user may request more videos with a simple
11 upward swipe, and the platform will deliver a seemingly endless video stream. If a user does not proceed
12 from a video, it continues to play on an endless loop. The ability to scroll continuously induces a “flow-
13 state” and distorts users’ sense of time.

14 634. The TikTok app interface is designed with only a limited number of buttons and sections
15 of the app for users to navigate, such that the design does not impede “flow.”

16 635. The FYP also leverages principles of IVR to encourage compulsive usage, in the same
17 fashion as Instagram Reels. A user swipes to receive the next video, and each swipe offers the prospect
18 (but not the certainty) of dopamine-releasing stimuli.

19 636. The cumulative effect of these features is addictive, compulsive engagement. As
20 researchers at the Brown University School of Public Health explained:

21 [T]he infinite scroll and variable reward pattern of TikTok likely increase the addictive
22 quality of the app as they may induce a flow-like state for users that is characterized by a
23 high degree of focus and productivity at the task at hand. . . . Once immersed in the flow-
24 like state, users may experience a distorted sense of time in which they do not realize
25 how much time has passed. Furthermore, the app interface itself is straightforward and
26 user-friendly, with only a limited number of buttons and sections of the app for users to
27 navigate, which further enables entrance into “flow.” . . . When they play, they consume
28 the entire device screen, which creates an immersive experience for users.

⁸³⁴ *Id.*

⁸³⁵ *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.⁸³⁶

637. 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.”⁸³⁷ 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.

638. 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.”⁸³⁸

639. 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.

⁸³⁶ 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/>.

⁸³⁷ 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>].

⁸³⁸ *Id.*

1 640. On at least some phones, TikTok is designed to cover the clock displayed at the top of
2 user's iPhones, preventing them from keeping track of the time spent on TikTok.⁸³⁹

3 641. ByteDance has designed the app so that users can see, however, how many times a video
4 was "Liked," commented on, or shared. So, the only thing users can quantify within the app is the
5 approval or disapproval of others.

6 642. In June 2022, after receiving public criticism regarding its platform's effects on people's
7 mental health, ByteDance introduced various tools to purportedly encourage users to take a break from
8 infinite scrolling, such as a "Take a Break" reminder and time-limit caps. ByteDance chose not to
9 activate these tools by default and instead buried them behind "a hidden series of menus" so users would
10 not use them.⁸⁴⁰ Even for minors, once they have exceeded 100 minutes of usage a day, TikTok only
11 "reminds" them that these "Take a Break" tools exist upon opening the app, but does not activate them
12 by default.

13 643. In March of 2023, TikTok announced additional measures to quell public criticism about
14 the addictiveness of its platform. Once the changes are implemented, minors under age 18 will by
15 default have their use limited to one hour. There is less to this time limit than meets the eye. Children
16 whose accounts are paired with parental accounts will need a code from the parent to extend the time
17 limit. Children with unpaired accounts, however, can easily extend the time limit or even disable it
18 themselves.

19 644. In addition to infinite scroll, ByteDance has designed TikTok so it has other design
20 features that exploit social psychological impulses to induce children to use TikTok daily and for
21 extended periods of time, adding to the platform's addictive nature.

22 645. Several TikTok features actively encourage users to generate ephemeral photos and
23 videos. This promotes compulsive use, because users risk missing posts by their friends and others if
24 they do not check TikTok at least daily.

25 646. A TikTok user can, for example, post expiring "Stories," short videos that disappear after
26 24 hours. These videos do not otherwise appear in a user's feed. TikTok's live stream feature is similar.

27 ⁸³⁹ Louise Matsakis, *On TikTok, There is No Time*, Wired (Oct. 3, 2019),
28 <https://www.wired.com/story/tiktok-time/> [<https://perma.cc/F8D6-UTRD>].

⁸⁴⁰ See Utah AG Compl. at 16, ¶ 43.

1 647. A relatively new feature, “TikTok Now,” pushes daily notifications to users to share
2 “authentic, real-time images or 10-second videos at the same time as your friends.”⁸⁴¹ ByteDance
3 designed this feature so that once a user gets the notification, the user has three minutes to post an image
4 or video. That user cannot view friends’ “TikTok Now” posts without sharing one of their own, and
5 posts submitted outside of the three-minute window are marked as “late.” TikTok preserves a user’s
6 history in a calendar view, adding to the pressure to visit the app daily and when notified by TikTok to
7 do so. ByteDance designed these features to increase responsiveness to notifications and keep young
8 users locked into the platform, as they do not want to miss out on this perceived social activity.

9 648. Like “Snap Streaks,” “TikTok Now” does not enhance the communication function of the
10 platform, but simply exploits young users’ susceptibility to persuasive design, teenage social anxiety,
11 and FOMO. ByteDance’s insidious design of “TikTok Now” also employs point scoring and
12 competition with others to drive frequent and continuous engagement by children, who otherwise risk
13 checking in late and alienating other peers participating in the exchange.

14 649. Like the other Defendants’ platforms, ByteDance designed TikTok to leverage the
15 principle of IVR by encouraging users to “like,” share, or reshare videos that others have created or
16 posted. Receiving a “Like” or “Reshare” indicates that others approve of a user’s posts, and satisfies the
17 user’s natural, developmentally predictable desire for acceptance. As discussed above, “Likes” activate
18 the reward region of the brain and release dopamine to create a positive feedback loop.⁸⁴² Users return to
19 TikTok again and again, hoping for yet another pleasurable experience.

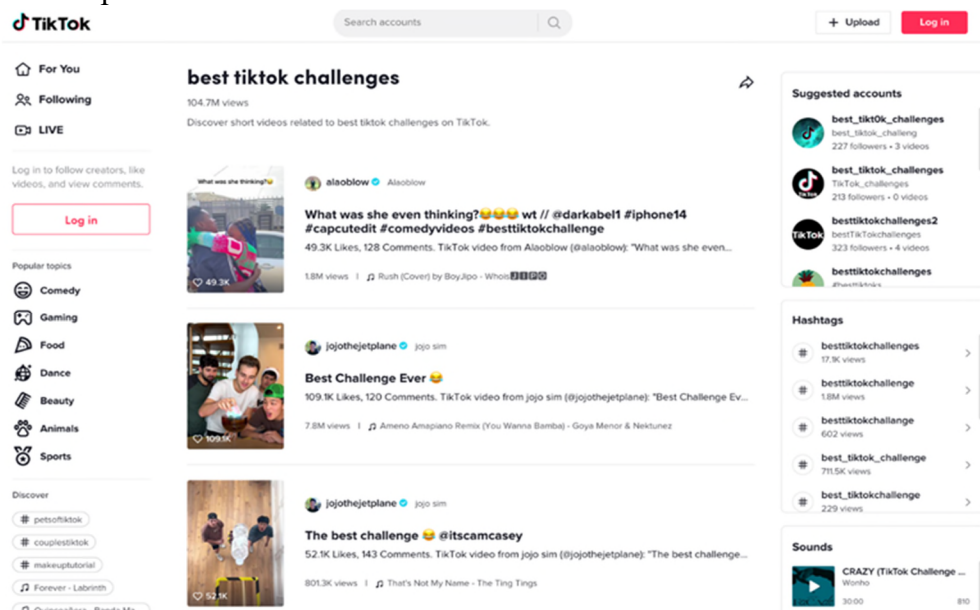
20 650. ByteDance also designed TikTok to use reciprocity to manipulate users into using the
21 platform. One example is the “Duet” feature, which allows users to post a video side-by-side with a
22 video from another TikTok user. Users utilize “Duet” to react to the videos of TikTok creators.
23 ByteDance intends the response to engender a reciprocal response from the creator of the original video,
24 inducing them to return to the app.

25 _____
26 ⁸⁴¹ *TikTok Now*, TikTok Inc., <https://www.tiktok.com/creators/creator-portal/product-feature-updates/tiktok-now>.

27 ⁸⁴² Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*
28 *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>.

651. 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.⁸⁴³

652. 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.



653. 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.”⁸⁴⁴

654. 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

⁸⁴³ 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/>.

⁸⁴⁴ *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>.

1 consequence of TikTok’s engagement-maximization design. Numerous child users have injured or even
2 killed themselves or others participating in viral pranks to obtain rewards and increase the number of
3 “Likes,” views, and followers.

4 655. A study of adolescents and young adults who participated in dangerous challenges found
5 that “engaging in online challenges to gain likes and views was reported as highly important” to the
6 participants. Study participants claimed to have received from sixty to two million views of their
7 challenge videos. Perhaps not surprisingly given the study involved adolescents, these children did not
8 seriously contemplate the possible outcomes from their stunts: “Our participants overlooked or were
9 unaware of the short-term and long-term risks associated with the challenges.” Moreover, “participants
10 also frequently encouraged others to perform the same or similar challenges in their posts, thus
11 potentially contributing to social media through propagating the challenge.”⁸⁴⁵ In fact, ByteDance
12 intentionally promotes these challenges due to their popularity.⁸⁴⁶

13 656. This is not news to ByteDance. Its own internal platform research has found that the
14 number one most identified reason for teen participation in challenges is “[g]etting
15 views/likes/comments,” followed by “[i]mpressing others online.” ByteDance therefore knows, or in
16 the exercise of reasonable care should know, that young users’ quest for social acceptance will cause
17 them to participate in dangerous online challenges to get “likes” or impress their peers. It is also
18 foreseeable that the challenge architecture on TikTok will be used by young users to promote dangerous,
19 deadly, and destructive challenges that ByteDance may not initially know about or actively promote.

20 657. Death, injury, and destruction are the result of design choices made by ByteDance in the
21 TikTok platform, including but not limited to (1) failure to verify age and identity of users, which
22 allowed children as young as 8 or 9 to see these dangerous challenges; (2) defaulting the youngest users
23 into public accounts, where some post dangerous stunts to increase their views or “Likes”; (3) designing
24 the TikTok algorithm to push this material to young children without regard to safety; and (4) failing to

25
26 ⁸⁴⁵ 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,
27 [https://www.sciencedirect.com/science/article/pii/S2772501422000021/pdf?md5=3f58814874a5ec80](https://www.sciencedirect.com/science/article/pii/S2772501422000021/pdf?md5=3f58814874a5ec80690a5bcd920e436e&pid=1-s2.0-S2772501422000021-main.pdf)
690a5bcd920e436e&pid=1-s2.0-S2772501422000021-main.pdf.

28 ⁸⁴⁶ See TIKTOK3047MDL-001-00000813 (“The algorithm is designed to surface viral content,
regardless of its source.”).

1 include warnings to children or their parents that many of the challenges users see on TikTok are
2 dangerous and potentially fatal.

3 658. TikTok's algorithms also promote challenges that specifically target school districts.⁸⁴⁷
4 As a result of challenges, school districts have sustained property damage, ranging from stolen urinals to
5 smashed floor tiles. In response, schools have been forced to lock down bathrooms for large portions of
6 the day.⁸⁴⁸ Other schools have resorted to diverting staff to monitor bathrooms during the school day.⁸⁴⁹
7 Repairing damages resulting from challenges puts strain on schools that already have budget constraints.
8 Even for schools that do not suffer property damage, responding to threats of the challenge and
9 communicating with students and families diverts significant time away from classroom instruction and
10 other administrative activities.

11 659. Indeed, threats on Defendants' platforms by students seeking the psychological rewards
12 Defendants' platforms offer require school police to stop what they're doing and investigate
13 immediately, which is a resource intensive and disruptive endeavor. Investigating threats puts a strain on
14 school police's resources.

15 **d. ByteDance's features inflict impossible image standards and encourage**
16 **negative appearance comparison.**

17 660. ByteDance designed TikTok with image-altering filters that harm users. These filters
18 allow children to artificially change their appearance, for example, by lightening their skin and eyes,
19 giving them glowing tan skin, changing facial structure, or giving them larger lips or fluttering
20 eyelashes.

21 661. Young people often then compare the filtered images to their real-life appearance,
22 developing a negative self-image based on unrealistic, artificial images.⁸⁵⁰ Many young girls use image-

23 ⁸⁴⁷ Megan Marples, *The 'devious licks' TikTok challenge has students stealing toilets and vandalizing*
24 *bathrooms*, CNN (Sept. 18, 2021), [https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-](https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-challenge-wellness/index.html)
25 [challenge-wellness/index.html](https://www.cnn.com/2021/09/18/health/devious-licks-tiktok-challenge-wellness/index.html).

26 ⁸⁴⁸ *Id.*

27 ⁸⁴⁹ *Viral 'devious licks' TikTok challenge encourages kids to steal from school*, PBS (Oct. 25, 2021),
28 [https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-](https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-from-school)
[from-school](https://www.pbs.org/newshour/show/viral-devious-licks-tiktok-challenge-encourages-kids-to-steal-from-school).

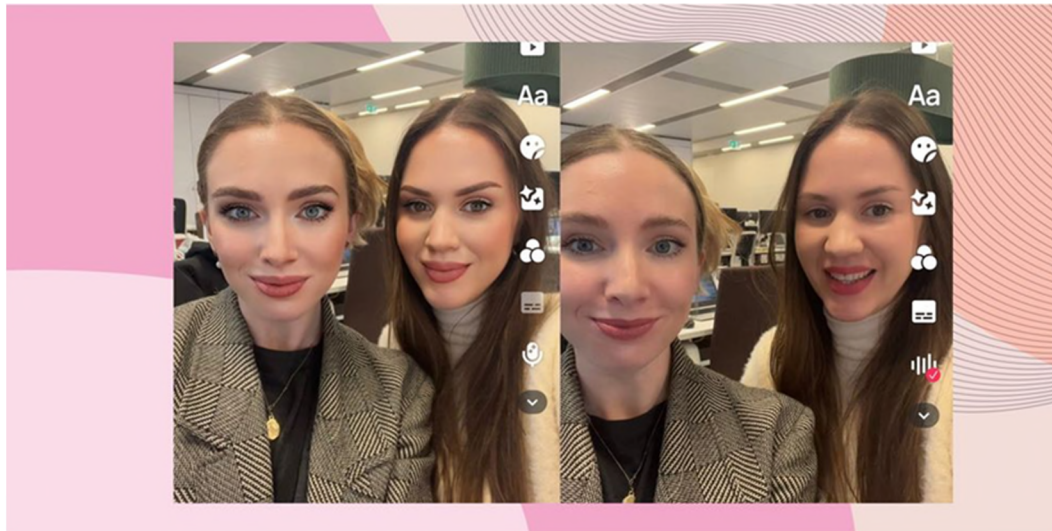
⁸⁵⁰ Anna Haines, *From 'Instagram Face' To 'Snapchat Dysmorphia': How Beauty Filters Are Changing*
The Way We See Ourselves, Forbes (Apr. 27, 2021),
<https://www.forbes.com/sites/annahaines/2021/04/27/from-instagram-face-to-snapchat-dysmorphia->

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.”⁸⁵¹

662. 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.

663. 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.

664. “Bold Glamour has the power to dramatically distort reality and reinforce narrow and unattainable beauty standards.”⁸⁵²



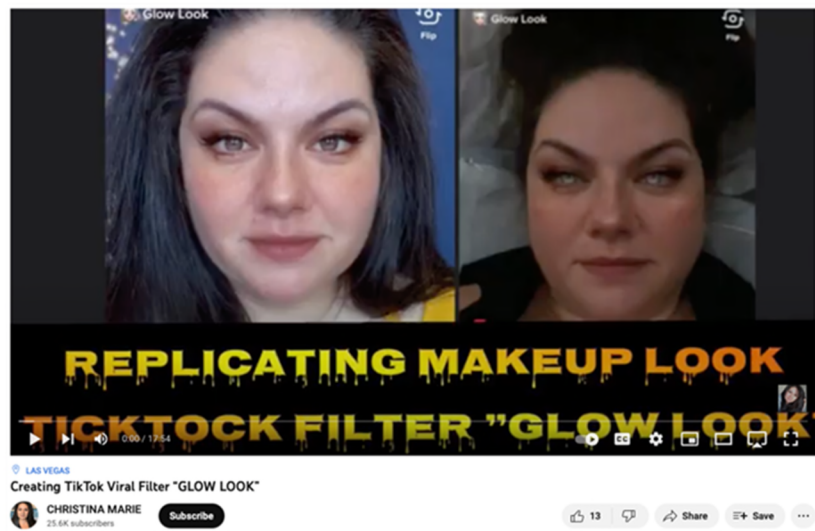
how-beauty-filters-are-changing-the-way-we-see-ourselves/?sh=3c32eb144eff
[https://perma.cc/Z8RQ-TC49].

⁸⁵¹ 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>.

⁸⁵² *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/>.

665. 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.⁸⁵³

666. 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”⁸⁵⁴ 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.



⁸⁵³ 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>.

⁸⁵⁴ Utah AG Compl. at 15, ¶ 40.

667. 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.

1 **4. ByteDance materially contributes to content on TikTok.**

2 668. A TikTok poster does not create content in a vacuum. ByteDance contributes to TikTok
3 content in a number of ways such that it is materially responsible in whole or in part for creation or
4 development of material posted on the platform.

5 669. ByteDance creates images and GIFs for users to use in their TikTok videos to keep
6 viewers returning to the platform. It makes video effects that content creators can incorporate. Some of
7 the newest visual contributions from TikTok are “stickers.” With this feature, a content creator can pin
8 stickers to moving objects so that it follows the subject as they move throughout the scene. ByteDance
9 acknowledges that “the sticker looks as though it’s *part* of the video.”⁸⁵⁵ The stickers even change size
10 relative to the video’s movement.⁸⁵⁶

11 670. In addition to providing some of the visual components of a video, ByteDance often also
12 provides the sound. ByteDance has “an extensive library” of sounds for creators to add to their videos.
13 Moreover, ByteDance has licensed a huge music catalog that creators can incorporate into their videos.
14 In November 2020, TikTok announced a new agreement with Sony Music Entertainment to make songs
15 available across the TikTok app;⁸⁵⁷ in December 2020, TikTok announced another such agreement with
16 Warner Music Group (“WMG”),⁸⁵⁸ and in February 2021, TikTok announced a “global” licensing
17 agreement with Universal Music Group (“UMG”).⁸⁵⁹

18 671. When a video becomes sufficiently popular, TikTok reaches out to and actively engages
19 with the poster who, once that threshold is met, is referred to as a “creator.” ByteDance provides special

20 ⁸⁵⁵ *Staying up to date with features*, TikTok Inc., [https://www.tiktok.com/creators/creator-portal/en-](https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/)
21 [us/tiktok-creation-essentials/staying-up-to-date-with-features/](https://www.tiktok.com/creators/creator-portal/en-us/tiktok-creation-essentials/staying-up-to-date-with-features/).

22 ⁸⁵⁶ *Id.*

23 ⁸⁵⁷ *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>.

24 ⁸⁵⁸ Murray Stassen, *Warner Music Group Inks Licensing Deal with TikTok*, Music Bus. Worldwide (Jan.
25 4, 2021), [https://www.musicbusinessworldwide.com/warner-music-group-inks-licensing-deal-with-](https://www.musicbusinessworldwide.com/warner-music-group-inks-licensing-deal-with-tiktok/)
26 [tiktok/](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),
27 [https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-](https://hitsdailydouble.com/news&id=324524&title=WARNER-TIKTOK-AGREE-TO-NEW-LICENSING-DEAL)
28 [LICENSING-DEAL](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.”).

⁸⁵⁹ 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-](https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/)
[group-sign-global-licensing-deal/](https://www.musicbusinessworldwide.com/tiktok-and-universal-music-group-sign-global-licensing-deal/).

1 tools, instructional videos and, critically, recommendations as to content and structure for the video. For
2 example, a “creator” might be told to break a longer video up into a series of shorter videos to get
3 additional views. ByteDance might suggest certain music or captions be added. The “creator” would be
4 encouraged to add certain hashtags that might increase the video’s visibility on the platform. On
5 information and belief, all TikTok content and associated metadata is modified to include tracking
6 systems, and every time the content is viewed, tracking codes and other data are downloaded to the
7 device and information is actively relayed to TikTok’s server.

8 672. TikTok likewise promises some “creators” that it will amplify their content and promote
9 them based solely on creator status. ByteDance internal documents show that, in addition to letting the
10 algorithm determine what goes viral, the company also hand picks specific videos to artificially increase
11 their distribution—a practice known internally as “heating.” Overall, 1% to 2% of videos viewed on
12 TikTok have been “heated.” According to media reports, ByteDance uses “heating” to court influential
13 “creators” or profitable brands to engage with users on TikTok.⁸⁶⁰

14 673. ByteDance has multiple methods of compensating “creators” who, in conjunction with
15 ByteDance, make content for the platform. These methods include receiving tips and gifts from viewers,
16 special gifts available during TikTok LIVE presentations, and contributions from TikTok’s “creator
17 fund.” TikTok obtains PayPal information from “creators” and sends them money daily, with
18 communications and full-screen notifications urging them to post more and to post on multiple surfaces
19 of the TikTok platform.

20 674. ByteDance’s contribution to the content on TikTok is further recognized in the rights it
21 asserts to content on the TikTok platform. In its Terms of Service (“Last updated: February 2019”),
22 TikTok requires that all users license to TikTok an unconditional, irrevocable, royalty-free, fully
23 transferable, perpetual worldwide license to use, modify, adapt, reproduce, publish, transmit all material
24 submitted by Users onto TikTok. TikTok further requires that all users waive any rights to inspect or
25 approve their material being used for marketing or promotional materials. Further, they require that
26 users waive any and all rights of privacy and publicity. TikTok requires that all users grant TikTok total

27 ⁸⁶⁰ Emily Baker White, *TikTok’s Secret ‘Heating’ Button Can Make Anyone Go Viral*, Forbes (Jan. 20,
28 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.

675. 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.

676. 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.

677. 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.

678. 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.

679. 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.

680. Once a user selects a reason for deletion, the next screen prompts the user to download their TikTok data.

681. 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

1 deleting your account.” This contrasts with the process of a user “agreeing” to the Terms of Service and
2 Privacy Policy during the registration process, which does not require a separate confirmation.

3 682. Once the user confirms a desire to continue with the deletion process, the platform takes
4 the user to yet another screen, which yet again asks whether the user wants to “delete this account?” The
5 text also explains that the account will be deactivated for 30 days, during which the user may reactivate
6 the account, and after 30 days, the account and data associated with it will be permanently deleted. It
7 goes on to warn that if a user deletes the account, the user will no longer be able to do many things in the
8 app.

9 683. Once a user again confirms that they want to delete their account, TikTok requires
10 validation with a 6-digit code sent to the telephone number or email address associated with the account.
11 Only after the user receives and enters the code may they finally “delete” their account (after waiting 30
12 days).

13 684. ByteDance’s account deletion process is inadequate for children attempting to escape its
14 addictive and harmful platform. Requiring a child to go through multiple steps, and offering alternatives,
15 as well as a list of things they are giving up, is designed to convince them to change their mind.
16 Moreover, requiring the user to maintain a deactivated account for 30 days, rather than deleting it on
17 demand, increases the chance that an addicted user will relapse and return to the app.

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

20 685. ByteDance failed to adequately warn Plaintiff and the public about the harms its platform
21 causes or to provide instructions regarding safe use.

22 686. Since TikTok’s inception, ByteDance has failed to adequately warn the public, including
23 Plaintiff and its students about the physical and mental health risks its product poses. These risks
24 include, but are not limited to, product abuse and addiction, dissociative behavior, damage to body
25 image, social isolation, and a plethora of mental health disorders like body dysmorphia, eating disorders,
26 anxiety, depression, insomnia, ADD/ADHD exacerbation, suicidal ideation, self-harm, suicide, and
27 death.
28

687. 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.

688. 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.⁸⁶¹

689. 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.⁸⁶² The 15-second video notes, “if it’s in culture, #ItStartsonTikTok.”⁸⁶³ 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.”⁸⁶⁴ On the other hand, teen culture in the United States is “a golden audience.”⁸⁶⁵

690. 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.”⁸⁶⁶ 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.”⁸⁶⁷

⁸⁶¹ *TikTok – Snapchat’s Biggest Advertiser – What’s the strategy*, Media Radar (Feb. 24, 2020), <https://mediaradar.com/blog/tiktok-snapchat-advertising-strategy/>.

⁸⁶² *TikTok, It Starts on TikTok: Bored in the House*, YouTube (Sept. 9, 2020), <https://www.youtube.com/watch?v=DWZCgkmcIjE>.

⁸⁶³ *Id.*

⁸⁶⁴ 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%20Dups,the%20rest%20of%20the%20globe\[https://perma.cc/UR2Q-KEF7\]](https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html#:~:text=For%20Chinese%20web%20start%20Dups,the%20rest%20of%20the%20globe[https://perma.cc/UR2Q-KEF7]).

⁸⁶⁵ *Id.*

⁸⁶⁶ *Family Impressions, Compilation*, YouTube (Dec. 11, 2020), <https://www.youtube.com/watch?v=6EYzm25gW-s>.

⁸⁶⁷ *TikTok Creators Share Their Thoughts About TikTok*, YouTube (Aug. 10, 2020), <https://www.youtube.com/watch?v=KAveGBv7HVM>.

691. 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.⁸⁶⁸ 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.⁸⁶⁹

692. ByteDance is also one of the biggest advertisers on Snapchat. In 2019, ByteDance accounted for 4.4% of Snapchat’s advertising revenue.⁸⁷⁰ 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.

693. 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.

694. 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.

695. 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.

696. Alarming, ByteDance also does not adequately warn young users before facilitating adult connections and interactions that adult predators use its platform.

⁸⁶⁸ 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/>.

⁸⁶⁹ *Id.*

⁸⁷⁰ 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/>.

1 697. ByteDance’s failure to adequately warn young users about the risks of the platform
2 continues even if they display signs of addiction or habitual and compulsive use. Besides the disabled by
3 default “Take a Break” reminder, ByteDance does not warn users when their screen time reaches
4 harmful levels or when young users are accessing the platform on a habitual basis.

5 698. Not only does ByteDance fail to adequately warn users about the risks associated with
6 TikTok, but it also does not provide sufficient instructions on how children can safely use the platform.
7 A reasonable and responsible company would instruct children on best practices and safety protocols
8 when using a platform known to contain danger and health risks.

9 699. ByteDance failed to adequately warn parents about all the foregoing dangers and harms.
10 ByteDance’s failure to properly warn and instruct adolescent users or their parents has proximately
11 caused significant harm to Plaintiff, who has expended and continues to expend significant resources
12 addressing the impact of Snap’s conduct on Plaintiff’s operations, including providing additional
13 support to impacted students.

14 **6. ByteDance knows that TikTok harms many young users.**

15 700. ByteDance has a Trust and Safety division charged with identifying issues in the TikTok
16 platform that are injurious to young users, monitoring malign and exploitative videos sent to young
17 users, and recording, analyzing, and tabulating the mental and physical injuries young users sustain
18 through their use of the TikTok platform.

19 701. TikTok Trust and Safety division personnel have engaged in thousands of
20 communications through Lark discussing safety and health concerns arising from young users’ addictive
21 use of the TikTok platform; algorithmic designs that direct TikTok users to malign videos promoting
22 depression, suicidality, eating disorders and negative body image; dangerous and deadly TikTok
23 challenges; and the exchange of CSAM on TikTok. These concerns have been shared throughout the
24 highest levels of TikTok Inc. and with engineers at ByteDance Ltd. who designed the TikTok
25 platform.⁸⁷¹

27 ⁸⁷¹ For example, TikTok publicly announced to the Office of the United Nations High Commissioner for
28 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

1 702. TikTok is fully aware of the risks its platform poses to adolescents and acknowledges that
2 children are “more easily persuaded” and “likely don’t understand the risks of unhealthy usage.”⁸⁷²
3 Specifically, TikTok’s head of Mental Health Policy has acknowledged that “13-18 yo [TikTok] users
4 are severely struggling with mental health, including thoughts of suicide and self-harm.”⁸⁷³ In an internal
5 digital well-being safety report, TikTok has also admitted that the design of its platform can trigger
6 addictive behaviors that harm mental health:

7 An internal study indicates that 50% of inactive TikTok users cited time management as
8 an issue, 24% reported too many notifications, and 23% reported too much time spent on
9 TikTok. . . . [C]ompulsive usage correlates with a slew of negative mental effects like
10 loss of analytical skills, memory formation, contextual thinking, conversational depth,
11 empathy, and increased anxiety. Various similar studies . . . also conclude that
12 compulsive usage interferes with essential personal responsibilities like sufficient sleep,
13 work/school responsibilities, and connecting with loved ones.⁸⁷⁴

12 **E. Factual Allegations As To Google**

13 703. Eric Schmidt, the former CEO of Google and more recently, parent company Alphabet,
14 Inc., recently acknowledged the powerful, and purposeful, addictive effect of social media. Social media
15 platforms are about “maximizing revenue,” Mr. Schmidt said, and the best way to maximize revenue is
16 to “maximize engagement.”⁸⁷⁵ As Mr. Schmidt continued, in pursuit of their goal of maximizing
17 engagement to increase revenues, social media platforms “play[] into the addiction capabilities of every
18 human[.]”⁸⁷⁶

19 704. Google’s YouTube platform is no exception. It includes specific, carefully calibrated
20 features that are known to exploit the mental processes of its users to keep them engaged for as long, as
21 frequently, and as intensely as possible. Google knows that children and teenagers who flock in droves
22 to its YouTube platform are particularly susceptible to these features. The impact of YouTube’s
23 addictive power on American youth has been devastating.

24 _____ status of the issue? From previous chat in the group, we promised we were using NCMEC hashed [sic]
25 to detect CP [CSAM] content, but we actually didn’t.” Utah AG Compl. at 36, ¶ 97.

26 ⁸⁷² Utah AG Compl. at 18–19, ¶ 52.

27 ⁸⁷³ Utah AG Compl. at 18–19, ¶ 52.

28 ⁸⁷⁴ Utah AG Compl. at 18–19, ¶ 52.

⁸⁷⁵ Issie Lapowsky, *Eric Schmidt: Social media companies ‘maximize outrage’ for revenue*, Protocol
(Jan. 6, 2022), <https://www.protocol.com/bulletins/eric-schmidt-youtube-criticism>.

⁸⁷⁶ *Id.*

1 **1. Background and overview of YouTube.**

2 705. YouTube is a social media platform that allows users to post and consume countless
3 hours of videos about virtually any topic imaginable. YouTube is available without any age verification
4 feature or adequate parental controls, and comes pre-installed in many Smart-TVs, mobile devices,
5 various digital media players like Roku, and video game consoles like PlayStation, Wii, Xbox and
6 Nintendo.

7 706. YouTube allows users to search for specific videos. It also employs a powerful algorithm
8 that exploits detailed user information to target each individual user with hours upon hours of videos
9 recommended by YouTube.

10 707. A group of design experts and computer scientists created YouTube and launched the
11 platform for public use in December 2005.

12 708. Technology behemoth Google quickly recognized YouTube’s huge profit potential. In
13 2006, just a year after YouTube’s launch, Google acquired YouTube for more than \$1.65 billion in
14 Google stock. At the time, Google’s acquisition of YouTube was one of the largest-ever tech
15 acquisitions.

16 709. YouTube primarily generates revenue by selling advertising. The more people who use
17 YouTube and spend time on the site, the more ads YouTube can sell.⁸⁷⁷ The ads are then embedded or
18 placed within the endless stream of videos recommended to the user by YouTube’s algorithm.

19 710. By 2012, YouTube users were watching close to four billion hours of video every month.
20 Yet, the average YouTube user spent just fifteen minutes daily engaged with the platform.⁸⁷⁸ Users
21 “were coming to YouTube when they knew what they were coming to look for[.]”⁸⁷⁹ They employed the
22 platform to identify and watch certain videos, and then they were done.

23
24
25 ⁸⁷⁷ 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-](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant)
26 [executives-ignored-warnings-letting-toxic-videos-run-rampant \[https://perma.cc/2RTW-XYVB\]](https://perma.cc/2RTW-XYVB).

27 ⁸⁷⁸ John Seabrook, *Streaming Dreams*, New Yorker (Jan. 8, 2012), [https://www.newyorker.com/](https://www.newyorker.com/magazine/2012/01/16/streaming-dreams)
[magazine/2012/01/16/streaming-dreams \[https://perma.cc/38VD-MGEM\]](https://perma.cc/38VD-MGEM).

28 ⁸⁷⁹ Casey Newton, *How YouTube Perfected the Feed*, Verge (Aug. 30, 2017),
[https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-](https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed)
[recommendation-personalized-feed](https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed).

711. To drive greater revenue, “YouTube . . . set a company-wide objective to reach one billion hours of viewing a day[.]”⁸⁸⁰

712. As Susan Wojcicki, YouTube’s CEO explained, the goal of a “billion hours of daily watch time gave our tech people a North Star.”⁸⁸¹

713. 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[.]”⁸⁸²

714. 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.

715. Google’s design changes worked. Today, YouTube “has over 2 billion monthly logged-in users.”⁸⁸³ 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.

716. 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.⁸⁸⁴ Nearly 20% of U.S. teens use YouTube “almost constantly.”⁸⁸⁵ Among U.S. teenagers who regularly use social media, 32% “wouldn’t want to live without” YouTube.⁸⁸⁶

⁸⁸⁰ 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>].

⁸⁸¹ *Id.*

⁸⁸² *Id.*

⁸⁸³ *Must-Know Youtube Channel Statistics [Latest Report]*, Gitnux (Oct. 31, 2023), <https://blog.gitnux.com/youtube-channel-statistics/>.

⁸⁸⁴ 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/>.

⁸⁸⁵ *Id.*

⁸⁸⁶ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 31, Common Sense Media (2022),

1 717. Rather than ensuring minors are not inappropriately or excessively using YouTube,
2 Google has sought to dominate their attention.

3 718. YouTube’s age controls are ineffective (or non-existent, since registration is not
4 required). In addition, Google has developed and marketed a version of YouTube, YouTube Kids,
5 explicitly targeted at children under 13. Google developed this platform to encourage early—and
6 therefore lasting—adoption of YouTube by children.

7 719. Google knows that a robust and committed base of young users is key to maximizing
8 advertising revenue. Indeed, it has aggressively touted its hold on child users to advertisers.

9 720. In 2014, for example, Google pitched its YouTube platform to Hasbro, a popular toy
10 manufacturer, and specifically boasted of the platform’s immense popularity among children, noting that
11 it was “unanimously voted as the favorite website of kids 2-12” and that “93% of tweens” use the
12 platform.⁸⁸⁷

13 721. In 2015, Google gave a similar presentation to toy manufacturer Mattel, the maker of
14 Barbie and other popular kids’ toys, highlighting children’s widespread use of YouTube to persuade
15 Mattel to display digital ads on the site.⁸⁸⁸

16 722. The FTC has aptly summarized Google’s pitch to advertisers concerning the value of its
17 youth user base.⁸⁸⁹ For example, Google boasted that “YouTube is today’s leader in reaching children
18 aged 6-11[;] . . . the new ‘Saturday Morning Cartoons’[;] . . . and the #1 website regularly visited by
19 kids[.]”⁸⁹⁰

21
22 https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf.

23 ⁸⁸⁷ 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,

24 https://www.ftc.gov/system/files/documents/cases/172_3083_youtube_revised_complaint.pdf.

25 ⁸⁸⁸ *Id.* at 8.

26 ⁸⁸⁹ *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
27 popularity with children to prospective corporate clients,” said FTC Chairman Joe Simons.”).

28 ⁸⁹⁰ 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.

723. 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.⁸⁹¹ 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 2016.⁸⁹² 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.⁸⁹³

724. 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[;]

⁸⁹¹ *Most Viewed Videos of All Time (Over 700M views)*, YouTube,

https://www.youtube.com/playlist?list=PLirAqAtl_h2r5g8xGajEwdXd3x1sZh8hC.

⁸⁹² 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>].

⁸⁹³ 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[.]”⁸⁹⁴

725. 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.”⁸⁹⁵

726. 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.⁸⁹⁶

727. 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.

⁸⁹⁴ *Information Google collects: Google Privacy Policy*, Google, <https://policies.google.com/privacy?hl=en#infocollect>.

⁸⁹⁵ *Id.*

⁸⁹⁶ *About Targeting for Video Campaigns*, Google, <https://support.google.com/youtube/answer/2454017?hl=en>.

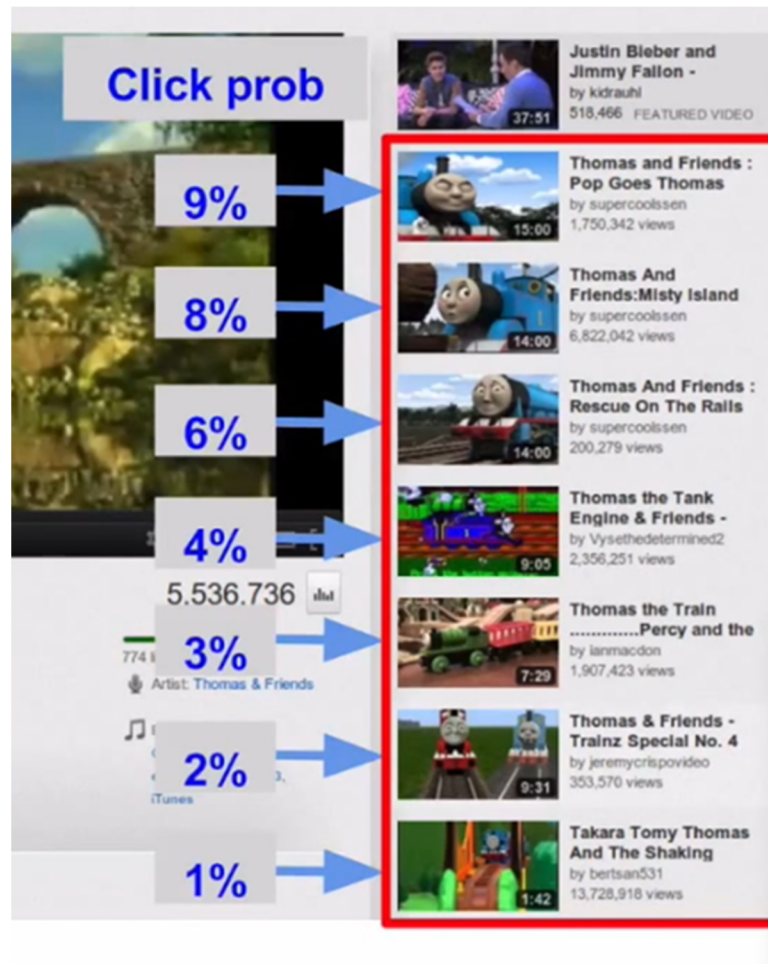
1 728. Google’s secret virtual dossiers on its users, including child users, fuel its algorithms. The
2 company relies on this data—including data plainly reflecting use by children—to train its algorithms. A
3 Google engineer explained in a 2014 presentation:

4 What do I mean by a training example? It’s a single-user experience. On YouTube, perhaps it’s
5 that one [Thomas the Tank Engine] webpage my son saw six months ago, along with all the
6 recommendations that we showed him. We also record the outcome to know whether the
7 recommendations we made are good or whether they’re bad. That’s a single training exercise. On a large
8 property, you can easily get into hundreds of billions of these.⁸⁹⁷

9 The engineer illustrated this with a slide, excerpted below, presenting how algorithmic analysis
10 both structured the format of recommendations of Thomas the Tank Engine YouTube videos and
11 provided information to inform algorithmic training through user engagement.⁸⁹⁸

27 ⁸⁹⁷ Alex Woodie, *Inside Sibyl, Google’s Massively Parallel Machine Learning Platform*, Datanami (July
28 17, 2014), <https://www.datanami.com/2014/07/17/inside-sibyl-googles-massively-parallel-machine-learning-platform/>.

⁸⁹⁸ *Id.*



729. 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.⁸⁹⁹

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

730. 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.

⁸⁹⁹ 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>.

1 **a. Google’s age-verification measures and parental controls are ineffective.**

2 731. Google’s strategy to entrench minor users begins with access. The company purports to
3 impose a minimum age requirement and claims to verify the age of its users. But those features are
4 ineffective, as they do little to prevent children and teenagers from using the platform.

5 732. Anyone with access to the Internet, regardless of age, can use YouTube and access every
6 video available through the platform without registering an account or verifying their age. YouTube
7 does not even ask for age information before allowing users to consume YouTube videos.

8 733. A user needs an account to post videos or like (or comment) on videos. But to get one, a
9 user needs only enter a valid email address and a birthday. Google does nothing to verify the birthday
10 entered by users in the U.S.—and the platform freely permits users to change their birthdays in their
11 account settings after creating an account.

12 734. YouTube’s ineffective age verification feature means that Google fails to protect children
13 from other platform features discussed below that Google knows to be harmful to kids.

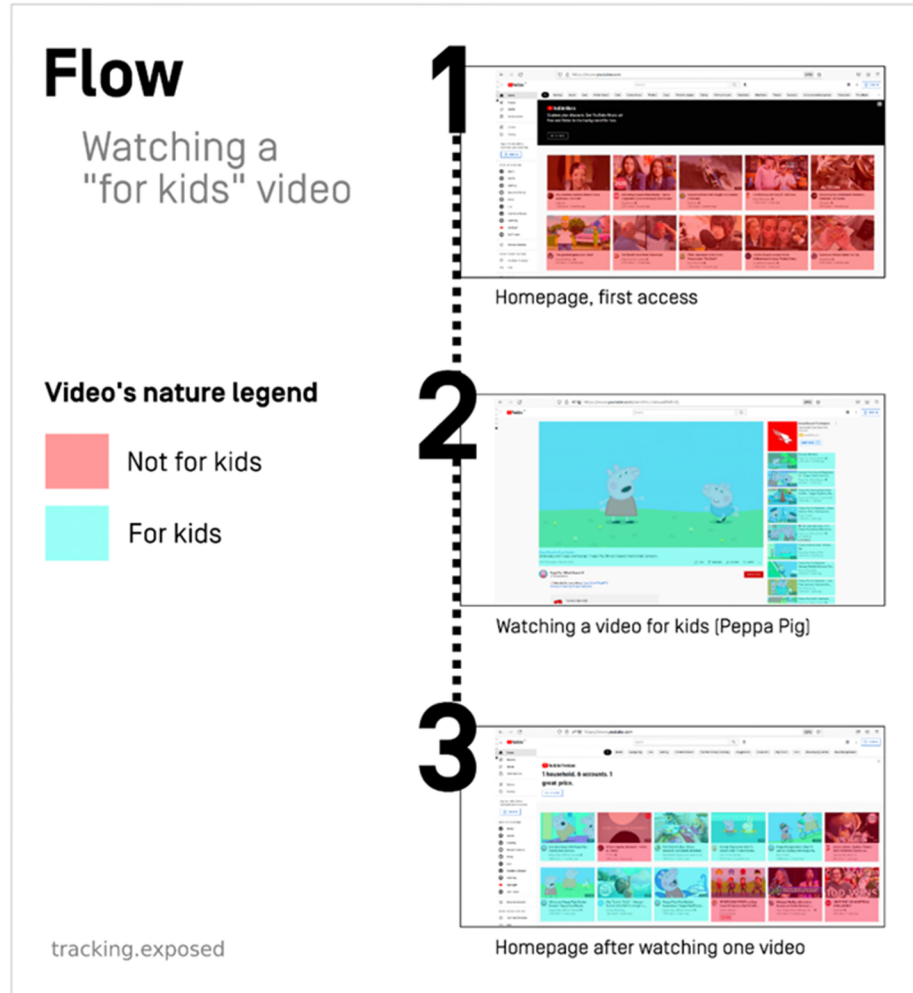
14 735. For example, for users 13–17 years old, Google claims to disable YouTube’s autoplay
15 feature. However, that measure is virtually meaningless because children can use YouTube without
16 logging into any account or by logging in but misreporting their age.

17 736. Even if children use YouTube Kids, that platform contains many of the same problems
18 YouTube does, including a harmful, manipulative algorithm, as discussed below.

19 737. Google cannot credibly claim that it is unaware of the fact and extent of youth usage of
20 YouTube. Google’s system can “identify children as being much younger than 13[.]”⁹⁰⁰ According to
21 *Tracking Exposed*, YouTube can rapidly identify a user as a child.⁹⁰¹

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27 ⁹⁰⁰ *Tracking Exposed Special Report: Non-logged-in children using YouTube* at 6, 19, *Tracking Exposed*
28 (July 1, 2022), <https://tracking.exposed/pdf/youtube-non-logged-kids-03July2022.pdf>.

⁹⁰¹ *Id.* at 15, 18.



738. 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 $[0, 1]$.⁹⁰²

⁹⁰² 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>.

1 739. The *Tracking Exposed Special Report* indicates that there is “strong evidence” that
2 Google’s systems continue to refine and develop a more precise estimate for under 18 users, but the
3 platform does not “redirect them to YouTube Kids.”⁹⁰³

4 **b. YouTube is designed to inundate users with features that use intermittent**
5 **variable rewards and reciprocity.**

6 740. Google uses a series of interrelated design features that exploit known mental processes
7 to induce YouTube’s users to use the platform more frequently, for more extended periods, and with
8 more intensity (i.e., providing more comments and likes). Google knows children and adolescents,
9 whose brains are still developing, are particularly susceptible to these addictive features.

10 741. Google designed its YouTube platform so that when children and teenagers use it, they
11 are inundated with interface design features specifically designed to dominate their attention and
12 encourage excessive use. Every aspect of how YouTube presents the format of a given page with a video
13 is structured to ensure unimpeded viewing of the videos, alongside Download, Like, and Share buttons,
14 plus recommendations for more videos to watch. The organization of these features is carefully
15 calibrated to adjust to the space constraints of a user’s device, such that minimal effort is needed to
16 watch a video unimpeded. YouTube even has an ambient mode that uses dynamic color sampling so that
17 the YouTube platform adapts to the video being watched and the user is not distracted by the video’s
18 borders.⁹⁰⁴

19 742. Like the other Defendants, Google has designed YouTube with features that exploit
20 neuropsychology to maximize the time users (including children) spend using the platform.

21 743. IVR features, such as notifications and Likes, compel YouTube creators and consumers,
22 particularly children, to use the platform habitually and excessively. For example, in order to create and
23 upload videos to YouTube, a user under 13 may submit a fictitious birthdate to gain access to posting
24 privileges. Once the young user has a logged-in account, they can receive notifications and Likes. For
25 example, the logged in user can subscribe to various YouTube channels, which in turn will send them

26
27 ⁹⁰³ *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>.

28 ⁹⁰⁴ 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/>

1 notifications from various channels they follow. Similarly, young creators who upload videos to
2 YouTube can track the Likes received by the video. These features psychologically reward creators who
3 upload videos to YouTube. As explained above, receiving a “Like” shows others’ approval and activates
4 the brain’s reward region.⁹⁰⁵ Thus, users’ ability to Like videos encourages creators to use the platform
5 compulsively, seeking additional pleasurable experiences.

6 744. Google engineers also deploy strategies to induce “flow” state among users of YouTube,
7 which, as described above, is dangerous to children because it induces excessive use and poses a risk of
8 addiction, compulsive use, and sleep deprivation.

9 745. YouTube uses two design features that induce flow state. The first is its panel of
10 recommended videos. YouTube recommends videos both on the home page and on each video page in
11 the “Up Next” panel.⁹⁰⁶ This panel pushes an endless stream of videos that YouTube’s algorithm selects
12 and “suggests” to keep users watching by teasing a pipeline of upcoming videos.

13 746. The second feature is Autoplay, which complements the Up Next panel and seamlessly
14 takes users through the list of upcoming videos without users having to affirmatively click on or search
15 for other videos. This constant video stream—comprised of videos recommended by YouTube’s
16 algorithm—is the primary way Google increases the time users spend using its platform. This endless
17 video succession induces users to enter a flow state of consumption, which is particularly dangerous for
18 children.

19 747. In an April 2021 letter to YouTube CEO Susan Wojcicki, the House Committee on
20 Oversight and Reform criticized the Autoplay feature:

21 This places the onus on the child to stop their viewing activity, rather than providing a natural
22 break or end point. Without that natural stopping point, children are likely to continue watching for long
23 periods of time.⁹⁰⁷

25 ⁹⁰⁵ See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence*
26 *on Neural and Behavioral Responses to Social Media*, 27(7) *Ass’n Psych. Sci.* 1027–1035, (2016),
27 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/pdf/10.1177_0956797616645673.pdf.

27 ⁹⁰⁶ *Recommended Videos*, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/>.

28 ⁹⁰⁷ Letter from Raja Krishnamoorthi, H. Rep., Chairman, Subcomm. on Econ. & Consumer Pol’y, to
Susan Wojcicki, CEO, YouTube at 4–5 (Apr. 6, 2021),

1 748. This is particularly acute for Google’s recently launched YouTube Shorts. YouTube
2 Shorts enables users to create short videos up to 60 seconds in length, in a full-screen format popularized
3 by TikTok and copied by Instagram Reels. As in Reels and TikTok, Shorts are presented in an
4 algorithmically generated feed; users can watch new videos by swiping up on their smartphones. Instead
5 of presenting videos chronologically, they are organized in a manner to drive the most watch time, as
6 dictated by the algorithm. Indeed, Google hired TikTok’s North American head, Kevin Ferguson, and
7 other TikTok engineers to develop YouTube Shorts.⁹⁰⁸

8 749. An important target audience for YouTube Shorts is children. For example, YouTube
9 Shorts features videos, such as child “influencers,” that appeals to children. YouTube Shorts contains
10 dangerous features similar to other Defendants’ short form platforms, including the ability to scroll
11 continuously through YouTube Shorts, inducing a “flow-state” that distorts users’ sense of time and
12 facilitates extended use, and dangerous exploitation of “social comparison” techniques by promoting
13 misleadingly idealized portrayals from influencers and others who are rewarded for posting popular
14 material.

15 750. Almost immediately upon launch, Google began marketing YouTube Shorts to children.
16 For example, Google launched an advertisement featuring images of children and teenagers (like in the
17 screenshot below) engaging with the YouTube Shorts platform.⁹⁰⁹

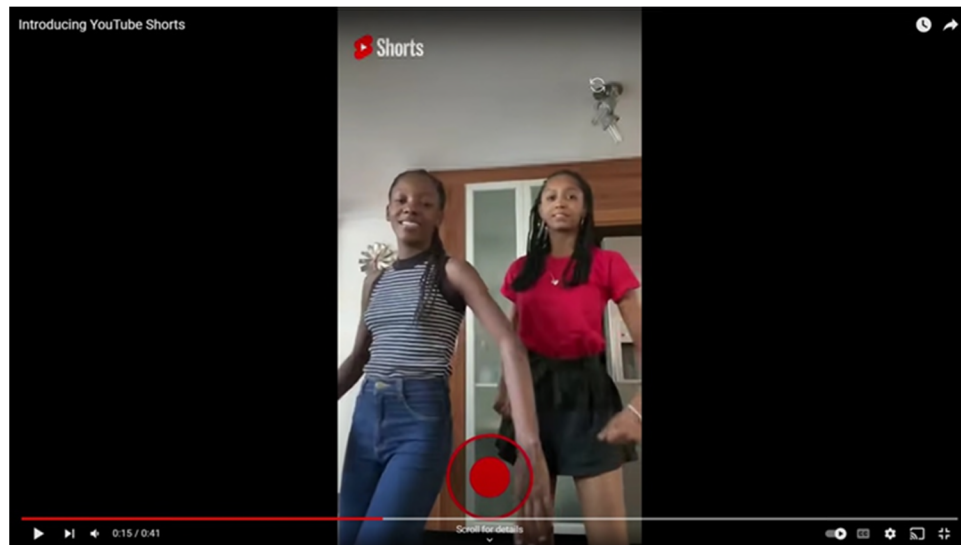
25 <https://oversightdemocrats.house.gov/sites/democrats.oversight.house.gov/files/2021-04-06.RK%20to%20Wojcicki-YouTube%20re%20YouTube%20Kids%20Content.pdf>.

26 ⁹⁰⁸ Richard Nieva, *In the Age of TikTok, YouTube Shorts Is a Platform in Limbo*, Forbes (Dec. 20, 2022),
27 <https://www.forbes.com/sites/richardnieva/2022/12/20/youtube-shorts-monetization-multiformat/>
[<https://perma.cc/9GSC-WSSE>].

28 ⁹⁰⁹ *Made on YouTube: New ways to join YPP, Shorts Monetization & Creator Music*, YouTube (Sept. 20, 2022), <https://www.youtube.com/watch?v=h6TrvCV3NdU>.



751. 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.⁹¹⁰



752. 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,

⁹¹⁰ *Introducing YouTube Shorts*, YouTube (Aug. 27, 2021), <https://www.youtube.com/watch?v=J38Yq85ZoyY>.

1 the issues with Shorts replicate the issues with TikTok and Instagram Reels, discussed above. Google
2 knows or should have known that children, whose brains are still developing, are particularly susceptible
3 to such addictive features.

4 753. YouTube has monetized users' susceptibility to IVR by allowing creators who obtain
5 more than a thousand subscribers with four-thousand valid public watch hours to qualify for the
6 YouTube Partner Program. Once a creator obtains this elite status, they are rewarded with "Super Chat"
7 and "Super Stickers"—special images or distinct messages that other users can purchase and place on a
8 creator's channel.⁹¹¹ Paid messages, including the amount donated, are visible to all users. And the more
9 a user pays for these promotions, the more prominent and longer the image is displayed. Both features
10 are intended to allow a user to show support for, or connect with, their favorite YouTube creators.
11 Similar to the "Likes" feature, this paid support activates the reward center of the creator's brain and
12 releases dopamine while the creator is generating revenue for YouTube.

13 **c. Google's algorithms are designed to maximize "watch time."**

14 754. Google engineers algorithms to recommend videos to YouTube users.

15 755. YouTube began building its algorithms in 2008.⁹¹² Its goal was to maximize how long
16 users spent watching YouTube videos.⁹¹³

17 756. These algorithms select videos that populate the YouTube homepage, rank results in user
18 searches, and push videos for viewers to watch through the "Up Next" feature.

19 757. YouTube designed its algorithms to manipulate users and induce them to use YouTube
20 excessively.

21 758. A former YouTube engineer explained that when he designed YouTube's algorithm,
22 YouTube wanted to optimize for one key metric, "watch time."⁹¹⁴ The engineer elaborated that

24 ⁹¹¹ *How to Make Money on YouTube: YouTube Partner Program*, YouTube,
25 https://www.youtube.com/intl/en_us/creators/how-things-work/video-monetization/.

26 ⁹¹² Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021),
27 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

28 ⁹¹³ 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>.

⁹¹⁴ 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>.

1 “[i]ncreasing users’ watch time is good for YouTube’s business model” because it increases advertising
2 revenue.⁹¹⁵

3 759. In 2012, the YouTube Head of Content Creator Communications similarly explained:
4 “When we suggest videos, we focus on those that increase the amount of time that the viewer will spend
5 watching videos on YouTube, not only on the next view, but also successive views thereafter.”⁹¹⁶

6 760. The current algorithm uses deep-learning neural networks, a type of software that returns
7 outputs based on data fed into it.⁹¹⁷ The VP of Engineering at YouTube explained:

8 To provide such custom curation, our recommendation system doesn’t operate off of a
9 “recipe book” of what to do. It’s constantly evolving, learning every day from over 80
10 billion pieces of information we call signals. That’s why providing more transparency
11 isn’t as simple as listing a formula for recommendations, but involves understanding all
12 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.⁹¹⁸

13 761. YouTube’s algorithm may also “use data from your Google Account activity to influence
14 your recommendations[.]”⁹¹⁹

15 762. The algorithm “develops dynamically” to predict which posts will hold the user’s
16 attention.⁹²⁰ That is, it can also determine which “signals” are more important to individual users. For
17 example, if a user shares every video they watch, including those they rate low, the algorithm learns to
18 discount the significance of the user’s shares when recommending videos.⁹²¹

19
20 ⁹¹⁵ 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

21 ⁹¹⁶ Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),
22 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

23 ⁹¹⁷ Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018),
24 <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,
25 <https://dl.acm.org/doi/pdf/10.1145/2959100.2959190>.

26 ⁹¹⁸ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
27 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

28 ⁹¹⁹ *Manage your recommendations & search results*, Google,
<https://support.google.com/youtube/answer/6342839?hl=en&co=GENIE.Platform%3DAndroid>.

⁹²⁰ Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021),
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

⁹²¹ *Id.*

1 763. Besides the algorithm’s self-learning capability, Google also consistently refines the
2 algorithm, updating it “multiple times a month[.]”⁹²²

3 764. In 2017, the former technical lead for YouTube recommendations explained that “one of
4 the key things [the algorithm] does is it’s able to generalize[.]”⁹²³ While older iterations “were pretty
5 good at saying, here’s another [video] just like” ones the user had watched, by 2017, the algorithm could
6 discern “patterns that are less obvious[.]” identifying “adjacent relationships” of “similar but not exactly
7 the same” videos.⁹²⁴

8 765. Over time, the algorithm became increasingly successful in getting users to watch
9 recommended videos. By 2018, YouTube Chief Product Officer Neal Mohan said that the YouTube
10 algorithm was responsible for more than 70% of users’ time using the platform.⁹²⁵ That is, more than
11 70% of the time users spend on YouTube was from recommendations Google’s algorithm pushed to
12 them rather than videos identified by users through independent searches.

13 766. The algorithm also keeps users watching for longer periods. For instance, Mohan
14 explained that mobile device users watch for more than 60 minutes on average per session “because of
15 what our recommendations engines are putting in front of [them].”⁹²⁶

16 767. The algorithm is particularly effective at addicting teenagers to the platform. In 2022,
17 *Pew Research Center* found that “[a]bout three-quarters of teens visit YouTube at least daily, including
18 19% who report using the site or app almost constantly.”⁹²⁷

22 ⁹²² Nilay Patel, *YouTube chief product officer Neal Mohan on the algorithm, monetization, and the*
23 *future for creators*, *Verge* (Aug. 3, 2021), [https://www.theverge.com/22606296/youtube-shorts-fund-](https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview)
24 [neal-mohan-decoder-interview](https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview).

24 ⁹²³ Casey Newton, *How YouTube Perfected the Feed*, *Verge* (Aug. 30, 2017),
25 [https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-](https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed)
26 [recommendation-personalized-feed](https://www.theverge.com/2017/8/30/16222850/youtube-google-brain-algorithm-video-recommendation-personalized-feed).

26 ⁹²⁴ *Id.*

26 ⁹²⁵ Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, *CNET* (Jan. 10,
27 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

27 ⁹²⁶ *Id.*

28 ⁹²⁷ 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/>.

1 768. A software engineer explained that the algorithm is “an addiction engine[.]”⁹²⁸ He raised
2 concerns with YouTube staff, who said they had no intention to change the algorithms. After all, the
3 engineer explained, the algorithm works as intended, “it makes a lot of money.”⁹²⁹

4 769. Because users watch more than one billion hours of YouTube videos daily and
5 approximately 70% of the time is spent on videos pushed to users by YouTube’s “recommendation
6 engines[.]” Google’s algorithms are responsible for hundreds of millions of hours users spend watching
7 videos on YouTube each day.⁹³⁰

8 770. Google’s “recommendation engines” are designed to prioritize the distribution of videos
9 that are more likely to be addictive and more likely to lead to harm. For example, “fear-inducing videos
10 cause the brain to receive a small amount of dopamine,” which acts as a reward and creates a desire to
11 do something over and over.⁹³¹ That dopaminergic response makes it more likely that a user will watch
12 the harmful video, which the algorithm interprets as signaling interest and preference. Former Google
13 engineers told *The Wall Street Journal* that “[t]he algorithm doesn’t seek out extreme videos . . . but
14 looks for clips that data show are already drawing high traffic and keeping people on the site. Those
15 videos often tend to be sensationalist.”⁹³² An investigation by *Bloomberg* put it simply: “[I]n the race to
16 one billion hours, a formula emerged: Outrage equals attention.”⁹³³

19 ⁹²⁸ Mark Bergen, *YouTube Executives Ignored Warnings, Letting Toxic Videos Run Rampant*,
20 *Bloomberg* (Apr. 2, 2019), [https://www.bloomberg.com/news/features/2019-04-02/youtube-](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant)
21 [executives-ignored-warnings-letting-toxic-videos-run-rampant](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant) [<https://perma.cc/2RTW-XYVB>].

22 ⁹²⁹ *Id.*

23 ⁹³⁰ See Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan.
24 10, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

25 ⁹³¹ Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC (Feb.
26 13, 2018), [https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
27 [children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

28 ⁹³² *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-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)
[children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html).

⁹³³ 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-](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant)
[executives-ignored-warnings-letting-toxic-videos-run-rampant](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant) [<https://perma.cc/2RTW-XYVB>].

771. Google’s algorithm pushes users down “rabbit hole[s],” addicting them to YouTube and keeping them on the platform for longer.⁹³⁴

772. 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.”⁹³⁵

773. 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.⁹³⁶ 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.⁹³⁷ Importantly, videos that elicited those negative experiences “acquired 70% more views per day than other videos watched by [study] volunteers.”⁹³⁸

774. 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 anxiety⁹³⁹ among children using YouTube. And because of that anxiety, those children “exhibit loss of appetite, sleeplessness, crying fits and fear.”⁹⁴⁰ Ultimately, she says, “YouTube is an ongoing conversation in my therapy practice, which indicates there’s a problem[.]”⁹⁴¹

⁹³⁴ 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>].

⁹³⁵ 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>].

⁹³⁶ *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.

⁹³⁷ *Id.* at 3.

⁹³⁸ *Id.* at 13.

⁹³⁹ 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>.

⁹⁴⁰ *Id.*

⁹⁴¹ *Id.*

1 775. One study determined that using Google’s platform was “consistently and negatively
2 related to sleep outcomes.”⁹⁴² Specifically, for every 15 minutes teens spent using YouTube, they were
3 24% less likely to get seven hours of sleep. According to Dr. Alon Avidan, director of the UCLA Sleep
4 Disorders Center, YouTube is particularly sleep disruptive because its recommendation algorithm and
5 Autoplay feature make it “so easy to finish one video” and watch the next.⁹⁴³ Similarly, a signal that the
6 YouTube algorithm relied on was the “time of day” a user was watching—a signal that, when used to
7 maximize length of duration with the YouTube platform, induces sleep deprivation.⁹⁴⁴

8 776. Sleep deprivation is, in turn, associated with poor health outcomes. For example,
9 “insufficient sleep negatively affects cognitive performance, mood, immune function, cardiovascular
10 risk, weight, and metabolism.”⁹⁴⁵

11 777. Compulsive YouTube use can also harm brain development. According to Donna
12 Volpitta, Ed.D, “[c]hildren who repeatedly experience stressful and/or fearful emotions may under
13 develop parts of their brain’s prefrontal cortex and frontal lobe, the parts of the brain responsible for
14 executive functions, like making conscious choices and planning ahead.”⁹⁴⁶

15 778. Google’s algorithm also promotes the creation of and pushes children towards extremely
16 dangerous “challenges”, which often garner thousands of “Likes,” adding to the pressure students feel to
17

18 ⁹⁴² Meg Pillion *et al.*, *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and sleep*
19 *outcomes*, 100 *Sleep Med.* 174–182, 179 (Dec. 2022),
20 <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>
[<https://perma.cc/PJ5C-CTMP>].

21 ⁹⁴³ Cara Murez, *One App Is Especially Bad for Teens’ Sleep*, U.S. News & World Rep. (Sept. 13, 2022),
22 <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

23 ⁹⁴⁴ *Recommended videos: How does YouTube’s recommendation system work?*, YouTube (July 28,
24 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>].

25 ⁹⁴⁵ Jessica C. Levenson *et al.*, *The association between social media use and sleep disturbance among*
26 *young adults*, 85 *Preventive Med.* 36–41, 36 (2016),
27 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025> [<https://perma.cc/QYE5-92M4>].

28 ⁹⁴⁶ Josephine Bila, *YouTube’s Dark Side Could be Affecting Your Child’s Mental Health*, CNBC (Feb.
13, 2018), <https://www.cnn.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

1 participate. The neurological and psychological techniques by which Google, like other Defendants,
2 fosters excessive, addictive use of YouTube in turn foster “challenges”.

3 779. Even though Google knew or should have known of these risks to its youth users,
4 Google’s platform lacks any warnings that foreseeable platform use could cause these harms.

5 780. And despite all the evidence that YouTube’s design and algorithms harm millions of
6 children, Google continues to manipulate users and compel them to use the platform excessively, to
7 enhance Google’s bottom line, often resulting in significant harm.

8 **d. YouTube’s features include impediments to discontinuing use.**

9 781. As with other Defendants, Google has intentionally designed its platforms so that
10 adolescent users, including students in Plaintiff’s schools and community, face significant navigational
11 obstacles and hurdles when trying to delete or deactivate their accounts, in contrast to the ease with
12 which users can create those accounts.

13 782. *First*, because YouTube is accessible without a user needing to log in, YouTube users
14 cannot prevent themselves from being able to access YouTube by deleting their YouTube account.

15 783. *Second*, YouTube accounts are linked to a user’s broader Google account. These accounts
16 are structured such that, for a user to delete a YouTube account, the user must also delete the user’s
17 entire Google account. This means that if a YouTube user uses Google’s other platforms, such as the
18 popular email service Gmail, those accounts will be lost as well. This structure holds hostage user
19 data—if a child needs to keep their email account through Google (for instance, if that is a requirement
20 of their school), they cannot delete their YouTube account, even if they want to. If a user stores family
21 photos in Google Photos, but wants to delete their YouTube account, they must choose between storage
22 for their photos or deleting their YouTube account. Similarly, if a user has purchased books or movies
23 through Google’s digital market Google Play, the user’s copy of those books or movies will be deleted if
24 the user deletes their Google account to rid themselves of YouTube. Google explicitly threatens users
25 with this consequence on the page where users can delete their account, listing every associated account
26 Google will delete and providing examples of the kinds of videos that will be deleted if a user deletes
27 their YouTube account.

1 784. *Third*, Google intentionally designed its platform so that to delete a user’s Google
2 account, a user must locate and tap on six different buttons (through six different pages and popups)
3 from YouTube’s main feed to delete an account successfully. This requires navigating away from
4 YouTube and into the webpages of other Google platforms. As with Meta, users are still able to recover
5 their accounts after deletion—though unlike Meta, Google does not tell users when their accounts will
6 become unrecoverable, just that they will sometime after deletion.

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

9 785. Since YouTube’s inception, Google has failed to adequately warn the public, including
10 Plaintiff and its students, about the physical and mental health risks its platform poses. These risks
11 include, but are not limited to, platform abuse, addiction, and compulsive use; dissociative behavior;
12 damage to body image; social isolation; impaired brain development; and a plethora of mental health
13 disorders like body dysmorphia, eating disorders, anxiety, depression, insomnia, ADD/ADHD
14 exacerbation, suicidal ideation, self-harm, and death.

15 786. Google targets adolescent users via advertising and marketing materials distributed
16 throughout digital and traditional media platforms. Its advertising and marketing campaigns fail to
17 provide adequate warnings to potential adolescent consumers of the physical and mental risks associated
18 with using YouTube.

19 787. Google further fails to adequately warn adolescents during the platform registration
20 process. At account setup, Google’s platform contains no warning labels, banners, or conspicuous
21 messaging to adequately inform adolescent users of the known risks and potential physical and mental
22 harms associated with usage of its platform. Instead, Google allows adolescents to easily create an
23 account (or multiple accounts), and to access YouTube with or without an account.

24 788. Google’s lack of adequate warnings continues once an adolescent uses YouTube. Google
25 does not adequately inform adolescent users that their data will be tracked, used to help build a unique
26 algorithmic profile, and potentially sold to Google’s advertising clients.

27 789. Google’s failure to warn adolescent users and the public continues even as adolescents
28 exhibit problematic signs of addictive, compulsive use of YouTube. Google does not adequately warn

1 users when their screen time reaches harmful levels or when adolescents are accessing the platform on a
2 habitual and uncontrolled basis.

3 790. Not only does Google fail to adequately warn users regarding the risks associated with
4 YouTube, it also does not provide adequate instructions on how adolescents can safely use its platform.
5 A reasonable and responsible company would instruct adolescents on best practices and safety protocols
6 when using a platform known to pose health risks.

7 791. Google’s failure to properly warn and instruct adolescent users or their parents has
8 proximately caused significant harm to Plaintiff, who has expended and continues to expend significant
9 resources addressing the impact of Google’s conduct on Plaintiff’s operations, including providing
10 additional support to impacted students.

11 **F. Youth Social Media Use and Addiction Has Disrupted this Country’s Public Schools.**

12 792. School districts have been, and continue to be, uniquely harmed by Defendants’ actions
13 and students’ addiction to social media. Students’ compulsive, problematic use of Defendants’ platforms
14 results in significant disruption to schools’ operations and public educational mission, greatly frustrates
15 their ability to achieve their mandate of educating students in a safe and healthy environment, and forces
16 school districts to expend or divert significant resources in response.

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

19 793. A recent report released by the *American Federation of Teachers*, a teachers union
20 representing 1.7 million educators, “details how school districts across the country are experiencing
21 significant burdens as they respond to tech’s predatory and prevalent influence in the classroom[.]”⁹⁴⁷
22 An article describing the report, *Likes vs. Learning: The Real Cost of Social Media for Schools*,—noted:

23 School districts have mustered significant resources to mitigate in-classroom disruptions
24 and grapple with an increase in depression and suicidal ideation among students,
25 dangerous and disruptive behavior, and bullying and harassment by and directed at
26 students, as well as the popularity of dangerous viral challenges that originate from social

27 ⁹⁴⁷ *New Report Calls Out Social Media Platforms for Undermining Schools, Increasing Costs, Driving*
28 *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>.

1 media. Notably, the increased attention to tackling tech companies’ omnipresent role in
2 children’s lives has pulled resources away from the core mission of education.⁹⁴⁸

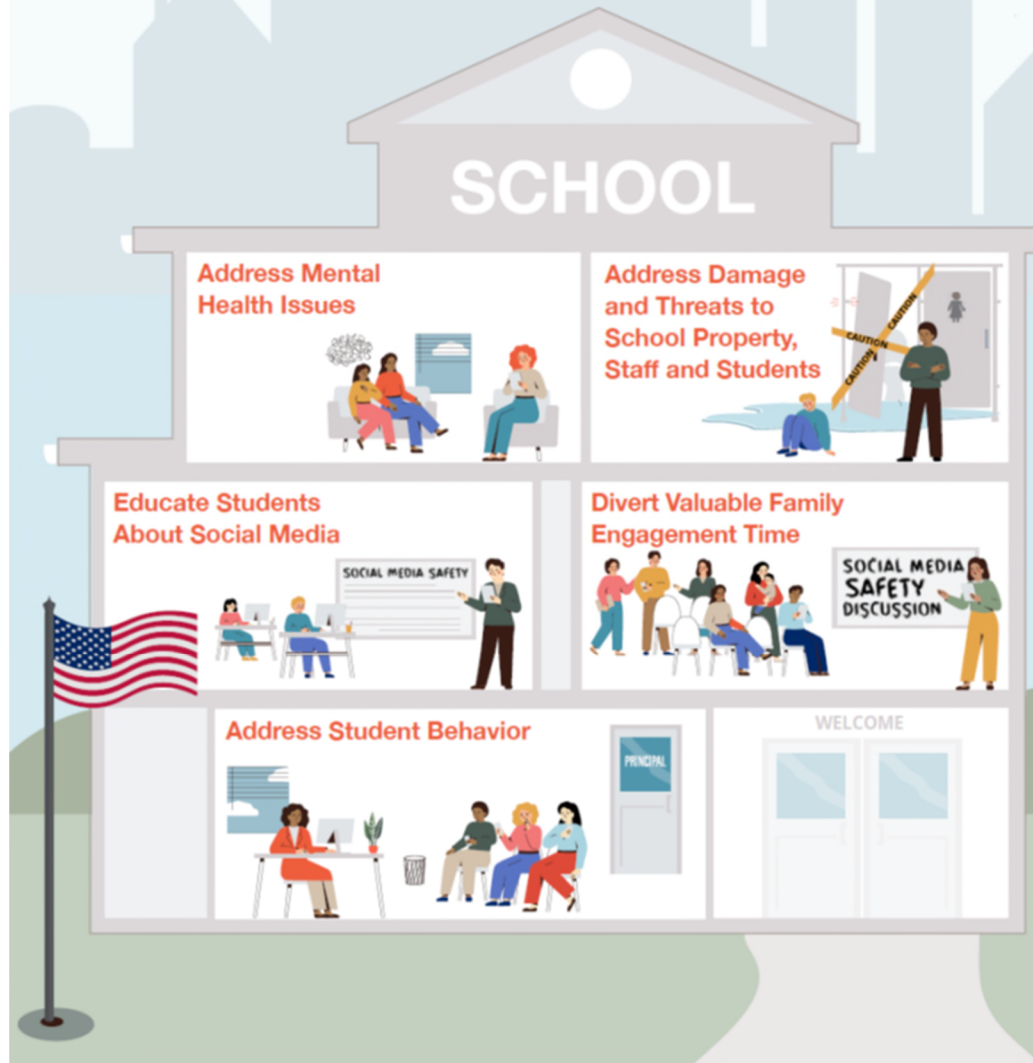
3 794. The report itself, published by the *American Federation of Teachers*, the *American*
4 *Psychological Association*, *Design It For Us*, *Fairplay*, and *ParentsTogether*, highlights the impact of
5 students’ social media use on the educational environment, noting the “dramatic disruption in the
6 teaching and learning ecosystems of all our nation’s schools[.]”⁹⁴⁹ The report confirms that “[d]ealing
7 with social media-related issues detracts from the primary mission of our schools, which is to educate
8 our children,” and details the myriad ways in which “[s]chool districts have borne increased costs and
9 expenses in response to the impacts of social media.”⁹⁵⁰

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⁹⁴⁸ *Id.*

27 ⁹⁴⁹ *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed’n Teachers (2023),
28 https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf

⁹⁵⁰ *Id.* at 3–4.

School districts have borne increased costs and expenses in response to the impacts of social media.



795. Schools are one of the main providers for mental health services for school-aged children.⁹⁵¹ 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.⁹⁵²

⁹⁵¹ *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>].

⁹⁵² *Id.*

1 796. Most schools offer mental health services to students. In the 2021–22 school year, 96% of
2 public schools reported offering at least one type of mental health service to their students.⁹⁵³ But 88%
3 “of public schools did not strongly agree that they could effectively provide mental health services to all
4 students in need.”⁹⁵⁴ The most common barriers to providing effective mental health services in public
5 schools are: (1) insufficient number of mental health professionals; (2) inadequate access to licensed
6 mental health professionals; and (3) inadequate funding.⁹⁵⁵ Student opinions also reflect that schools are
7 unable to provide adequate mental health services. Less than a quarter of students in grades 6–12 report
8 accessing counseling or psychological services when they are upset, stressed, or having a problem.⁹⁵⁶
9 And of the students who access mental health services, only 41% of middle schoolers and 36% of high
10 schoolers are satisfied with the services they receive.⁹⁵⁷

11 797. In part, schools are struggling to provide adequate mental health services because of the
12 increase in students seeking these services. More than two-thirds of public schools reported an increase
13 in the percent of students seeking mental health services from school since the start of the pandemic.⁹⁵⁸

14 798. During this same period, adolescents increased their social media use, also raising levels
15 of excessive and problematic use of digital media.⁹⁵⁹ And these higher rates of social media use are
16 related to higher “ill-being.”⁹⁶⁰ Thus, the increase in adolescent social media use during the pandemic
17 has caused an increase in adolescents experiencing mental health problems.

20 ⁹⁵³ *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to*
21 *All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022),

22 https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp [<https://perma.cc/P4K9-4HF7>].

23 ⁹⁵⁴ *Id.*

24 ⁹⁵⁵ *Id.*

25 ⁹⁵⁶ *Insights From the Student Experience, Part I: Emotional and Mental Health* at 8, YouthTruth (2022),
26 https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf

27 [<https://perma.cc/UHV7-RNQ6>].

28 ⁹⁵⁷ *Id.* at 10.

⁹⁵⁸ *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>].

⁹⁵⁹ 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>.

⁹⁶⁰ *Id.*

799. 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.⁹⁶¹ 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.”⁹⁶²

800. Anxiety disorders are also up, affecting 31.9% of adolescents between 13 and 18 years old.⁹⁶³ “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.”⁹⁶⁴

801. 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[.]”⁹⁶⁵

802. 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.⁹⁶⁶ 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

⁹⁶¹ *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>].

⁹⁶² 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.

⁹⁶³ *Anxiety Disorders: Facts and Statistics, Anxiety & Depression Ass’n Am.*, <https://adaa.org/understanding-anxiety/facts-statistics>.

⁹⁶⁴ *Id.*

⁹⁶⁵ *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 Dupère *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://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext) [<https://perma.cc/48WF-NRX4>]).

⁹⁶⁶ *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>].

1 academic performance.⁹⁶⁷ Compulsive social media use is linked to reduced sleep time and quality⁹⁶⁸.
2 Social media use also contributes to poor academic performance by distracting students during class or
3 study time, and it causes procrastination on school assignments. Defendants' conduct has undermined
4 students' rights to public education by undermining school districts' ability to provide students with a
5 safe and high-quality public education.

6 803. The youth mental health crisis has also caused a wide range of other behavioral issues
7 among students that interfere with schools' ability to teach. In 2022, 60% of public schools saw an
8 increase in classroom disruptions from student misconduct compared to school years before the
9 pandemic.⁹⁶⁹ In that same year, 57% of public schools also saw an increase in rowdiness outside of the
10 classroom, 67% saw increases in tardiness, 28% saw increases in students skipping classes, 54% saw
11 increases in the use of electronic devices when not permitted, 38% saw an increase in physical fights
12 between students, and 45% saw an increase in threats of fights between students.⁹⁷⁰

13 804. Another major problem for schools and school districts is that students are skipping
14 school. Indeed, student absenteeism has greatly increased as the youth mental health crisis has
15 intensified as a result of youth addiction to social media platforms. In the 2021–22 school year, 39% of
16 public schools experienced an increase in chronic student absenteeism compared to the 2020–21 school
17 year, and 72% of public schools saw increased chronic student absenteeism compared to school years
18

19 ⁹⁶⁷ Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-*
20 *United States, 2015*, 67(3) Morbidity & Mortality Wkly. Rpt. 85–90 (2018),
<https://www.cdc.gov/mmwr/volumes/67/wr/pdfs/mm6703a1-H.pdf>.

21 ⁹⁶⁸ Ajay M. Bhandarkar *et al.*, *Impact of social media on the academic performance of undergraduate*
22 *medical students*, 77 Med. J. Armed Forces India 37–41 (2021),
23 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7873710/pdf/main.pdf> (citing Aryn C. Karpinski *et al.*,
24 *An exploration of social networking site use, multitasking, and academic performance among*
25 *United States and European university students*, 29(3) *Computs. 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*
26 *academic performance in Iranian students of medical sciences: a cross-sectional study*, 7(1) *BMC*
27 *Psychiatry* 28 (2019),
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6500070/pdf/40359_2019_Article_305.pdf); *see*

28 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>
⁹⁶⁹ *School Pulse Panel: Student Behavior*, Inst. Educ. Scis., <https://ies.ed.gov/schoolsurvey/spp/>.

⁹⁷⁰ *Id.*

1 before the pandemic.⁹⁷¹ In many instances, students choose to stay home from school after Defendants’
2 platforms have amplified an interaction or event.

3 805. Vandalism also increased in 2022, with 35% of public schools reporting increased acts of
4 student vandalism on school property.⁹⁷² Schools have seen a rise in vandalism of school property
5 coinciding with the youth mental health crisis that Defendants’ platforms have been a substantial factor
6 in bringing about, and at the same time specific aspects of the platforms encourage users to participate in
7 escalating, attention-seeking behaviors that have led to damage of school property.

8 806. Further, social media distraction “moderates the relationship between students’ cognitive
9 engagement and their evaluation of teaching faculty.”⁹⁷³ Social media distractions “disrupt student
10 engagement inside the classroom,” leading to wrong or biased assessments of a teacher’s performance
11 while also exacerbating struggles with academic achievement.⁹⁷⁴ Declines in academic performance can
12 affect school district funding, governmental review metrics, and teacher reviews, in addition to taxing
13 students’ mental health. These issues and others stemming from students’ social media use, discussed
14 above, also drive declining teacher and staff morale, making retaining and hiring qualified staff more
15 difficult for school districts.⁹⁷⁵

17 ⁹⁷¹ *School Pulse Panel: Absenteeism*, Inst. Educ. Scis., <https://ies.ed.gov/schoolsurvey/spp/>.

18 ⁹⁷² *School Pulse Panel: Student Behavior*, Inst. Educ. Scis., <https://ies.ed.gov/schoolsurvey/spp/>.

19 ⁹⁷³ Priyanka Nema, *Impact of social media distraction on student evaluation of teacher effectiveness*, 37
20 Int’l J. Educ. Mgmt. 300–313, 308 (2023), [https://www.emerald.com/insight/content/doi/](https://www.emerald.com/insight/content/doi/10.1108/IJEM-10-2022-0389/full/html)
21 [10.1108/IJEM-10-2022-0389/full/html](https://www.emerald.com/insight/content/doi/10.1108/IJEM-10-2022-0389/full/html) [<https://perma.cc/2FK2-ZP6P>].

22 ⁹⁷⁴ *Id.* at 300; Teun Sivers, *Social Media and Distraction: An Experience Sampling Study among*
23 *Adolescents*, 25(3) Med. Psych. 343–366 (2021),
24 <https://www.tandfonline.com/doi/epdf/10.1080/15213269.2021.1959350?needAccess=true>; Jia-Qiong
25 Xie *et al.*, *The association between excessive social media use and distraction: An eye movement*
26 *tracking study*, 58 Info. & Mgmt., Mar. 2021,
27 <https://www.sciencedirect.com/science/article/abs/pii/S0378720620303530> [[https://perma.cc/3E76-](https://perma.cc/3E76-5UUT)
28 [5UUT](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.”).

⁹⁷⁵ 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”).

1 807. School districts have contacted one or more of Defendants and asked for assistance
2 relating to problems caused by Defendants’ platforms and often received inadequate responses or no
3 response at all.⁹⁷⁶ For example, Meta reported internally that a middle school in Oakland asked
4 Facebook to implement a “hotline in which real people could help school officials (deans of discipline,
5 administrators, [and/or] teacher leaders)” solve problems being caused by social media, but that it would
6 “[p]robably not [be] cheap[.]”⁹⁷⁷ Another Meta employee noted they had been “having a lot of
7 conversations lately with Principals at schools and school districts.”⁹⁷⁸

8 808. Some of the costs and resource expenditures of school districts forced to address
9 students’ problematic social media use include, but are not limited to:

- 10 a. Diverting time and resources from instruction activities to address unauthorized in-
11 classroom use of social media by students;
- 12 b. Increasing disciplinary services and hiring additional personnel for disciplinary services
13 in response to increased behavior issues caused by students’ social media use;
- 14 c. Addressing property damaged as a result of students’ addiction to social media and
15 compulsive participation in social media challenges that direct destruction or theft of
16 school property;
- 17 d. Addressing property damaged as a result of students acting out because of mental, social,
18 and emotional problems Defendants’ conduct caused;
- 19 e. Diverting time and resources from instruction activities to notify parents and guardians of
20 students’ behavioral issues and attendance problems;
- 21 f. Investigating and responding to threats made against schools and students over social
22 media that are pushed by Defendants’ platforms to drive user engagement;
- 23 g. Adding additional information technology resources in an attempt limit students’ access
24 to social media platforms and mitigate risks posed by students’ social media use;

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26 ⁹⁷⁶ See *Likes vs. Learning: The Real Cost of Social Media for Schools* at 12, Am. Fed’n Teachers (2023),
27 https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf (“it is
28 nearly impossible to get a timely response from a platform when there is a social media-enabled
crisis[.]”).

⁹⁷⁷ META3047MDL-003-00047518 at META3047MDL-003-00047518.

⁹⁷⁸ 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);⁹⁷⁹
- 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);⁹⁸⁰
- 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);⁹⁸¹
- n. Updating student handbooks and similar materials to address use of Defendants' platforms; and
- o. Updating school policies to address use of Defendants' platforms.

809. Defendants knew their actions were having a serious impact on school districts and have nonetheless refused to change their conduct.⁹⁸²

810. 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

⁹⁷⁹ *Id.*

⁹⁸⁰ *Id.*

⁹⁸¹ *Id.*

⁹⁸² 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[.]").

1 their addictive platforms spreading through entire school communities. For example, Meta set out to
2 infiltrate schools specifically, noting in a presentation reviewed by Mark Zuckerberg himself that
3 “[h]igh school is the key driver of U.S. teen social activity and occupies 6+ hours per day[.]”⁹⁸³ Meta
4 knew that getting into high schools was key, reporting that that “[r]esearch indicates that we have ‘FB’
5 and ‘non-FB’ high schools; tipping schools may be high impact” and “[i]n the United States, per-high
6 school adoption is a crucial driver of teen Facebook engagement[.]”⁹⁸⁴ For example, Meta conducted a
7 school analysis and concluded that “‘FB High Schools’ (>75% adoption) have ... 22% more [Time
8 Spent] per [Monthly Active Person] . . . compared to high schools with 5-30% FB adoption[.]”⁹⁸⁵ As a
9 result of this research, Meta set out to make “big 2017 bets” on “High School Communities” to attract
10 “teens.”⁹⁸⁶ The goal of this work was to “[g]row [Monthly Active Person], [Daily Active Person], and
11 time spent among U.S. teens.”⁹⁸⁷ The same presentation stated that Meta planned to “emphasize ‘social
12 entertainment’ market opportunities to win back teen interaction.”⁹⁸⁸ Meta noted, “we should bet big on
13 Instagram Direct + stories to beat Snapchat” and that the goal was to “increase U.S. teen time spent.”⁹⁸⁹

14 811. Meta adopted similar policies for Instagram, noting that “[n]early everyone attends high
15 school” and “[t]he school someone attends is a big part of their life[.]”⁹⁹⁰ In their own words “[w]inning
16 schools is the way to win with teens because an individual teen’s engagement is highly correlated with
17 school [Monthly Active Person] penetration.”⁹⁹¹ The Instagram “teen’s team” also discussed how to
18 study “teen penetration and engagement on [a] school level in [the] US” and noted their capability to tell
19 when teens “open the app AT school” and geolocate “which high school they go to.”⁹⁹² Similarly, a
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23 ⁹⁸³ META3047MDL-003-00134688 at META3047MDL-003-00134706.

24 ⁹⁸⁴ *Id.*; *Id.* at META3047MDL-003-00134714-715.

25 ⁹⁸⁵ *Id.* at META3047MDL-003-00134715.

26 ⁹⁸⁶ *Id.* at META3047MDL-003-00134708.

27 ⁹⁸⁷ *Id.* at META3047MDL-003-00134706

28 ⁹⁸⁸ MDL AG Compl. at 27, ¶ 147.

⁹⁸⁹ *Id.*

⁹⁹⁰ META3047MDL-003-00023595.

⁹⁹¹ *Id.*

⁹⁹² META3047MDL-003-00022355 at META3047MDL-003-00022355, META3047MDL-003-00022356.

1 2017 presentation detailed how Meta planned to increase time spent by teens while teens are in school,
2 including live broadcasts of high school sports.⁹⁹³

3 812. Instagram also intentionally reached into schools by partnering with the National PTA
4 and Scholastic to get materials into the hands of “parents, grandparents, and educators at scale” and to
5 “integrate [their] parent’s guide and [Instagram] programming into the 500 back to school nights” across
6 the country.⁹⁹⁴ Instagram reported that partnering with “Scholastic gives us the ability to win educators
7 and the school community, creating a ripple effect to allow us to win parents and families” and let them
8 reach out to “20,000 classrooms across the U.S.” and to “250K+” teachers.⁹⁹⁵ While Instagram may try
9 to characterize this work as helpful to addressing youth mental health problems, they were more candid
10 in other documents about using this as a strategy to get more teen users, explaining that the goal of the
11 parents plan was to get “parents to think, [‘]my kids are on social media, and my FAVORITE app for
12 them to be on is Instagram, bar none.” Thus, “[w]hat winning looks like” for Instagram is to have
13 “[p]arents believe Instagram is the social media platform of choice for their kids.”⁹⁹⁶ Instagram also
14 tested new features by high school, noting that “getting critical mass in a high school very quickly (e.g.,
15 in the same afternoon) is extremely important” and one way to do this was “a (hacky) way to use push
16 notifications from their [Instagram] account to tell students ‘we just shipped this for your school[.]’”⁹⁹⁷
17 They explained “[w]e want to learn as much as we can from these High School tests about what levers
18 we have for driving teen engagement[.]”⁹⁹⁸ Schools are so important to Meta because “[e]ngaging the
19 vast majority of teens in an area / school with our products is crucial to driving overall time spent in the
20 same area[.]”⁹⁹⁹ Meta boiled it down to a simple message: “Winning Teens = Winning High
21 Schools[.]”¹⁰⁰⁰

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24 ⁹⁹³ MDL AG Compl. at 27, ¶ 147.

25 ⁹⁹⁴ META3047MDL-003-00084526 at META3047MDL-003-00084527–META3047MDL-003-
00084527.

26 ⁹⁹⁵ *Id.* at META3047MDL-003-00084528.

27 ⁹⁹⁶ META3047MDL-003-00082536 at META3047MDL-003-00082538.

28 ⁹⁹⁷ META3047MDL-003-00138616 at META3047MDL-003-00138617.

⁹⁹⁸ *Id.*

⁹⁹⁹ META3047MDL-003-00021467.

¹⁰⁰⁰ META3047MDL-003-00023583.

1 813. TikTok is likewise well aware of school-age children using its platform. When TikTok
2 decides to age verify youth users, one of the tools it uses is “school ID.”¹⁰⁰¹ TikTok created and shared a
3 chart with its staff showing how age correlated to grade in school and birth year.¹⁰⁰²

4 814. The company also admits that “TikTok is particularly popular with younger users, who
5 are seen as more vulnerable to online harms and the negative impacts of compulsive use.”¹⁰⁰³ Internal
6 research confirmed that users try to “mitigate TikTok’s interference with their obligations and
7 productivity” including “school.”¹⁰⁰⁴ However, the same research noted that the “aspects of TikTok that
8 contributed to participants’ challenges with managing their time including the continuous scroll, few or
9 no breaks between content, short videos, and not knowing what the next video will be[,]” the same types
10 of features at issue in this complaint.¹⁰⁰⁵

11 815. TikTok acknowledged that users believe its “platform is addictive,” and that “compulsive
12 usage interferes with essential personal responsibilities” such as “sufficient sleep,” “school
13 responsibilities,” and “connecting with loved ones.”¹⁰⁰⁶ TikTok admitted that it is interfering with the
14 school day and student sleep, stating, “we send notifications to users during the school day and in some
15 cases, up until midnight which could interfere with sleep.”¹⁰⁰⁷ Therefore, it stated, “[w]e should
16 therefore be prepared to implement product changes to address concerns in [the wellbeing] area if
17 needed, including . . . [a]voiding sending users push notifications around bedtime and (for younger
18 users) during the school day[.]”¹⁰⁰⁸

19 816. TikTok also sought to directly enter schools, noting that “we have about 80 high schools
20 across the country” that it would be sending its TikTok toolkit to for “back to school nights” and that it
21 was “coordinating with the Department of Education and they plan to send a PDF of the toolkit in their
22 August newsletter, which is going out on Friday to nearly 30K subscribers.”¹⁰⁰⁹ As with Meta, TikTok

24 ¹⁰⁰¹ TIKTOK3047MDL-001-00060190.

¹⁰⁰² *Id.*

25 ¹⁰⁰³ TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-0006161327.

¹⁰⁰⁴ *Id.* at TIKTOK3047MDL-001-00061324.

26 ¹⁰⁰⁵ *Id.*

¹⁰⁰⁶ TIKTOK3047MDL-001-00060485.

27 ¹⁰⁰⁷ TIKTOK3047MDL-001-00061318 at TIKTOK3047MDL-001-00061327.

28 ¹⁰⁰⁸ *Id.* at TIKTOK3047MDL-001-00061333.

¹⁰⁰⁹ TIKTOK3047MDL-001-00005239.

1 recognized the importance of controlling the narrative, noting in a different document that recent years
2 had been “fraught with PR and GR [Government Relations] issues for ByteDance and TikTok” which
3 “reduced advertiser trust, user loyalty, investor confidence, and [TikTok’s] ability to consistently hire
4 top talent.” Combating these issues would “ensure the long term success of the ByteDance ecosystem
5 and help further [the TikTok] brand.”¹⁰¹⁰

6 817. Similarly, a large part of Snapchat’s success has been its virality on school campuses.¹⁰¹¹
7 According to an interview regarding Snapchats’ early adoption, “the app started catching on with high
8 schoolers in LA as they could send digital notes back and forth during classes.”¹⁰¹² Snapchat “grew very
9 quickly in tight-knit communities at high schools and colleges, where students interact at a very high
10 frequency and can (and did) tell each other to download Snapchat in between classes.”¹⁰¹³ Once
11 Snapchat knew it had appeal among school-aged children, Snapchat “ran with it and never looked
12 back.”¹⁰¹⁴

13 818. Snapchat has long been aware of its connection to schools and the large impact it has had
14 on classrooms. After Snapchat added new features to the app, news organizations noted the havoc it was
15 wrecking on classrooms: “No one was more excited about the update than Snapchat’s target
16 demographic: teens. And no one could have used a warning about the huge in-app changes more than
17 high-school teachers,” one of whom noted that “[i]n 16 years of teaching I can’t think of anything that
18 has ever disrupted my classroom more than today’s Snapchat update.”¹⁰¹⁵ The teacher explained that
19 during class kids were so focused on updating their Snapchat, “you would have thought it was crack.
20 They seriously could not keep away from it. I even had one girl crawl under the table with her
21 phone.”¹⁰¹⁶

22
23 ¹⁰¹⁰ TIKTOK3047MDL-001-00060485.

24 ¹⁰¹¹ *How Snapchat Gained Success By Going Viral At High Schools Across Los Angeles*, Forbes (Feb.
25 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>].

26 ¹⁰¹² *Id.*

27 ¹⁰¹³ *Id.*

28 ¹⁰¹⁴ *Id.*

¹⁰¹⁵ 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>.

¹⁰¹⁶ *Id.*



819. Snapchat also highlights its connection to schools when communicating with advertisers, promoting “Back to School on Snapchat”¹⁰¹⁷ and “Snap to School.”¹⁰¹⁸ The company explained that it had an “unparalleled student and parent audience”¹⁰¹⁹ and noted that 90% of students (ages 13-24) in the U.S. and UK are on Snapchat.¹⁰²⁰ 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.¹⁰²¹

820. 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.¹⁰²² 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.¹⁰²³

¹⁰¹⁷ See, e.g., *Back to School on Snapchat*, Snap Inc., <https://forbusiness.snapchat.com/back-to-school-2021>.

¹⁰¹⁸ *Snap to School is in Session*, Snap Inc., <https://forbusiness.snapchat.com/back-school>.

¹⁰¹⁹ *Id.*

¹⁰²⁰ See, e.g., *Back to School on Snapchat*, Snap Inc., <https://forbusiness.snapchat.com/back-to-school-2021>.

¹⁰²¹ *Fresh Features for Fall!*, Snap Inc. (Sept. 15, 2022), <https://newsroom.snap.com/fresh-fall-features>.

¹⁰²² 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/>.

¹⁰²³ *Id.*

821. YouTube has also advertised itself for use in schools, creating youtube.com/Teachers which provides “tips and tricks for bringing YouTube into the classroom[.]”¹⁰²⁴

822. 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.”¹⁰²⁵ 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.”¹⁰²⁶ In a different presentation to Hasbro, YouTube was referred to as “the “#1 website regularly visited by kids.”¹⁰²⁷

823. 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.”¹⁰²⁸ 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.”¹⁰²⁹

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

824. Plaintiff Porterville Unified School District is a school district located in Tulare County, California, serving over 14,000 students in grades pre-kindergarten through 12th grade.¹⁰³⁰ Porterville

¹⁰²⁴ *Teachers: About*, YouTube, <https://www.youtube.com/Teachers>.

¹⁰²⁵ 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.

¹⁰²⁶ *Id.* at Exhibit B

¹⁰²⁷ *Id.* at Exhibit C.

¹⁰²⁸ 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>].

¹⁰²⁹ *Id.*

¹⁰³⁰ *Porterville Unified*, Nat’l Ctr. Educ. Stat.,

https://nces.ed.gov/ccd/districtsearch/district_detail.asp?Search=2&ID2=0600064 (last visited Mar. 22, 2024).

operates 23 schools, comprising ten elementary schools, three middle schools, four comprehensive high schools, three charter schools, along with preschool programs, one community day school, and an adult school.

825. Porterville has been directly impacted by the mental health crisis among youth in its community.

826. 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.

827. 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[.]”¹⁰³¹ In all grades, these are the highest rates reported in the past decade.¹⁰³² Further, 17 percent of 9th graders and 16 percent of 11th graders contemplated suicide over the past twelve months.¹⁰³³ 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 2020.¹⁰³⁴ 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.¹⁰³⁵

828. 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

¹⁰³¹ 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>].

¹⁰³² *Id.*

¹⁰³³ *Id.*

¹⁰³⁴ *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>].

¹⁰³⁵ *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.”¹⁰³⁶

829. Anxiety, depression, and suicidal ideation are also rampant among Plaintiff’s students. In the 2021–22 California Healthy Kids Survey, 26 percent of 7th graders, 27 percent of 9th graders, and 31 percent of 11th graders in Plaintiff’s schools reported experiencing social emotional distress.¹⁰³⁷ Further, 37 percent of 7th graders, 36 percent of 9th graders, and 40 percent of 11th graders reported experiencing chronic sad or hopeless feelings over the past twelve months.¹⁰³⁸ Additionally, 16 percent of 7th graders, 15 percent of 9th graders, and 15 percent of 11th graders reported considering suicide in the past twelve months.¹⁰³⁹

830. Plaintiff’s staff also recognize depression and other mental health issues as a problem that Porterville students face. In the 2021–22 California School Staff Survey, 28 percent of Plaintiff’s teachers reported that student depression or other mental health issues were a moderate problem, and 13 percent of Plaintiff’s teachers reported mental health issues as a severe problem.¹⁰⁴⁰

831. The deteriorating mental health of Plaintiff’s students is also reflected in the data from Plaintiff’s network filter. The filter monitors and analyzes the online activity of students signed into their school-issued accounts for signs of self-harm. When a student exhibits signs of self-harm, administrators are alerted. During the 2020–21 school year, Plaintiff received 231 self-harm alerts. The following year, the 2021–22 school year, Plaintiff received 385 such alerts. Last year, the number of alerts jumped to 645, a more than 179 percent increase since the 2020–21 school year.

832. 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

¹⁰³⁶ 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>].

¹⁰³⁷ *California Healthy Kids Survey, Porterville Unified Secondary 2021–2022 Main Report* at 4, WestEd for Cal. Dep’t Educ. (Oct. 26, 2022), https://data.calschls.org/resources/Porterville_Unified_2122_Sec_CHKS.pdf.

¹⁰³⁸ *Id.*

¹⁰³⁹ *Id.*

¹⁰⁴⁰ *California School Staff Survey, Porterville Unified 2021–2022 Main Report* at 39, WestEd for Cal. Dep’t Educ. (Aug. 22, 2022), https://data.calschls.org/resources/Porterville_Unified_2122_CSSS.pdf.

1 have noted that social media use among Plaintiff's students is ubiquitous. Students access social media
2 during class time, between classes, and during lunch.

3 833. In lockstep with these increases in anxiety, depression, and suicidal ideation, student
4 behavior problems have also increased in Plaintiff's schools, including disciplinary incidents tied to
5 social media. Many of these disciplinary incidents are connected to social media, according to
6 administrators.

7 834. While Plaintiff's schools and its staff must deal with increased behavioral issues on the
8 one hand, they must deal with increased absenteeism on the other. And even when Plaintiff's students
9 attend school, there is still a significant amount of lost instructional time. For example, administrators
10 have seen an increasing number of students leaving class to go to the bathroom where they stay to access
11 social media.

12 835. To curb the distraction that cell phone and social media use poses, Porterville enacted a
13 policy requiring phones be turned off and put away during class. Despite this policy, students continue
14 to use electronic devices to access Defendants' social media platforms during class.

15 836. The pandemic and corresponding increase in time youth spend on Defendants' platforms
16 have intensified the youth mental health crisis and the behavioral issues Plaintiff's students are
17 experiencing.

18 837. The current youth mental health crisis has led to a marked increase in the number of
19 Plaintiff's students in crisis, acting out, and in need of mental health services.

20 838. This increase has adversely impacted the educational experience for Porterville's staff,
21 teachers, students, and their families. Staff and teachers cannot ignore students who are in crisis and
22 need to support those students, even if this comes at the expense of the educational goals and experience
23 for the larger student body. School campuses are public spaces, and classes and activities are communal
24 experiences. Increases in anxiety, depression, suicidal ideation, and other mental health crises impact
25 both the students suffering from these problems and the other students, teachers, and staff who need to
26 interact with these students.

27 839. The pernicious effects of Defendants' platforms are inescapable and have fundamentally
28 changed the learning and teaching environment at Plaintiff's schools.

840. 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.

841. 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.

842. As of the 2022–23 school year, Plaintiff employs a variety of school-based mental and behavior support staff, including thirty-two counselors, seventeen comprehensive support and intervention specialists, thirteen school psychologists, ten positive behavior intervention specialists, ten

1 elementary student support specialist counselors, four social workers, two Behavior Environment
2 Support Team coaches, two school psychologist interns, and a district-wide mental health awareness
3 counselor. These 91 staff members represents an almost three-fold increase over the staffing for mental
4 health in 2018, when there were only 34 such persons.

5 843. Porterville’s staff directly offer mental health services to its students. These services
6 include direct counseling, group counseling, social skills exercises, and classroom education.
7 Additionally, Porterville’s staff assist students and their families in accessing mental health services
8 from community service providers.

9 844. Despite these efforts, the District is unable to maintain pace with the increased need for
10 mental health services.

11 845. As a result, the rest of Plaintiff’s staff must fill in the cracks to help students with mental
12 health concerns.

13 846. Ultimately, Plaintiff requires significant and long-term funding to address the nuisance
14 Defendants have created and amplified. Plaintiff cannot ignore the ever-increasing mental health needs
15 of its students, even if this means diverting resources away from important school functions and
16 lessening the educational experience for all students and the families. Such funding should not come at
17 the expense of the students and fall at the foot of the public. Rather, Defendants must bear the burden of
18 remedying their wrongs. It is time, as President Biden declared, to get “all Americans the mental health
19 services they need.”

20 **V. CAUSES OF ACTION**

21 **COUNT ONE — CALIFORNIA PUBLIC NUISANCE**

22 847. Plaintiff incorporates by reference all preceding paragraphs.

23 848. Under California law, “anything which is injurious to health...or is indecent or offensive
24 to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable
25 enjoyment of life or property...is a nuisance.”¹⁰⁴¹ “A public nuisance is one which affects at the same
26 time an entire community or neighborhood, or any considerable number of persons, although the extent
27 of the annoyance or damage inflicted upon individuals may be unequal.”¹⁰⁴²

28 ¹⁰⁴¹ Cal. Civ. Code § 3479.

¹⁰⁴² Cal. Civ. Code § 3480.

1 849. Defendants have created a crisis of social media addiction in Plaintiff's schools, injuring
2 the public health and safety in Plaintiff's community, disrupting the educational mission of Plaintiff, and
3 interfering with the operations, use, and enjoyment of the property of Plaintiff.

4 850. Defendants, by designing, developing, marketing, supplying, promoting, advertising,
5 operating, and distributing their respective social media platforms for use by students in Plaintiff's
6 schools in the manner described above, have engaged in conduct that substantially and unreasonably
7 interferes with the health and safety of Plaintiff's students; substantially and unreasonably interferes
8 with the functions and operations of Plaintiff's schools, including the public educational mission of
9 Plaintiff; harms the health, safety, and welfare of the Plaintiff's community; and adversely impacts
10 Plaintiff's use and enjoyment of its property.

11 851. Each Defendant has created or assisted in the creation of a condition that is injurious to
12 the health, safety, and welfare of Plaintiff's community and interferes with the educational environment
13 for students, teachers, and administrators in Plaintiff's schools. Defendants have each created or assisted
14 in the creation of a condition that significantly disrupts the daily operations and functioning of Plaintiff's
15 public schools.

16 852. The health and safety of Plaintiff's students, including those who use, have used, or will
17 use Defendants' platforms, as well as those affected by others' use of their platforms, are matters of
18 substantial public interest and of legitimate concern to Plaintiff.

19 853. Defendants' conduct has affected and continues to affect a substantial number of people
20 within Plaintiff's community and is likely to continue causing significant harm.

21 854. Defendants' conduct is ongoing and continues to produce permanent and long-lasting
22 damage.

23 855. Defendants' conduct substantially and unreasonably interferes with public health, safety,
24 and the right to a public education in a safe and healthy environment.

25 856. The public nuisance created or maintained by Defendants impacts Plaintiff's property and
26 its use and enjoyment of the same, including but not limited to school buildings and other public spaces
27 connected to the schools.

1 857. This harm to youth mental health and the corresponding impacts to public health, safety,
2 and the welfare of Plaintiff’s public schools and community outweigh any social utility of Defendants’
3 wrongful conduct.

4 858. The rights and interests of, and inconvenience to, Plaintiff’s public schools and
5 community far outweigh the rights and interest of, and inconvenience to, Defendants, who have profited
6 tremendously from their wrongful conduct.

7 859. Defendants’ social media platforms have caused a massive disruption to the educational
8 process in schools throughout the United States. As noted above, a report by the *American Federation of*
9 *Teachers* “details how school districts across the country are experiencing significant burdens as they
10 respond to tech’s predatory and prevalent influence in the classroom[.]”¹⁰⁴³ These same problems are
11 borne by Plaintiff.

12 860. For these reasons, Defendants have caused an unreasonable interference with the
13 educational process—including the health, welfare, and safety of students, teachers, and staff members,
14 as well as educators’ ability to teach and students’ ability to learn—in the Plaintiff’s District.

15 861. By interfering with the educational process in public schools, the Defendants’ conduct
16 unreasonably interferes with the health, safety, peace, comfort, or convenience of the general
17 community.

18 862. In addition to the impact on the public health and safety, the nature of Defendants’
19 conduct causes a substantial interference with the entire educational process in the public schools, as
20 described above. Students’ compulsive use of Defendants’ social media platforms greatly frustrates
21 schools’ ability to achieve their mandate of educating their students in a safe and healthy environment.

22 863. The right to a public education is a right common to the general public. This right is
23 codified in the California Constitution. *See* Cal. Const. art. IX, § 1 (“A general diffusion of knowledge
24 and intelligence [is] ... essential to the preservation of the rights and liberties of the people[.]”); Cal.
25 Const. art. IX, § 5 (“The Legislature shall provide for a system of common schools by which a free
26

27 ¹⁰⁴³ *New Report Calls Out Social Media Platforms for Undermining Schools, Increasing Costs, Driving*
28 *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>.

1 school shall be kept up and supported in each district[.]”). “[T]he right to an education in [California]
2 public schools is a fundamental interest[.]”¹⁰⁴⁴

3 864. Whether they choose to avail themselves of the right or not, all California residents have
4 the opportunity to utilize the public education system.

5 865. Further, the entire state of California benefits from having a strong educational system
6 that results in a well-educated citizenry. Thus, the right to a public education is a right common to the
7 general public, and a right that has an impact on all citizens of California, whether they utilize the public
8 school system directly or not.

9 866. Additionally, by taking unreasonable actions that increase the costs of mental health
10 services and other services provided by California school districts, including Plaintiff, Defendants have
11 interfered with a right common to the general public by diverting tax dollars into projects required to
12 abate the nuisance caused by the Defendants’ conduct, rather than having that tax money spent on other
13 public programs.

14 867. All Defendants maintain control, at all times, over their social media platforms, including
15 each design feature thereof, and these platforms are used by students in Plaintiff’s District.

16 868. Because all Defendants maintain control over their platforms, Defendants have the power
17 and the ability, at all times, to change the design features, such that Defendants could change the
18 features and user experience that is presently causing harm to Plaintiff and Plaintiff’s students.

19 869. Because they control their social media platforms and their design features, Defendants
20 could modify those features and the user experience that feeds users’ social media addiction, and which
21 is harmful to users’ mental and psychological health.

22 870. Because of the nature of social media platforms, Defendants never lose control over the
23 instrumentality that causes the nuisance. The Defendants cause the nuisance, and maintain the nuisance,
24 by constantly inundating users, including Plaintiff’s students, with addictive product features.

25 871. Because of the nature of social media platforms, the instrumentality of the nuisance never
26 leaves the Defendants’ hands. Defendants always have the ability to modify their platforms—and,

27 ¹⁰⁴⁴ *Serrano v. Priest*, 487 P.2d 1241, 1244 (Cal. 1971); *see also Slayton v. Pomona Unified Sch. Dist.*,
28 207 Cal. Rptr. 705, 711 (Cal. Ct. App. 1984) (“California has extended the *right* to an education by
virtue of two constitutional provisions[.]”).

1 thereby, modify the user experience. Correspondingly, Defendants always have the power to abate the
2 nuisance that they have caused and continue to cause.

3 872. But for Defendants' actions, Plaintiff's students would not use social media platforms as
4 frequently or long as they do today and would not have their mental health and ability to learn and
5 participate in public school adversely affected to the same degree. The associated harms suffered by
6 Plaintiff would not be incurred, and the public health crisis that currently exists as a result of
7 Defendants' conduct would have been averted.

8 873. Logic, common sense, justice, policy, and precedent indicate Defendants' unfair and
9 deceptive conduct has caused the damage and harm complained of herein. Defendants knew or had
10 reason to know that their design, development, marketing, supply, promotion, advertisement, operation,
11 and distribution of their platforms would cause students to use their platforms excessively, that their
12 marketing methods were designed to appeal to youth, and that their active efforts to increase youth use
13 of their platforms were causing harm to youth and to schools, including youth who attend Plaintiff's
14 schools.

15 874. Thus, the public nuisance caused by Defendants was reasonably foreseeable, including
16 the financial and economic losses incurred by Plaintiff.

17 875. Defendants' conduct was a substantial factor in bringing about the public nuisance. By
18 designing, developing, marketing, supplying, promoting, advertising, operating, and distributing their
19 platforms in a manner intended to maximize the time youth spend on their respective platforms—despite
20 knowledge of the harms to youth from their wrongful conduct—Defendants directly facilitated the
21 widespread, excessive, and habitual use of their platforms and the public nuisance affecting Plaintiff. By
22 seeking to capitalize on their success by refining their platforms to increase the time youth spend on
23 their platforms, Defendants directly contributed to the public health crisis and the public nuisance
24 affecting Plaintiff.

25 876. Defendants' conduct is especially injurious to Plaintiff because, as a direct and proximate
26 cause of Defendants' conduct creating or assisting in the creation of a public nuisance, the educational
27 environment within Plaintiff's schools and the ability of Plaintiff to operate its public schools has been,
28 and will continue to be, substantially harmed.

1 877. As noted above, a report from the *American Federation of Teachers*, the *American*
2 *Psychological Association*, *Design It For Us*, *Fairplay*, and *ParentsTogether*, highlights the impact of
3 students’ social media use on the educational environment, noting the “dramatic disruption in the
4 teaching and learning ecosystems of all our nation’s schools[.]”¹⁰⁴⁵ The report confirms that “[d]ealing
5 with social media-related issues detracts from the primary mission of our schools, which is to educate
6 our children,” and it details the myriad ways in which “[s]chool districts have borne increased costs and
7 expenses in response to the impacts of social media.”¹⁰⁴⁶ The same is true in Plaintiff’s District.
8 Defendants’ conduct has caused a substantial disruption to the learning environment in schools
9 throughout the district, and has caused increased costs, expenses, and diversion of resources to mitigate
10 the impacts of social media.

11 878. As noted above, school districts are uniquely harmed by the current crisis of youth social
12 media addiction, including the negative impact on students’ mental, social, and emotional health. This is
13 because schools are one of the main providers of mental health services for school-aged children.

14 879. Schools nationally and in the Plaintiff’s District are struggling not only to provide
15 students with mental health services but also to deliver an adequate education because of the youth
16 mental health crisis. Students in grades 6–12 are suffering from depression, stress, and anxiety, which
17 are serious obstacles to learning. Most middle school and high school students also fail to get enough
18 sleep on school nights, which contributes to poor academic performance. Use of Defendants’ social
19 media platforms causes or contributes to cause these problems for students, which in turn creates a
20 nuisance for the school districts.

21 880. The youth mental health crisis has also caused a wide range of other behavioral issues
22 among students that interfere with schools’ ability to teach. There has been a substantial increase in
23 behaviors such as classroom disruptions, students skipping class, the use of electronic devices during
24 class, and bullying and fights, both nationally and in the Plaintiff’s District. Defendants’ social media
25 platforms cause these behaviors and, therefore, cause the nuisance that exists in the Plaintiff’s District.

27 ¹⁰⁴⁵ *Likes vs. Learning: The Real Cost of Social Media for Schools* at 1, Am. Fed’n Teachers (2023),
28 https://www.aft.org/sites/default/files/media/documents/2023/LikesVSLearning_Report.pdf.

¹⁰⁴⁶ *Id.* at 3–5.

1 881. Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants’
2 conduct, including the following:

- 3 a. hiring additional personnel to address mental, emotional, and social health issues;
- 4 b. developing additional resources to address mental, emotional, and social health issues;
- 5 c. increasing training for teachers and staff to identify students exhibiting symptoms
6 affecting their mental, emotional, and social health;
- 7 d. training teachers, staff, and members of the community about the harms caused by
8 Defendants’ wrongful conduct;
- 9 e. developing lesson plans to teach students about the dangers of using Defendants’
10 platforms;
- 11 f. educating students about the dangers of using Defendants’ platforms;
- 12 g. addressing property damaged as a result of students acting out because of mental, social,
13 and emotional problems Defendants’ conduct is causing;
- 14 h. increasing disciplinary services;
- 15 i. confiscating devices on which students use Defendants’ platforms while in class or on
16 Plaintiff’s school campuses;
- 17 j. meeting with students and the parents of students caught using Defendants’ platforms at
18 school or other disciplinary matters related to students’ use of Defendants’ platforms;
- 19 k. diverting time and resources from instruction activities to notify parents and guardians of
20 students’ behavioral issues and attendance;
- 21 l. updating its student handbook to address use of Defendants’ platforms; and
- 22 m. updating school policies to address use of Defendants’ platforms.

23 882. Fully abating the nuisance resulting from Defendants’ conduct will require much more
24 than these steps. In addition to actions already taken and funds already spent, Plaintiff needs to take
25 additional actions and spend additional funds to address the harm caused by Defendants and abate the
26 nuisance. For instance, with additional funding, Plaintiff would consider strategies like purchasing
27 additional learning materials to aid students who are behind on their progress due in whole or in part to
28

1 their social media addiction and purchasing faraday bags (or something similar) to disable phones, to
2 attempt to reduce the disruption caused by social media addiction during the school day.

3 883. As detailed herein, Plaintiff has suffered special damage different in kind or quality from
4 that suffered by the public in common. Plaintiff has a unique responsibility to operate its public schools.
5 The damages suffered by Plaintiff have been greater in degree and different in kind than those suffered
6 by the general public including, but not limited to, costs arising from: expending, diverting, and
7 increasing personnel to provide mental health services; expending, diverting, and increasing resources to
8 address mental health issues; expending, diverting, and increasing staff time to confiscate cell phones
9 and other devices; expending, diverting, and increasing staff time to communicate and engage with
10 parents; expending, diverting, and increasing staff time associated with student discipline; expending,
11 diverting, and increasing staff time associated with routing students to counselors; expending, diverting,
12 and increasing staff time to train staff to identify students exhibiting symptoms affecting their mental
13 health; expending, diverting, and increasing resources for modifications to mental health curriculum;
14 expending, diverting, and increasing resources for creating education materials addressing social media
15 addiction and harm for students, parents, and staff; and expending, diverting, and increasing resources to
16 repair property damages as a result of Defendants' addictive platform directed to students.

17 884. As a result of Defendant's conduct, Plaintiff has incurred damages and is entitled to
18 compensation therefor. Plaintiff requests all the relief to which it is entitled in its own right and relating
19 to the special damage or injury it has suffered, including actual and compensatory damages in an amount
20 to be determined at trial, an order providing for the abatement of the public nuisance that Defendants
21 have created or assisted in the creation of, and an order enjoining Defendants from future conduct
22 contributing to the public nuisance described above. Plaintiff's claim is not brought in any representative
23 or *parens patriae* capacity on behalf of students.

24 885. Defendants engaged in conduct, as described above, that constituted malice and/or
25 intentional, wanton, willful, or reckless disregard of Plaintiff's rights, being fully aware of the probable
26 dangerous consequences of the conduct and deliberately failing to avoid those consequences.

27 886. Defendants' conduct, as described above, was intended to serve their own interests
28 despite having reason to know and consciously disregarding a substantial risk that their conduct might

1 significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a
2 course of conduct knowing that it created a substantial risk of significant harm to others, including
3 Plaintiff. Defendants regularly risk the health of consumers and users of their platforms with full
4 knowledge of the dangers of their platforms. In doing so, Defendants knowingly and intentionally placed
5 the burden of that risk on others, including Plaintiff and other school districts. Defendants consciously
6 decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff's students or
7 Plaintiff. Defendants' willful, knowing, and reckless conduct therefore warrants an award of aggravated
8 or punitive damages.

9 887. Defendants are jointly and severally liable. As alleged throughout this Complaint,
10 Defendants' actions were intentional, and Plaintiff has suffered property damage as a result.

11 **COUNT TWO — CALIFORNIA NEGLIGENCE**

12 888. Plaintiff incorporates by reference all preceding paragraphs.

13 889. California law establishes the general duty of each person to exercise, in his or her
14 activities, reasonable care for the safety of others. Cal. Civ. Code § 1714.

15 890. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm,
16 and to act with reasonable care as a reasonably careful person and/or company would act under the
17 circumstances.

18 891. Public policy factors support the imposition of a duty on Defendants to exercise
19 reasonable care toward Plaintiff and other school districts because any social utility of Defendants'
20 conduct is greatly outweighed by the harms of addicting youth to social media, causing a massive
21 disruption to the learning process and requiring additional expenditures at public schools throughout
22 Plaintiff's community and elsewhere.

23 892. Another reason Defendants owed a duty of care to Plaintiff is that the harms to Plaintiff
24 and other school districts were clearly foreseeable to Defendants. Defendants not only were aware of the
25 risk that their products would addict school children, but they were also actively seeking that result, as
26 laid out above. Defendants wanted children using their products during the school day. They also
27 understood that their products could be addictive and harmful to children. Thus, the economic costs and
28 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.

893. 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.

894. 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.

895. 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.

896. 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.

897. 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.

898. 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

1 the risks of extended or problematic social media use and social media addiction and the likelihood that
2 algorithm-based recommendations would harm youth mental health.

3 899. As such, Defendants, by action and inaction, representation and omission, breached their
4 duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably careful person
5 and/or company would act under the circumstances in the design, research, development, testing,
6 marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms,
7 in that Defendants designed, researched, developed, tested, marketed, supplied, promoted, advertised,
8 operated, and distributed social media platforms that Defendants knew or had reason to know would
9 negatively impact the mental health of consumers, particularly youth, and failed to prevent or adequately
10 warn of these risks and injuries. This negative impact on youth foreseeably harmed Plaintiff and other
11 school districts, as described above.

12 900. Despite their ability and means to investigate, study, and test their social media platforms
13 and to provide adequate warnings, Defendants have failed to do so. Defendants have wrongfully
14 concealed information and have made false and/or misleading statements concerning the safety and use
15 of Defendants' social media platforms.

16 901. Defendants' negligence includes, but is not limited to:

- 17 a. Designing, researching, developing, marketing, supplying, promoting, advertising,
18 operating, and distributing their social media platforms without thorough and adequate
19 pre- and post-market testing; design, research, development, testing, marketing, supply,
20 promotion, advertisement, operation, and distribution;
- 21 b. Failing to sufficiently study and conduct necessary tests to determine whether or not their
22 social media platforms were safe for youth users;
- 23 c. Failing to use reasonable and prudent care in the research, design, development, testing,
24 marketing, supply, promotion, advertisement, operation, and distribution of their social
25 media platforms, so as to avoid the risk of encouraging extended social media use;
- 26 d. Designing their social media platforms to maximize the amount of time users spend on
27 the platform and causing excessive and problematic use of their platforms, particularly
28 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.

902. 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.

903. 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.

904. 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.

905. 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.

906. 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.

907. 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.

908. 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

909. Plaintiff incorporates by reference all preceding paragraphs.

910. 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.

911. 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.

912. 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.

913. 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.

914. 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.

915. 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.

916. Defendants were grossly negligent in designing, researching, developing, testing, marketing, supplying, promoting, advertising, operating, and distributing their social media platforms.

1 917. As developers of widely used platforms backed by powerful algorithms designed to
2 maximize the amount of time users spend on the platform, Defendants knew or should have known their
3 platforms needed to be designed, researched, developed, tested, marketed, supplying, promoted,
4 advertised, operated, and distributed with due care to avoid causing needless harm. Defendants knew or
5 should have known their platforms could cause serious risk of harm, particularly to young persons like
6 students in Plaintiff's schools.

7 918. Defendants engaged in grossly negligent, willful, and/or wanton conduct that lacked any
8 care and amounted to an extreme departure from what a reasonably careful person would do in the same
9 situation to prevent harm to others. Defendants' willful and wanton conduct caused Plaintiff to suffer
10 harm.

11 919. The grossly negligent, willful, and wanton conduct of Defendants includes, but is not
12 limited to, the following:

- 13 a. Designing researching, developing, marketing, supplying, promoting, advertising,
14 operating, and distributing their social media platforms without thorough and adequate
15 pre- and post-market testing; design, research, development, testing, marketing, supply,
16 promotion, advertisement, operation, and distribution;
- 17 b. Failing to sufficiently study and conduct necessary tests to determine whether or not their
18 social media platforms were safe for youth users;
- 19 c. Failing to use reasonable and prudent care in the research, design, development, testing,
20 marketing, supply, promotion, advertisement, operation, and distribution of their social
21 media platforms so as to avoid the risk encouraging extended social media use;
- 22 d. Designing their social media platforms to maximize the amount of time users spend on
23 the platform and causing excessive and problematic use of their platforms, particularly
24 among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;
- 25 e. Failing to implement adequate safeguards in the design and operation of their platforms
26 to ensure they would not encourage excessive and problematic use of their platforms;

- 1 f. Designing and manufacturing their platforms to appeal to minors and young people who
2 lack the same cognitive development as adults and are particularly vulnerable to social
3 rewards like IVR and social reciprocity;
- 4 g. Failing to take adequate steps to prevent their platforms from being promoted,
5 distributed, and used by minors under the age of 13;
- 6 h. Failing to provide adequate warnings to child and adolescent users or parents who
7 Defendants could reasonably foresee would use their platforms;
- 8 i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the negative
9 mental health consequences associated with social media use, especially for children and
10 adolescents;
- 11 j. Failing to disclose to Plaintiff, users, and the general public that Defendants' platforms
12 are designed to maximize the time users, particularly youth, spend on Defendants'
13 platforms and cause negative mental health consequences;
- 14 k. Representing that Defendants' platforms were safe for child and adolescent users when,
15 in fact, Defendants knew or should have known that the platforms presented acute mental
16 health concerns for young users;
- 17 l. Failing to alert users and the general public, including students at Plaintiff's schools of
18 the true risks of using Defendants' platforms;
- 19 m. Advertising, marketing, and recommending Defendants' platforms while concealing and
20 failing to disclose or warn of the dangers known by Defendants to be associated with, or
21 caused by, youth use of Defendants' platforms;
- 22 n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and
23 distribute Defendants' platforms with knowledge that Defendants' platforms are
24 unreasonably unsafe, addictive, and dangerous to youth mental health;
- 25 o. Failing to modify Defendants' algorithms in a manner that would no longer prioritize
26 maximizing the amount of time users spend on Defendants' platforms over the safety of
27 its youth users; and
- 28 p. Committing other failures, acts, and omissions set forth herein.

1 920. Defendants breached the duties they owed to Plaintiff and in doing so were wholly
2 unreasonable.

3 921. Defendants breached their duties through their false and misleading statements and
4 omissions in the course of designing, manufacturing, distributing, and marketing their social media
5 platforms.

6 922. As a foreseeable consequence of Defendants' breaches of their duties, Plaintiff has
7 suffered and will continue to suffer direct and consequential economic and other injuries as a result of
8 dealing with the youth mental health crisis in Plaintiff's schools, as described herein.

9 923. Defendants engaged in conduct, as described above, that constituted malice, oppression,
10 or fraud, with intent to cause injury and/or with willful and knowing disregard of the rights or safety of
11 another, being fully aware of the probable dangerous consequences of the conduct and deliberately
12 failing to avoid those consequences.

13 924. Defendants regularly risk the health and lives of users of its platforms with full
14 knowledge of the dangers of its platforms. Defendants made conscious decisions not to redesign their
15 platforms, or warn the unsuspecting public, including Plaintiff and Plaintiff's students. Defendants'
16 willful, knowing, and reckless conduct therefore warrants an award of aggravated or punitive damages.

17 **VI. DEMAND FOR A JURY TRIAL**

18 925. Plaintiff hereby demands a trial by jury.

19 **VII. PRAYER FOR RELIEF**

20 926. Entering an Order that the conduct alleged herein constitutes a public nuisance under
21 California law;

22 927. Entering an Order that Defendants are jointly and severally liable;

23 928. Entering an Order requiring Defendants to abate the public nuisance described herein and
24 to deter and/or prevent the resumption of such nuisance;

25 929. Enjoining Defendants from engaging in further actions causing or contributing to the
26 public nuisance as described herein; and

27 930. Awarding equitable relief to fund prevention education and addiction treatment;

28 931. Awarding actual and compensatory damages;

