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9 SUPERIOR COURT OF THE STATE OF CALIFORNIA
10 COUNTY OF LOS ANGELES
(UNLIMITED JURISDICTION)

11 GERVAIS SCHOOL DISTRICT 1,

12 Plaintiff,

13 v.

14 META PLATFORMS, INC., FACEBOOK
15 HOLDINGS, LLC, FACEBOOK OPERATIONS,
16 LLC, META PAYMENTS INC., META
17 PLATFORMS TECHNOLOGIES, LLC,
18 INSTAGRAM, LLC, SICULUS, INC., SNAP
19 INC., TIKTOK INC., BYTEDANCE INC.,
20 GOOGLE LLC, and YOUTUBE, LLC,

21 Defendants.

Case No. **23STCV30215**

COMPLAINT

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I. INTRODUCTION

1. Meta Platforms, Inc., Facebook Holdings, LLC, Facebook Operations, LLC, Meta Payments Inc., Meta Platforms Technologies LLC, Instagram, LLC, Siculus, Inc., Snap Inc., TikTok Inc., ByteDance Inc., Google LLC, and YouTube, LLC (collectively, “**Defendants**”) design, market, promote, and operate social media platforms. Over the past decade, each has grown their respective platforms exponentially, from millions to billions of users. And Defendants have grown not just their user bases, but the frequency with which users use their platforms and the time each user spends on their platforms. Defendants’ growth is a product of choices they made to design and operate their platforms in ways that exploit the psychology and neurophysiology of their users into spending more and more time on their platforms. These techniques are both particularly effective and harmful to the youth audience Defendants have intentionally cultivated. The result—entirely foreseeable—is that today’s children and teenagers spend excessive amounts of time on Defendants’ platforms at great cost to their mental health. Defendants have created a mental health crisis among America’s youth.

2. Defendants have done so for profit. Their business models are based on advertisements. The more time users spend on their platforms, the more ads Defendants can sell.

3. Youth are central to Defendants’ business models. Youth are more likely to have a phone, to use social media, and to have downtime to spend on Defendants’ social media platforms. Plus, youth influence the behavior of their parents and younger siblings. As one Defendant put it, “los[ing] the teen foothold in the U.S.[.]” would mean “los[ing] the pipeline” for growth.¹

4. Defendants have maximized the time users—particularly youth—spend on their platforms by purposely designing, refining, and operating them to exploit the neurophysiology of the brain’s reward systems to keep users coming back, coming back frequently, and staying on the respective platforms for as long as possible.

5. Youth are particularly susceptible to Defendants’ manipulative conduct because their brains are not fully developed, and they consequently lack the same emotional maturity, impulse control, and psychological resiliency that other, more mature users generally possess.

¹ 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>].

1 6. Defendants have successfully exploited the vulnerable brains of youth, hooking tens of
2 millions of students across the country into positive feedback loops of excessive and problematic use of
3 Defendants’ social media platforms. Worse, the content Defendants curate and direct to youth is too
4 often harmful and exploitive (*e.g.*, promoting a “corpse bride” diet, eating 300 calories a day, or
5 encouraging self-harm).

6 7. Defendants’ misconduct has been a substantial factor in causing a youth mental health
7 crisis, which has been marked by higher and higher proportions of youth struggling with anxiety,
8 depression, thoughts of self-harm, and suicidal ideation. The rates at which children have struggled with
9 mental health issues have climbed steadily since 2010 and, by 2018, made suicide the second-leading
10 cause of death for youth. The pandemic and the corresponding increase in time youth spend on
11 Defendants’ platforms has only intensified this crisis.

12 8. The state of children’s mental health led the American Academy of Pediatrics, the
13 American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to
14 jointly declare a national emergency, and the U.S. Surgeon General to issue an advisory in 2021 “to
15 highlight the urgent need to address the nation’s youth mental health crisis.”²

16 9. In his 2022 State of the Union Address, President Joe Biden also called attention to the
17 harm social media has wrought on youth and implored all to “hold social media platforms accountable
18 for the national experiment they’re conducting on our children for profit.”³

19 10. Continuing the Department of Health and Human Services’ ongoing efforts to support
20 President Joe Biden’s strategy to transform mental health care, the Surgeon General released an advisory
21 in early May 2023 on the country’s “[e]pidemic of [l]oneliness and [i]solat[i]on,” where he outlined the
22 profound health consequences of social disconnection and laid out six pillars to improve connection
23

24 ² AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics
25 (Oct. 19, 2021), [https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-](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/)
26 [declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/](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/) [<https://perma.cc/JKF4-XZCT>]; U.S. Surgeon
27 General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic, U.S. Dep’t Health &
28 Hum. Servs. (Dec. 7, 2021), [https://public3.pagefreezer.com/browse/HHS.gov/30-12-](https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/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)
[2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-on-youth-mental-health-](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)
[crisis-further-exposed-by-covid-19-pandemic.html](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) [<https://perma.cc/G8AY-PCGA>].

³ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at [https://www.whitehouse.gov/state-of-](https://www.whitehouse.gov/state-of-the-union-2022/)
[the-union-2022/](https://www.whitehouse.gov/state-of-the-union-2022/) [<https://perma.cc/A9EH-DV4Q>]).

1 across the country, one being the need to “[r]eform [d]igital [e]nvironments.”⁴ Within its
2 recommendations to reform social media environments for youth, the advisory encourages companies to
3 introduce “age-appropriate protections and identity assurance mechanisms, to ensure safe digital
4 environments that enable positive social connection, particularly for minors.”⁵

5 11. Later that month, on May 23, 2023, the Surgeon General issued a second advisory,
6 calling for urgent action by policymakers, technology companies, researchers, families, and young
7 people to gain a better understanding of the impact of social media platforms, and create “safer, healthier
8 online environments to protect children.”⁶

9 12. Plaintiff Gervais School District 1 (“**Plaintiff**” or “**Gervais School District**”) brings this
10 action to do just that. Youth in Plaintiff’s community are experiencing the same mental health crisis
11 observed nationally.

12 13. Students experiencing anxiety, depression, and other mental health issues historically
13 perform worse in school, are less likely to attend class, are more likely to engage in substance use, and
14 are more likely to act out, all of which directly affects Plaintiff’s ability to fulfill its educational mission.

15 14. That is why Plaintiff, like 96% of other school districts in the United States, provides
16 mental health services to its students. For example, Plaintiff trains its teachers and staff to screen
17 students for mental health symptoms and refer them to services. But Plaintiff needs a comprehensive,
18 long-term plan and funding to drive a sustained reduction in the record rates of anxiety, depression,
19 suicidal ideation, and other tragic indices of the mental health crisis its youth are experiencing at
20 Defendants’ hands.

21 15. As aptly summarized by U.S. Senator Ron Wyden from Oregon, “[s]tudents, teachers and
22 counselors across Oregon tell me just how crucial school-based mental health services are to young
23 people facing challenges at home and in the classroom—but these services are stretched to the breaking
24

25 ⁴ *Our Epidemic of Loneliness and Isolation: The U.S. Surgeon General’s Advisory on the Healing Effects of Social*
26 *Connection and Community* at 51, U.S. Dep’t Health & Hum. Servs. (2023),
<https://www.hhs.gov/sites/default/files/surgeon-general-social-connection-advisory.pdf> [<https://perma.cc/574S-4VJD>].

27 ⁵ *Id.* at 63.

28 ⁶ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*, U.S. Dep’t Health &
Hum. Servs. (May 23, 2023), <https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html> [<https://perma.cc/FU9W-ZG2E>].

point.”⁷ Plaintiff, like many school districts across the state and country, is at a breaking point. Meanwhile, Defendants profit tremendously from their wrongful conduct. Plaintiff brings this action to remedy this wrong and hold Defendants accountable.

II. JURISDICTION AND VENUE

16. This Court has original jurisdiction over this action pursuant to Article VI, Section 10 of the California Constitution.

17. This Court has general personal jurisdiction over Defendants because each are headquartered and/or have their principal places of business in the State of California and have continuous and systematic operations within the State of California.

18. The Court also has specific personal jurisdiction over Defendants because they actively conduct substantial business in Los Angeles County and the State of California. Defendants have purposefully availed themselves of the privilege of conducting business in this State through the design, development, programming, promotion, marketing, operations, and distribution of their platforms at issue in this lawsuit and have purposefully directed their activities toward the State of California. Defendants have sufficient minimum contacts with the State of California to render the exercise of jurisdiction by this Court permissible under California law and the United States Constitution.

19. Venue is proper in this judicial district pursuant to California Code of Civil Procedure Sections 395 and 395.5 because at least some Defendants reside in this County, their principal places of business are in this County, and a substantial part of the events or omissions giving rise to the claims at issue in this Complaint arose in this County.

III. PARTIES

A. Plaintiff

20. Plaintiff Gervais School District 1 is a school district located in Marion County, Oregon. Gervais School District serves approximately 1,500 students at four schools, consisting of one elementary school, one middle school, one high school, and one K-12 online charter school.

⁷ Wyden, Merkley: Nearly \$20 Million to Oregon School Districts to Hire More Mental Health Providers, Off. Sen. Ron Wyden (Jan. 6, 2023), <https://www.wyden.senate.gov/news/press-releases/wyden-merkley-nearly-20-million-to-oregon-school-districts-to-hire-more-mental-health-providers> [<https://perma.cc/FGV7-33PC>].

B. Facebook and Instagram Defendants

21. Defendant Meta Platforms, Inc. (“**Meta**”), formerly known as Facebook, Inc., is a Delaware corporation with its principal place of business in Menlo Park, California.

22. Defendant Meta develops and maintains social media platforms, communication platforms, and electronic devices that are widely available to users throughout the United States. The platforms developed and maintained by Meta include Facebook (including its self-titled app, Marketplace, and Workplace), Messenger (including Messenger Kids), Instagram, and a line of electronic virtual reality devices and services called Meta Quest (collectively, “**Meta platforms**”).

23. Meta transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with its subsidiaries (identified below), Meta has advertised, marketed, and distributed the Meta platforms to consumers throughout the United States. At all times material to this Complaint, Meta formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

24. Defendant Meta’s subsidiaries include Facebook Holdings, LLC; Facebook Operations, LLC; Meta Payments Inc.; Meta Platforms Technologies LLC; Instagram, LLC; and Siculus, Inc.

25. Defendant Facebook Holdings, LLC (“**Facebook Holdings**”) was organized under the laws of the state of Delaware on March 11, 2020, and is a wholly owned subsidiary of Meta Platforms, Inc. Facebook Holdings is primarily a holding company for entities involved in Meta’s supporting and international endeavors, and its principal place of business is in Menlo Park, California. Defendant Meta is the sole member of Facebook Holdings.

26. Defendant Facebook Operations, LLC (“**Facebook Operations**”) was organized under the laws of the state of Delaware on January 8, 2012, and is a wholly owned subsidiary of Meta Platforms, Inc. The principal place of business of Facebook Operations is in Menlo Park, California. Defendant Meta is the sole member of Facebook Operations.

27. Defendant Meta Payments Inc. (“**Meta Payments**”) was incorporated in Florida on December 10, 2010, as Facebook Payments Inc. In July 2022, the entity’s name was amended to Meta Payments Inc. Meta Payments is a wholly owned subsidiary of Meta Platforms, Inc. Meta Payments manages, secures, and processes payments made through Meta, among other activities, and its principal

1 place of business is in Menlo Park, California.

2 28. Defendant Meta Platforms Technologies, LLC (“**Meta Technologies**”) was organized
3 under the laws of the state of Delaware as “Oculus VR, LLC” on March 21, 2014, and acquired by Meta
4 on March 25, 2014. In November 2018, the entity’s name was amended to Facebook Technologies,
5 LLC. In June 2022, the entity’s name was amended again, this time to Meta Platforms Technologies,
6 LLC. Meta Technologies develops Meta’s virtual and augmented reality technology, such as the Meta
7 Quest line of services, among other technologies related to Meta’s platforms, and its principal place of
8 business is in Menlo Park, California. Defendant Meta is the sole member of Meta Technologies.

9 29. Defendant Instagram, LLC (“**Instagram**”) was founded by Kevin Systrom and Mike
10 Krieger in October 2010 and is a social media platform designed for photo and video sharing. In April
11 2012, Meta purchased the company for approximately \$1 billion. Meta reformed the limited liability
12 company under the laws of the state of Delaware on April 7, 2012, and the company’s principal place of
13 business is in Menlo Park, California. Defendant Meta is the sole member of Instagram.

14 30. Defendant Siculus, Inc. (“**Siculus**”) was incorporated in Delaware on October 19, 2011.
15 Siculus is a wholly owned subsidiary of Meta, which supports Meta platforms by constructing data
16 facilities and other projects. Siculus’s principal place of business is in Menlo Park, California.

17 **C. Snap Defendant**

18 31. Defendant Snap Inc. (“**Snap**”) is a Delaware corporation with its principal place of
19 business in Santa Monica, California. Snap transacts or has transacted business in this District and
20 throughout the United States. At all times material to this Complaint, acting alone or in concert with
21 others, Snap has advertised, marketed, and distributed the Snapchat social media platform to consumers
22 throughout the United States. At all times material to this Complaint, Snap formulated, directed,
23 controlled, had the authority to control, or participated in the acts and practices set forth in this
24 Complaint.

25 **D. TikTok Defendants**

26 32. Defendant TikTok Inc. was incorporated in California on April 30, 2015, with its
27 principal place of business in Culver City, California. TikTok Inc. transacts or has transacted business in
28 this District and throughout the United States. At all times material to this Complaint, acting alone or in

1 concert with others, TikTok Inc. has advertised, marketed, and distributed the TikTok social media
2 platform to consumers throughout the United States. At all times material to this Complaint, acting alone
3 or in concert with ByteDance Inc., TikTok Inc. formulated, directed, controlled, had the authority to
4 control, or participated in the acts and practices set forth in this Complaint.

5 33. Defendant ByteDance Inc. (“**ByteDance**”) is a Delaware corporation with its principal
6 place of business in Mountain View, California. ByteDance transacts or has transacted business in this
7 District and throughout the United States. At all times material to this Complaint, acting alone or in
8 concert with others, ByteDance has advertised, marketed, and distributed the TikTok social media
9 platform to consumers throughout the United States. At all times material to this Complaint, acting alone
10 or in concert with TikTok Inc., ByteDance formulated, directed, controlled, had the authority to control,
11 or participated in the acts and practices set forth in this Complaint.

12 **E. YouTube Defendants**

13 34. Defendant Google is a limited liability company organized under the laws of the state of
14 Delaware, and its principal place of business is in Mountain View, California. Google LLC is the
15 managing member of YouTube, LLC. Google LLC transacts or has transacted business in this District
16 and throughout the United States. At all times material to this Complaint, acting alone or in concert with
17 others, Google LLC has advertised, marketed, and distributed its YouTube video sharing platform to
18 consumers throughout the United States. At all times material to this Complaint, acting alone or in
19 concert with YouTube, LLC, Google LLC formulated, directed, controlled, had the authority to control,
20 or participated in the acts and practices set forth in this Complaint.

21 35. Defendant YouTube, LLC is a limited liability company organized under the laws of the
22 state of Delaware, and its principal place of business is in San Bruno, California. YouTube, LLC is a
23 wholly owned subsidiary of Google LLC. YouTube, LLC transacts or has transacted business in this
24 District and throughout the United States. At all times material to this Complaint, acting alone or in
25 concert with Defendant Google LLC, YouTube, LLC has advertised, marketed, and distributed its
26 YouTube social media platform to consumers throughout the United States. At all times material to this
27 Complaint, acting alone or in concert with Google LLC, YouTube, LLC formulated, directed,
28 controlled, had the authority to control, or participated in the acts and practices set forth in this

Complaint.

IV. FACTUAL ALLEGATIONS

A. Millions of Youth Have Become Excessive and Problematic Users of Social Media

36. Researchers studying the effect social media⁸ has on the brain have shown that social media exploits “the same neural circuitry” as “gambling and recreational drugs to keep consumers using their products as much as possible.”⁹

37. As described below, each Defendant designed and marketed its exploitive social media platform to be extremely popular with youth. And they have all been successful. Approximately 90% of children ages 13–17 use social media.¹⁰ Younger children also regularly use social media. One study reported 38% of children ages 8–12 used social media in 2021.¹¹ Other studies reveal numbers as high as 49% of children ages 10–12 use social media and 32% of children ages 7–9 use social media.¹²

38. The most popular of these platforms is YouTube. 95% of children ages 13-17, a vast majority of this age group, have used YouTube.¹³

39. TikTok has skyrocketed in popularity with teenagers since its merger with Musical.ly in 2018. As of July 2020, “TikTok classified more than a third of its 49 million *daily* users in the United States as being 14 years old or younger[,]” and that likely underestimates those under 14 and older teenagers (*i.e.*, those between 15 and 18 years old) because TikTok claims not to know how old a third

⁸ The term “social media” is commonly used to refer to text, photos, videos, and ideas that are exchanged among virtual communities. The interactive technologies that allow for the virtual exchange of these media among networks of users are known as social media platforms.

⁹ *Social Media Addiction*, Addiction Ctr, <https://www.addictioncenter.com/drugs/social-media-addiction/#:~:text=Due%20to%20the%20effect%20that,when%20taking%20an%20addictive%20substance> [<https://perma.cc/94AL-ML97>] (last visited June 26, 2023).

¹⁰ *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 [<https://perma.cc/VF8P-9UNT>].

¹¹ 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 [<https://perma.cc/L6ND-X7VR>].

¹² *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child.’s Hosp. Univ. Mich. Health (Oct. 18, 2021), https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf [<https://perma.cc/ZNA9-W4E5>].

¹³ Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

of its daily users are.¹⁴ TikTok is now the second most popular social media platform with over 67% of children ages 13–17 having used the app.¹⁵

40. Instagram’s numbers are comparable to TikTok, with 62% of children ages 13–17 reporting they have used the app.¹⁶

41. Snapchat also remains popular with youth, with 59% of children ages 13–17 reporting they have used the app.¹⁷

42. Facebook rounds out the five most popular social media platforms, with 32% of children ages 13–17 reporting they have used Facebook’s app or website.¹⁸

43. Teenagers who use these social media platforms are also likely to use them every day. One study estimates that 62% of children ages 13–18 use social media every day.¹⁹ An increasing number of younger children also use social media daily with 18% of children ages 8–12 reporting using a social media site at least once a day.²⁰

44. Daily use for many teenagers does not consist of logging onto a platform just once. Rather, many teenage users check social media repeatedly throughout the day. In one study, teenage users reported checking Snapchat thirty times a day on average.²¹

45. Even more alarming, some teenagers never stop looking at social media.²²

¹⁴ 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> [<https://perma.cc/QQH8-SS5M>].

¹⁵ Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

¹⁶ *Id.*

¹⁷ *Id.*

¹⁸ *Id.*

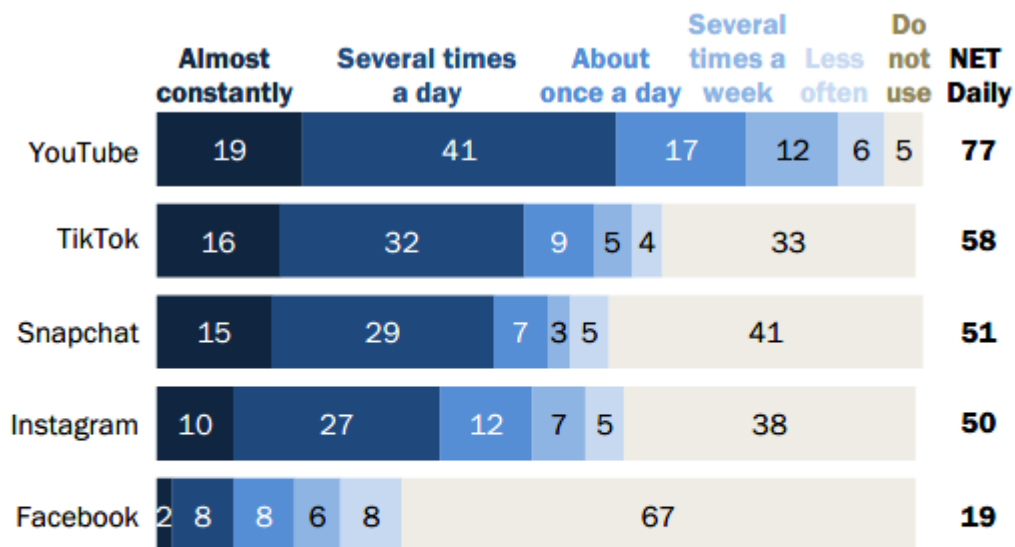
¹⁹ Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at 4, Common Sense Media (2022), https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf [<https://perma.cc/L6ND-X7VR>].

²⁰ *Id.* at 5.

²¹ Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), tinyurl.com/89ct4p88 [<https://perma.cc/XL9U-WH57>].

²² Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

46. As demonstrated in the chart below, nearly 20% of teens use YouTube almost constantly.²³ TikTok and Snapchat are close behind, with near constant use rates among teens at 16% and 15% respectively.²⁴ Meanwhile, 10% of teens use Instagram almost constantly.²⁵ And 2% of teens report using Facebook almost constantly.²⁶



Note: Teens refer to those ages 13 to 17. Those who did not give an answer are not shown.

Figures may not add up to the NET values due to rounding.

Source: Survey conducted April 14-May 4, 2022.

"Teens, Social Media and Technology 2022"

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47. Teenagers are aware of the grip social media has on their lives yet still cannot stop using it; 36% of teenagers admit they spend too much time on social media.²⁷ And over half of teens say that giving up social media would be somewhat hard, with nearly one-in-five teens saying giving up social media would be very hard.²⁸ And of the subgroup of teenagers who use at least one platform "almost constantly," 71% said giving up social media would be hard, with 32% saying giving up social media would be very hard.²⁹

²³ *Id.*

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

48. The more that teenagers use social media, the harder they find it to give up. Teenagers who say they spend too much time on social media are almost twice as likely to say that giving up social media would be hard as teens who see their social media usage as about right.³⁰

49. Another study shows that among teenagers who regularly use social media, 32% “wouldn’t want to live without” YouTube.³¹ 20% of teenagers said the same about Snapchat; 13% said the same about both TikTok and Instagram; and 6% said the same about Facebook.³²

50. Despite using social media frequently, most youth do not enjoy it. Only 27% of boys and 42% of girls ages 8–18 reported enjoying social media “a lot” in 2021.³³

B. Research Has Confirmed the Harmful Effects of Social Media on Youth

51. Social media use—especially excessive use—has severe and wide-ranging effects on youth mental health. Social media use is linked to increases in mental, emotional, developmental, and behavior disorders. Independent research and internal data from these social media platforms show social media has a direct negative impact on teenagers’ mental health on various fronts.

52. In general, moderate or high rates of any electronic screen use are associated with lower psychological well-being for children and adolescents.³⁴ Those with high screen time (seven+ hours/day) are twice as likely to receive diagnoses of depression, anxiety, or need treatment for mental or behavior health conditions compared to low-screen-time users (one hour/day).³⁵

53. Researchers have found that high-volume social media use is associated with increased levels of depression and anxiety for adults.³⁶ Social media has particularly detrimental effects on the

³⁰ *Id.*

³¹ Victoria Rideout *et al.*, *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 [<https://perma.cc/L6ND-X7VR>].

³² *Id.*

³³ *Id.* at 34.

³⁴ 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 *Prev. Med. Rep.* 271–83 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/> [<https://perma.cc/F9VM-MBRW>]; Ariel Shensa *et al.*, *Social Media Use and Depression and Anxiety Symptoms: A Cluster Analysis*, 42(2) *Am. J. Health Behav.* 116–28 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904786/> [<https://perma.cc/PTD2-G6XL>].

³⁵ *Id.*

³⁶ Ariel Shensa *et al.*, *Social Media Use and Depression and Anxiety Symptoms: A Cluster Analysis*, 42(2) *Am. J. Health Behav.* 116–28 (2018), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904786/> [<https://perma.cc/PTD2-G6XL>].

1 mental health of adolescents. Depressive symptoms, suicide-related outcomes, and suicide rates among
2 adolescents increased between 2010 and 2015, at the same time that youth use of social media
3 increased.³⁷ Researchers examining the link between these increases found that adolescents who spent
4 more time on screen activities were significantly more likely to have high depressive symptoms or have
5 at least one suicide-related outcome, and that the highest levels of depressive symptoms were reported
6 by adolescents with high social media use and fewer in-person social interactions.³⁸

7 54. One of the primary reasons the use of social media is associated with depressive
8 symptoms among adolescents is because it encourages unhealthy social comparison and feedback-
9 seeking behaviors.³⁹ Because adolescents spend a majority of their time on social media looking at other
10 users' profiles and photos, rather than updating their own profiles, they are likely to engage in negative
11 comparisons with their peers.⁴⁰ Specifically, adolescents are likely to engage in harmful upward
12 comparisons with others they perceive to be more popular.⁴¹

13 55. Clinicians have also observed a clear relationship between youth social media use and
14 disordered eating behavior.⁴² One study found that the more social media accounts an adolescent has,
15 the higher their scores on evaluations of disordered eating behaviors and cognitions.⁴³ Additionally, the
16 study found that, for girls, greater daily time spent using Instagram and Snapchat was associated with
17 significantly higher scores on evaluations of disordered eating behaviors.⁴⁴

19 Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S.*
20 *Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 *Clinical Psych. Sci.* 3–17 (2017),
<https://doi.org/10.1177/2167702617723376>.

21 ³⁷ Fazida Karim *et al.*, *Social Media Use and Its Connection to Mental Health: A Systemic Review*, *Cureus* Volume 12(6)
(June 15, 2020), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7364393/> [<https://perma.cc/PBC3-LF35>].

22 ³⁸ *Id.*

23 ³⁹ Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and*
Popularity Moderate Associations with Depressive Symptoms, 43 *J. Abnormal Child Psych.* 1427–38 (2015),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/> [<https://perma.cc/ZZW4-J3B2>].

24 ⁴⁰ *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, *BMC Psych.* 10, 279 (2022),
<https://doi.org/10.1186/s40359-022-00990-7> [<https://perma.cc/Z3K2-ZWRC>] (explaining that youth are particularly
25 vulnerable because they “use social networking sites for construing their identity, developing a sense of belonging, and for
26 comparison with others”).

27 ⁴¹ *Id.*

28 ⁴² 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 (2020), <https://pubmed.ncbi.nlm.nih.gov/31797420/> [<https://perma.cc/VE58-DSAC>].

⁴³ *Id.*

⁴⁴ *Id.*

56. Social media use also contributes to sleep deprivation. Young adults who spend a lot of time on social media during the day or check it frequently throughout the week are more likely to suffer sleep disturbances than their peers who use social media infrequently.⁴⁵ In turn, disturbed and insufficient sleep is associated with poor health outcomes.⁴⁶ One study found 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 the fear of missing out.⁴⁷

57. Defendants exacerbate the disruption of sleep by sending push notifications and emails either at night when children should be sleeping or during school hours when they should be studying, thereby prompting children to re-engage with Defendants' platforms at times when using them is harmful to their health and well-being.

58. Further, children are especially vulnerable to developing harmful behaviors because the prefrontal cortex is not fully developed in children and teens.⁴⁸ Consequently, they find it particularly difficult to exercise the self-control required to regulate their own use of Defendants' platforms. In this regard, self-regulation allows people to delay gratification, postponing an immediate reward for a better reward later. Adolescents' low capacity for self-regulation means they are particularly vulnerable to the immediately pleasurable, but ultimately harmful, effects of the repeated dopamine spikes caused by an external stimulus, such as "likes" that activate the reward system in the brain.⁴⁹

59. As discussed in further detail *infra* Section IV.D, these reward-based learning systems "contribute to the maintenance of excessive usage patterns."⁵⁰ Researchers investigating the

⁴⁵ Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85 Preventive Med. 36–41 (Apr. 2016), <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025> [<https://doi.org/10.1016/j.ypmed.2016.01.001>].

⁴⁶ *Id.*

⁴⁷ See, e.g., 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> [<https://perma.cc/X4J4-KYTW>] (approximately 12.5% of children report waking up to check social media notifications).

⁴⁸ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC Psych. 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7> [<https://perma.cc/Z3K2-ZWRC>].

⁴⁹ *Id.*

⁵⁰ *Id.*

1 “directionality between social networking [platforms] and problematic use,” have found that “increases
2 in the intensity of use . . . predict[] problematic use.”⁵¹ And empirical studies have found that
3 problematic use is associated with “insomnia, stress, relationship dissatisfaction, anxiety, social anxiety,
4 and depressive symptoms.”⁵²

5 60. In this regard, adolescents are especially vulnerable to long-term harm from Defendants’
6 platforms because excessive and problematic use can disrupt their brains’ development at a critical
7 stage.

8 **C. As a Result, America’s Youth are Facing a Mental Health Crisis**

9 61. The number of youth using Defendants’ social media platforms and the intensity of their
10 use has increased significantly since 2008, which has contributed to a wide range of negative effects on
11 youth mental health. Over that same time the number of youth experiencing depression, contemplating
12 suicide, seeking emergency room help for mental health issues and—tragically—committing suicide has
13 skyrocketed.

14 62. These issues led the United States Surgeon General to issue an advisory on the youth
15 mental health crisis in December 2021.⁵³ In issuing the advisory, the Surgeon General noted, “[m]ental
16 health challenges in children, adolescents, and young adults are real and widespread. Even before the
17 pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and
18 thoughts of suicide — and rates have increased over the past decade.”⁵⁴

19 63. While the report highlights ways in which the COVID-19 pandemic has exacerbated
20 mental health issues for American youth, it also highlights the mental health challenges youth faced
21 before the pandemic. Specifically, the report notes that before the pandemic, “mental health challenges
22 were the leading cause of disability and poor life outcomes in young people.”⁵⁵

24 ⁵¹ *Id.*

25 ⁵² *Id.* (collecting sources).

26 ⁵³ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health & Hum. Servs. (Dec. 7, 2021),
<https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf> [<https://perma.cc/SQZ7-NDFR>].

27 ⁵⁴ *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic*, U.S.
Dep’t Health & Hum. Servs. (Dec. 7, 2021), [https://public3.pagefreezer.com/browse/HHS.gov/30-12-
2021T15:27/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](https://public3.pagefreezer.com/browse/HHS.gov/30-12-2021T15:27/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) [<https://perma.cc/G8AY-PCGA>].

28 ⁵⁵ *Id.*

64. In fact, before the pandemic, one in five children ages 3–17 in the United States had a mental, emotional, developmental, or behavior disorder.⁵⁶

65. From 2009 to 2019, the rate of high school students who reported persistent feelings of sadness or hopelessness increased by 40% (to one out of every three kids).⁵⁷ The proportion of kids seriously considering attempting suicide increased by 36% and the share creating a suicide plan increased by 44%.⁵⁸

66. From 2007 to 2019, suicide rates among youth ages 10–24 in the United States increased by 57%.⁵⁹ By 2018, suicide was the second leading cause of death for youth ages 10–24.⁶⁰

67. From 2007 to 2016, emergency room visits for youth ages 5–17 rose 117% for anxiety disorders, 44% for mood disorders, and 40% for attention disorders.⁶¹

68. This and other data led the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to join the Surgeon General and declare a national emergency in child and adolescent mental health in December 2021.⁶²

69. President Biden also addressed the mental health harms Defendants’ platforms have caused youth in his 2022 state of the union address⁶³ and again in 2023, demanding to “finally hold social media platforms accountable for [the] experimenting they’re doing – running [on] children for profit.”⁶⁴

70. The national youth mental health crisis continues to worsen. In May 2023, the Surgeon

⁵⁶ *Id.*

⁵⁷ *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory* at 8, U.S. Dep’t Health & Hum. Servs. (Dec. 7, 2021), <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf> [<https://perma.cc/SQZ7-NDFR>].

⁵⁸ *Id.*

⁵⁹ *Id.*

⁶⁰ *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/> [<https://perma.cc/JKF4-XZCT>].

⁶¹ Matt Richtel, *A Teen’s Journey Into the Internet’s Darkness and Back Again*, N.Y. Times (Aug. 22, 2022), <https://www.nytimes.com/2022/08/22/health/adolescents-mental-health-technology.html> [<https://perma.cc/SL22-JTMG>].

⁶² *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/> [<https://perma.cc/JKF4-XZCT>].

⁶³ President Biden, *State of the Union Address* (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/> [<https://perma.cc/A9EH-DV4Q>]).

⁶⁴ President Biden, *State of the Union Address* (Feb. 7, 2023) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2023/> [<https://perma.cc/H4P7-NY8P>]).

General issued a new advisory about the effects of social media on youth mental health based on the most recent research.⁶⁵

71. For example, the Surgeon General cites research that indicates that youth who spend more than three hours per day on social media platforms face twice the risk of experiencing poor mental health outcomes, such as symptoms of depression and anxiety.⁶⁶ And the most recent data, as the Surgeon General notes, indicates social media use by young people is “nearly universal,” with up to 95% of youth ages 13–17 using social media platforms and more than 33% of youth saying they use social media “almost constantly.”⁶⁷ On average, the data reveals that “8th and 10th graders now spend an average of 3.5 hours per day on social media.”⁶⁸

72. The Surgeon General’s advisory highlights two primary ways in which social media platforms can harm youth. First, “[e]xtreme, inappropriate, and harmful content continues to be easily and widely accessible by children and adolescents,” which the advisory notes “can be spread through direct pushes, unwanted content exchanges, and algorithmic designs.”⁶⁹ Second, “[e]xcessive and problematic use of social media can harm children and adolescents by disrupting important healthy behaviors.”⁷⁰ As the advisory explains, “[s]ocial media platforms are often designed to maximize user engagement, which has the potential to encourage excessive use and behavioral dysregulation.”⁷¹ Moreover, the advisory cites research indicating that “social media exposure can overstimulate the reward center in the brain and, when the stimulation becomes excessive, can trigger pathways comparable to addiction.”⁷² Youth are more vulnerable to these risks because their brains are still

⁶⁵ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*, U.S. Dep’t Health & Hum. Servs. (May 23, 2023), <https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html> [<https://perma.cc/FU9W-ZG2E>].

⁶⁶ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 6, U.S. Dep’t Health & Hum. Servs. (2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf> [<https://perma.cc/39QN-NAY7>].

⁶⁷ *Id.* at 4.

⁶⁸ *Id.* at 7 (citation omitted).

⁶⁹ *Id.* at 8.

⁷⁰ *Id.* at 9.

⁷¹ *Id.*

⁷² *Id.*

1 developing, and many self-identify as having “addictions” to social media.⁷³ A study published in 2023
2 on the gender-specific impacts of social media found that more than one-third of girls aged 11–15 say
3 they feel “addicted” to certain social media platforms.⁷⁴

4 73. “Our children,” as the Surgeon General explained in his advisory, “have become
5 unknowing participants in a decades-long experiment.”⁷⁵ The risk of harm to an entire generation is too
6 great to wait, especially in the face of what the Surgeon General described as “*ample* indicators that
7 social media can [] have a profound risk of harm to the mental health and well-being of children and
8 adolescents.”⁷⁶ Therefore, the Surgeon General issued a call in his 2023 advisory to “urgently take
9 action to create safe and healthy digital environments that minimize harm and safeguard children’s and
10 adolescents’ mental health and well-being during critical stages of development.”⁷⁷

11 74. The White House echoed these concerns, announcing in May 2023 that the “United
12 States is experiencing an unprecedented youth mental health crisis” and “there is now *undeniable*
13 evidence that social media and other online platforms have contributed to [this] youth mental health
14 crisis.”⁷⁸ The White House explained that “online platforms often use manipulative design techniques
15 embedded in their products to promote addictive and compulsive use by young people to generate more
16 revenue.”⁷⁹ The White House also specifically recognized the impact on school districts, noting that
17 “[s]ocial media use in schools is affecting students’ mental health and disrupting learning.”⁸⁰

18 75. Given the totality of these findings, the Surgeon General urged social media companies to
19 take responsibility in creating safe online environments by changing their practices and adopting
20

21 ⁷³ *Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental Health*, U.S. Dep’t Health &
22 Hum. Servs. (May 23, 2023), <https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html> [<https://perma.cc/FU9W-ZG2E>].

23 ⁷⁴ *Id.*

24 ⁷⁵ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 11, U.S. Dep’t Health & Hum. Servs.
(2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf> [<https://perma.cc/39QN-NAY7>].

25 ⁷⁶ *Id.* at 4 (emphasis added).

26 ⁷⁷ *Id.*

27 ⁷⁸ *Fact Sheet: Biden-Harris Administration Announces Actions to Protect Youth Mental Health, Safety & Privacy Online*,
The White House (May 23, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/23/fact-sheet-biden-harris-administration-announces-actions-to-protect-youth-mental-health-safety-privacy-online/>
[<https://perma.cc/22Q4-PHSP>] (emphasis added).

28 ⁷⁹ *Id.*

⁸⁰ *Id.*

specific policies to, for example:

- a. “Prioritize and leverage expertise in developmental psychology and user mental health and well-being in product teams to minimize risks of harm to children and adolescents[;]”⁸¹
- b. Design platforms and algorithms to prioritize health and safety as the first principle;⁸²
- c. “[A]void design features that attempt to maximize time, attention, and engagement[;]”⁸³
- d. “Create effective and timely systems and processes to adjudicate requests and complaints” from youth, families, and educators “to address online abuse, harmful content and interactions, and other threats to children’s health and safety[;]”⁸⁴
- e. “Share data relevant to the health impact of platforms and strategies” with the public and independent researchers;⁸⁵
- f. “Conduct and facilitate transparent and independent assessments of the impact of social media products and services on children and adolescents[;]”⁸⁶
- g. Minimize risk of harm by creating default settings for children that are set to the highest safety and priority standards, written in easy-to-read and highly visible formats;⁸⁷ and
- h. “Adhere to and enforce age minimums...that respect the privacy of youth users.”⁸⁸

D. Defendants Intentionally Target Youth Users with the Marketing, Design, and Operation of Their Social Media Platforms

76. This mental health crisis is no accident. It is the result of the Defendants’ deliberate choices and affirmative actions to design and market their social media platforms to attract youth.

77. Defendants each run and operate social media platforms. The interactive features Defendants provide on their platforms are similar in many respects. For example, Facebook, Instagram, Snap, TikTok, and YouTube all offer tailored “feeds” of content curated by complex algorithms

⁸¹ *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 16, U.S. Dep’t Health & Hum. Servs. (2023), <https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf> [<https://perma.cc/39QN-NAY7>].

⁸² *Id.*

⁸³ *Id.*

⁸⁴ *Id.*

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *Id.*

intended to learn users' interests; ways to publicly express affirmation for such curated content through "likes," comments, and sharing or reposting the content; and, in fact, each is known to copy the designs and features of one another.⁸⁹ The salient features of Defendants' social media platforms are described in more detail below.

78. Defendants' make money from their social media platforms by using them as advertising platforms. Defendants collect data on their users' viewing habits and behaviors and use that data to sell advertisers access to their youth and other users to allow those companies to promote their products. Advertisers pay a premium to target advertisements to specific categories of users, including youth.

79. Defendants view their population of adolescent and even pre-adolescent users as one of their most valuable commodities. Young users are central to Defendants' business model and advertising revenue as an audience for advertisements because children are more likely than adults to use social media. Today, 95% of children ages 13–17 have cellphones,⁹⁰ 90% use social media,⁹¹ and 28% buy products and services through social media.⁹²

80. To profit from these young users, Defendants intentionally market their platforms to youth and adolescents. For children under 13, the Children's Online Privacy Protection Act ("COPPA")⁹³ regulates the conditions under which platforms like Defendants' can collect and use their information.

81. COPPA requires platforms that either target children under age 13 or have actual knowledge of users under age 13 to obtain "verifiable parental consent" prior to collecting and using information about children under age 13.⁹⁴ Defendants have blatantly violated COPPA or turned a blind

⁸⁹ See, e.g., Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*, Gizmodo (Aug. 16, 2022), <https://www.gizmodo.com.au/2022/08/for-sites-like-instagram-and-twitter-imitation-is-the-only-form-of-flattery/> [<https://perma.cc/U5E9-8X6L>].

⁹⁰ Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

⁹¹ *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 [<https://perma.cc/VF8P-9UNT>].

⁹² Erinn Murphy et al., *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), tinyurl.com/89ct4p88 [<https://perma.cc/XL9U-WH57>].

⁹³ See 15 U.S.C. §§ 6501-6506.

⁹⁴ *Id.*

1 eye to younger users on their platforms by leaving users to self-report their age.

2 82. Seeking to capture even younger audiences, Defendants have each offered “kid versions”
3 of their platforms, which, while not collecting users’ information, are “designed to fuel [kids’] interest in
4 the grown-up version.”⁹⁵

5 83. To maximize revenue, Defendants have intentionally designed and operated their
6 platforms to maximize users’ screen time. Defendants have built features intended to exploit human
7 psychology and designed complex algorithms driven by advanced artificial intelligence and machine-
8 learning systems, progressively modifying their platforms in ways that promote excessive and
9 problematic use—despite knowing these practices are harming young users.

10 84. One way Defendants maximize the time users spend on their platforms involves the
11 design of feeds—whether of photos, videos, or sponsored or promoted content. Each Defendant uses
12 algorithms to serve users personalized content for them to consume ad nauseum. Google’s former design
13 ethicist, Tristan Harris, explained that this never-ending stream is designed to “keep [users] scrolling,
14 and purposely eliminate any reason for [them] to pause, reconsider or leave.”⁹⁶ Defendants’ feeds take
15 “an experience that was bounded and finite, and turn it into a bottomless flow that keeps going.”⁹⁷ This
16 “flow state,” as psychologists describe it, “fully immerse[s]” users, distorts their perception of time, and
17 “has been shown to be associated with problematic use of social networking sites.”⁹⁸

18 85. A second way social media platforms manipulate users is through social reciprocity.
19 “Reciprocity,” from a psychology perspective, refers to the powerful social phenomenon of how people
20 respond to positive or, conversely, hostile actions. Reciprocity means that in response to friendly
21
22
23

24 ⁹⁵ Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), [https://ifstudies.org/blog/is-tiktok-](https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-)
25 [dangerous-for-teens-](https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-) [<https://perma.cc/RGX9-3JWC>].

26 ⁹⁶ 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>
27 [<https://perma.cc/E328-D8WY>].

28 ⁹⁷ *Id.*

⁹⁸ Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC Psych. 10, 279 (2022), [https://doi.org/10.1186/s40359-022-](https://doi.org/10.1186/s40359-022-00990-7)
[00990-7](https://doi.org/10.1186/s40359-022-00990-7) [<https://perma.cc/Z3K2-ZWRC>].

actions, people respond in a friendly manner and vice versa.⁹⁹ Sociologist Phillip Kunz best illustrated the automatic nature of reciprocity through his Christmas card experiment. In the experiment, Mr. Kunz sent a group of complete strangers holiday cards with pictures of his family and included a brief note.¹⁰⁰ Those people, whom he had never met or communicated with before, reciprocated, flooding him with holiday cards.¹⁰¹ The majority of the responses did not even ask Mr. Kunz who he was.¹⁰² They simply responded to his initial gesture with a reciprocal action.

86. Reciprocity is why Facebook and Snapchat automatically tell a “sender when you ‘saw’ their message, instead of letting you avoid disclosing whether you read it. As a consequence, you feel more obligated to respond[,]” immediately.¹⁰³ Through these alerts and other push notifications, users feel psychologically compelled to return to the platform.

87. A third way Defendants manipulate users to keep using or coming back to their platforms is through the use of intermittent variable rewards (“**IVR**”). Also referred to as random rewards or random reinforcement, IVR is another principle of behavioral psychology that has been recognized and studied for decades. The rewards are variable because the behavior is not rewarded every time. Slot machines are the classic example of how IVR works.¹⁰⁴ With each pull of the lever on a slot machine, the user may or may not win a prize. Slot machine winnings are intermittent and vary in value. As casino owners know, IVR creates behaviors that are very hard to stop, even when the rewards are no longer given out.

88. The neurobiology behind the effectiveness of IVR is well understood. IVR works by

⁹⁹ Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J. Econ. Persps. 159–81 (2000), https://www.researchgate.net/profile/Ernst-Fehr-2/publication/23756527_Fairness_and_Retaliation_The_Economics_of_Reciprocity/links/5eb024e945851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf [<http://dx.doi.org/10.2139/ssrn.229149>].

¹⁰⁰ Phillip R. Kunz & Michael Woolcott, *Season’s Greetings: From my status to yours*, 5(3) Soc. Sci. Rsch. 269–78 (Sept. 1976), <https://www.sciencedirect.com/science/article/abs/pii/0049089X7690003X?via%3Dihub> [[https://doi.org/10.1016/0049-089X\(76\)90003-X](https://doi.org/10.1016/0049-089X(76)90003-X)].

¹⁰¹ *Id.*

¹⁰² *Id.*

¹⁰³ 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> [<https://perma.cc/E328-D8WY>].

¹⁰⁴ 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> [<https://perma.cc/2HES-Y3AB>].

spacing out dopamine-triggering stimuli with dopamine gaps—allowing for anticipation and craving to develop, which strengthens the desire to engage in the activity with each release of dopamine.

89. Defendants integrate IVR into the design and operations of their respective platforms by “link[ing] a user’s action (like pulling a lever) with a variable reward.”¹⁰⁵ 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.”¹⁰⁶ Meta also delays the time it takes to load the feed. “This is because without that three-second delay, Instagram wouldn’t feel variable.”¹⁰⁷ Without that delay, there would be no time for users’ anticipation 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.”¹⁰⁸ Each of the Defendants’ platforms exploits this biochemical reaction among its users, typically using “likes,” “hearts,” or other forms of approval that serve as the reward. *See infra* Section IV.D.1–4.

90. “Everyone innately responds to social approval, but some demographics, in particular teenagers, are more vulnerable to it than others.”¹⁰⁹

91. Youth are especially vulnerable both to the ways in which Defendants manipulate users to maximize their “watch time,” and to the resulting harms. Children’s brains undergo a fundamental shift around age 10 that makes “preteens extra sensitive to attention and admiration from others.”¹¹⁰ Consequently, for young users of social media, Defendants’ use of IVR, reciprocity, and other “rewards” taps into this heightened sensitivity at a critical time in their development.

92. Adolescence is a period of rapid growth and development in the human brain, second only to infancy in that regard. As a result of many of these changes during adolescence, preteens and

¹⁰⁵ 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> [<https://perma.cc/E328-D8WY>].

¹⁰⁶ *Id.*

¹⁰⁷ 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> [<https://perma.cc/2HES-Y3AB>].

¹⁰⁸ *Id.*

¹⁰⁹ 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> [<https://perma.cc/E328-D8WY>].

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> [<https://perma.cc/J68J-JZPE>].

1 teens are highly sensitive to both positive and negative social stimuli. The structures of the brain
2 “closely tied” to social media activity and that drive instinctual behavior begin to change.¹¹¹ The ventral
3 striatum is one of those structures. It receives a rush of dopamine and oxytocin, known as the “happy
4 hormones[,]” whenever we experience social rewards.¹¹² Between the ages of 10 and 12, the receptors
5 for those happy hormones begin to multiply in this region of the brain, which makes compliments on a
6 new hairstyle, laughter from a classmate, or other social rewards “start to feel a lot more satisfying.”¹¹³

7 93. These biological changes incentivize kids and teens to develop healthy social skills and
8 connections. “But arriving at school in a new pair of designer jeans, hoping your crush will smile at you
9 in the hallway, is worlds away from posting a video on TikTok that may get thousands of views and
10 likes,” according to Mitch Prinstein, Chief Science Officer for the American Psychology Association.¹¹⁴

11 94. Part of what makes interactions on social media so different is that they are often
12 permanent and public in nature. There is no public ledger tracking the number of consecutive days you
13 have spoken to someone, like there is for Snap “streaks.” Similarly, “[a]fter you walk away from a
14 regular conversation, you don’t know if the other person liked it, or if anyone else liked it[.]”¹¹⁵
15 Conversely, on Defendants’ platforms, kids, their friends, and even complete strangers can publicly
16 deliver or withhold social rewards in the form of likes, comments, views, and follows.¹¹⁶

17 95. These social rewards release dopamine and oxytocin in the brains of youth and adults
18 alike but there are two key differences, as Chief Science Officer Prinstein explained: “First, adults tend
19 to have a fixed sense of self that relies less on feedback from peers. Second, adults have a more mature
20 prefrontal cortex, an area that can help regulate emotional responses to social rewards.”¹¹⁷

21 96. Adolescents, by contrast, are in a “period of personal and social identity formation,”
22
23
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25 ¹¹¹ *Id.*

26 ¹¹² *Id.*

27 ¹¹³ *Id.*

28 ¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

much of which “is now reliant on social media.”¹¹⁸ “Due to their limited capacity for self-regulation and their vulnerability to peer pressure,” adolescents “are at greater risk of developing mental disorder.”¹¹⁹

97. Together, Meta, Snap, TikTok, and Google have designed, refined, marketed, and operated their social media platforms to maximize the number of youth who use their platforms and the time they spend on those platforms. Despite knowing that social media inflicts harms on youth, Defendants have continued to create more sophisticated versions of their platforms with features designed to keep users engaged and maximize the amount of time they spend using social media. Defendants’ conduct in designing and marketing exploitive and manipulative platforms, youth spend excessive amounts of time on Defendants’ platforms.

98. Defendants’ efforts worked. The majority of teenagers use the same five social media platforms: YouTube, TikTok, Instagram, Snapchat, and Facebook.¹²⁰ Each of these platforms individually boasts high numbers of teenage users.

1. Meta Intentionally Marketed to and Designed Their Social Media Platforms for Youth Users, Substantially Contributing to the Mental Health Crisis

a. The Meta Platform

99. Meta platforms, including Facebook and Instagram, are among the most popular social networking platforms in the world, with more than 3.6 billion users worldwide.¹²¹

(i) The Facebook Platform

100. Facebook is a social networking platform that is one of Meta’s platforms.

101. Facebook was founded in 2004 and has become the largest social network in the world. As of October 2021, Facebook had approximately 2.9 billion monthly active users, approximately 2

¹¹⁸ Betül Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, Int’l J. Adolescence & Youth (202) 25:1, 79–93 (Mar. 3, 2019), https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf [<https://doi.org/10.1080/02673843.2019.1590851>].

¹¹⁹ *Id.*

¹²⁰ Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

¹²¹ Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, Statista (Oct. 29, 2021), <https://www.statista.com/chart/2183/facebook-mobile-users/> [<https://perma.cc/5NCB-AG9B>].

1 billion of whom use Facebook every day.¹²²

2 102. When Facebook was founded in 2004, only students at certain colleges and universities
3 could use the social media platform, and verification of college enrollment was required to access
4 Facebook.

5 103. In 2005, Facebook expanded and became accessible to students at more universities
6 around the world, after which Meta launched a high school version of Facebook that also required an
7 invitation to join.

8 104. Meta later expanded eligibility for Facebook to employees of several companies,
9 including Apple and Microsoft, and added more universities to its network.

10 105. In September 2006, Facebook became available to all internet users. At the time, Meta
11 claimed that it was open only to persons aged 13 and older with a valid email address; however, on
12 information and belief, Meta did not in fact require verification of a user's age or identity and did not
13 actually verify users' email addresses, such that underage users could easily register an account with and
14 access Facebook.

15 106. Facebook then underwent a series of changes aimed at increasing user engagement and
16 platform growth, without regard to user safety, including the following:

- 17 a. In 2009, Facebook launched the "like" button;
- 18 b. In 2011, Facebook launched Messenger, its direct messaging service, and started
19 allowing people to subscribe to accounts outside of their "friends";
- 20 c. In 2012, Facebook started showing advertisements in its news feed and launched a real-
21 time bidding system through which advertisers could bid on users based on their visits to
22 third-party websites;
- 23 d. In 2014, Facebook's facial recognition algorithm (DeepFace) reached near-human
24 accuracy in identifying faces;
- 25 e. In 2015, Facebook made significant changes to its news feed algorithm to determine what
26 content to show users and launched its live-streaming service;

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28 ¹²² See *id.*; S. Dixon, *Number of Daily Active Facebook Users Worldwide as of 3rd Quarter 2022 (in Millions)*, Statista (Oct. 27, 2022), <https://www.statista.com/statistics/346167/facebook-global-dau/> [<https://perma.cc/WC96-FA6Z>].

- f. In 2016, Facebook launched games for its social media platform, so that users could play games without having to install new apps; and
- g. In 2017, Facebook launched Facebook Creator, an app for mobile video posts that assists with content creation.

(ii) The Instagram Platform

107. Instagram is a social media platform that launched in 2010, which Meta acquired for \$1 billion in April 2012.

108. Instagram enables users to share photos and videos with other users and to view other users' photos and videos. These photos and videos appear on users' Instagram "feeds," which are virtually bottomless, scrollable lists of content.

109. After being acquired by Meta, Instagram experienced exponential user growth, expanding from approximately 10 million monthly active users in September 2012 to more than one billion monthly active users worldwide today, including approximately 160 million users in the United States.¹²³

110. Instagram's user growth was driven by design and development changes to the Instagram platform that increased engagement at the expense of the health and well-being of Instagram's users—especially the children using the platform.

111. For example, in August 2020, Instagram began hosting and recommending short videos to users, called Reels.¹²⁴ Like TikTok, Instagram allows users to view an endless feed of Reels that are recommended and curated to users by Instagram's algorithm.

112. Instagram has become the most popular photo sharing social media platform among children in the United States—approximately 72% of children aged 13–17 in the United States use Instagram.¹²⁵

¹²³ S. Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista (May 23, 2022), <https://www.statista.com/statistics/183585/instagram-number-of-global-users/> [<https://perma.cc/6LZ4-BGBB>].

¹²⁴ *Introducing Instagram Reels*, Instagram (Aug. 5, 2020), <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement> [<https://perma.cc/6FJX-3LV2>].

¹²⁵ 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/> [<https://perma.cc/C244-RDFH>].

1 **b. Meta Markets Its Platforms to Youth**

2 113. To maximize the revenue generated from relationships with advertisers, Meta has
3 expended significant effort to attract youth, to its platforms, including designing features that appeal to a
4 teen and preteen audience. Meta explicitly targets teenagers for multiple reasons. In part, Meta views
5 teenagers as a way to attract other potential users, such as by using teenagers to recruit parents who want
6 to participate in their children’s lives as well as younger siblings who look to older siblings as models
7 for which social media platforms to use and how to use them.¹²⁶

8 114. Most importantly, Meta recognizes that teenagers are the “pipeline” for the continued
9 growth of the company. An internal Instagram strategy memo warned in 2020, “[i]f we lose the teen
10 foothold in the U.S. we lose the pipeline”.¹²⁷ A 2018 marketing presentation declared the loss of teenage
11 users to other social media platforms an “existential threat.”¹²⁸ In response, starting in 2018, Instagram
12 devoted almost all of its annual marketing budget to attracting teenagers—hundreds of millions of
13 dollars annually.¹²⁹

14 115. Meta also views preteens or “tweens” as a “valuable but untapped audience,” even
15 contemplating “exploring playdates as a growth lever.”¹³⁰ Meta formed a team to study preteens,
16 endeavored to create more products designed for them, and commissioned strategy papers regarding the
17 “business opportunities” created.¹³¹

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24 ¹²⁶ 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>].

25 ¹²⁷ *Id.*

26 ¹²⁸ *Id.*

27 ¹²⁹ *Id.*

28 ¹³⁰ *Id.*

¹³¹ Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It
has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a
growth lever*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-
11632849667](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667) [<https://perma.cc/3QRQ-NU4C>].

Why do we care about tweens?

They are a valuable but untapped audience

- Our ultimate goal is messaging primacy with US Tweens (TAM = 12M), which may also lead to winning with Teens (TAM 36M).
- MK begins to lose PMF as kids age. Our primacy declines at 10 and 82% of users are 10 or younger.

"I don't think I would use it...that's just me. I would have to get [my mom's] permission to [connect with my friends] and everyone would make fun of me..."

10 yo boy, Detroit

- Are kids using Messenger Kids during playdates, and if so, how are they using the app and talking about the app?
- Who initiates the playdates, and how are they planned/what kinds of activities take place?

Is there a way to leverage playdates to drive word of hand/growth among kids?

ive word of hand/growth

To better understand how playdates might be an area to drive kid growth, we asked parents of the MK Community about how they initiate and plan, as well as the activities that take place during playdates.

****Researcher's note:** This note is intended to generate ideas and consider how we can leverage playdates to increase growth/retention and active threads. These findings are MK community-specific (active users who routinely provide feedback about the app) and are meant to give us insight into how active users leverage Messenger Kids in the context of initiating and coordinating playdates.

TL;DR:

- Most kids (68% | 65/95) do not use Messenger Kids during playdates, mainly because parents view the app as a way for kids to communicate with others when they're *not* together.
 - When kids do use Messenger Kids during playdates, it is mainly to communicate with their parents or with another friend who is not present at the playdate.

1 116. For these reasons, the Meta platforms are designed to be used by children and are actively
2 marketed to children throughout the Meta markets in the United States. Meta advertises to children
3 through its own efforts as well as through advertisers that create and target advertisements to children.
4 Internal Meta documents establish that Meta spends hundreds of millions of dollars researching,
5 analyzing, and marketing to children to find ways to make its platforms more appealing to these age
6 groups and to maximize the time they spend on its platforms, as these age groups are seen as essential to
7 Meta’s long-term profitability and market dominance.¹³² For instance, after Instagram’s founders left
8 Meta in September 2018, “Facebook went all out to turn Instagram into a main attraction for young
9 audiences,” and “began concentrating on the ‘teen time spent’ data point,” in order to “drive up the
10 amount of time that teenagers were on the app with features including Instagram Live, a broadcasting
11 tool, and Instagram TV, where people upload videos that run as long as an hour.”¹³³

12 117. In fact, Meta’s acquisition of Instagram in 2012 was primarily motivated by its desire to
13 make up for declines in the use of Facebook by youth, and Meta views Instagram as central to its ability
14 to attract and retain young audiences. A Meta presentation from 2019 indicated that “Instagram is well
15 positioned to resonate and win with young people,” and “[t]here is a path to growth if Instagram can
16 continue their trajectory.”¹³⁴

17 118. Although Meta’s policy is that children younger than 13 cannot register an account, it
18 lacks effective age-verification protocols—an issue long known to Meta. Since at least 2011, Meta has
19 known that its age-verification protocols are largely inadequate, estimating at that time that it removed
20 20,000 children under age 13 from Facebook every day.¹³⁵ A decade later, in 2021, an Instagram
21 executive acknowledged that users under 13 can still “lie about [their] age now,” to register an
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24 ¹³² *Id.*

25 ¹³³ 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>].

26 ¹³⁴ Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show; Its own in-depth*
research shows a significant teen mental-health issue that Facebook plays down in public, Wall St. J. (Sept. 14, 2021),
<https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>
[\[https://perma.cc/3VKL-UW94\]](https://perma.cc/3VKL-UW94).

27 ¹³⁵ Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing Privacy Concerns?*, Fast Co.
28 (Mar. 22, 2011), <https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns> [<https://perma.cc/8228-YGS7>].

1 account.¹³⁶

2 119. Meta has yet to implement protocols to verify a users' age. Meta also has agreements
3 with cell phone manufacturers and/or providers and/or retailers, who often pre-install its platforms on
4 mobile devices prior to sale and without regard to the age of the intended user of each such device. That
5 is, even though Meta is prohibited from providing the Meta platforms to users under the age of 13, Meta
6 actively promotes and provides underage users access to its platforms by encouraging and allowing cell
7 phone manufacturers to pre-install the platforms on mobile devices indiscriminately. Consequently,
8 approximately 11% of United States children between the ages of 9 and 11 used Instagram in 2020,¹³⁷
9 despite Meta claiming to remove approximately 600,000 underage users per quarter.¹³⁸

10 120. Ultimately, as discussed above, Meta's efforts to attract young users have been
11 successful. *See supra* Section IV.A.

12 **c. Meta Intentionally Maximizes the Time Users Spend on its Platforms**

13 121. Once users begin using its platforms, Meta employs a variety of strategies to keep them
14 there, using features that exploit the natural human desire for social interaction and the neurophysiology
15 of the brain's reward systems to keep users endlessly scrolling, posting, "liking," commenting, and
16 counting the number of "likes" and comments to their own posts. As discussed above, the rapidly
17 developing adolescent brain, highly attuned to social rewards, is particularly vulnerable to such
18 exploitation.

19 122. Many of the features Meta has designed utilize the well-established principle of
20 intermittent variable rewards or IVR, discussed above, including one of its most defining features: the
21 "Like" button. Meta knows "Likes" are a source of social comparison harm for many users, as detailed
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23 ¹³⁶ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It*
24 *has investigated how to engage young users in response to competition from Snapchat, TikTok; 'Exploring playdates as a*
25 *growth lever*, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
[11632849667](https://perma.cc/3QRQ-NU4C) [<https://perma.cc/3QRQ-NU4C>].

26 ¹³⁷ Brooke Auxier *et al.*, *Parenting Children in the Age of Screens: 1. Children's engagement with digital devices, screen*
27 *time*, Pew Rsch. Ctr. (July 28, 2020), [https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-](https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/)
[devices-screen-time/](https://perma.cc/U7LH-D62Q) [<https://perma.cc/U7LH-D62Q>].

28 ¹³⁸ Georgia Wells & Jeff Horwitz, *Facebook's Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It*
has investigated how to engage young users in response to competition from Snapchat, TikTok; 'Exploring playdates as a
growth lever, Wall St. J. (Sept. 28, 2021), [https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-](https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667)
[11632849667](https://perma.cc/3QRQ-NU4C) [<https://perma.cc/3QRQ-NU4C>].

1 below. Several Meta employees involved in creating the Like button have since left Meta and have
2 spoken publicly about the manipulative nature of Meta’s platforms and the harm they cause users.¹³⁹

3 123. Another way in which Meta employs IVR is through its push notifications and emails.
4 These notifications alert users to activity related to their account, such as when someone else has
5 “Liked” a post or when the user has been tagged in someone else’s post. Meta spaces out notifications of
6 likes and comments into multiple bursts rather than notifying users in real time, which activates the
7 brain’s reward circuitry and then creates dopamine gaps that leave users craving in anticipation for
8 more. In this regard, Meta’s push notifications and emails are specifically designed to manipulate users
9 to reengage with Meta’s platforms to increase user engagement regardless of a user’s health or
10 wellbeing.

11 124. Other features of Meta’s platforms based on IVR principles include posts, comments,
12 tagging, and the “pull to refresh” feature (which, as noted above, has the same effect on the brain as
13 pulling the lever on a slot machines).

14 125. Still other design decisions utilize the principle of reciprocity, such as the use of visual
15 cues to reflect that someone is currently writing a message (a feature designed to keep a user on the
16 platform until they receive the message), and alerting users when a recipient has read their message
17 (which encourages the recipient to respond and return to the platform to check for a response).

18 126. The Meta platforms are designed to encourage users to post content and to like, comment,
19 and interact with other users’ posts. Each new post that appears on a user’s feed can function as a
20 dopamine-producing social interaction in the user’s brain. Similarly, likes, comments, and other
21 interactions with the user’s posts function as an even stronger dopamine-producing stimulus than does
22 seeing new posts from other users. This in turn drives users to post more content they expect will
23 generate even more likes and comments. In this regard, Meta has designed its platforms to effectively
24 trap users—especially youth—in endless cycles of what Facebook whistleblower Frances Haugen called
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27 ¹³⁹ See, e.g., Paul Lewis, ‘Our minds can be hijacked’: the tech insiders who fear a smartphone dystopia, Guardian (Oct. 6,
28 2017), <https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia>
[\[https://perma.cc/8DU4-MLJA\]](https://perma.cc/8DU4-MLJA).

1 “little dopamine loops.”¹⁴⁰

2 **d. Meta’s Algorithms Are Manipulative and Harmful**

3
4 127. Meta also employs advanced computer algorithms and artificial intelligence to make its
5 platforms as engaging and habit forming as possible for users. For example, the Meta platforms display
6 curated content and employ recommendations that are customized to each user by using sophisticated
7 algorithms. The proprietary services developed through such algorithms include News Feed (a newsfeed
8 of stories and posts published on the platform, some of which are posted by connections and others that
9 are suggested by Meta’s algorithms), People You May Know (algorithm-based suggestions of persons
10 with common connections or background), Suggested for You, Groups You Should Join, and Discover
11 (algorithm-based recommendations of groups). Such algorithm-based content and recommendations are
12 pushed to each user in a steady stream as the user navigates the platform, as well as through notifications
13 sent to the user’s smartphone and email addresses when the user is disengaged with the platform.

14 128. Meta’s algorithms are not based exclusively on user requests or even user inputs. Meta’s
15 algorithms combine information entered or posted by the user on the platform with the user’s
16 demographics and other data points collected and synthesized by Meta, make assumptions about that
17 user’s interests and preferences, make predictions about what else might appeal to the user, and then
18 make very specific recommendations of posts and pages to view and groups to visit and join based on
19 rankings that will optimize Meta’s key performance indicators. In this regard, Meta’s design dictates the
20 way content is presented, such as its ranking and prioritization.¹⁴¹

21 129. Meta’s current use of algorithms in its platforms is driven and designed to maximize user
22 engagement. Over time, Meta has gradually transitioned away from chronological ranking, which
23 organized the interface according to when content was posted or sent, to prioritize what Meta calls
24 “Meaningful Social Interactions” (“MSI”), which emphasizes users’ connections and interactions such

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26 ¹⁴⁰ Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big mistake with social media*, Today
(Feb. 7, 2022), <https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256>
27 [<https://perma.cc/7P7V-CDNH>].

28 ¹⁴¹ See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8, 2021),
<https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works> [<https://perma.cc/8MTZ-238X>].

1 as likes and comments and gives greater significance to the interactions of connections that appeared to
2 be the closest to users. In order to do this, Meta developed and employed an “amplification algorithm”
3 to execute engagement-based ranking, which considers a post’s likes, shares, and comments, as well as a
4 respective user’s past interactions with similar content, and exhibits the post in the user’s newsfeed if it
5 otherwise meets certain benchmarks.

6 130. Although Meta claims that the goal of this engagement-based ranking is “helping you
7 have more meaningful social interactions,”¹⁴² Meta’s algorithms covertly operate on the principle that
8 intense reactions invariably compel attention. Because these algorithms measure reactions and
9 contemporaneously immerse users in the most reactive content, these algorithms effectively work to
10 steer users toward the most negative content, because negative content routinely elicits passionate
11 reactions. In other words, the algorithm is designed to prioritize the number of interactions rather than
12 the quality of interactions.

13 131. As set forth in greater detail below, Meta was well aware of the harmful content that it
14 was promoting but failed to change its algorithms because the inflammatory content that its algorithms
15 were feeding to users fueled their return to the platforms and led to more engagement—which in turn
16 helped Meta sell more advertisements that generate most of its revenue.

17 132. Meta’s shift from chronological ranking to algorithm-driven content and
18 recommendations has changed the Meta platforms in ways that are profoundly dangerous and harmful to
19 children. Meta’s algorithms exploit vulnerabilities that are heightened in preteens and teens due to their
20 social and psychological development—and Meta designs its platforms with these specific
21 vulnerabilities in mind.

22 **e. Meta’s Harmful “Feeds”**

23 133. Both Facebook and Instagram show each user an algorithm-generated “feed” that consists
24 of a series of photos and videos posted by accounts that the user follows, along with advertising and
25 content specifically selected and promoted by Meta.
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27
28 ¹⁴² Mark Zuckerberg, Facebook (Jan. 11, 2018, 4:28 PM),
<https://www.facebook.com/zuck/posts/10104413015393571?pnref=story> [<https://perma.cc/F8VD-U6JU>].

1 134. These feeds are virtually bottomless lists of content that enable users to scroll endlessly
2 without any natural end points that would otherwise encourage them to move on to other activities. In
3 this regard, “[u]nlike a magazine, television show, or video game,” the Meta platforms only rarely
4 prompt their users to take a break by using “stopping cues.”¹⁴³ Meta’s “bottomless scrolling” feature is
5 designed to encourages users to use its platforms for unlimited periods of time.

6 135. Meta also exerts control over a user’s feed through certain ranking mechanisms,
7 escalation loops, and promotion of advertising and content specifically selected and promoted by Meta
8 based on, among other things, its ongoing planning, assessment, and prioritization of the types of
9 information most likely to increase user engagement.

10 136. As Senator Richard Blumenthal, Chair of the Subcommittee on Consumer Protection,
11 Product Safety, and Data Security, explained during one of a series of Senate hearings in 2021 on
12 “Protecting Kids Online,” Meta utilizes private information of its child users to “precisely target [them]
13 with content and recommendations, assessing what will provoke a reaction,” including encouragement
14 of “destructive and dangerous behaviors,” which is how Meta “can push teens into darker and darker
15 places.”¹⁴⁴ Whistleblower Frances Haugen testified that Meta’s “amplification algorithms, things like
16 engagement based ranking . . . can lead children . . . all the way from just something innocent like
17 healthy recipes to anorexia promoting content over a very short period of time.”¹⁴⁵ Meta thus
18 specifically selects and pushes this harmful content on its platforms, for which it is then paid, and does
19 so both for direct profit and also to increase user engagement, resulting in additional profits down the
20 road.

21 137. As part of the Senate Subcommittee’s investigation into social media companies, Senators
22 Richard Blumenthal, Marsha Blackburn and Mike Lee tested and confirmed the fact that Meta’s
23 platforms’ recommendation-based feeds and features promote harmful content by opening test accounts
24

25 ¹⁴³ See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?*, Am. Psych. Ass’n (Dec. 2, 2021),
26 <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects> [<https://perma.cc/XV58-GHJ4>].

27 ¹⁴⁴ See Facebook Whistleblower Frances Haugen Testifies on Children & Social Media Use: Full Senate Hearing Transcript
at 09:02, Rev (Oct. 5, 2021), [https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-](https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript)
28 [children-social-media-use-full-senate-hearing-transcript](https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript) [<https://perma.cc/WML5-286H>] (statement by Mr. Chairman
Blumenthal).

¹⁴⁵ *Id.* at 37:34 (statement by Ms. Frances Haugen).

1 purporting to be teenage girls. Senator Blumenthal stated that, “[w]ithin an hour all our
2 recommendations promoted pro-anorexia and eating disorder content.”¹⁴⁶ Likewise, Senator Lee found
3 that an account for a fake 13-year-old girl was quickly “flooded with content about diets, plastic surgery
4 and other damaging material for an adolescent girl.”¹⁴⁷

5 138. Meta’s Instagram platform features a feed of “Stories,” which are short-lived photo or
6 video posts that are accessible only for 24 hours. This feature encourages constant, repeated, and
7 compulsive use of Instagram, so that users do not miss out on content before it disappears. As with other
8 feeds, the presentation of content in a user’s Stories is generated by an algorithm designed by Meta to
9 maximize the amount of time a user spends on the app.

10 139. Instagram also features a feed called “Explore,” which displays content posted by users
11 not previously “followed.” The content in “Explore” is selected and presented by an algorithm designed
12 by Meta to maximize the amount of time a user spends on the app. As with other feeds, the Explore
13 feature may be scrolled endlessly, and its algorithm will continually generate new recommendations,
14 encouraging users to use the app for unlimited periods of time.

15 140. Further, Instagram also features another feed called “Reels,” which presents short video
16 posts by users not previously followed. These videos play automatically, without input from the user,
17 encouraging the user to stay on the app for indefinite periods of time. As with other feeds, Reels content
18 is selected and presented by an algorithm designed by Meta to maximize the amount of time a user
19 spends on the app.

20 f. For Years, Meta Has Been Aware That Its Platforms Harm Children

21 141. In an internal slide presentation in 2019, Meta’s own researchers, studying Instagram’s
22 effects on children, concluded, “**We make body image issues worse for one in three teen girls[.]**”¹⁴⁸
23

24
25 ¹⁴⁶ Vanessa Romo, *4 Takeaways from Senators’ Grilling of Instagram’s CEO About Kids and Safety*, NPR (Dec. 8, 2021,
10:13 PM), [https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli)
26 [promises-to-self-poli](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli) [<https://perma.cc/3CH4-GWJW>].

27 ¹⁴⁷ *Id.*

28 ¹⁴⁸ Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays down in public*, 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/3VKL-UW94>].

1 This presentation was one of many documents leaked by former Meta employee Frances Haugen to
2 journalists at the *Wall Street Journal* and federal regulators in 2021.¹⁴⁹ The *Wall Street Journal*'s
3 reporting on the documents began in September 2021 and caused a national and international uproar.

4 142. The leaked documents confirmed what social scientists have long suspected, that social
5 media platforms like Meta's—and Instagram in particular—can cause serious harm to the mental and
6 physical health of children. Moreover, this capacity for harm is by design—what makes the Meta
7 platforms profitable is precisely what harms its young users.

8 143. Upon information and belief, at least as far back as 2019, Meta initiated a Proactive
9 Incident Response experiment, which began researching the effect of Meta on the mental health of
10 today's children.¹⁵⁰ Meta's own in-depth analyses show significant mental-health issues stemming from
11 the use of Instagram among teenage girls, many of whom linked suicidal thoughts and eating disorders
12 to their experiences on the app.¹⁵¹ In this regard, Meta's researchers have repeatedly found that
13 Instagram is harmful for a sizable percentage of teens that use the platform.¹⁵²

14 144. In particular, the researchers found that “[s]ocial comparison,” or individuals’ assessment
15 of their own value relative to that of others, is “worse on Instagram” for teens than on other social media
16 platforms.¹⁵³ One in five teens reported that Instagram “makes them feel worse about themselves.”¹⁵⁴
17 Roughly two in five teen users reported feeling “unattractive,” while one in ten teen users reporting
18 suicidal thoughts traced them to Instagram.¹⁵⁵ Teens “consistently” and without prompting blamed
19

20 ¹⁴⁹ The *Wall Street Journal* and *Digital Wellbeing* published several of these documents in November 2021. See Paul
21 Marsden, *The ‘Facebook Files’ on Instagram Harms—All Leaked Slides on a Single Page*, Digit. Wellbeing (Oct. 20,
22 2021), <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/>
23 [<https://perma.cc/XT2G-A77K>]. Gizmodo also started publishing these documents in November 2021. See Dell Cameron *et*
al., *Read the Facebook Papers for Yourself*, Gizmodo (Apr. 18, 2022), [https://gizmodo.com/facebook-papers-how-to-read-](https://gizmodo.com/facebook-papers-how-to-read-1848702919)
<https://perma.cc/7K26-G7GF>].

24 ¹⁵⁰ See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5, 2021), [https://www.c-](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook)
[span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook](https://perma.cc/5QN2-MKRX) [[https://perma.cc/5QN2-](https://perma.cc/5QN2-MKRX)
[MKRX](https://perma.cc/5QN2-MKRX)].

25 ¹⁵¹ See Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show*, Wall St. J.
26 (Sept. 14, 2021, 7:59 AM), [https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline)
[documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline](https://perma.cc/3VKL-UW94) [<https://perma.cc/3VKL-UW94>].

27 ¹⁵² *Id.*

28 ¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

Instagram “for increases in the rate of anxiety and depression.”¹⁵⁶ And although teenagers identify Instagram as a source of psychological harm, they often lack the self-control to use Instagram less. Also, according to Meta’s own researchers, young users are not capable of controlling their Instagram use to protect their own health.¹⁵⁷ Such users “often feel ‘addicted’ and know that what they’re seeing is bad for their mental health but feel unable to stop themselves.”¹⁵⁸

145. Similarly, in a March 2020 presentation posted to Meta’s internal message board, researchers found that 32% of teen girls said that “when they felt bad about their bodies, Instagram made them feel worse.”¹⁵⁹ 66% of teen girls and 40% of teen boys have experienced negative social comparison harms on Instagram.¹⁶⁰ Further, approximately 13% of teen girl Instagram users say the platform makes thoughts of “suicide and self harm” worse, and 17% of teen girl Instagram users say the platform makes “[e]ating issues” worse.¹⁶¹ Meta’s researchers also acknowledged that “[m]ental health outcomes” related to the use of Instagram “can be severe,” including “Body Dissatisfaction,” “Body Dysmorphia,” “Eating Disorders,” “Loneliness,” and “Depression.”¹⁶²

146. Not only is Meta aware of the harmful nature of the Meta platforms, but the leaked documents also reveal that Meta is aware of the specific design features that lead to excessive use and harm to children. For instance, Meta knows that Instagram’s Explore, Feed, and Stories features

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.*

¹⁵⁹ *Id.*; *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.*, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf> [<https://perma.cc/7D2X-363R>]; see also *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf> [<https://perma.cc/6JNT-ZLJQ>]; Paul Marsden, *The ‘Facebook Files’ on Instagram arms – all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021) <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> [<https://perma.cc/XT2G-A77K>] (hard life moment – mental health deep dive).

¹⁶⁰ *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 9, Wall St. J. (Sept. 29, 2021), <https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf> [<https://perma.cc/7D2X-363R>].

¹⁶¹ *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf> [<https://perma.cc/6JNT-ZLJQ>]; Paul Marsden, *The Facebook Files’ on Instagram arms – all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021), <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> [<https://perma.cc/XT2G-A77K>].

¹⁶² *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://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf> [<https://perma.cc/7D2X-363R>].

1 contribute to social comparison harms “in different ways.”¹⁶³ Moreover, specific “[a]spects of Instagram
2 exacerbate each other to create a perfect storm” of harm to users, and that the “social comparison sweet
3 spot”—a place of considerable harm to users, particularly teenagers and teen girls—lies at the center of
4 Meta’s model and platforms’ features.¹⁶⁴ In this regard, Meta’s researchers wrote that “[s]ocial
5 comparison and perfectionism are nothing new, but young people are dealing with this on an
6 unprecedented scale,” and “[c]onstant comparison on Instagram is ‘the reason’ why there are higher
7 levels of anxiety and depression in young people.”¹⁶⁵

8 **2. Snapchat Intentionally Marketed to and Designed Its Social Media Platform for** 9 **Youth Users, Substantially Contributing to the Mental Health Crisis**

10 **a. The Snapchat Platform**

11 147. Snapchat was created in 2011 by Stanford University students Evan Spiegel and Bobby
12 Murphy, who serve as Snap Inc.’s CEO and CTO, respectively.¹⁶⁶

13 148. Snapchat started as a photo sharing platform that allowed users to form groups and share
14 photos, known as “snaps,” that disappear after being viewed by the recipients. Snapchat became well
15 known for this self-destructing content feature. But Snapchat quickly evolved from a simple photo-
16 sharing app, as Snap made design changes and rapidly developed new features aimed at, and ultimately
17 increasing, Snapchat’s popularity among teenage users.

18 149. In 2012, Snap added video sharing capabilities, pushing the number of “snaps” to 50
19 million per day.¹⁶⁷ A year later, Snap added the “Stories” function, which allows users to upload a
20 rolling compilation of snaps that the user’s friends can view for 24 hours.¹⁶⁸ The following year, Snap
21

22 ¹⁶³ *Id.* at 31.

23 ¹⁶⁴ *Id.* at 33.

24 ¹⁶⁵ See *Hard Life Moments-Mental Health Deep Dive* at 53, Facebook (Nov. 2019), <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf> [<https://perma.cc/6JNT-ZLJQ>].

25 ¹⁶⁶ Katie Benner, *How Snapchat is Shaping Social Media*, N.Y. Times (Nov. 30, 2016),
<https://www.nytimes.com/2016/11/30/technology/how-snapchat-works.html> [<https://perma.cc/6GCG-ZHYX>].

26 ¹⁶⁷ J.J. Colao, *Snapchat Adds Video, Now Seeing 50 Million Photos A Day*, Forbes (Dec. 14, 2012),
<https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b> [<https://perma.cc/6DYM-QAGC>].

27 ¹⁶⁸ Ellis Hamburger, *Snapchat’s Next Big Thing: ‘Stories’ That Don’t Just Disappear*, Verge (Oct. 3, 2013),
<https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear>
28 [<https://perma.cc/25YP-T7W4>].

1 added a feature that enabled users to communicate with one another in real time via text or video.¹⁶⁹ It
2 also added the “Our Story” feature, expanding on the original stories function by allowing users in the
3 same location to add their photos and videos to a single publicly viewable content stream.¹⁷⁰ At the same
4 time, Snap gave users the capability to add filters and graphic stickers onto photos indicating a user’s
5 location, through a feature it refers to as “Geofilters.”¹⁷¹

6 150. In 2015, Snap added a “Discover” feature that promotes videos from news outlets and
7 other content creators.¹⁷² Users can watch that content by scrolling through the Discover feed. After the
8 selected video ends, Snapchat automatically plays other video content in a continuous stream, which
9 does not cease until a user manually exits the stream.

10 151. In 2020, Snap added the “Spotlight” feature through which it serves users “an endless
11 feed of user-generated content” that Snap curates from the 300 million daily Snapchat users.¹⁷³

12 152. Today, Snapchat is one of the largest social media platforms in the world. By its own
13 estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.¹⁷⁴
14 Snapchat reaches 90% of people ages 13–24 in over twenty countries and reaches nearly half of all
15 smartphone users in the United States.¹⁷⁵

16 **b. Snap Markets Its Platform to Youth**

17 153. Snapchat’s commercial success is due to its advertising. In 2014, Snap began running
18 advertisements on Snapchat.¹⁷⁶ Since then, Snapchat’s business model has revolved around its
19

20 ¹⁶⁹ Romain Dillet, *Snapchat Adds Ephemeral Text Chat and Video Calls*, TechCrunch (May 1, 2014),
<https://techcrunch.com/2014/05/01/snapchat-adds-text-chat-and-video-calls/> [<https://perma.cc/3UAN-LY4N>].

21 ¹⁷⁰ Laura Stampler, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014), [https://time.com/2890073/snapchat-new-](https://time.com/2890073/snapchat-new-feature/)
22 [feature/](https://time.com/2890073/snapchat-new-feature/) [<https://perma.cc/E28M-8KLT>].

23 ¹⁷¹ Angela Moscaritolo, *Snapchat Adds ‘Geofilters’ in LA, New York*, PC Mag. (July 15, 2014),
<https://www.pcmag.com/news/snapchat-adds-geofilters-in-la-new-york> [<https://perma.cc/NJ9E-3JYD>].

24 ¹⁷² Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
<https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1> [<https://perma.cc/22ST-8HAL>].

25 ¹⁷³ 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>
26 [<https://perma.cc/2HCW-KUFG>].

27 ¹⁷⁴ *October 2022 Investor Presentation at 5*, Snap Inc. (Oct. 20, 2022), [https://investor.snap.com/events-and-](https://investor.snap.com/events-and-presentations/presentations/default.aspx)
28 [presentations/presentations/default.aspx](https://investor.snap.com/events-and-presentations/presentations/default.aspx) [<https://perma.cc/8BDK-7S9V>].

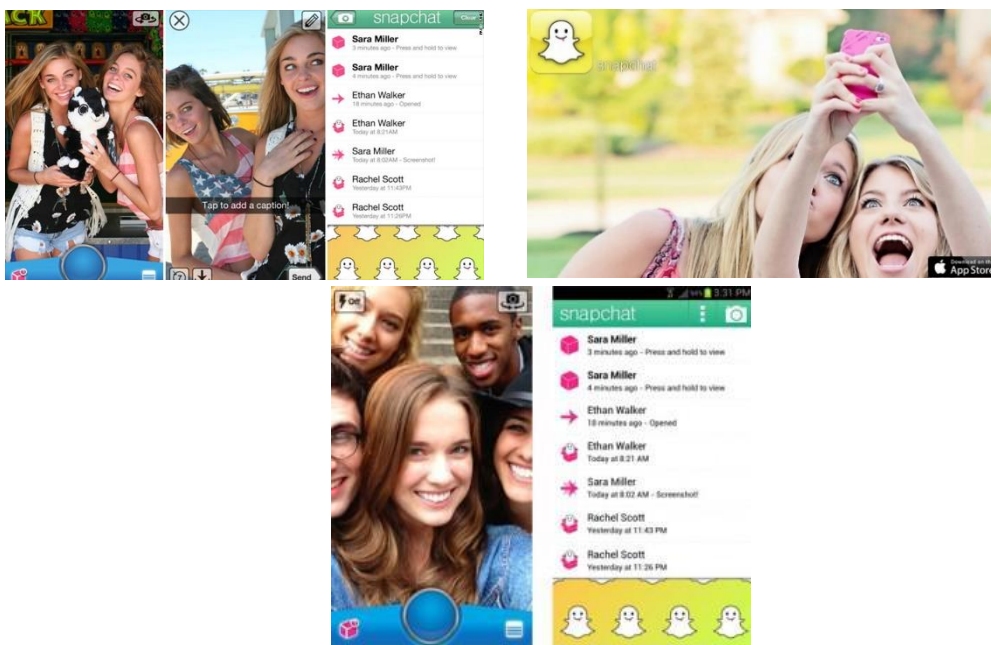
¹⁷⁵ *Id.* at 6–7.

¹⁷⁶ Sara Fischer, *A timeline of Snap’s advertising, from launch to IPO*, Axios (Feb. 3, 2017),
<https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279>
[<https://perma.cc/7XTY-2AXS>].

1 advertising revenue, which has boomed. Snap now expects to generate \$4.86 billion in Snapchat
2 advertising revenue for 2022.¹⁷⁷

3 154. Snap specifically markets Snapchat to children ages 13–17 because they are a key
4 demographic for Snap’s advertising business. Internal documents describe users between the ages of 13–
5 34 as “critical” to Snap’s advertising success because of the common milestones achieved within that
6 age range.¹⁷⁸

7 155. While Snap lumps teenagers in with younger adults in its investor materials, Snap
8 marketing materials features young models that reveal its priority market:



19 156. In addition to its marketing, Snap has targeted a younger audience by designing Snapchat
20 in a manner that older individuals find hard to use.¹⁷⁹ The effect of this design is that Snapchat is a
21 platform where its young users are insulated from older users, including their parents. As Snap’s CEO
22 explained, “[w]e’ve made it very hard for parents to embarrass their children[.]”¹⁸⁰

24 ¹⁷⁷ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022),
25 <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>
26 [<https://perma.cc/L8U2-Q9ZZ>].

¹⁷⁸ *October 2022 Investor Presentation at 27*, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx> [<https://perma.cc/8BDK-7S9V>].

¹⁷⁹ 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/D9A4-JFEA>].

¹⁸⁰ 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/DJT8-TK3L>].

157. Snap also designed Snapchat as a haven for young users to hide content from their parents by ensuring that photos, videos, and chat messages quickly disappear. This design further insulates youth from adult oversight.

158. Moreover, Snap added as a feature the ability for users to create cartoon avatars modeled after themselves.¹⁸¹ By using an artform generally associated with and directed at younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

159. In 2013, Snap also marketed Snapchat specifically to children under 13 through a feature it branded “SnapKidz.”¹⁸² This feature—part of the Snapchat platform—allowed children under 13 to take photos, draw on them, and save them locally on the device.¹⁸³ Kids could also send these images to others or upload them to other social media sites.¹⁸⁴

160. While SnapKidz feature was later discontinued and Snap purports to now prohibit users under the age of 13, its executives have admitted that its age verification “is effectively useless in stopping underage users from signing up to the Snapchat app.”¹⁸⁵

161. Snap’s efforts to attract young users have been successful. *See supra* Section IV.A. Teenagers consistently name Snapchat as a favorite social media platform. The latest figures show 13% of children ages 8–12 used Snapchat in 2021,¹⁸⁶ and almost 60% of children ages 13–17 use Snapchat.¹⁸⁷

c. Snap Intentionally Maximizes the Time Users Spend on its Platform

162. Snap promotes excessive use of its platform through design features and manipulative

¹⁸¹ 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> [<https://perma.cc/4PRE-VSW9>].

¹⁸² Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23, 2013), <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a> [<https://perma.cc/ZQA9-F2VC>].

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ 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> [<https://perma.cc/V938-6AEG>].

¹⁸⁶ Victoria Rideout *et al.*, *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 [<https://perma.cc/L6ND-X7VR>].

¹⁸⁷ Emily 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/> [<https://perma.cc/BH7W-ZUPM>].

1 algorithms intended to maximize users' screen time.

2 163. Snap has implemented inherently and intentionally exploitive features into Snapchat,
3 including "Snapstreaks," various trophies and reward systems, quickly disappearing ("ephemeral")
4 messages, and filters. Snap designed these features, along with others, to maximize the amount of time
5 users spend on Snapchat.

6 164. Snaps are intended to manipulate users by activating the rule of reciprocity.¹⁸⁸
7 Whenever a user gets a snap, they feel obligated to send a snap back. And Snapchat tells users each time
8 they receive a snap by pushing a notification to the recipient's cellphone. These notifications are
9 designed to prompt users to open Snapchat and view content, increasing the amount of time users spend
10 on Snapchat. Further, because snaps disappear within ten seconds of being viewed, users feel compelled
11 to reply immediately. This disappearing nature of snaps is a defining characteristic of Snapchat and
12 intended to keep users on the platform.

13 165. Snap also keeps users coming back to the Snapchat platform through the "Snapstreaks"
14 feature.¹⁸⁹ A "streak" is a counter within Snapchat that tracks how many consecutive days two users
15 have sent each other snaps. If a user fails to snap the other user within 24 hours, the streak ends. Snap
16 adds extra urgency by putting an hourglass emoji next to a friend's name if a Snapchat streak is about to
17 end.¹⁹⁰ This design implements a system where a user must "check constantly or risk missing out."¹⁹¹
18 And this feature is particularly effective on teenage users. "For teens in particular, streaks are a vital part
19
20
21

22 ¹⁸⁸ Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015), <https://www.nirandfar.com/psychology-of-snapchat/> [<https://perma.cc/ZQC2-8W3M>].

23 ¹⁸⁹ See Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you*
24 *'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> [<https://perma.cc/5RE8-3PMA>]; see generally
25 Virginia Smart & Tyana Grundig, *'We're designing minds': Industry insider reveals secrets of addictive app trade*, CBC
26 (Nov. 3, 2017), <https://www.cbc.ca/news/science/marketplace-phones-1.4384876> [<https://perma.cc/93PV-XE3E>]; Julian
27 Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017),
28 <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction> [<https://perma.cc/2HES-Y3AB>].

¹⁹⁰ 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/V92N-WSGP>].

¹⁹¹ *Id.*

of using the app, and of their social lives as a whole.”¹⁹² Some children become so obsessed with maintaining a Snapstreak that they give their friends access to their accounts when they may be away from their phone for a day or more, such as on vacation.¹⁹³

166. Snap also designed features that operate on IVR principles to maximize the time users are on its platform. The “rewards” come in the form of a user’s “Snapscore,” and other signals of recognition similar to “likes” used in other platforms. For example, a Snapscore increases with each snap a user sends and receives. The increase in score and other trophies and charms users can earn by using the app operate on variable reward patterns. Like Snapstreaks, these features are designed to incentivize sending snaps and increase the amount of time users spend on Snapchat.

167. Snap also designs photo and video filters and lenses, which are central to Snapchat’s function as a photo and video sharing social media platform. Snap designed its filters and lenses in a way to further maximize the amount of time users spend on Snapchat. One way Snap uses its filters to hook young users is by creating temporary filters that impose a sense of urgency to use them before they disappear. Another way Snap designed its filters to increase screen use is by gamification. Many filters include games,¹⁹⁴ creating competition between users by sending each other snaps with scores. Further, Snap tracks data on the most commonly used filters and develops new filters based on this information.¹⁹⁵ Snap personalizes, designs and modifies these filters to maximize the amount of time users spend on Snapchat.¹⁹⁶

¹⁹² 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> [<https://perma.cc/5RE8-3PMA>]; see generally Cathy Becker, *Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27, 2017), <https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296> [<https://perma.cc/47HQ-7WVQ>].

¹⁹³ 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> [<https://perma.cc/WW9-6E2P>]; 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> [<https://perma.cc/RDR2-TKDR>].

¹⁹⁴ Josh Constine, *Now Snapchat Has ‘Filter Games’*, TechCrunch (Dec. 23, 2016), <https://techcrunch.com/2016/12/23/snapchat-games/> [<https://perma.cc/U9UY-C5NR>].

¹⁹⁵ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> [<https://perma.cc/93WL-GSY8>] (last visited June 26, 2023).

¹⁹⁶ *Id.*

1 **d. Snapchat’s Algorithms Are Manipulative and Harmful**

2 168. Snap also uses complex algorithms to suggest friends and recommend content to users in
3 order to keep them using Snapchat.

4 169. Snap utilizes an equation to determine whether someone should add someone else as a
5 friend on Snapchat and notifies the user of these recommendations. This is known as “Quick Add.” By
6 using an algorithm to suggest friends to users, Snapchat increases the odds that users will add additional
7 friends, send additional snaps, and spend more time on the app.

8 170. Snapchat also contains “Discover” and “Spotlight” features that use algorithms to
9 recommend content to users. The Discover feature includes content from news and other media
10 outlets.¹⁹⁷ A user’s Discover page is populated by an algorithm and constantly changes depending on
11 how a user interacts with the content.¹⁹⁸ Similarly, the Spotlight feature promotes popular videos from
12 other Snapchat users and is based on an algorithm that determines whether a user has positively or
13 negatively engaged with similar content.¹⁹⁹ Snap programs its algorithms to push content to users that
14 will keep them engaged for increased amounts of time on Snapchat and, thereby, worsen their mental
15 health.

16 **e. Snap’s Conduct in Designing and Operating Its Platform Has Harmed Youth**
17 **Mental Health**

18 171. The way in which Snap has designed and operated Snapchat has caused youth to suffer
19 increased anxiety, depression, disordered eating, and sleep deprivation.

20 172. Snap knows Snapchat is harming youth because, as alleged above, Snap intentionally
21 designed Snapchat to maximize engagement by preying on the psychology of children through its use of
22 algorithms and other features including Snapstreaks, various trophies and reward systems, quickly
23 disappearing messages, filters, and games.

24 _____
25 ¹⁹⁷ Steven Tweedie, *How to Use Snapchat’s New ‘Discover’ Feature*, Bus. Insider (Jan. 27, 2015),
<https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1> [<https://perma.cc/22ST-8HAL>].

26 ¹⁹⁸ *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> [<https://perma.cc/93WL-GSY8>] (last visited June 26, 2023).

27 ¹⁹⁹ Sara Fischer, *Snapchat launches Spotlight, a TikTok competitor*, Axios (Nov. 23, 2020),
<https://www.axios.com/2020/11/23/snapchat-launches-spotlight-tiktok-competitor> [<https://perma.cc/3FYB-C2DU>]; *How*
28 *We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> [<https://perma.cc/93WL-GSY8>]
(last visited June 26, 2023).

1 173. Snap should know that its conduct has negatively affected youth. Snap’s conduct has
2 been the subject of inquiries by the United States Senate regarding Snapchat’s use “to promote bullying,
3 worsen eating disorders, and help teenagers buy dangerous drugs or engage in reckless behavior.”²⁰⁰
4 Further, Senators across the ideological spectrum have introduced bills that would ban many of the
5 features Snapchat offers, including badges and other awards recognizing a user’s level of engagement
6 with the platform.²⁰¹ Despite these calls for oversight from Congress, Snap has failed to curtail its use of
7 streaks, badges, and other features that award users’ levels of engagement with Snapchat.

8 174. Snap also knows or should know of Snapchat’s other negative effects on youth based on
9 published research findings. For instance, researchers coined the phrase “Snapchat dysmorphia” after the
10 pernicious effect Snapchat has had on how young people view themselves.²⁰² The researchers and
11 doctors use this phrase to describe people, usually young women, who are seeking plastic surgery to
12 make themselves look like the way they do through Snapchat filters.²⁰³ The cause of this trend appears
13 to be Snapchat’s and other social media platforms’ beauty filters, which create a “sense of unattainable
14 perfection” that is alienating and damaging to a person’s self-esteem.²⁰⁴ One social psychologist
15 summed the effect as “the pressure to present a certain filtered image on social media can certainly play
16 into [depression and anxiety] for younger people who are just developing their identities.”²⁰⁵

17 175. Despite knowing Snapchat harms its young users, Snap continues to update and add
18 features intentionally designed to maximize the amount of time users spend on Snapchat. Snap continues
19 its harmful conduct because its advertising revenue relies on Snapchat’s users consuming large volumes
20 of content on its platform.

21 ²⁰⁰ Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and TikTok*, Nat’l Pub. Radio
22 (Oct. 26, 2021), <https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing>
[<https://perma.cc/8GNJ-PLE9>].

23 ²⁰¹ See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, Nat’l Pub. Radio (Aug. 3, 2019),
24 <https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill>
[<https://perma.cc/VP9G-EVBK>]; *Social Media Addiction Reduction Technology Act*, S. 2314, 116th Cong. (2019); *Kids*
25 *Internet Design and Safety Act*, S. 2918, 117th Cong. (2021).

26 ²⁰² ‘Snapchat Dysmorphia’: *When People Get Plastic Surgery To Look Like A Social Media Filter*, WBUR (Aug 29, 2018),
<https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery> [<https://perma.cc/JDZ7-TUX7>].

27 ²⁰³ *Id.*

28 ²⁰⁴ 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>
[<https://perma.cc/KA79-G2PX>].

²⁰⁵ *Id.*

1 **3. TikTok Intentionally Marketed to and Designed Its Social Media Platform for**
2 **Youth Users, Substantially Contributing to the Mental Health Crisis**

3 **a. TikTok's Platform**

4 176. TikTok is a social media platform that describes itself as “the leading destination for
5 short-form mobile video.”²⁰⁶ According to TikTok, it is primarily a platform where users “create and
6 watch short-form videos.”²⁰⁷

7 177. TikTok's predecessor, Musical.ly, launched in 2014 as a place where people could create
8 and share 15-second videos of themselves lip-syncing or dancing to their favorite music.²⁰⁸

9 178. In 2017, ByteDance launched an international version of a similar platform that also
10 enabled users to create and share short lip-syncing videos that it called TikTok.²⁰⁹

11 179. That same year, ByteDance acquired Musical.ly to leverage its young user base in the
12 United States, of almost 60 million monthly active users.²¹⁰

13 180. Months later, the apps were merged under the TikTok brand.²¹¹

14 181. Since then, TikTok has expanded the length of time for videos from 15-seconds to up to
15 10 minutes;²¹² created a fund that was expected to grow to over \$1 billion within three years to
16 incentivize users to create videos that even more people will watch;²¹³ and had users debut their own

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18
19 ²⁰⁶ *About: Our Mission*, TikTok, <https://www.tiktok.com/about> [<https://perma.cc/3XS6-U99U>] (last visited June 26, 2023).

20 ²⁰⁷ *Protecting Kids Online: Snapchat, TikTok, and YouTube: Hearing Before the Subcomm. On Consumer Protection, Product Safety, and Data Security*, 117 Cong. (2021) (statement of Michael Beckerman, VP and Head of Public Policy, Americas, TikTok).

21 ²⁰⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you've probably never heard of*, Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5> [<https://perma.cc/78KJ-WBRS>].

22 ²⁰⁹ Paresh Dave, *China's ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW> [<https://perma.cc/EZ6K-3Q8B>].

23 ²¹⁰ Liza Lin & Rolfe Winkler, *Social-Media App Musical.ly Is Acquired for as Much as \$1 Billion; With 60 million monthly users, startup sells to Chinese maker of news app Toutiao*, Wall St. J. (Nov. 10, 2017), <https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123> [<https://perma.cc/KXV7-C5HW>].

24 ²¹¹ Paresh Dave, *China's ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW> [<https://perma.cc/EZ6K-3Q8B>].

25 ²¹² Andrew Hutchinson, *TikTok Confirms that 10 Minute Video Uploads are Coming to All Users*, SocialMediaToday (Feb. 28, 2022), <https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/> [<https://perma.cc/DY6R-A9QY>].

26 ²¹³ Vanessa Pappas, *Introducing the \$200M TikTok Creator Fund*, TikTok (July 29, 2021), <https://newsroom.tiktok.com/en-us/introducing-the-200-million-tiktok-creator-fund> [<https://perma.cc/5HJ4-475H>].

songs, share comedy skits,²¹⁴ and “challenge” others to perform an activity.²¹⁵

182. The videos users create on TikTok are only one part of the equation.

183. “[O]ne of the defining features of the TikTok platform,” is its “For You” feed.²¹⁶ There, users are served with an unending stream of videos TikTok curates for them based on complex, machine-learning algorithms intended to keep users on its platform. TikTok itself describes the feed as “central to the TikTok experience and where most of our users spend their time.”²¹⁷ The *New York Times* described it this way:

It’s an algorithmic feed based on videos you’ve interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you’ve explicitly told it you want to see. It’s full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.²¹⁸

184. The “For You” feed has quickly garnered TikTok hundreds of millions of users. Since 2018, TikTok has grown from 271 million global users to more than 1 billion global monthly users as of September 2021.²¹⁹

b. TikTok Markets Its Platform to Youth

185. TikTok, like the other Defendants’ platforms, has built its business plan around advertising revenue, which has boomed. In 2022, TikTok is projected to receive \$11 billion in advertising revenue, over half of which (*i.e.*, \$6 billion) is expected to come from the United States.²²⁰

186. TikTok, since its inception as Musical.ly, has been designed and developed with youth in

²¹⁴ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html> [<https://perma.cc/452K-SEAS>].

²¹⁵ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html> [<https://perma.cc/82VQ-8VPE>].

²¹⁶ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you> [<https://perma.cc/4DBQ-MCQY>].

²¹⁷ *Id.*

²¹⁸ John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html> [<https://perma.cc/82VQ-8VPE>].

²¹⁹ 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> [<https://perma.cc/S6WT-2ET7>].

²²⁰ Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022), <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/> [<https://perma.cc/L8U2-Q9ZZ>].

1 mind.

2 187. Alex Zhu and Louis Yang, the other co-founder of Musical.ly, raised \$250,000 to build
3 an app that experts could use to create short three- to five-minute videos explaining a subject.²²¹ The day
4 they released the app, Zhu said they knew “[i]t was doomed to be a failure,” because “[i]t wasn’t
5 entertaining, and it didn’t attract teens.”²²²

6 188. According to Zhu, he stumbled upon the idea that would become known as TikTok while
7 observing teens on a train, half of whom were listening to music while the other half took selfies or
8 videos and shared the results with friends.²²³ “That’s when Zhu realized he could combine music,
9 videos, and a social network to attract the early-teen demographic.”²²⁴

10 189. Zhu and Yang thereafter developed the short-form video app that is now known as
11 TikTok, which commentators have observed “encourages a youthful audience in subtle and obvious
12 ways.”²²⁵

13 190. Among the more subtle ways the app was marketed to youth, are its design and content.
14 For example, the Federal Trade Commission (“FTC”) alleged that the app initially centered around a
15 child-oriented activity (*i.e.*, lip syncing); featured music by celebrities that then appealed primarily to
16 teens and tweens, such as Selena Gomez and Ariana Grande; labelled folders with names meant to
17 appeal to youth, such as “Disney” and “school”; included songs in such folders related to Disney
18 television shows and movies, such as “Can You Feel the Love Tonight” from the movie “The Lion
19 King” and “You’ve Got a Friend in Me” from the movie “Toy Story” and songs covering school-related
20 subjects or school-themed television shows and movies.²²⁶

21 191. The target demographic was also reflected in the sign-up process. In 2016, the birthdate
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23 ²²¹ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*,
24 Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5> [<https://perma.cc/78KJ-WBRS>].

25 ²²² *Id.*

26 ²²³ *Id.*

27 ²²⁴ *Id.*

28 ²²⁵ John Herrman, *Who’s Too Young for an App? Musical.ly Tests the Limits*, N.Y. Times (Sept. 16, 2016),
<https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-by-children-tests-the-limits-of-online-regulation.html> [<https://perma.cc/9HTF-BHT7>].

²²⁶ Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief (“**Musical.ly Complaint**”) at p. 8, ¶¶ 26–
27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019), ECF No. 1.

1 for those signing up for the app defaulted to the year 2000 (*i.e.*, 16 years old).²²⁷

2 192. TikTok also cultivated a younger demographic in unmistakable, albeit concealed, ways.
3 In 2020, the *Intercept* reported on a document TikTok prepared for its moderators. In the document,
4 TikTok instructs its moderators that videos of “senior people with too many wrinkles” are disqualified
5 for the “For You” feed because that would make “the video . . . much less attractive [and] not worth[] . .
6 . recommend[ing.]”²²⁸

7 193. In December 2016, Zhu confirmed the company had actual knowledge that “a lot of the
8 top users are under 13.”²²⁹

9 194. The FTC alleged that despite the company’s knowledge of these and a “significant
10 percentage” of other users who were under 13, the company failed to comply with the COPPA.²³⁰

11 195. TikTok settled those claims in 2019 by agreeing to pay what was then the largest ever
12 civil penalty under COPPA and to several forms of injunctive relief.²³¹

13 196. In an attempt to come into compliance with the consent decree and COPPA, TikTok
14 made available to users under 13 what it describes as a “limited, separate app experience.”²³² The child
15 version of TikTok restricts users from posting videos through the app. Children can still, however,
16 record and watch videos on TikTok.²³³ For that reason, experts fear the app is “designed to fuel [kids’]
17 interest in the grown-up version.”²³⁴

18 197. These subtle and obvious ways TikTok markets to and obtained a young userbase are
19

20 ²²⁷ Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed with*, Bus. Insider (Dec. 7,
2016), <https://www.businessinsider.com/how-to-use-musically-app-2016-12> [<https://perma.cc/2Q9R-F8TN>].

21 ²²⁸ Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly” People and the Poor to*
22 *Attract New Users*, *Intercept* (Mar. 15, 2020), [https://theintercept.com/2020/03/16/tiktok-app-moderators-users-](https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/)
[discrimination/](https://perma.cc/6YKN-G54N) [<https://perma.cc/6YKN-G54N>].

23 ²²⁹ Jon Russell, *Muscal.ly defends its handling of young users, as it races past 40M MAUs at 8:58–11:12*, TechCrunch (Dec.
2016), <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/> [<https://perma.cc/CCX9-WQDF>].

24 ²³⁰ See generally *Musical.ly Complaint*, *supra* note 226.

25 ²³¹ Lesley Fair, *Largest FTC COPPA settlement requires Musical.ly to change its tune*, FTC (Feb. 27, 2019),
<https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune>
[<https://perma.cc/S747-9RDD>].

26 ²³² Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge (Feb. 27, 2019),
<https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law>
[<https://perma.cc/W2BQ-T5Y7>].

27 ²³³ *Id.*

28 ²³⁴ Leonard Sax, *Is TikTok Dangerous for Teens?*, *Inst. Fam. Stud.* (Mar. 29, 2022), [https://ifstudies.org/blog/is-tiktok-](https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-)
[dangerous-for-teens-](https://perma.cc/RGX9-3JWC) [<https://perma.cc/RGX9-3JWC>].

1 manifestations of Zhu’s views about the importance of user engagement to growing TikTok. Zhu
2 explained the target demographic to the *New York Times*: “[T]eenage culture doesn’t exist” in China
3 because “teens are super busy in school studying for tests, so they don’t have the time and luxury to play
4 social media apps.”²³⁵ By contrast, Zhu describes “[t]eenagers in the U.S. [as] a golden audience.”²³⁶

5 198. TikTok’s efforts to attract young users have been successful. *See supra* Section IV.A.
6 Over 66% of children ages 13–17 report having used the TikTok app.

7 **c. TikTok Intentionally Maximizes the Time Users Spend on its Platform**

8 199. TikTok employs design elements and complex algorithms to simulate variable reward
9 patterns in a flow-inducing stream of short-form videos intended to captivate its user’s attention well
10 after they are satiated.

11 200. Like the other Defendants’ social media platforms, TikTok developed features that
12 exploit psychological phenomenon such as IVR and reciprocity to maximize the time users spend on its
13 platform.

14 201. TikTok drives habitual use of its platform using design elements that operate on
15 principles of IVR. For example, TikTok designed its platform to allow users to like and reshare videos.
16 Those features serve as rewards for users who create content on the platform. Receiving a like or reshare
17 indicates that others approve of that user’s content and satisfies their natural desire for acceptance.²³⁷
18 Studies have shown that “likes” activate the reward region of the brain.²³⁸ The release of dopamine in
19 response to likes creates a positive feedback loop.²³⁹ Users will use TikTok—again and again—in hope
20 of another pleasurable experience.²⁴⁰

21
22 ²³⁵ Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016),
23 <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html>
24 [<https://perma.cc/2Q2L-DYWZ>].

25 ²³⁶ *Id.*

26 ²³⁷ *See, e.g.*, Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and*
27 *Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016),
28 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/> [<https://perma.cc/9T58-KJBG>].

²³⁸ *Id.*

²³⁹ Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media*
Addiction, 11(7) J. Neurology & Neurophysiology 507 (2020), [https://www.ioncworld.org/open-access/neurotransmitter-](https://www.ioncworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf)
[dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf](https://www.ioncworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf) [<https://perma.cc/3QWP-9N5A>].

²⁴⁰ *Id.*

202. TikTok also uses reciprocity to manipulate users to use the platform. TikTok invokes reciprocity through features like “Duet.” The Duet feature allows users to post a video side-by-side with a video from another TikTok user. Users use Duet as a way to react to the videos of TikTok content creators. The response is intended to engender a reciprocal response from the creator of the original video.

203. TikTok, like Snapchat, offers video filters, lenses, and music, which are intended to keep users on its platform. Also, like Snapchat, TikTok has gamified its platform through “challenges.” These challenges are essentially campaigns in which users compete to perform a specific task. By fostering competition, TikTok incentivizes users to use its platform.

204. TikTok’s defining features, its “For You” feed, is a curated, never-ending stream of short-form videos intended to keep users on its platform. In that way, TikTok feeds users beyond the point they are satiated. The ability to scroll ad infinitum, coupled with the variable reward pattern of TikTok induces a flow-like state for users that distorts their sense of time.²⁴¹ That flow is yet another way TikTok increases the time users spend on its platform.

d. TikTok’s Algorithms are Manipulative

205. The first thing a user sees when they open TikTok is the “For You” feed, even if they have never posted anything, followed anyone, or liked a video.²⁴²

206. The “For You” page presents users with a “stream of videos” TikTok claims are “curated to [each user’s] interests.”²⁴³

207. According to TikTok, it populates each user’s “For You” feed by “ranking videos based on a combination of factors,” that include, among others, any interests expressed when a user registers a new account, videos a user likes, accounts they follow, hashtags, captions, sounds in a video they watch,

²⁴¹ Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, 16(14) Int’l J. Env’t Rsch. & Pub. Health 2612 (July 23, 2019), <https://doi.org/10.3390/ijerph16142612> [<https://perma.cc/JUG3-P7VH>].

²⁴² Brian Feldman, *TikTok is Not the Internet’s Eden*, N.Y. Mag. (Mar. 16, 2020), <https://nymag.com/intelligencer/2020/03/tiktok-didnt-want-you-to-see-ugly-or-poor-people-on-its-app.html> [<https://perma.cc/A5TR-U794>].

²⁴³ *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you> [<https://perma.cc/4DBQ-MCQY>].

1 and certain device settings, such as their language preferences and where they are located.²⁴⁴

2 208. Critically, some factors weigh heavier than others. To illustrate, TikTok explains that an
3 indicator of interest, such as “whether a user finishes watching a longer video from beginning to end,
4 would receive greater weight than a weak indicator, such as whether the video’s viewer and creator are
5 both in the same country.”²⁴⁵

6 209. TikTok claims it ranks videos in this way because the length of time a user spends
7 watching a video is a “strong indicator of interest[.]”²⁴⁶

8 210. But Zhu offered a different explanation, he repeatedly told interviewers that he was
9 “focused primarily on increasing the engagement of existing users.”²⁴⁷ “Even if you have tens of
10 millions of users,” Zhu explained, “you have to keep them *always* engaged.”²⁴⁸

11 211. The decisions TikTok made in programming its algorithms are intended to do just that, as
12 TikTok candidly explained in an internal document titled, “TikTok Algo 101.” The document, which
13 TikTok has confirmed is authentic, “explains frankly that in the pursuit of the company’s ‘ultimate goal’
14 of adding daily active users, it has chosen to optimize for two closely related metrics in the stream of
15 videos it serves: ‘retention’ — that is, whether a user comes back — and ‘time spent.’”²⁴⁹

16 212. “This system means that watch time is key.”²⁵⁰ Guillaume Chaslot, the founder of Algo
17 Transparency, who reviewed the document at the request of the *New York Times*, explained that “rather
18 than giving [people] what they really want,” TikTok’s “algorithm tries to get people addicted[.]”²⁵¹

19 213. Put another way, the algorithm, coupled with the design elements, condition users
20 through reward-based learning processes to facilitate the formation of habit loops that encourage

21
22 ²⁴⁴ *Id.*

23 ²⁴⁵ *Id.*

24 ²⁴⁶ *Id.*

25 ²⁴⁷ Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June
26 2, 2016), <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html> [<https://perma.cc/2VJM-NSSX>].

27 ²⁴⁸ Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*,
28 Bus. Insider (May 28, 2016), <https://www.businessinsider.com/what-is-musically-2016-5> [<https://perma.cc/78KJ-WBRS>]
(emphasis added).

²⁴⁹ 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/KTT2-UWTH>].

²⁵⁰ *Id.*

²⁵¹ *Id.*

1 excessive use.

2 214. The end result is that TikTok uses “a machine-learning system that analyzes each video
3 and tracks user behavior so that it can serve up a continually refined, never-ending stream of TikToks
4 optimized to hold [user’s] attention.”²⁵²

5 **e. TikTok’s Conduct in Designing and Operating its Platform Has Harmed**
6 **Youth Mental Health**

7 215. TikTok’s decision to program its algorithm to prioritize user engagement causes harmful
8 and exploitive content to be amplified to the young market it has cultivated.

9 216. The Integrity Institute, a nonprofit consisting of engineers, product managers, data
10 scientists, and others, has demonstrated how prioritizing user engagement amplifies misinformation on
11 TikTok (and other platforms).²⁵³ That pattern, the Integrity Institute notes, is “true for a broad range of
12 harms,” such as hate speech and self-harm content, in addition to misinformation.²⁵⁴

13 217. The Integrity Institute’s analysis builds on a premise Mark Zuckerberg described as the
14 “Natural Engagement Pattern.”²⁵⁵

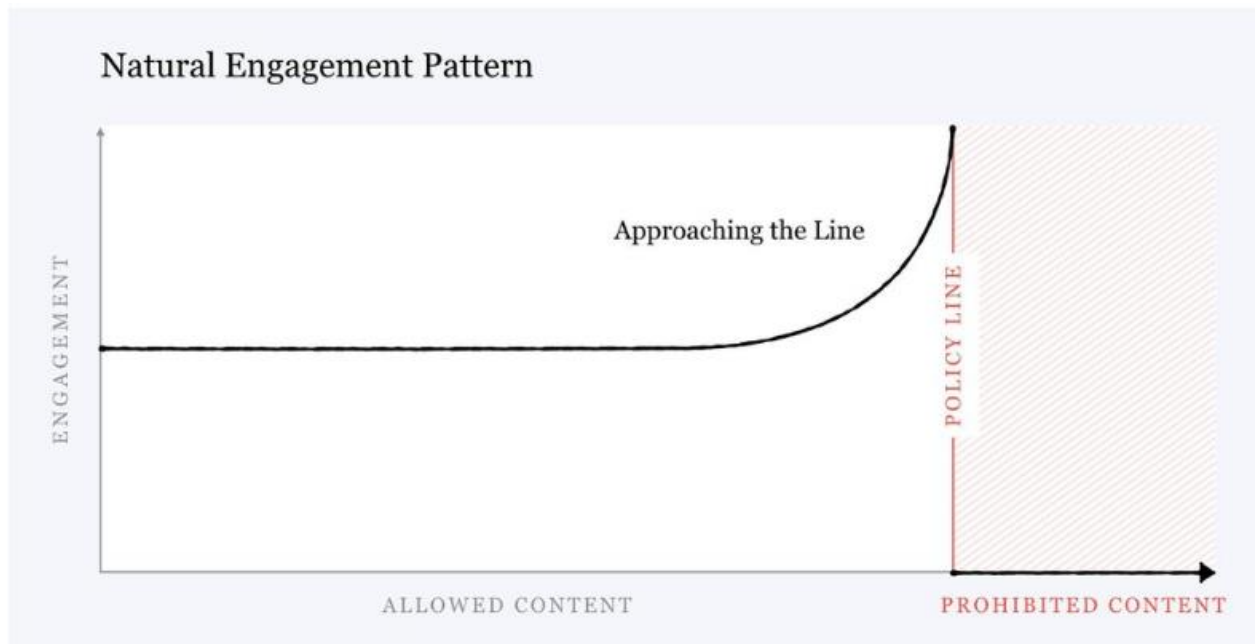
15
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22 ²⁵² Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),
23 <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention> [<https://perma.cc/YX85-ZFV6>].

24 ²⁵³ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022),
25 <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>
26 [<https://perma.cc/59QV-BYVK>]; see also Steven Lee Myers, *How Social Media Amplifies Misinformation More Than*
27 *Information*, N.Y. Times (Oct. 13, 2022), [https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-](https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html)
28 [institute-report.html](https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html) [<https://perma.cc/EA9U-UBZF>].

²⁵⁴ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022),
<https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>
[<https://perma.cc/59QV-BYVK>].

²⁵⁵ Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (Nov. 15, 2018),
[https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-](https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/?hc_location=ufi)
[enforcement/10156443129621634/?hc_location=ufi](https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/?hc_location=ufi) [<https://perma.cc/ZK5C-ZTSX>].

218. This chart shows that as content gets closer and closer to becoming harmful, on average, it gets more engagement.



219. According to Zuckerberg “no matter where we draw the lines for what is allowed, as a piece of content gets close to that line, people will engage with it more on average[.]”²⁵⁶

220. This has important implications for platform design, as the Integrity Institute explains:

when platforms use machine learning models to predict user engagement on content, we should expect the predicted engagement to follow the actual engagement. When those predictions are used to rank and recommend content, specifically when a higher predicted engagement score means the content is more likely to be recommended or placed at the top of feeds, then we expect that misinformation will be preferentially distributed and amplified on the platform.²⁵⁷

221. Put differently, if you use past engagement to predict future engagement, as TikTok does, you are most likely to populate users “For You” feed with harmful content.

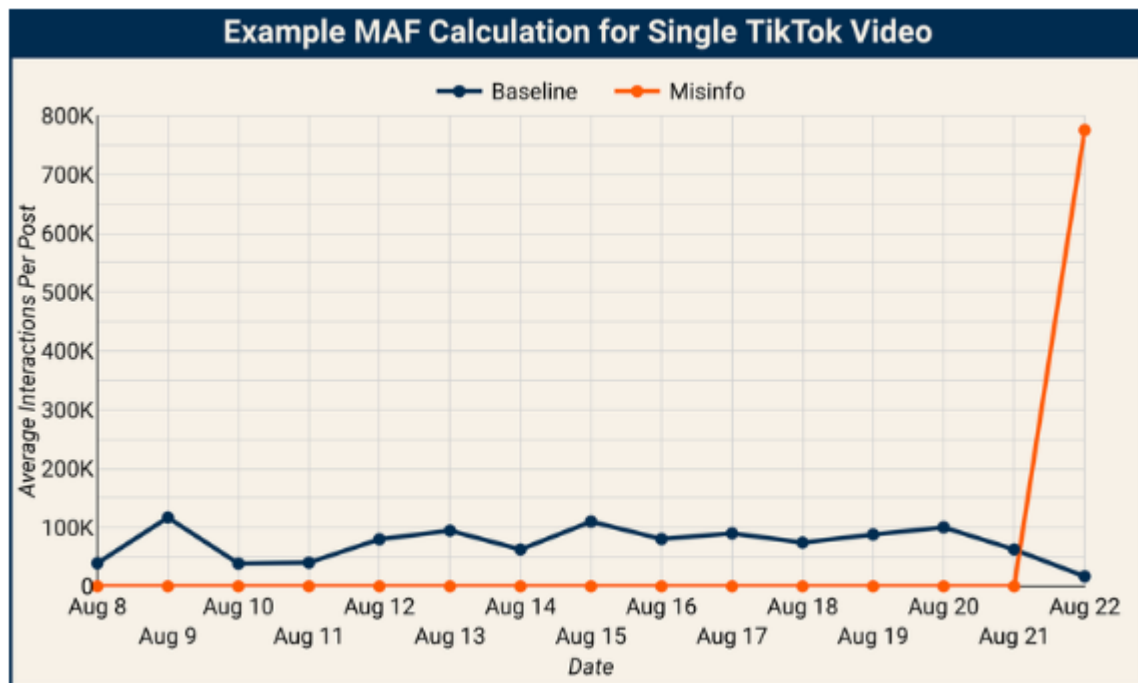
222. The Integrity Institute tested its theory by analyzing a category of harmful content: misinformation. Specifically, the Integrity Institute compared the amount of engagement (e.g., number of views) a post containing misinformation received as compared to prior posts from the same content

²⁵⁶ *Id.*

²⁵⁷ *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard> [<https://perma.cc/59QV-BYVK>].

creator.²⁵⁸

223. For example, a TikTok user's historical posts received on average 75,000 views. When that same user posted a false statement (as determined by the International Fact Checking Network), the post received 775,000 views. In this case, TikTok amplified the misinformation 10 times more than this user's typical content.²⁵⁹



224. After analyzing many other posts from other users, the Integrity Institute found that TikTok on average amplified misinformation 29 times more than other content.²⁶⁰

225. A separate investigation by *NewsGuard* found TikTok's search algorithm similarly amplified misinformation. TikTok's search engine, like its "For You" feed, is a favorite among youth, with 40% preferring it (and Instagram) over Google.²⁶¹ Unfortunately, *NewsGuard* found that one in five of the top 20 TikTok search results on prominent news topics, such as school shootings and COVID vaccines, contain misinformation.²⁶²

²⁵⁸ *Id.*

²⁵⁹ *Id.*

²⁶⁰ *Id.*

²⁶¹ Wanda Pogue, *Move Over Google. TikTok is the Go-To Search Engine for Gen Z*, Adweek (Aug. 4, 2022), <https://www.adweek.com/social-marketing/move-over-google-tiktok-is-the-go-to-search-engine-for-gen-z/> [<https://perma.cc/327V-7T46>].

²⁶² *Misinformation Monitor*, NewsGuard (Sept. 2022), <https://www.newsguardtech.com/misinformation-monitor/september-2022/> [<https://perma.cc/XH7X-RYZY>].

226. Misinformation is just one type of harmful content TikTok amplifies to its young users. Investigations by the *Wall Street Journal* found TikTok inundated young users with videos about depression, self-harm, drugs, and extreme diets, to name a few.

227. In one investigation, the *Wall Street Journal* found TikTok’s algorithm quickly pushed users down rabbit holes where they were more likely to encounter harmful content. The *Wall Street Journal* investigated how TikTok’s algorithm chose what content to promote to users by having 100 bots scroll through the “For You” feed.²⁶³ Each bot was programmed with interests, such as extreme sports, forestry, dance, astrology, and animals.²⁶⁴ Those interests were not disclosed in the process of registering their accounts.²⁶⁵ Rather, the bots revealed their interests through their behaviors, specifically the time they spent watching the videos TikTok recommended to them. Consistent with TikTok’s internal “Algo 101” document, the *Wall Street Journal* found that time spent watching videos to be “the most impactful data on [what] TikTok serves you.”²⁶⁶

228. Over the course of 26 minutes, one bot watched 224 videos, lingering over videos with hashtags for “depression” or “sad.”²⁶⁷ From then on, 93% of the videos TikTok showed this account were about depression or sadness.²⁶⁸

229. That is not an outlier. Guillaume Chaslot, a former engineer for Google who worked on the algorithm for YouTube and the founder of Algo Transparency, explained that 90–95% of the content users see on TikTok is based on its algorithm.²⁶⁹

230. “Even bots with general mainstream interests got pushed to the margin as recommendations got more personalized and narrow.”²⁷⁰ Deep in these rabbit holes, the *Wall Street Journal* found “users are more likely to encounter potential harmful content.”²⁷¹ For example, one video

²⁶³ *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021), <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477> [<https://perma.cc/L3F2-DA4M>].

²⁶⁴ *Id.*

²⁶⁵ *Id.*

²⁶⁶ *Id.*

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ *Id.*

²⁷⁰ *Id.*

²⁷¹ *Id.*

1 the *Wall Street Journal* encountered encouraged suicide, reading “Just go. Leave. Stop trying. Stop
2 pretending. You know it and so do they. Do Everyone a favor and leave.”²⁷²

3 231. Chaslot explained why TikTok feeds users this content:

4 [T]he algorithm is able to find the piece of content that you’re vulnerable to. That will
5 make you click, that will make you watch, but it doesn’t mean you really like it. And that
6 it’s the content that you enjoy the most. It’s just the content that’s most likely to make
you stay on the platform.²⁷³

7 232. A follow-up investigation by the *Wall Street Journal* using bots found “that through its
8 powerful algorithms, TikTok can quickly drive minors—among the biggest users of the app—into
9 endless spools of content about sex and drugs.”²⁷⁴

10 233. The bots in this investigation were registered as users aged 13 to 15 and, as before,
11 programmed to demonstrate interest by how long they watched the videos TikTok’s algorithms served
12 them.²⁷⁵ Videos that did not match their interests, the bots scrolled through without pausing.²⁷⁶ The bots
13 lingered on videos that matched any of their programmed interests.²⁷⁷

14 234. Every second the bot hesitated or re-watched a video again proved key to what TikTok
15 recommended to the accounts, which the *Wall Street Journal* found was used to “drive users of any age
16 deep into rabbit holes of content[.]”²⁷⁸

17 235. For example, one bot was programmed to pause on videos referencing drugs, among
18 other topics. The first day on the platform, the “account lingered on a video of a young woman walking
19 through the woods with a caption” referencing “stoner girls.”²⁷⁹ The following day the bot viewed a
20 video of a “marijuana-themed cake.”²⁸⁰ The “majority of the next thousand videos” TikTok directed at
21 the teenage account “tout[ed] drugs and drug use, including marijuana, psychedelics and prescription
22

23 ²⁷² *Id.*

²⁷³ *Id.*

24 ²⁷⁴ Rob Barry *et al.*, *How TikTok Serves up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8, 2021),
25 [https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-
11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink](https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink) [<https://perma.cc/UVX9-8MCG>].

²⁷⁵ *Id.*

26 ²⁷⁶ *Id.*

²⁷⁷ *Id.*

27 ²⁷⁸ *Id.*

²⁷⁹ *Id.*

28 ²⁸⁰ *Id.*

1 medication.”²⁸¹

2 236. TikTok similarly zeroed in on and narrowed the videos it showed accounts whether the
3 bot was programmed to express interest in drugs, sexual imagery, or a multitude of interests. In the first
4 couple of days, TikTok showed the bots a “high proportion of popular videos.”²⁸² “But after three days,
5 TikTok began serving a high number of obscure videos.”²⁸³

6 237. For example, a bot registered as a 13-year-old was shown a series of popular videos upon
7 signing up.²⁸⁴ The bot, which was programmed to demonstrate interest in sexual text and imagery, also
8 watched sexualized videos. Later, “[i]t experienced one of the most extreme rabbit holes among the *Wall*
9 *Street Journal’s* accounts. Many videos described how to tie knots for sex, recover from violent sex acts
10 and discussed fantasies about rape.”²⁸⁵ At one point, “more than 90% of [one] account’s video feed was
11 about bondage and sex.”²⁸⁶

12 238. At least 2,800 of the sexualized videos that were shown to the *Wall Street Journal’s* bots
13 were labeled as being for adults only.²⁸⁷ Yet, TikTok directed these videos to the minor accounts
14 because, as TikTok told the *Wall Street Journal*, it does not “differentiate between videos it serves to
15 adults and minors.”²⁸⁸

16 239. TikTok also directed a concentrated stream of videos at accounts programmed to express
17 interest in a variety of topics. One such account was programmed to linger over hundreds of Japanese
18 film and television cartoons. “In one streak of 150 videos, all but four” of the videos TikTok directed at
19 the account, “featured Japanese animation—many with sexual themes.”²⁸⁹

20 240. The relentless stream of content intended to keep users engaged “can be especially
21 problematic for young people,” because they may lack the capability to stop watching, says David
22 Anderson, a clinical psychologist at the nonprofit mental health care provider, The Child Mind

23 ²⁸¹ *Id.*

24 ²⁸² *Id.*

25 ²⁸³ *Id.*

26 ²⁸⁴ *Id.*

27 ²⁸⁵ *Id.*

28 ²⁸⁶ *Id.*

²⁸⁷ *Id.*

²⁸⁸ *Id.*

²⁸⁹ *Id.*

1 Institute.²⁹⁰

2 241. In a similar investigation, the *Wall Street Journal* found TikTok “flood[ed] teen users
3 with videos of rapid-weight-loss competitions and ways to purge food that health professionals say
4 contribute to a wave of eating-disorder cases spreading across the country.”²⁹¹

5 242. In this investigation, the *Wall Street Journal* analyzed the tens of thousands of videos
6 TikTok recommended to a dozen bots registered as 13-year-olds. As before, the bots were given
7 interests. Bots scrolled quickly through videos that did not match their interests and lingered on videos
8 that did.²⁹² The accounts registered as 13-year-olds were programmed at different times to display
9 interests in weight loss, gambling, and alcohol.²⁹³

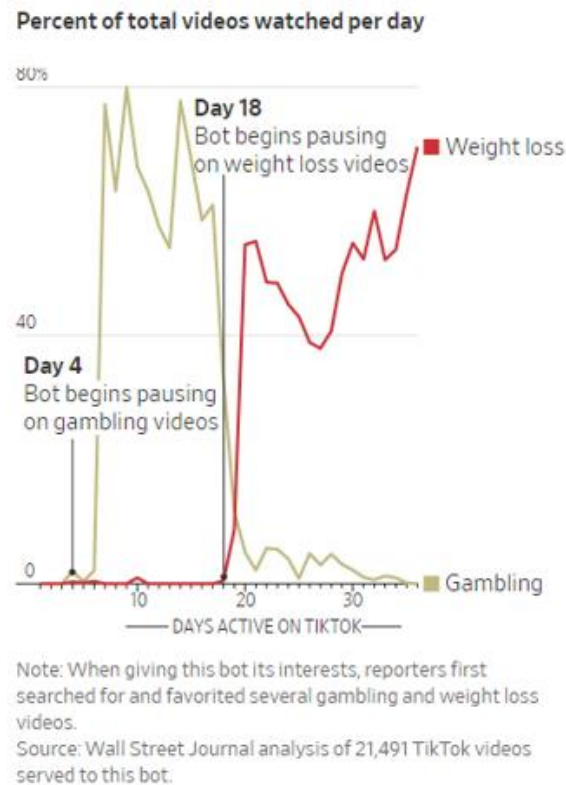
25 ²⁹⁰ *Id.*

26 ²⁹¹ Tawnell D. Hobbs *et al.*, *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-Disorder Videos*, Wall St. J.
(Dec. 17, 2021), <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848>
27 [<https://perma.cc/TS8V-QQJX>] (some of the accounts performed searches or sent other, undisclosed signals indicating their
preferences).

28 ²⁹² *Id.*

²⁹³ *Id.*

243. “TikTok’s algorithm quickly g[a]ve[] users the content they’ll watch, for as long as they’ll watch it.”²⁹⁴ For example, TikTok streamed gambling videos to a bot registered to a 13-year-old after it first searched for and favorited several such videos.²⁹⁵ When the bot began demonstrating interest in weight loss videos, the algorithm adapted quickly, as this chart demonstrates.²⁹⁶



244. After the change in programming, weight-loss videos accounted for well over 40% of the content TikTok’s algorithm recommended to the user.²⁹⁷

245. The other accounts were also flooded with weight-loss videos. Over the course of about 45 days, TikTok inundated the accounts with more than 32,000 such videos, “many promoting fasting, offering tips for quickly burning belly fat and pushing weight-loss detox programs and participation in extreme weight-loss competitions.”²⁹⁸ Some encouraged purging, eating less than 300 calories a day,

²⁹⁴ *Id.*

²⁹⁵ *Id.*

²⁹⁶ *Id.*

²⁹⁷ *Id.*

²⁹⁸ *Id.*

1 consuming nothing but water some days, and other hazardous diets.²⁹⁹

2 246. According to Alyssa Moukheiber, a treatment center dietitian, TikTok’s powerful
3 algorithm and the harmful streams of content it directs at young users can tip them into unhealthy
4 behaviors or trigger a relapse.³⁰⁰

5 247. Unfortunately, it has for the several teenage girls interviewed by the *Wall Street Journal*,
6 who reported developing eating disorders or relapsing after being influenced by the extreme diet videos
7 TikTok promoted to them.³⁰¹

8 248. They are not alone. Katie Bell, a co-founder of the Healthy Teen Project, “said the
9 majority of her 17 teenage residential patients told her TikTok played a role in their eating disorders.”³⁰²

10 249. Others, like Stephanie Zerwas, an associate professor of psychiatry at the University of
11 North Carolina at Chapel Hill, could not recount how many of her young patients told her that “I’ve
12 started falling down this rabbit hole, or I got really into this or that influencer on TikTok, and then it
13 started to feel like eating-disorder behavior was normal, that everybody was doing that.”³⁰³

14 250. This trend extends nationwide. The National Association of Anorexia Nervosa and
15 Associated Disorders has fielded 50% more calls to its hotline since the pandemic began, most of whom
16 it says are from young people or parents on their behalf.³⁰⁴

17 251. Despite the ample evidence that TikTok’s design and operation of its platform harms the
18 tens of millions of youth who use it, TikTok continues to manipulate them into returning to the platform
19 again and again so that it may serve them ads in between the exploitive content it amplifies.

20 **4. YouTube Intentionally Marketed to and Designed Its Social Media Platform for**
21 **Youth Users, Substantially Contributing to the Mental Health Crisis**

22 **a. The YouTube Platform**

23 252. YouTube is a platform where users can post, share, view, and comment on videos related
24 to a vast range of topics. The platform became available publicly in December 2005 and was acquired

25 ²⁹⁹ *Id.*

26 ³⁰⁰ *Id.*

27 ³⁰¹ *Id.*

28 ³⁰² *Id.*

³⁰³ *Id.*

³⁰⁴ *Id.*

by Google in 2006.

253. YouTube reports that today it has over 2 billion monthly logged-in users.³⁰⁵ Even more people use YouTube each month because consumers do not have to register an account to view a video on YouTube. As a result, anyone can view most content on YouTube—regardless of age.

254. Users, whether logged in or not, watch *billions of hours of videos every day*.³⁰⁶

255. Users with accounts can post their own videos, comment on others, and since 2010 express their approval of videos through “likes.”³⁰⁷

256. Beginning in 2008 and through today, YouTube has recommended videos to users.³⁰⁸ Early on, the videos YouTube recommended to users were the most popular videos across the platform.³⁰⁹ YouTube admits “[n]ot a lot of people watched those videos[,]” at least not based on its recommendation.³¹⁰

257. Since then, YouTube has designed and refined its recommendation system using machine learning algorithms that today take into account a user’s “likes,” time spent watching a video, and other behaviors to tailor its recommendations to each user.³¹¹

258. YouTube automatically plays those recommendations for a user after they finish watching a video. This feature, known as “autoplay,” was implemented in 2015. YouTube turns the feature on by default, which means videos automatically and continuously play for users unless they turn it off.³¹²

259. YouTube purports to disable by default its autoplay feature for users aged 13–17.³¹³ But, as mentioned above, YouTube does not require users to log in or even have an account to watch videos.

³⁰⁵ YouTube for Press, YouTube, <https://blog.youtube/press/> [<https://perma.cc/GC4P-PVBW>] (last visited June 26, 2023).

³⁰⁶ *Id.*

³⁰⁷ Josh Lowensohn, *YouTube’s big redesign goes live to everyone*, CNET (Mar. 31, 2010), <https://www.cnet.com/culture/youtubes-big-redesign-goes-live-to-everyone/> [<https://perma.cc/Y6S6-KGXG>].

³⁰⁸ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [<https://perma.cc/WM6C-D36J>].

³⁰⁹ *Id.*

³¹⁰ *Id.*

³¹¹ *Id.*

³¹² Autoplay videos, YouTube Help, <https://support.google.com/youtube/answer/6327615?hl=en#:~:text=For%20users%20aged%2013%2D17,turned%20off%20Autoplay%20for%20you> [<https://perma.cc/RYN4-LA55>] (last visited June 26, 2023).

³¹³ *Id.*

For them or anyone who does not self-report an age between 13 and 17, YouTube defaults to automatically playing the videos its algorithm recommends to the user.

b. YouTube Markets Its Platform to Youth

260. The primary way YouTube makes money is through advertising. In 2021 alone, YouTube made \$19 billion in ad revenue.³¹⁴

261. “In 2012, YouTube concluded that the more people watched, the more ads it could run[.]”³¹⁵ “So YouTube . . . set a company-wide objective to reach one billion hours of viewing a day[.]”³¹⁶

262. “[T]he best way to keep eyes on the site,” YouTube realized, was “recommending videos, alongside a clip or after one was finished.”³¹⁷ That is what led to the development of its recommendation algorithm and autoplay feature described above. *See supra* Section IV.D.4.a.

263. YouTube has long known that youth use its platforms in greater proportion than older demographics.

264. Yet, YouTube has not implemented even rudimentary protocols to verify the age of users. Anyone can watch a video on YouTube without registering an account or reporting their age.

265. Instead, YouTube leveraged its popularity among youth 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.”³¹⁸ 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

³¹⁴ Alphabet Inc., Annual Report, Form 10-k at 60 (2021), <https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm> [<https://perma.cc/9SJ8-FGW8>].

³¹⁵ Mark Bergen, *YouTube Executive Ignores 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?leadSource=verify%20wall> [<https://perma.cc/98GG-VNSS>].

³¹⁶ *Id.*

³¹⁷ *Id.*

³¹⁸ Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit A, *FTC v. Google LLC et al.*, No. 1-19-cv-02642-BAH (D.D.C. Sept. 4, 2019), ECF No. 1-1.

1 watch videos.”³¹⁹ In a different presentation to Hasbro, YouTube was referred to as “[t]he new ‘Saturday
2 Morning Cartoons,’” and claimed that YouTube was the “#1 website regularly visited by kids” and “the
3 #1 source where children discover new toys + games.”³²⁰

4 266. In addition to turning a blind eye towards underage users of its platform, YouTube
5 developed and marketed a version of YouTube specifically for children under the age of 13.

6 267. YouTube’s efforts to attract young users have been successful. *See supra* Section IV.A. A
7 vast majority, 95%, of children ages 13–17 have used YouTube.³²¹

8 **c. YouTube Intentionally Maximizes the Time Users Spend on its Platform**

9 268. Google designed YouTube to maximize user engagement, predominantly through the
10 amount of time users spend watching videos. To that end, Google employs design elements and complex
11 algorithms to create a never-ending stream of videos intended to grip user’s attention.

12 269. Like the other Defendants’ social media platforms, Google developed features that
13 exploit psychological phenomenon such as IVR to maximize the time users spend on YouTube.

14 270. YouTube uses design elements that operate on principles of IVR to drive both YouTube
15 content creators and YouTube viewers into habitual, excessive use. Google designed YouTube to allow
16 users to like, comment, and share videos and to subscribe to content creator’s channels. These features
17 serve as rewards for users who create and upload videos to YouTube. As described above, receiving a
18 like indicates others’ approval and activates the reward region of the brain.³²² The use of likes, therefore,
19 encourages users to use YouTube over and over, seeking future pleasurable experiences.

20 271. YouTube also uses IVR to encourage users to view others content. One of the ways
21 Google employs IVR into YouTube’s design is through subscriber push notifications and emails, which
22 are designed to prompt users to watch YouTube content and encourages excessive use of the platform.
23 When a user “subscribes” to another user’s channel, they receive notifications every time that user
24

25 ³¹⁹ *Id.* Exhibit B.

26 ³²⁰ *Id.* Exhibit C.

27 ³²¹ *Id.*

28 ³²² *See, e.g.,* Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/> [<https://perma.cc/9T58-KJBG>].

1 uploads new content, prompting them to open YouTube and watch the video.³²³

2 272. One of YouTube’s defining features is its panel of recommended videos. YouTube
3 recommends videos to users on both the YouTube home page and on every individual video page in an
4 “Up Next” panel.³²⁴ This list automatically populates next to the video a user is currently watching. This
5 recommended video list is a never-ending feed of videos intended to keep users on the app watching
6 videos without having to affirmatively click or search for other videos. This constant video stream,
7 comprised of videos recommended by YouTube’s algorithms, is the primary way Google increases the
8 time users spend on YouTube.

9 **d. YouTube’s Algorithms are Manipulative**

10 273. Google uses algorithms throughout YouTube to recommend videos to users. These
11 algorithms select videos that populate the YouTube homepage, rank results in user searches, and suggest
12 videos for viewers to watch next. These algorithms are manipulative by design and increase the amount
13 of time users spend on YouTube.

14 274. Google began building the YouTube recommendation system in 2008.³²⁵ When Google
15 initially developed its recommendation algorithms, the end goal was to maximize the amount of time
16 users spend watching YouTube videos. A YouTube spokesperson admitted as much, saying YouTube’s
17 recommendation system was initially set up to “optimize” the amount of time users watch videos.³²⁶

18 275. Former YouTube engineer Guillaume Chaslot has also stated that when he worked for
19 YouTube designing its recommendation algorithm, the priority was to keep viewers on the site for as
20 long as possible to maximize “watch time.”³²⁷ Chaslot further stated that “[i]ncreasing users’ watch
21

22 ³²³ *Manage YouTube Notifications*, YouTube,
23 <https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop> [<https://perma.cc/6NT6-NQ9M>] (last visited June 26, 2023).

24 ³²⁴ *Recommended Videos*, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/>
25 [<https://perma.cc/WN7Y-F2ZH>] (last visited June 26, 2023).

26 ³²⁵ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [<https://perma.cc/WM6C-D36J>].

27 ³²⁶ Ben Popken, *As algorithms take over, YouTube’s recommendations highlight a human problem*, NBC (Apr. 19, 2018),
28 <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596> [<https://perma.cc/2EV7-GUCT>].

³²⁷ 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> [<https://perma.cc/8VC9-AYZY>].

time is good for YouTube’s business model” because the more people watch videos, the more ads they see, resulting in an increase of YouTube’s advertising revenue.³²⁸

276. Early on, one of the primary metrics behind YouTube’s recommendation algorithm was clicks. As YouTube describes, “[c]licking on a video provides a strong indication that you will also find it satisfying.”³²⁹ But as YouTube learned, clicking on a video does not mean a user actually watched it. Thus, in 2012, YouTube also started tracking watch time—the amount of time a user spends watching a video.³³⁰ YouTube made this switch to keep people watching for as long as possible.³³¹ In YouTube’s own words, this switch was successful. “These changes have so far proved very positive -- primarily less clicking, more watching. We saw the amount of time viewers spend watching videos across the site increase immediately[.]”³³² And in 2016, YouTube started measuring “valued watchtime” via user surveys to ensure that viewers are satisfied with their time spent watching videos on YouTube.³³³ All of these changes to YouTube’s algorithms were made to ensure that users spend more time watching videos and ads.

277. YouTube’s current recommendation algorithm is based on deep-learning neural networks that retune its recommendations based on the data fed into it.³³⁴ While this algorithm is incredibly complex, its process can be broken down into two general steps. First, the algorithm compiles a shortlist of several hundred videos by finding videos that match the topic and other features of the video a user is

³²⁸ Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile’s Paradise*, Huffington Post (Mar. 20, 2020), https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db [https://perma.cc/8GJ2-KXL4].

³²⁹ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [https://perma.cc/WM6C-D36J].

³³⁰ *Id.*

³³¹ Dave Davies, *How YouTube became one of the planet’s most influential media businesses*, NPR (Sept. 8, 2022), <https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses> [https://perma.cc/JR2R-E7CF].

³³² Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012), <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/> [https://perma.cc/5D2X-QUZP].

³³³ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/> [https://perma.cc/WM6C-D36J].

³³⁴ Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018), <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/> [https://perma.cc/V6B7-64LA]; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, Google (2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf> [https://perma.cc/P3V7-BDNF].

1 currently watching.³³⁵ Then the algorithm ranks the list according to the user’s preferences, which the
2 algorithm learns by tracking a user’s clicks, likes, and other interactions.³³⁶ In short, the algorithms track
3 and measure a user’s previous viewing habits and then finds and recommends other videos the algorithm
4 thinks will hold the consumer’s attention.

5 278. YouTube’s recommendation system “is constantly evolving, learning every day from
6 over 80 billion pieces of information.”³³⁷ Some of the information the recommendation algorithm relies
7 on to deliver recommended videos to users includes users’ watch and search history, channel
8 subscriptions, clicks, watch time, survey responses, shares, likes, dislikes, users’ location (country) and
9 the time of day.³³⁸

10 279. The recommendation algorithm can determine what “signals” or factors are more
11 important to individual users.³³⁹ For example, if a user shares every video they watch, including videos
12 the user gives a low rating, the algorithm learns not to heavily factor the user’s shares when
13 recommending content.³⁴⁰ Thus, the recommendation algorithm “develops dynamically” to individual
14 user’s viewing habits and makes highly specific recommendations to keep individual users watching
15 videos.³⁴¹

16 280. In addition to the algorithm’s self-learning, Google engineers consistently update
17 YouTube’s recommendation and ranking algorithms, making several updates every month, according to
18 YouTube Chief Product Officer Neal Mohan.³⁴² The end goal is to increase the amount of time users
19 spend watching content on YouTube.

20 ³³⁵ Karen Hao, *YouTube is experimenting with ways to make its algorithm even more addictive*, MIT Tech. Rev. (Sept. 27,
21 2019), <https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/>
22 [<https://perma.cc/CC7F-S7DN>]; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, Google
(2016), <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf> [<https://perma.cc/P3V7-BDNF>].
23 ³³⁶ *Id.*

24 ³³⁷ Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), [https://blog.youtube/inside-](https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/)
25 [youtube/on-youtubes-recommendation-system/](https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/) [<https://perma.cc/WM6C-D36J>].

26 ³³⁸ *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content)
27 [features/recommendations/#signals-used-to-recommend-content](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content) [<https://perma.cc/WN7Y-F2ZH>] (last visited June 26,
28 2023).

³³⁹ *Id.*

³⁴⁰ *Id.*

³⁴¹ *Id.*

³⁴² Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and the Future for Creators*,
Verge (Aug. 3, 2021), <https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>
[<https://perma.cc/2HWP-YSL4>].

281. Because Google has designed and refined its algorithms to be manipulative, these algorithms are incredibly successful at getting users to view content based on the algorithm's recommendation. Mohan stated in 2018 that YouTube's AI-driven recommendations are responsible for 70% of the time users spend on YouTube.³⁴³ In other words, 70% of all YouTube content that users watch was recommended to users by YouTube's algorithms as opposed to users purposely searching for and identifying the content they watch.

282. Mohan also stated that recommendations keep mobile device users watching YouTube for more than 60 minutes at a time on average.³⁴⁴

283. Given that people watch more than one billion hours of YouTube videos daily,³⁴⁵ YouTube's recommendation algorithms are responsible for hundreds of millions of hours that users spend watching videos on YouTube.

e. YouTube's Conduct in Designing and Operating its Platform Has Harmed Youth Mental Health

284. By designing YouTube's algorithms to prioritize and maximize the amount of time users spend watching videos, Google has harmed youth mental health. In particular, YouTube has harmed youth mental health by recommending exploitive content to youth through its algorithms.

285. YouTube's algorithms push its young users down rabbit holes where they are likely to encounter content that is violent, sexual, or encourages self-harm, among other types of harmful content.

286. Research by the Tech Transparency Project ("TTP") shows that YouTube Kids fed children content that involved drug culture, guns, and beauty and diet tips that could lead to harmful body image issues.³⁴⁶ Among the videos TTP found were step-by-step instructions on how to conceal a gun, guides on how to bleach one's face at home, and workout videos emphasizing the importance of

³⁴³ Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan. 20, 2018), <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/> [<https://perma.cc/Q6GM-SSDG>].

³⁴⁴ *Id.*

³⁴⁵ Shira Ovide, *The YouTube Rabbit Hole is Nuanced*, N.Y. Times (Apr. 21, 2022), <https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html> [<https://perma.cc/7NCH-GHBV>].

³⁴⁶ Alex Hern, *YouTube Kids shows videos promoting drug culture and firearms to toddlers*, Guardian (May 5, 2022), <https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers> [<https://perma.cc/UMK2-H43F>].

burning calories and telling kids to “[w]iggle your jiggle.”³⁴⁷ This research shows that YouTube Kids not only lets inappropriate content slip through its algorithmic filters, but actively directed the content to kids through its recommendation engine.

287. Similar examples abound. Amanda Kloer, a campaign director with the child safety group ParentsTogether, spent an hour on her child’s YouTube Kids profile and found videos “encouraging kids how to make their shirts sexier, a video in which a little boy pranks a girl over her weight, and a video in which an animated dog pulls objects out of an unconscious animated hippo’s butt.”³⁴⁸ Another parent recounted that YouTube Kids’ autoplay function led her 6-year-old daughter to an animated video that encouraged suicide.³⁴⁹

288. Other youth are fed content by YouTube’s algorithms that encourages self-harm. As reported by PBS Newshour, a middle-schooler named Olivia compulsively watched YouTube videos every day after she came home from school.³⁵⁰ Over time she became depressed and started searching for videos on how to commit suicide. Similar videos then gave her the idea of overdosing. Weeks later she was in the hospital after “downing a bottle of Tylenol.”³⁵¹ Ultimately, she was admitted into rehab for digital addiction because of her compulsive YouTube watching.³⁵²

289. According to the Pew Research Center, 46% of parents say their child has encountered inappropriate videos on YouTube.³⁵³ And children are not encountering these videos on their own volition. Rather, they are being fed harmful and inappropriate videos through YouTube’s algorithms. Again, YouTube’s AI-driven recommendations are responsible for 70% of the time users spend on

³⁴⁷ *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency Project (May 5, 2022), <https://www.techtransparencyproject.org/articles/guns-drugs-and-skin-bleaching-youtube-kids-still-poses-risks-children> [<https://perma.cc/EHB9-MBX8>].

³⁴⁸ Rebecca Heilweil, *YouTube’s kids app has a rabbit hole problem*, Vox (May 12, 2021), <https://www.vox.com/recode/22412232/youtube-kids-autoplay> [<https://perma.cc/C6BA-AU6E>].

³⁴⁹ *Id.*

³⁵⁰ Lesley McClurg, *After compulsively watching YouTube, teenage girl lands in rehab for ‘digital addiction’*, PBS (May 16, 2017), <https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction> [<https://perma.cc/M594-VB5A>].

³⁵¹ *Id.*

³⁵² *Id.*

³⁵³ Brooke Auxier et al., *Parenting Children in The Age of Screens: 2. Parental views about YouTube*, Pew Rsch. Ctr. (July 28, 2020), <https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/> [<https://perma.cc/U7LH-D62Q>].

1 YouTube.³⁵⁴

2 290. Other reports have also found that YouTube’s recommendation algorithm suggests a
3 wide array of harmful content, including videos that feature misinformation, violence, and hate speech,
4 along with other content that violates YouTube’s policies.³⁵⁵ A 2021 crowdsourced investigation from
5 the Mozilla Foundation involving 37,000 YouTube users revealed that 71% of all reported negative user
6 experiences came from videos recommended by YouTube to users.³⁵⁶ And users were 40% more likely
7 to report a negative experience with a video recommended by YouTube’s algorithm than with a video
8 they searched for.³⁵⁷

9 291. The inappropriate and disturbing content YouTube’s algorithms expose children to has
10 adverse effects on mental health. Mental health experts have warned that YouTube is a growing source
11 of anxiety and inappropriate sexual behavior among kids under the age of 13.³⁵⁸

12 292. Even though much of the harmful content YouTube’s algorithms feed to youth is
13 harmful, it can activate the reward circuitry in the brain such that it encourages youth to spend more
14 time watching videos on YouTube. According to Donna Volpita, founder of The Center for Resilient
15 Leadership, watching “fear-inducing videos cause the brain to receive a small amount of dopamine,”
16 which acts as a reward and creates a desire to do something over and over.³⁵⁹ This dopaminergic
17 response is in addition to the reward stimulus YouTube provides users through IVR.

18 293. Mental health professionals across the country have seen an increase in children
19 experiencing mental health issues because of YouTube. Natasha Daniels, a child psychotherapist in
20 Arizona, said she has seen a rise in cases of children suffering from anxiety because of videos they
21 watched on YouTube.³⁶⁰ Because of their anxiety, these children “exhibit loss of appetite, sleeplessness,

22 ³⁵⁴ Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan. 20, 2018),
23 <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/> [<https://perma.cc/Q6GM-SSDG>].

24 ³⁵⁵ Brandy Zadrozny, *YouTube’s recommendations still push harmful videos, crowdsourced study finds*, NBC News (July 17,
25 2021), <https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355> [<https://perma.cc/HT4Q-QSN5>].

26 ³⁵⁶ *Id.*

27 ³⁵⁷ *Id.*

28 ³⁵⁸ 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>
[<https://perma.cc/CRO9-6VJV>].

³⁵⁹ *Id.*

³⁶⁰ *Id.*

1 crying fits, and fear.”³⁶¹

2 294. In addition to causing anxiety, watching YouTube is also associated with insufficient
3 sleep.³⁶² In one study on the effect of app use and sleep, YouTube was the only app consistently
4 associated with negative sleep outcomes.³⁶³ For every 15 minutes teens spent watching YouTube, they
5 had a 24% greater chance of getting fewer than seven hours of sleep.³⁶⁴ YouTube is particularly
6 problematic on this front because the recommendation and autoplay feature make it “so easy to finish
7 one video” and watch the next, said Dr. Alon Avidan, director of the UCLA Sleep Disorders Center.³⁶⁵
8 In turn, insufficient sleep is associated with poor health outcomes.³⁶⁶ Thus, YouTube exacerbates an
9 array of youth mental health issues by contributing to sleep deprivation.

10 295. Despite the extensive evidence that YouTube’s design and algorithms harms millions of
11 youth, Google continues to promote YouTube unchanged, manipulating youth into staying on the
12 platform and watching more and more videos so that it can increase its ad revenue.

13 **E. The Effect of Social Media Use on Schools**

14 296. School districts are uniquely harmed by the current youth mental health crisis. This is
15 because schools are one of the main providers for mental health services for school-aged children.³⁶⁷
16 Indeed, over 3.1 million children ages 12–17 received mental health services through an education
17 setting in 2020, more than any other non-specialty mental health service setting.³⁶⁸

18 297. Most schools offer mental health services to students. In the 2021–22 school year, 96% of
19
20

21 ³⁶¹ *Id.*

22 ³⁶² Meg Pillion *et al.*, *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and sleep outcomes*, 100 Sleep
23 Med. 174–82 (Dec. 2022), <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>
24 [<https://doi.org/10.1016/j.sleep.2022.08.004>].

25 ³⁶³ *Id.*

26 ³⁶⁴ *Id.*

27 ³⁶⁵ Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022),
28 <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>
[<https://perma.cc/L8HD-ZTZ2>].

29 ³⁶⁶ Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85
Preventive Med. 36–41 (Apr. 2016), <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>
[<https://doi.org/10.1016/j.ypmed.2016.01.001>].

30 ³⁶⁷ *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>].

31 ³⁶⁸ *Id.*

public schools reported offering at least one type of mental health service to their students.³⁶⁹ But 88% of public schools did not strongly agree that they could effectively provide mental health services to all students in need.³⁷⁰ The most common barriers to providing effective mental health services in public schools are (1) insufficient number of mental health professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate funding.³⁷¹ Student opinions also reflect that schools are unable to provide adequate mental health services. Less than a quarter of students in grades 6–12 report accessing counseling or psychological services when they are upset, stressed, or having a problem.³⁷² And of the students who access mental health services, only 41% of middle schoolers and 36% of high schoolers are satisfied with the services they receive.³⁷³

298. In part, schools are struggling to provide adequate mental health services because of the increase in students seeking these services. More than two-thirds of public schools reported an increase in the percent of students seeking mental health services from school since the start of the pandemic.³⁷⁴

299. During this same period, adolescents increased their social media use, also raising levels of excessive and problematic use of digital media.³⁷⁵ And these higher rates of social media use are related to higher “ill-being.”³⁷⁶ Thus, the increase in adolescent social media use during the pandemic has caused an increase in adolescents experiencing mental health problems.

300. 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

³⁶⁹ *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>].

³⁷⁰ *Id.*

³⁷¹ *Id.*

³⁷² *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>].

³⁷³ *Id.*

³⁷⁴ *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>].

³⁷⁵ Laura Marciano *et al.*, *Digital Media Use and Adolescents’ Mental Health During the Covid-19 Pandemic: A Systematic Review and Meta-Analysis*, *Frontiers Pub. Health* (Feb. 2022), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/> [<https://perma.cc/3ZSA-UBDF>].

³⁷⁶ *Id.*

disturbances since the start of the pandemic.³⁷⁷ Students receiving mental health services in educational settings predominately do so because they “[f]elt depressed,” “[t]hought about killing [themselves] or tried to” or “[f]elt very afraid and tense.”³⁷⁸

301. Anxiety disorders are also up, affecting 31.9% of adolescents between 13 and 18 years old.³⁷⁹ “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.”³⁸⁰

302. According to the National Alliance on Mental Illness, “[s]tudents ages 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.”³⁸¹

303. 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.³⁸² Most middle school and high school students also fail to get enough sleep on school nights, which contributes to poor academic performance.³⁸³ These negative mental health outcomes are also the most common symptoms of excessive social media use.

³⁷⁷ *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>].

³⁷⁸ Rachel N. Lipari *et al.*, *Adolescent Mental Health Service Use and Reasons for Using Services in Specialty, Educational, and General Medical Settings*, SAMHSA (May 5, 2016), https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html [<https://perma.cc/X4YF-ZAB7>].

³⁷⁹ *Anxiety Disorders: Facts and Statistics*, Anxiety & Depression Ass’n Am., <https://adaa.org/understanding-anxiety/facts-statistics> [<https://perma.cc/EBF6-CXBF>] (last visited June 26, 2023).

³⁸⁰ *Id.*

³⁸¹ *Mental Health By the Numbers*, Nat’l All. Mental Health (June 2022), <https://www.nami.org/mhstats> [<https://perma.cc/DNB4-SA2R>] (citing *2018-2019 National Survey of Children’s Health*, Data Res. Ctr. Child & Adolescent Health, Child and Adolescent Health Measurement Initiative, <https://www.childhealthdata.org/browse/survey/results?q=7839&r=1&g=812> [<https://perma.cc/Y5ZQ-4XQN>] (last visited Apr. 19, 2023)); and Véronique Dupère *et al.*, *Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of Exposure Matters*, *J. Adolescent Health* 62 (2018) 2015–211 (Sept. 24, 2017), [https://www.jahonline.org/article/S1054-139X\(17\)30491-3/fulltext](https://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext) [<https://doi.org/10.1016/j.jadohealth.2017.09.024>].

³⁸² *Insights From the Student Experience, Part I: Emotional and Mental Health at 2–3*, YouthTruth (2022), https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf [<https://perma.cc/UHV7-RNQ6>].

³⁸³ Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-United States, 2015*, 67(3) *Morbidity & Mortality Wkly. Rpt.* 85–90 (Jan. 26, 2018), <http://dx.doi.org/10.15585/mmwr.mm6703a1> [<https://perma.cc/873Q-D5PC>].

304. The youth mental health crisis has also caused a wide range of other behavioral issues among students that interfere with schools' ability to teach. In 2022, 61% of public schools saw an increase in classroom disruptions from student misconduct compared to school years before the pandemic.³⁸⁴ In that same year, 58% of public schools also saw an increase in rowdiness outside of the classroom, 68% saw increases in tardiness, 27% saw increases in students skipping classes, 55% saw increases in the use of electronic devices when not permitted, 37% saw an increase in bullying, 39% saw an increase in physical fights between students, and 46% saw an increase in threats of fights between students.³⁸⁵

305. Further exacerbating school's struggle to teach is the fact students are not showing up to school. Indeed, student absenteeism has greatly increased. In the 2021–22 school year, 39% of public schools experienced an increase in chronic student absenteeism compared to the 2020–21 school year, and 72% of public schools saw increased chronic student absenteeism compared to school years before the pandemic.³⁸⁶ Following suit, vandalism has increased in 2022, with 36% of public schools reporting increased acts of student vandalism on school property.³⁸⁷

306. School districts have borne increased costs and expenses in response to the youth mental health crisis. These costs include:

- a. Hiring additional mental health personnel (41% of public schools added staff to focus on student mental health);³⁸⁸
- b. 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);³⁸⁹
- c. Training teachers to help students with their mental health (56% of public schools offered

³⁸⁴ 2022 *School Pulse Panel*, U.S. Dep't Educ., Inst. Educ. Sci. (2022), <https://ies.ed.gov/schoolsurvey/spp/> [<https://perma.cc/364R-H5U4>].

³⁸⁵ *Id.*

³⁸⁶ *Id.*

³⁸⁷ *Id.*

³⁸⁸ *Id.*

³⁸⁹ *Id.*

professional development to teachers on helping students with mental health);³⁹⁰

- d. Increasing disciplinary services and hiring additional personnel for disciplinary services in response to increased bullying and harassment over social media;
- e. Addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct caused;
- f. Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;
- g. investigating and responding to threats made against schools and students over social media;
- h. Updating its student handbook to address use of Defendants' platforms; and
- i. Updating school policies to address use of Defendants' platforms.

F. Impact of Social Media Use on Plaintiff

307. Plaintiff Gervais School District is a public school district in Marion County Oregon, the fifth most populous county in Oregon. Gervais School District operates four schools, serving approximately 1,500 students.³⁹¹ Gervais School District includes one high school, one middle school, one elementary school, and one K-12 charter school.

308. Gervais School District has been directly impacted by the mental health crisis among youth in its community.

309. There has been a surge in the proportion of youth in Plaintiff's community who say they cannot stop or control their anxiety, who feel so sad and hopeless that they experience higher rates of negative thoughts, who are considering suicide, who made plans to commit suicide, and who have attempted to commit suicide.

310. Across Oregon, more and more youth are experiencing anxiety and depression. In 2016, an estimated 11.5% of children in Oregon had anxiety or depression.³⁹² By 2020, this number had

³⁹⁰ *Id.*

³⁹² Jamie Diep, *Children's Wellness Report Reveals 'Mental Health Pandemic,'* Or. Pub. Broad. (Aug. 8, 2022), <https://www.opb.org/article/2022/08/08/children-mental-health-pandemic-oregon-usa/> [<https://perma.cc/GEX9-UNZZ>].

increased 40% to over 16% of Oregon children (117,000) experiencing anxiety or depression.³⁹³

311. In 2020, suicide was the second leading cause of death among Oregon youth under 25 years old.³⁹⁴ Suicidal ideation and attempts also remained high among school-aged children. Indeed, 10% of 6th graders, 14% of 8th graders, and 17% of 11th graders reported seriously considering attempting suicide.³⁹⁵ And 3% of 6th graders, 6% of 8th graders, and 5% of 11th graders reported attempting suicide at least once.³⁹⁶

312. The numbers are even higher in Marion County, where Plaintiff is located. In 2020, over 25 percent of eighth graders and nearly 20 percent of eleventh graders in Marion County reported engaging in self-harm.³⁹⁷ Additionally, nearly 18 percent of eighth graders and 17 percent of eleventh graders reported seriously considering attempting suicide.³⁹⁸ Even worse, roughly 6 percent of eighth and eleventh graders attempted suicide at least once.³⁹⁹

313. Anxiety is also rampant in Marion County. In 2020, over 57 percent of eighth graders and over 70 percent of eleventh graders reported experiencing anxiety at least several days a week.⁴⁰⁰

314. Like students across the county and state, Plaintiff's students suffer from suicidal ideation and self-harm. In 2020, over 25 percent of sixth and eighth graders and 20 percent of eleventh graders reported performing self-harm in the past year. Even worse, 16 percent of sixth graders, 21 percent of eighth graders, and ten percent of eleventh graders reported seriously attempting suicide, with ten percent of sixth graders and nearly eight percent of eighth and eleventh graders actually attempting suicide at least once.

315. Anxiety is also a prevalent issue among Plaintiff's students. In 2020, over 50 percent of

³⁹³ *Id.*

³⁹⁴ 2021 Youth Suicide Intervention and Prevention Plan Annual Report at 39, Or. Health Auth. (Mar. 2022), https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/le8874_2021.pdf?utm_medium=email&utm_source=govdelivery [<https://perma.cc/6N5N-UTVV>].

³⁹⁵ *Id.* at 49.

³⁹⁶ *Id.* at 49.

³⁹⁷ 2020 Oregon SHS Student Health Survey: MarionData Tables Deschutes County at 4739, Or. Health Auth. (20212022), <https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/Documents/SHS/2020/Reports/County/Marion%20County.pdf>, <https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/Documents/SHS/2022/Reports/County/Deschutes%20County%202022.pdf> [<https://perma.cc/JQQ6-EWT6>].

³⁹⁸ *Id.*

³⁹⁹ *Id.*

⁴⁰⁰ *Id.* at 38.

1 eighth graders and nearly 70 percent of eleventh graders reported feeling anxious during the past thirty
2 days.

3 316. Despite students' increased need for services to treat anxiety and depression, large
4 numbers of students lack access to mental healthcare. In 2020, 14.5% of Oregon 8th graders reported
5 having unmet emotional or mental healthcare needs due to being unable to access a healthcare
6 provider.⁴⁰¹ A lack of access to mental healthcare is especially acute in low-income communities like
7 Plaintiff's, where students' families lack insurance or otherwise cannot afford mental healthcare.
8 Plaintiff's students face an additional barrier in accessing mental healthcare because there are no
9 providers in the city of Gervais. As a result of these barriers, 15 percent of eighth graders and nearly 40
10 percent of eleventh graders in Gervais School District reported having unmet emotional or mental health
11 care needs.

12 317. The increases in anxiety, depression, and suicidal behavior among Plaintiff's students
13 have contributed to students' increased behavior problems in Plaintiff's schools. Over the last two years,
14 an increased number of students in Plaintiff's schools have been reported or disciplined for disruptive
15 conduct.

16 318. In turn, much of the disruptive conduct in Plaintiff's schools occurs on or is related to
17 Defendants' platforms. A common pattern of disruptive conduct at Plaintiff's schools is that students
18 will film or photograph other students without their permission and post videos or photos on
19 Defendants' platforms. As a result, students cannot concentrate on schoolwork because of anxiety from
20 being bullied and harassed online. And administrators and teachers cannot focus on educating. Rather,
21 they spend increasingly more time investigating and resolving disciplinary issues tied to Defendants'
22 platforms and fielding complaints from students and parents alike.

23 319. The increase in Plaintiff's students who report suffering from anxiety and depression and
24 the increase in behavioral issues—and the connection to Defendants' platforms—have not gone
25 unnoticed. Gervais School District counselors estimate that 50 percent of student counseling is related to

26
27 ⁴⁰¹ 2022 KIDS COUNT National Report and Oregon State Data Cards Release: Oregon's Progress on Child Well-Being
28 *Sees Some Improvement, but Many Children and Youth are Experiencing Mental Health Challenges*, Our Child. Or. (Aug.
8, 2022), <https://ourchildrenoregon.org/2022-kids-count-national-report-and-oregon-state-data-cards-release/>
[\[https://perma.cc/3HFS-EJ9S\]](https://perma.cc/3HFS-EJ9S).

1 social media. The common themes of these counseling sessions are that students feel unable to manage
2 their time and unable to control their impulse to use social media, and they express fear and anxiety
3 about what other students post about them on social media.

4 320. In addition to increased disciplinary incidents and counseling, Plaintiff also faces
5 attendance challenges. An increasing number of students are late to class, admitting they are late
6 because they stayed up the previous night watching videos and other content on Defendants' platforms.
7 Even worse, students are missing school and failing classes for the same reason.

8 321. The COVID-19 pandemic and the corresponding increase in time youth spend on
9 Defendants' platforms have only intensified the crisis and disruption to Plaintiff's educational mission.

10 322. In an attempt to address the decline in students' mental, emotional, and social health,
11 Plaintiff has been forced to divert resources and expend additional resources to:

- 12 a. Hire additional personnel, including counselors and medical professionals to address
13 mental, emotional, and social health issues;
- 14 b. Develop additional resources to address mental, emotional, and social health issues;
- 15 c. Increase training for teachers and staff to identify students exhibiting symptoms affecting
16 their mental, emotional, and social health;
- 17 d. Train teachers, staff, and members of the community about the harms caused by
18 Defendants' wrongful conduct;
- 19 e. Develop policies and train teachers and staff on monitoring students' phones and use of
20 Defendants' platforms;
- 21 f. Educate students about the dangers of using Defendants' platforms;
- 22 g. Update its student handbook to address use of Defendants' platforms; and
- 23 h. Update school policies to address use of Defendants' platforms.

24 323. Additionally, more students have been involved in disciplinary incidents as a result of the
25 decline Defendants have caused in students' mental, emotional, and social health. As a result, Plaintiff
26 has been forced to divert resources and expend additional resources to:

- 27 a. Repair property damaged as a result of the exploitive and harmful content Defendants
28 directed to students;

- b. Increase disciplinary services;
- c. Confiscate devices on which students were compelled by Defendants' conduct to use while in class or school campuses to access Defendants' platforms;
- d. Meet with students and the parents of students caught using Defendants' platforms at school;
- e. Divert time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance; and
- f. Investigate and respond to threats made against schools and students over social media.

324. As of the 2022-23 school year, Plaintiff employs five counselors across the district. Two counselors work at Gervais Elementary and three counselors that work at both Gervais Middle School and Gervais High School. Many students rely on these counselors as their only form of mental healthcare. Indeed, Plaintiff is in an under-resourced community, meaning many of its students have low access to healthcare or lack insurance altogether. Despite being the only mental health provider for many students, the counselors at Plaintiff's schools are unable to meet the increased need for mental health services resulting from students' use of Defendants' platforms. As a result, Plaintiff has had to seek partnerships with third parties to provide additional mental health services for its students. In previous years, Plaintiff had partnered with Marion County for additional mental health services in the form of a part-time social worker. But the County has not been able to provide these services over the past two years because of its own staffing shortages. Similarly, a private provider that Plaintiff contacted could not offer its services because the increase in demand for mental health services has overloaded its own staff.

325. With these limited resources, Plaintiff cannot keep up with its students' increased need for mental health services to address the youth mental health crisis caused by social media.

326. As a result, the rest of Plaintiff's staff must fill in the cracks to help students with mental health concerns. While this is admirable, teachers and other support staff cannot replace the role of certified counselors.

327. And while some school districts have received desperately needed grant funding to

1 address mental health,⁴⁰² others, like Plaintiff, remain left to fend for themselves. But the funding
2 needed to address these harms should not fall at the foot of the public. Rather, Defendants should bear
3 the burden of remedying their wrongs.

4 328. Ultimately, Plaintiff requires significantly greater and long-term funding to address the
5 nuisance Defendants have created, along with abatement and injunctive relief. It is time, as President
6 Biden declared, to get “all Americans the mental health services they need.”⁴⁰³

7 V. SECTION 230 IS NO SHIELD FOR DEFENDANTS’ CONDUCT

8 329. Plaintiff anticipates that Defendants will raise section 230 of the Communications
9 Decency Act, 47 U.S.C. § 230(c)(1), as a shield for their conduct. But section 230 is no shield for
10 Defendants’ own acts in designing, marketing, and operating social media platforms that are harmful to
11 youth.

12 330. Section 230 provides immunity from liability only to “(1) a provider or user of an
13 interactive computer service (2) whom a plaintiff seeks to treat, under a state law cause of action, as a
14 publisher or speaker (3) of information provided by another information content provider.” *Barnes v.*
15 *Yahoo!, Inc.*, 570 F.3d 1096, 1100–01 (9th Cir. 2009), *as amended* (Sept. 28, 2009).

16 331. Publication generally involves traditional editorial functions, such as reviewing, editing,
17 and deciding whether to publish or to withdraw from publication third-party content. *Lemmon v. Snap,*
18 *Inc.*, 995 F.3d 1085, 1091 (9th Cir. 2021).

19 332. Publication does not, however, include duties related to designing and marketing a social
20 media platform. *See id.* at 1092–93.

21 333. Plaintiff expressly disavows any claims or allegations that attempt to hold Defendants
22 liable as the publisher or speaker of any information provided by third parties.

23 334. Section 230 does not shield Defendants’ conduct because, among other considerations:
24 (1) Defendants are liable for their own affirmative conduct in recommending and promoting harmful
25

26 ⁴⁰² *Douglas ESD Receives \$7 Million to Expand School-Based Mental Health Services*, KPIC News (Jan. 20, 2023),
27 <https://kpic.com/news/local/douglas-esd-receives-7-million-to-expand-school-based-mental-health-services>
28 [\[https://perma.cc/2FDA-DQEH\]](https://perma.cc/2FDA-DQEH).

⁴⁰³ President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/> [\[https://perma.cc/A9EH-DV4Q\]](https://perma.cc/A9EH-DV4Q)).

1 content to youth; (2) Defendants are liable for their own actions designing and marketing their social
2 media platforms in a way that causes harm; (3) Defendants are liable for the content they create that
3 causes harm; and (4) Defendants are liable for distributing, delivering, and/or transmitting material that
4 they know or have reason to know is harmful, unlawful, and/or tortious.

5 335. First, Plaintiff is not alleging Defendants are liable for what third parties have said on
6 Defendants' platforms but, rather, for Defendants' own conduct. As described above, Defendants
7 affirmatively recommend and promote harmful content to youth, such as pro-anorexia and eating
8 disorder content. Recommendation and promotion of damaging material is not a traditional editorial
9 function and seeking to hold Defendants liable for these actions is not seeking to hold them liable as a
10 publisher or speaker of third-party content.

11 336. Second, Plaintiff's claims arise from Defendants' status as designers and marketers of
12 dangerous social media platforms that have injured the health, comfort, and repose of its community.
13 The nature of Defendants' platforms centers around Defendants' use of algorithms and other designs
14 features that encourage users to spend the maximum amount of time on their platforms—not on
15 particular third-party content. The algorithms Defendants employ adapt to the social media activity of
16 individual users to promote whatever content will trigger a particular user's attention and maximize their
17 screen time. That is, Defendants' algorithms are user-focused rather than content-based and are
18 indifferent to the nature and type of content they promote to users, provided that such content increases
19 the time users spend on their platforms. In that respect, they are content neutral.

20 337. Third, Defendants are liable for the content they create. In addition to content such as
21 Snapchat filters which promote body dysmorphia, Defendants send emails and notifications to youth
22 including material they create which often promotes certain harmful content.

23 338. Fourth, Plaintiff does not seek to hold Defendants liable as publishers or speakers of
24 information provided by other content providers, but instead Plaintiff seeks to hold them liable for
25 distributing material they know or should know is harmful or unlawful. *See Malwarebytes, Inc. v.*
26 *Enigma Software Grp. USA, LLC*, 141 S. Ct. 13 (2020) (statement of Justice Thomas respecting denial
27 of certiorari discussing the distinction between distributor and publisher liability); *cf. Restatement*
28 *(Second) of Torts* § 581 (Am. Law Inst. 1977) (“[O]ne who only delivers or transmits defamatory matter

published by a third person is subject to liability if, but only if, he knows or has reason to know of its defamatory character.”).

339. Ultimately, Plaintiff’s claim is not predicated on information provided by another information content provider. Rather, Plaintiff’s claim rests on Defendants’ conduct which has resulted in the current public health crisis among youth mental health.

VI. CAUSES OF ACTION

COUNT ONE — PUBLIC NUISANCE

340. Plaintiff incorporates by reference all preceding paragraphs.

341. Plaintiff brings this claim under Oregon public nuisance law as to all Defendants.

342. Under Oregon law, a public nuisance is an unreasonable interference with a right which is common to the public, including acts that significantly interfere with public health, safety, and welfare.

343. Defendants have created a mental health crisis in Plaintiff’s schools, substantially interfering with the public health and safety in Plaintiff’s community and interfering with the operations and learning environment of the Gervais School District.

344. Defendants, by designing, developing, marketing, supplying, promoting, advertising, operating, and distributing their respective social media platforms for use by students in Plaintiff’s schools in the manner described above, have engaged in conduct that substantially and unreasonably interferes with the health and safety of the students of Gervais, interferes with the educational mission and operations of Gervais, and harms the health, safety, and welfare of Gervais, its students, and its community. Defendants’ conduct is ongoing and continues to produce permanent and long-lasting damage.

345. But for Defendants’ actions, Plaintiff’s students would not use social media platforms as frequently or continuously as they do today, be deluged with exploitive and harmful content to the same degree, and the public health crisis that currently exists as a result of Defendants’ conduct would have been averted.

346. Each Defendant has created or assisted in the creation of a condition that is injurious to the health, safety, and welfare of the Gervais community and interferes with the educational

1 environment for students, teachers, and administrators in Plaintiff's schools. Defendants have each
2 created or assisted in the creation of a condition that significantly disrupts the daily operations and
3 functioning of Plaintiff's schools. Defendants are jointly and severally liable.

4 347. The health and safety of the students and employees of the Gervais School District,
5 including those who use, have used, or will use Defendants' platforms, as well as those affected by
6 others' use of their platforms, are matters of substantial public interest and of legitimate concern to
7 Plaintiff.

8 348. Defendants' conduct has affected and continues to affect a substantial number of people
9 within Plaintiff's community and is likely to continue causing significant harm.

10 349. This harm to youth mental health and the corresponding impacts to public health, safety,
11 and the welfare of Plaintiff's community outweighs any social utility of Defendants' wrongful conduct.
12 The benefit to Plaintiff and its students in abating the harm caused by Defendants far outweighs any
13 hardship to Defendants, who have profited tremendously from their wrongful conduct.

14 350. Defendants' wrongful conduct has caused the damage and harm complained of herein.
15 Defendants knew or reasonably should have known that their design, development, marketing, supply,
16 promotion, advertisement, operation, and distribution of their platforms would cause students to use
17 their platforms excessively, that their marketing methods were designed to appeal to youth, and that
18 their active efforts to increase youth use of their platforms were caused harm to youth and to schools,
19 including to Gervais and its students.

20 351. Thus, the public nuisance caused by Defendants, and the resulting economic losses
21 incurred by Plaintiff, were reasonably foreseeable.

22 352. Alternatively, Defendants' conduct was a substantial factor in bringing about the public
23 nuisance even if a similar result would have occurred without it. By designing, marketing, supplying,
24 promoting, advertising, operating, and distributing their platforms in a manner intended to maximize the
25 time youth spend on their respective platforms—despite knowledge of the harms to youth from their
26 wrongful conduct—Defendants directly facilitated the widespread, excessive, and habitual use of their
27 platforms and the public nuisance affecting Plaintiff. By seeking to capitalize on their success by
28 refining their platforms to increase the time youth spend on their platforms, Defendants directly

1 contributed to the public health crisis and the public nuisance affecting Plaintiff.

2 353. Defendants' conduct is especially injurious to Plaintiff because, as a direct and proximate
3 cause of Defendants' conduct creating or assisting in the creation of a public nuisance, the educational
4 environment within Plaintiff's schools has been and will continue to be substantially harmed.

5 354. Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants'
6 conduct, including the following:

- 7 a. Hiring additional personnel to address mental, emotional, and social health issues;
- 8 b. Developing additional resources to address mental, emotional, and social health issues;
- 9 c. Increasing training for teachers and staff to identify students exhibiting symptoms
10 affecting their mental, emotional, and social health;
- 11 d. Training teachers, staff, and members of the community about the harms caused by
12 Defendants' wrongful conduct;
- 13 e. Developing lesson plans to teach students about the dangers of using Defendants'
14 platforms;
- 15 f. Educating students about the dangers of using Defendants' platforms;
- 16 g. Addressing property damaged as a result of students acting out because of mental, social,
17 and emotional problems Defendants' conduct is causing;
- 18 h. Increasing disciplinary services;
- 19 i. Confiscating devices on which students use Defendants' platforms while in class or on
20 Plaintiff's school campuses;
- 21 j. Meeting with students and the parents of students caught using Defendants' platforms at
22 school or other disciplinary matters related to students' use of Defendants' platforms;
- 23 k. Diverting time and resources from instruction activities to notify parents and guardians of
24 students' behavioral issues and attendance;
- 25 l. Investigating and responding to threats made against Plaintiff's schools and students over
26 social media;
- 27 m. Updating its student handbook to address use of Defendants' platforms; and
- 28 n. Updating school policies to address use of Defendants' platforms.

1 355. Fully abating the nuisance resulting from Defendants' conduct will require much more
2 than these steps.

3 356. As detailed herein, Plaintiff has suffered special damage different in kind or quality from
4 that suffered by the public in common. The damages suffered by Plaintiff has been substantial in
5 character, greater in degree, and different in kind than the harm suffered by the general public. These
6 injuries include, but are not limited to, costs arising from: expending, diverting and increasing personnel
7 to provide mental health services; expending, diverting and increasing resources to address mental
8 health issues; expending, diverting and increasing staff time to confiscate cell phones and other devices;
9 expending, diverting and increasing staff time to communicate and engage with parents; expending,
10 diverting and increasing staff time associated with student discipline; expending, diverting and
11 increasing staff time associated with routing students to counselors; expending, diverting and increasing
12 staff time to train staff to identify students exhibiting symptoms affecting their mental health;
13 expending, diverting and increasing resources for modifications to mental health curriculum; expending,
14 diverting and increasing resources to repair property damage as a result of the exploitive and harmful
15 content Defendants directed to students; and expending, diverting and increasing resources to investigate
16 and respond to threats made against schools and students over social media.

17 357. 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 and an order providing for the abatement of the public nuisance that Defendants
21 have created or assisted in the creation of, and enjoining Defendants from future conduct contributing to
22 the public nuisance described above. Plaintiff's claim is not brought in any representative or *parents*
23 *patriae* capacity on behalf of students.

24 358. Defendants' conduct, as described above, was intended to serve their own interests
25 despite having reason to know and consciously disregarding a substantial risk that their conduct might
26 significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a
27 course of conduct knowing that it created a substantial risk of significant harm to others, including
28 Plaintiff. Defendants regularly risk the health of youth using their platforms with full knowledge of the

1 dangers of their platforms. Defendants consciously decided not to redesign their platforms, or to warn or
2 inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants were recklessly
3 and outrageously indifferent to the highly unreasonable risk of harm that would result to Plaintiff and its
4 students as the result of their actions, and acted with a conscious indifference to the health, safety, and
5 welfare of Gervais and its students. Defendants' conduct therefore warrants an award of punitive
6 damages.

7 **COUNT TWO — NEGLIGENCE**

8 359. Plaintiff incorporates by reference each and every preceding paragraph.

9 360. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm,
10 and to act with reasonable care as a reasonably careful person and/or company would act under the
11 circumstances.

12 361. At all times relevant to this litigation, Defendants owed a duty to consumers and the
13 general public, including Plaintiff, to exercise reasonable care in the design, research, development,
14 testing, marketing, supply, promotion, advertisement, operation, and distribution of Defendants' social
15 media platforms, including the duty to take all reasonable steps necessary to design, research, market,
16 advertise, promote, operate, and/or distribute their platforms in a way that is not unreasonably dangerous
17 to users, including youth.

18 362. At all times relevant to this litigation, Defendants owed a duty to consumers and the
19 general public, including Plaintiff, to exercise reasonable care in the design, research, development,
20 testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media
21 platforms, including the duty to provide accurate, true, and correct information about the risks of using
22 Defendants' platforms; and appropriate, complete, and accurate warnings about the potential adverse
23 effects of extended social media use, in particular, social media content Defendants directed via their
24 algorithms to users, including youth.

25 363. At all times relevant to this litigation, Defendants knew or, in the exercise of reasonable
26 care, should have known of the hazards and dangers of their respective social media platforms and
27 specifically, the health hazards their platforms posed to youth in particular, especially extended or
28 problematic use of such platforms.

1 364. Accordingly, at all times relevant to this litigation, Defendants knew or, in the exercise of
2 reasonable care, should have known that use of Defendants' social media platforms by youth could
3 cause Plaintiff's injuries and thus created a dangerous and unreasonable risk of injury to Plaintiff.

4 365. Defendants also knew or, in the exercise of reasonable care, should have known that
5 consumers of Defendants' social media platforms were unaware of the risks and the magnitude of the
6 risks associated with the use of Defendants' platforms, including but not limited to the risks of extended
7 or problematic social media use and the likelihood that algorithm-based recommendations would expose
8 child and adolescent users to content that is violent, sexual, or encourages self-harm, among other types
9 of harmful content.

10 366. As such, Defendants, by action and inaction, representation and omission, breached their
11 duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably careful person
12 and/or company would act under the circumstances in the design, research, development, testing,
13 marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms,
14 in that Defendants designed, researched, developed, tested, marketed, supplied, promoted, advertised,
15 operated, and distributed social media platforms that Defendants knew or had reason to know would
16 negatively impact the mental health of consumers, particularly youth, and failed to prevent or adequately
17 warn of these risks and injuries.

18 367. Despite their ability and means to investigate, study, and test their social media platforms
19 and to provide adequate warnings, Defendants have failed to do so. Defendants have wrongfully
20 concealed information and have made false and/or misleading statements concerning the safety and use
21 of Defendants' social media platforms.

22 368. Defendants' negligence includes:

23 a. Designing, researching, developing, marketing, supplying, promoting, advertising,
24 operating, and distributing their social media platforms without thorough and adequate
25 pre- and post-market testing; design, research, development, marketing, supply,
26 promotion, advertisement, operation, and distribution;

27 b. Failing to sufficiently study and conduct necessary tests to determine whether or not their
28 social media platforms were safe for youth users;

- c. Failing to use reasonable and prudent care in the research, design, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms so as to avoid the risk encouraging extended social media use;
- d. Designing their social media platforms to maximize the amount of time users spend on the platform and causing excessive and problematic use of their platforms, particularly among youth, through the use of algorithm-based feeds, social reciprocity, and IVR;
- e. Failing to implement adequate safeguards in the design and operation of their platforms to ensure they would not encourage excessive and problematic use of their platforms;
- f. Designing and manufacturing their platforms to appeal to minors and young people who lack the same cognitive development as adults and are particularly vulnerable to social rewards like IVR and social reciprocity;
- g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;
- h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;
- i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;
- j. Failing to disclose to Plaintiff, users, 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, which are used to recommend content to users, 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;
- p. Failing to adequately modify Defendants' algorithm-based recommendations to filter out content that expose child and adolescent users to content that is violent, sexual, or encourages self-harm, among other types of harmful content; and
- q. Committing other failures, acts, and omissions set forth herein.

369. 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.

370. 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.

371. 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.

372. 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.

373. The mental health crisis caused and/or significantly contributed to by Defendants has caused a major disruptive behavioral situation 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 exhibiting symptoms affecting their mental, emotional, and social health;
- d. Training teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;
- e. Developing lesson plans to teach students about the dangers of using Defendants' platforms;
- f. Educating students about the dangers of using Defendants' platforms;
- g. Addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;
- h. Increasing disciplinary services;
- i. Confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;
- j. Meeting with students and the parents of students caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;
- k. Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;
- l. Investigating and responding to threats made against Plaintiff's schools and students over social media;
- m. Updating its student handbook to address use of Defendants' platforms; and
- n. Updating school policies to address use of Defendants' platforms.

374. As a result of Defendants' negligence, Plaintiff suffered harm and economic losses in an amount to be proven at trial.

COUNT THREE — GROSS NEGLIGENCE

375. Plaintiff incorporates by reference all preceding paragraphs.

376. Defendants knew of the substantial risk of harm that their platforms posed to users'

1 mental health, particularly children and adolescents.

2 377. Defendants' conduct, as described above, was intended to serve their own interests
3 despite having reason to know and consciously disregarding a substantial risk that their conduct might
4 significantly injure the rights of others, including Plaintiff, and/or Defendants consciously pursued a
5 course of conduct knowing that it created a substantial risk of significant harm to others, including
6 Plaintiff. Defendants regularly risk the health of users of their platforms with full knowledge of the
7 significant dangers of their platforms. Defendants consciously decided not to redesign their platforms, or
8 to warn or inform the unsuspecting public, including Plaintiff's students or Plaintiff, despite knowing the
9 probable consequences would be to increase mental health issues among youth and to cause a major
10 disruptive behavioral situation in Plaintiff's schools.

11 378. Defendants' gross negligence caused or was a substantial factor in causing foreseeable
12 harm to Plaintiff and other economic losses in an amount to be proven at trial.

13 379. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm,
14 and to act with reasonable care as a reasonably careful person and/or company would act under the
15 circumstances.

16 380. At all times relevant to this litigation, Defendants owed a duty to users and the general
17 public, including Plaintiff, to exercise reasonable care in the design, research, development, testing,
18 marketing, supply, promotion, advertisement, operation, and distribution of Defendants social media
19 platforms, including the duty to take all reasonable steps necessary to design, research, market,
20 advertise, promote, operate, and/or distribute their platforms in a way that is not unreasonably dangerous
21 to users, including youth.

22 381. At all times relevant to this litigation, Defendants owed a duty to users and the general
23 public, including Plaintiff, to exercise reasonable care in the design, research, development, testing,
24 marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms,
25 including the duty to provide accurate, true, and correct information about the potential adverse effects
26 of extended social media use, in particular, social media content Defendants directed via their algorithms
27 to users, including youth.

28 382. At all times relevant to this litigation, Defendants knew or, in the exercise of reasonable

1 care, should have known of the hazards and dangers of their respective social media platforms and
2 specifically, the health hazards their platforms posed to youth in particular, especially extended or
3 problematic use of such platforms.

4 383. Defendants' platforms were of the type that could endanger others, particularly youth, if
5 negligently made, promoted, or distributed. Defendants knew the risks that young people would be
6 attracted to their platforms yet unable to appropriately limit their use of Defendants platforms because of
7 their still-developing brains. Further, Defendants knew the risks their platforms posted to youth,
8 especially extended or problematic use of such platforms.

9 384. Defendants were grossly negligent in designing, researching, developing, testing,
10 marketing, supplying, promoting, advertising, operating, and distributing their social media platforms.

11 385. As widely used platforms backed by powerful algorithms designed to maximize the
12 amount of time users spend on the platform, Defendants knew or should have known their platforms
13 needed to be designed, researched, developed, tested, marketed, supplying, promoted, advertised,
14 operated, and distributed with due care to avoid causing needless harm. Defendants knew or should have
15 known their products could cause serious risk of harm, particularly to young persons like students in
16 Plaintiff's schools.

17 386. Defendants disregarded or were indifferent to the rights of others, including Plaintiff's
18 students and Plaintiff, and were indifferent to the probable consequences of designing their platforms to
19 maximize the amount of time youth spend using social media. Defendants' indifference to the safety of
20 others and indifference to the probable consequences of its acts caused Plaintiff to suffer harm.

21 387. Defendants disregarded or were indifferent to the rights of others, including Plaintiff's
22 students and Plaintiff, and were indifferent to the probable consequences of designing their platforms to
23 maximize the amount of time youth spend using social media. Defendants' indifference to the safety of
24 others and indifference to the probable consequences of its acts caused Plaintiff to suffer harm.

25 388. Defendants' indifference to the rights of others and the probable consequences of its acts
26 includes, but is not limited to, the following:

- 27 a. Designing researching, developing, marketing, supplying, promoting, advertising,
28 operating, and distributing their social media platforms without thorough and adequate

pre- and post-market testing; design, research, development, testing, marketing, supply, promotion, advertisement, operation, and distribution;

- b. Failing to sufficiently study and conduct necessary tests to determine whether or not their social media platforms were safe for youth users;
- c. Failing to use reasonable and prudent care in the research, design, development, testing, marketing, supply, promotion, advertisement, operation, and distribution of their social media platforms so as to avoid the risk encouraging extended social media use;
- d. Designing their social media platforms to maximize the amount of time users spend on the platform and causing excessive and problematic use of their platforms, particularly among youth, through the use of algorithm- based feeds, social reciprocity, and IVR;
- e. Failing to implement adequate safeguards in the design and operation of their platforms to ensure they would not encourage excessive and problematic use of their platforms;
- f. Designing and manufacturing their platforms to appeal to minors and young people who lack the same cognitive development as adults and are particularly vulnerable to social rewards like IVR and social reciprocity;
- g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;
- h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;
- i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;
- j. Failing to disclose to Plaintiff, users, and the general public that Defendants' platforms are designed to maximize the time users, particularly youth, spend on Defendants' platforms and cause negative mental health consequences;
- k. Representing that Defendants' platforms were safe for child and adolescent users when, in fact, Defendants knew or should have known that the platforms presented acute mental health concerns for young users;

- 1 l. Failing to alert users and the general public, including students at Plaintiff's schools of the
2 true risks of using Defendants' platforms;
- 3 m. Advertising marketing; and recommending Defendants' platforms while concealing and
4 failing to disclose or warn of the dangers known by Defendants to be associated with, or
5 caused by, youth use of Defendants' platforms;
- 6 n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and
7 distribute Defendants' platforms with knowledge that Defendants' platforms are
8 unreasonably unsafe, addictive, and dangerous to youth mental health;
- 9 o. Failing to modify Defendants' algorithms, which are used to recommend content to users,
10 in a manner that would no longer prioritize maximizing the amount of time users spend
11 on Defendants' platforms over the safety of its youth users;
- 12 p. Failing to adequately modify Defendants' algorithm-based recommendations to filter out
13 content that expose child and adolescent users to content that s violent, sexual, or
14 encourages self-harm, among other types of harmful content; and
- 15 q. Committing other failures, acts, and omissions set forth herein.

16 389. Defendants breached the duties they owed to Plaintiff and in doing so were wholly
17 unreasonable.

18 390. Defendants breached their duties through their false and misleading statements and
19 omissions in the course of designing, manufacturing, distributing, and marketing their social media
20 platforms.

21 391. As a foreseeable consequence of Defendants' breaches of their duties, Plaintiff has
22 suffered and will continue to suffer direct and consequential economic and other injuries as a result of
23 dealing with the youth mental health crisis in Plaintiff's school, as described herein.

24 392. Defendants engaged in conduct, as described above, with a near total disregard or
25 indifference to the rights of others, including Plaintiff's students and Plaintiff, and the probable
26 consequences of its acts, despite being fully aware of the probable dangerous consequences of the
27 conduct and deliberate failing to avoid these consequences.

28 393. Defendants made conscious decisions not to redesign, warn, or inform the unsuspecting

1 public, including Plaintiff and Plaintiff's students. Defendants were recklessly and outrageously
2 indifferent to the highly unreasonable risk of harm that would result to Plaintiff and its students as a
3 result of their actions, and acted with a conscious indifference to the health, safety, and welfare of
4 Gervais and its students. Defendants' conduct therefore warrants an award of punitive damages.

5 394. Defendants' reckless and outrageous indifference to a highly unreasonable risk of harm
6 and conscious indifference to the health, safety, and welfare of others warrants an award of punitive
7 damages.

8 **VII. PRAYER FOR RELIEF**

9 WHEREFORE, Plaintiff prays for judgment as follows:

10 395. Entering an Order that the conduct alleged herein constitutes a public nuisance under
11 Oregon law;

12 396. Entering an Order that Defendants are jointly and severally liable;

13 397. Entering an Order requiring Defendants to abate the public nuisance described herein and
14 to deter and/or prevent the resumption of such nuisance;

15 398. Enjoining Defendants from engaging in further actions causing or contributing to the
16 public nuisance as described herein;

17 399. Awarding equitable relief to fund prevention education and treatment for excessive and
18 problematic use of social media;

19 400. Awarding actual, compensatory, and punitive damages;

20 401. Awarding reasonable attorneys' fees and costs of suit;

21 402. Awarding pre-judgment and post-judgment interest; and

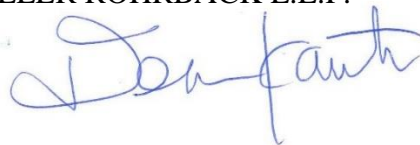
22 403. Such other and further relief as the Court deems just and proper under the circumstances.

23 **VIII. JURY TRIAL DEMAND**

24 404. Plaintiff hereby demands a trial by jury.

25 RESPECTFULLY SUBMITTED this 11th day of December, 2023.

26
27 KELLER ROHRBACK L.L.P.

28 

By _____

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