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Executive Officer/Clerk of Court,  
By J. Nunez, Deputy Clerk

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

SISTERS SCHOOL DISTRICT 6,

Plaintiff,

v.

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,

Defendants.

Case No. 23STCV25221

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.<sup>1</sup>

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

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<sup>1</sup> 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 their brains are not fully developed, and they consequently lack the same emotional maturity,  
2 impulse control, and psychological resiliency that other, more mature users generally possess.

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

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

14 8. The state of children’s mental health led the American Academy of Pediatrics, the  
15 American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association  
16 to jointly declare a national emergency, and the U.S. Surgeon General to issue an advisory in  
17 2021 “to highlight the urgent need to address the nation’s youth mental health crisis.”<sup>2</sup>

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

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22 <sup>2</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental  
23 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>]; U.S. Surgeon General  
24 Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic, U.S.  
25 Dep’t Health & Hum. Servs. (Dec. 7, 2021),  
26 <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>  
27 [<https://perma.cc/G8AY-PCGA>].

28 <sup>3</sup> 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>]).

1           10. Continuing the Department of Health and Human Services’ ongoing efforts to  
2 support President Joe Biden’s strategy to transform mental health care, the Surgeon General  
3 released an advisory in early May 2023 on the country’s “[e]pidemic of [l]oneliness and  
4 [i]solation,” where he outlined the profound health consequences of social disconnection and laid  
5 out six pillars to improve connection across the country, one being the need to “[r]eform [d]igital  
6 [e]nvironments.”<sup>4</sup> Within its recommendations to reform social media environments for youth,  
7 the advisory encourages companies to introduce “age-appropriate protections and identity  
8 assurance mechanisms, to ensure safe digital environments that enable positive social  
9 connection, particularly for minors.”<sup>5</sup>

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

14           12. Plaintiff Sisters School District 6 (“**Plaintiff**,” “**Sisters**,” or “**the District**”) brings  
15 this suit to answer President Biden’s and the Surgeon General’s calls to action. Youth in  
16 Plaintiff’s community are experiencing the same mental health crisis observed nationally.

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

21           14. That is why Plaintiff, like 96% of other school districts in the United States,  
22 provides mental health services to its students. For example, Plaintiff trains its teachers and staff

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

28 <sup>5</sup> *Id.* at 63.

<sup>6</sup> *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-](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html)  
[effects-social-media-use-has-youth-mental-health.html](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>].

1 to screen students for mental health symptoms and refer them to services, such as those provided  
2 by the counselors who work full-time in each of the schools. But Plaintiff needs a  
3 comprehensive, long-term plan and funding to drive a sustained reduction in the record rates of  
4 anxiety, depression, suicidal ideation, and other tragic indices of the mental health crisis its youth  
5 are experiencing at Defendants' hands.

6 15. As aptly summarized by U.S. Senator Ron Wyden from Oregon, “[s]tudents,  
7 teachers and counselors across Oregon tell me just how crucial school-based mental health  
8 services are to young people facing challenges at home and in the classroom—but these services  
9 are stretched to the breaking point.”<sup>7</sup> Plaintiff, like many school districts across the state and  
10 country, is at a breaking point. Meanwhile, Defendants profit tremendously from their wrongful  
11 conduct. Plaintiff brings this action to remedy this wrong and hold Defendants accountable.

## 12 II. JURISDICTION AND VENUE

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

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

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

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26  
27 <sup>7</sup> Wyden, Merkley: Nearly \$20 Million to Oregon School Districts to Hire More Mental Health  
28 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>].

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 Sisters School District 6 is a public school district in Deschutes County, Oregon. Sisters operates one elementary school, one middle school, and one high school.<sup>8</sup> In addition, Sisters also offers special programs to its students, including online classes. The District serves approximately 1,170 students.

### 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

<sup>8</sup> *Schools*, Sisters Sch. Dist., <https://district.ssd6.org/> [<https://perma.cc/4RKQ-73CY>] (last visited Sept. 18, 2023).



1 Operations, LLC; Meta Payments Inc.; Meta Platforms Technologies LLC; Instagram, LLC; and  
2 Siculus, Inc.

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

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

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

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

25 29. Defendant Instagram, LLC (“**Instagram**”) was founded by Kevin Systrom and  
26 Mike Krieger in October 2010 and is a social media platform designed for photo and video  
27 sharing. In April 2012, Meta purchased the company for approximately \$1 billion. Meta  
28 reformed the limited liability company under the laws of the state of Delaware on April 7, 2012,

1 and the company's principal place of business is in Menlo Park, California. Defendant Meta is  
2 the sole member of Instagram.

3 30. Defendant Siculus, Inc. ("**Siculus**") was incorporated in Delaware on October 19,  
4 2011. Siculus is a wholly owned subsidiary of Meta, which supports Meta platforms by  
5 constructing data facilities and other projects. Siculus's principal place of business is in  
6 Menlo Park, California.

7 **C. Snap Defendant**

8 31. Defendant Snap Inc. ("**Snap**") is a Delaware corporation with its principal place  
9 of business in Santa Monica, California. Snap transacts or has transacted business in this District  
10 and throughout the United States. At all times material to this Complaint, acting alone or in  
11 concert with others, Snap has advertised, marketed, and distributed the Snapchat social media  
12 platform to consumers throughout the United States. At all times material to this Complaint,  
13 Snap formulated, directed, controlled, had the authority to control, or participated in the acts and  
14 practices set forth in this Complaint.

15 **D. TikTok Defendants**

16 32. Defendant TikTok Inc. ("**TikTok**") was incorporated in California on April 30,  
17 2015, with its principal place of business in Culver City, California. TikTok Inc. transacts or has  
18 transacted business in this District and throughout the United States. At all times material to this  
19 Complaint, acting alone or in concert with others, TikTok Inc. has advertised, marketed, and  
20 distributed the TikTok social media platform to consumers throughout the United States. At all  
21 times material to this Complaint, acting alone or in concert with ByteDance Inc., TikTok Inc.  
22 formulated, directed, controlled, had the authority to control, or participated in the acts and  
23 practices set forth in this Complaint.

24 33. Defendant ByteDance Inc. ("**ByteDance**") is a Delaware corporation with its  
25 principal place of business in Mountain View, California. ByteDance transacts or has transacted  
26 business in this District and throughout the United States. At all times material to this Complaint,  
27 acting alone or in concert with others, ByteDance has advertised, marketed, and distributed the  
28 TikTok social media platform to consumers throughout the United States. At all times material to

1 this Complaint, acting alone or in concert with TikTok Inc., ByteDance formulated, directed,  
2 controlled, had the authority to control, or participated in the acts and practices set forth in this  
3 Complaint.

4 **E. YouTube Defendants**

5 34. Defendant Google LLC (“**Google**”) is a limited liability company organized under  
6 the laws of the state of Delaware, and its principal place of business is in Mountain View,  
7 California. Google LLC is a wholly owned subsidiary of XXVI Holdings Inc., and the managing  
8 member of YouTube, LLC. Google LLC transacts or has transacted business in this District and  
9 throughout the United States. At all times material to this Complaint, acting alone or in concert  
10 with others, Google LLC has advertised, marketed, and distributed its YouTube video sharing  
11 platform to consumers throughout the United States. At all times material to this Complaint,  
12 acting alone or in concert with YouTube, LLC, Google LLC formulated, directed, controlled,  
13 had the authority to control, or participated in the acts and practices set forth in this Complaint.

14 35. Defendant YouTube, LLC (“**YouTube**”) is a limited liability company organized  
15 under the laws of the state of Delaware, and its principal place of business is in San Bruno,  
16 California. YouTube, LLC is a wholly owned subsidiary of Google LLC. YouTube, LLC  
17 transacts or has transacted business in this District and throughout the United States. At all times  
18 material to this Complaint, acting alone or in concert with Defendant Google LLC, YouTube,  
19 LLC has advertised, marketed, and distributed its YouTube social media platform to consumers  
20 throughout the United States. At all times material to this Complaint, acting alone or in concert  
21 with Google LLC, YouTube, LLC formulated, directed, controlled, had the authority to control,  
22 or participated in the acts and practices set forth in this Complaint.

23 **IV. FACTUAL ALLEGATIONS**

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

25 36. Researchers studying the effect social media<sup>9</sup> has on the brain have shown that  
26 social media exploits “the same neural circuitry” as “gambling and recreational drugs to keep

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27 <sup>9</sup> The term “social media” is commonly used to refer to text, photos, videos, and ideas that are  
28 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.

1 consumers using their products as much as possible.”<sup>10</sup>

2 37. As described below, each Defendant designed and marketed its exploitive social  
3 media platform to be extremely popular with youth. And they have all been successful.  
4 Approximately 90% of children ages 13–17 use social media.<sup>11</sup> Younger children also regularly  
5 use social media. One study reported 38% of children ages 8–12 used social media in 2021.<sup>12</sup>  
6 Other studies reveal numbers as high as 49% of children ages 10–12 use social media and 32%  
7 of children ages 7–9 use social media.<sup>13</sup>

8 38. The most popular of these platforms is YouTube. 95% of children ages 13-17, a  
9 vast majority of this age group, have used YouTube.<sup>14</sup>

10 39. TikTok has skyrocketed in popularity with teenagers since its merger with  
11 Musical.ly in 2018. As of July 2020, “TikTok classified more than a third of its 49 million *daily*  
12 users in the United States as being 14 years old or younger[,]” and that likely underestimates  
13 those under 14 and older teenagers (*i.e.*, those between 15 and 18 years old) because TikTok  
14 claims not to know how old a third of its daily users are.<sup>15</sup> TikTok is now the second most  
15  
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17 <sup>10</sup> *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).

18  
19 <sup>11</sup> *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018),  
20 [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Social-Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx) [<https://perma.cc/VF8P-9UNT>].

21 <sup>12</sup> Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at  
22 5, Common Sense Media (2022),  
23 [https://www.common sense media.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](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>].

24 <sup>13</sup> *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child.’s Hosp. Univ. Mich. Health (Oct. 18, 2021),  
25 [https://mottpoll.org/sites/default/files/documents/101821\\_SocialMedia.pdf](https://mottpoll.org/sites/default/files/documents/101821_SocialMedia.pdf)  
26 [<https://perma.cc/ZNA9-W4E5>].

27 <sup>14</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022),  
28 <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/> [<https://perma.cc/BH7W-ZUPM>].

<sup>15</sup> 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>].

1 popular social media platform with over 67% of children ages 13–17 having used the app.<sup>16</sup>

2 40. Instagram’s numbers are comparable to TikTok, with 62% of children ages 13–17  
3 reporting they have used the app.<sup>17</sup>

4 41. Snapchat also remains popular with youth, with 59% of children ages 13–17  
5 reporting they have used the app.<sup>18</sup>

6 42. Facebook rounds out the five most popular social media platforms, with 32% of  
7 children ages 13–17 reporting they have used Facebook’s app or website.<sup>19</sup>

8 43. Teenagers who use these social media platforms are also likely to use them every  
9 day. One study estimates that 62% of children ages 13–18 use social media every day.<sup>20</sup> An  
10 increasing number of younger children also use social media daily with 18% of children ages 8–  
11 12 reporting using a social media site at least once a day.<sup>21</sup>

12 44. Daily use for many teenagers does not consist of logging onto a platform just  
13 once. Rather, many teenage users check social media repeatedly throughout the day. In one  
14 study, teenage users reported checking Snapchat thirty times a day on average.<sup>22</sup>

15 45. Even more alarming, some teenagers never stop looking at social media.<sup>23</sup>

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20 <sup>16</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,  
21 2022), [https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/)  
22 [2022/](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/) [<https://perma.cc/BH7W-ZUPM>].

23 <sup>17</sup> *Id.*

24 <sup>18</sup> *Id.*

25 <sup>19</sup> *Id.*

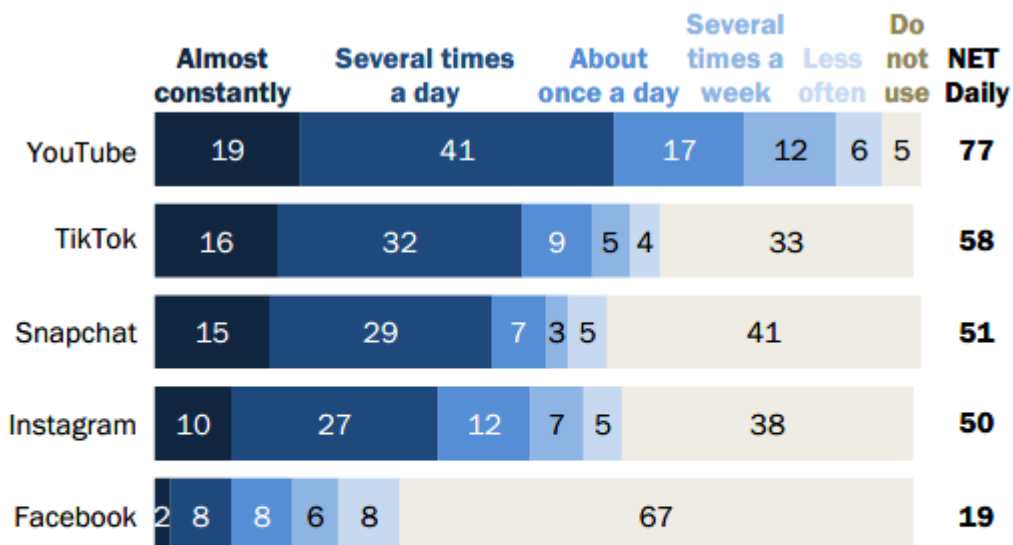
26 <sup>20</sup> Victoria Rideout *et al.*, *The Common Sense Census: Media Use by Tweens and Teens, 2021* at  
27 4, Common Sense Media (2022),  
28 [https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf)  
[report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf) [<https://perma.cc/L6ND-X7VR>].

<sup>21</sup> *Id.* at 5.

<sup>22</sup> Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021),  
[tinyurl.com/89ct4p88](https://www.pipersandler.com/89ct4p88) [<https://perma.cc/XL9U-WH57>].

<sup>23</sup> 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-](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/)  
[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.<sup>24</sup> TikTok and Snapchat are close behind, with near constant use rates among teens at 16% and 15% respectively.<sup>25</sup> Meanwhile, 10% of teens use Instagram almost constantly.<sup>26</sup> And 2% of teens report using Facebook almost constantly.<sup>27</sup>



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.

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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.<sup>28</sup> 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.<sup>29</sup> 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.<sup>30</sup>

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> *Id.*

<sup>30</sup> *Id.*

1           48.     The more that teenagers use social media, the harder they find it to give up.  
2 Teenagers who say they spend too much time on social media are almost twice as likely to say  
3 that giving up social media would be hard as teens who see their social media usage as about  
4 right.<sup>31</sup>

5           49.     Another study shows that among teenagers who regularly use social media, 32%  
6 “wouldn’t want to live without” YouTube.<sup>32</sup> 20% of teenagers said the same about Snapchat;  
7 13% said the same about both TikTok and Instagram; and 6% said the same about Facebook.<sup>33</sup>

8           50.     Despite using social media frequently, most youth do not enjoy it. Only 27% of  
9 boys and 42% of girls ages 8–18 reported enjoying social media “a lot” in 2021.<sup>34</sup>

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

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

16           52.     In general, moderate or high rates of any electronic screen use are associated with  
17 lower psychological well-being for children and adolescents.<sup>35</sup> Those with high screen time  
18 (seven+ hours/day) are twice as likely to receive diagnoses of depression, anxiety, or need  
19 treatment for mental or behavior health conditions compared to low-screen-time users (one  
20

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21 <sup>31</sup> *Id.*

22 <sup>32</sup> Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 31,  
23 Common Sense Media (2022),  
[https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf) [<https://perma.cc/L6ND-X7VR>].

24 <sup>33</sup> *Id.*

25 <sup>34</sup> *Id.* at 34.

26 <sup>35</sup> 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),  
27 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/> [<https://perma.cc/F9VM-MBRW>];  
28 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>].

hour/day).<sup>36</sup>

53. Researchers have found that high-volume social media use is associated with increased levels of depression and anxiety for adults.<sup>37</sup> Social media has particularly detrimental effects on the mental health of adolescents. Depressive symptoms, suicide-related outcomes, and suicide rates among adolescents increased between 2010 and 2015, at the same time that youth use of social media increased.<sup>38</sup> Researchers examining the link between these increases found that adolescents who spent more time on screen activities were significantly more likely to have high depressive symptoms or have at least one suicide-related outcome, and that the highest levels of depressive symptoms were reported by adolescents with high social media use and fewer in-person social interactions.<sup>39</sup>

54. One of the primary reasons the use of social media is associated with depressive symptoms among adolescents is because it encourages unhealthy social comparison and feedback-seeking behaviors.<sup>40</sup> Because adolescents spend a majority of their time on social media looking at other users' profiles and photos, rather than updating their own profiles, they are likely to engage in negative comparisons with their peers.<sup>41</sup> Specifically, adolescents are

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<sup>36</sup> *Id.*

<sup>37</sup> 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>]; Jean M. Twenge *et al.*, *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 *Clinical Psych. Sci.* 3–17 (2017), <https://doi.org/10.1177/2167702617723376>.

<sup>38</sup> 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>].

<sup>39</sup> *Id.*

<sup>40</sup> 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>].

<sup>41</sup> *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 vulnerable because they “use social networking sites for construing their identity, developing a sense of belonging, and for comparison with others”).



likely to engage in harmful upward comparisons with others they perceive to be more popular.<sup>42</sup>

55. Clinicians have also observed a clear relationship between youth social media use and disordered eating behavior.<sup>43</sup> One study found that the more social media accounts an adolescent has, the higher their scores on evaluations of disordered eating behaviors and cognitions.<sup>44</sup> Additionally, the study found that, for girls, greater daily time spent using Instagram and Snapchat was associated with significantly higher scores on evaluations of disordered eating behaviors.<sup>45</sup>

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.<sup>46</sup> In turn, disturbed and insufficient sleep is associated with poor health outcomes.<sup>47</sup> 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.<sup>48</sup>

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.

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<sup>42</sup> *Id.*

<sup>43</sup> 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>].

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> 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>].

<sup>47</sup> *Id.*

<sup>48</sup> *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).

1           58. Further, children are especially vulnerable to developing harmful behaviors  
2 because the prefrontal cortex is not fully developed in children and teens.<sup>49</sup> Consequently, they  
3 find it particularly difficult to exercise the self-control required to regulate their own use of  
4 Defendants’ platforms. In this regard, self-regulation allows people to delay gratification,  
5 postponing an immediate reward for a better reward later. Adolescents’ low capacity for self-  
6 regulation means they are particularly vulnerable to the immediately pleasurable, but ultimately  
7 harmful, effects of the repeated dopamine spikes caused by an external stimulus, such as “likes”  
8 that activate the reward system in the brain.<sup>50</sup>

9           59. As discussed in further detail *infra* Section IV.D, these reward-based learning  
10 systems “contribute to the maintenance of excessive usage patterns.”<sup>51</sup> Researchers investigating  
11 the “directionality between social networking [platforms] and problematic use,” have found that  
12 “increases in the intensity of use . . . predict[] problematic use.”<sup>52</sup> And empirical studies have  
13 found that problematic use is associated with “insomnia, stress, relationship dissatisfaction,  
14 anxiety, social anxiety, and depressive symptoms.”<sup>53</sup>

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

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

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

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24 <sup>49</sup> Nino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated*  
25 *mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, *BMC*  
26 *Psych.* 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7> [[https://perma.cc/Z3K2-](https://perma.cc/Z3K2-ZWRC)  
[ZWRC](https://perma.cc/Z3K2-ZWRC)].

27 <sup>50</sup> *Id.*

28 <sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.* (collecting sources).

1           62.     These issues led the United States Surgeon General to issue an advisory on the  
2 youth mental health crisis in December 2021.<sup>54</sup> In issuing the advisory, the Surgeon General  
3 noted, “[m]ental health challenges in children, adolescents, and young adults are real and  
4 widespread. Even before the pandemic, an alarming number of young people struggled with  
5 feelings of helplessness, depression, and thoughts of suicide — and rates have increased over the  
6 past decade.”<sup>55</sup>

7           63.     While the report highlights ways in which the COVID-19 pandemic has  
8 exacerbated mental health issues for American youth, it also highlights the mental health  
9 challenges youth faced before the pandemic. Specifically, the report notes that before the  
10 pandemic, “mental health challenges were the leading cause of disability and poor life outcomes  
11 in young people.”<sup>56</sup>

12           64.     In fact, before the pandemic, one in five children ages 3–17 in the United States  
13 had a mental, emotional, developmental, or behavior disorder.<sup>57</sup>

14           65.     From 2009 to 2019, the rate of high school students who reported persistent  
15 feelings of sadness or hopelessness increased by 40% (to one out of every three kids).<sup>58</sup> The  
16 proportion of kids seriously considering attempting suicide increased by 36% and the share  
17 creating a suicide plan increased by 44%.<sup>59</sup>

18           66.     From 2007 to 2019, suicide rates among youth ages 10–24 in the United States  
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20 <sup>54</sup> *Protecting Youth Mental Health: The U.S. Surgeon General’s Advisory*, U.S. Dep’t Health &  
21 Hum. Servs. (Dec. 7, 2021), [https://www.hhs.gov/sites/default/files/surgeon-general-youth-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)  
22 [mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf) [<https://perma.cc/SQZ7-NDFR>].

23 <sup>55</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by*  
24 *COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 7, 2021),  
25 [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)  
26 [2021T15:27/https://www.hhs.gov/about/news/2021/12/07/us-surgeon-general-issues-advisory-](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)  
27 [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)  
28 [<https://perma.cc/G8AY-PCGA>].

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> *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-](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf)  
[mental-health-advisory.pdf](https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf) [<https://perma.cc/SQZ7-NDFR>].

<sup>59</sup> *Id.*

1 increased by 57%.<sup>60</sup> By 2018, suicide was the second leading cause of death for youth ages 10–  
2 24.<sup>61</sup>

3 67. From 2007 to 2016, emergency room visits for youth ages 5–17 rose 117% for  
4 anxiety disorders, 44% for mood disorders, and 40% for attention disorders.<sup>62</sup>

5 68. This and other data led the American Academy of Pediatrics, the American  
6 Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to join  
7 the Surgeon General and declare a national emergency in child and adolescent mental health in  
8 December 2021.<sup>63</sup>

9 69. President Biden also addressed the mental health harms Defendants’ platforms  
10 have caused youth in his 2022 state of the union address<sup>64</sup> and again in 2023, demanding to  
11 “finally hold social media platforms accountable for [the] experimenting they’re doing – running  
12 [on] children for profit.”<sup>65</sup>

13 70. The national youth mental health crisis continues to worsen. In May 2023, the  
14 Surgeon General issued a new advisory about the effects of social media on youth mental health  
15 based on the most recent research.<sup>66</sup>

16 71. For example, the Surgeon General cites research that indicates that youth who

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17 <sup>60</sup> *Id.*

18 <sup>61</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental  
19 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>].  
20

21 <sup>62</sup> 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>].  
22

23 <sup>63</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental  
24 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>].

25 <sup>64</sup> 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>]).

26 <sup>65</sup> 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>]).

27 <sup>66</sup> Surgeon General Issues New Advisory About Effects Social Media Use Has on Youth Mental  
28 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>].

1 spend more than three hours per day on social media platforms face twice the risk of  
2 experiencing poor mental health outcomes, such as symptoms of depression and anxiety.<sup>67</sup> And  
3 the most recent data, as the Surgeon General notes, indicates social media use by young people is  
4 “nearly universal,” with up to 95% of youth ages 13–17 using social media platforms and more  
5 than 33% of youth saying they use social media “almost constantly.”<sup>68</sup> On average, the data  
6 reveals that “8th and 10th graders now spend an average of 3.5 hours per day on social media.”<sup>69</sup>

7       72. The Surgeon General’s advisory highlights two primary ways in which social  
8 media platforms can harm youth. First, “[e]xtreme, inappropriate, and harmful content continues  
9 to be easily and widely accessible by children and adolescents,” which the advisory notes “can  
10 be spread through direct pushes, unwanted content exchanges, and algorithmic designs.”<sup>70</sup>  
11 Second, “[e]xcessive and problematic use of social media can harm children and adolescents by  
12 disrupting important healthy behaviors.”<sup>71</sup> As the advisory explains, “[s]ocial media platforms  
13 are often designed to maximize user engagement, which has the potential to encourage excessive  
14 use and behavioral dysregulation.”<sup>72</sup> Moreover, the advisory cites research indicating that “social  
15 media exposure can overstimulate the reward center in the brain and, when the stimulation  
16 becomes excessive, can trigger pathways comparable to addiction.”<sup>73</sup> Youth are more vulnerable  
17 to these risks because their brains are still developing, and many self-identify as having  
18 “addictions” to social media.<sup>74</sup> A study published in 2023 on the gender-specific impacts of  
19 social media found that more than one-third of girls aged 11–15 say they feel “addicted” to  
20

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21  
22 <sup>67</sup> *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 6, U.S. Dep’t  
23 Health & Hum. Servs. (2023), [https://www.hhs.gov/sites/default/files/sg-youth-mental-health-](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf)  
24 [social-media-advisory.pdf](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf) [<https://perma.cc/39QN-NAY7>].

25 <sup>68</sup> *Id.* at 4.

26 <sup>69</sup> *Id.* at 7 (citation omitted).

27 <sup>70</sup> *Id.* at 8.

28 <sup>71</sup> *Id.* at 9.

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> <sup>74</sup> *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-](https://www.hhs.gov/about/news/2023/05/23/surgeon-general-issues-new-advisory-about-effects-social-media-use-has-youth-mental-health.html)  
[effects-social-media-use-has-youth-mental-health.html](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>].

1 certain social media platforms.<sup>75</sup>

2 73. “Our children,” as the Surgeon General explained in his advisory, “have become  
3 unknowing participants in a decades-long experiment.”<sup>76</sup> The risk of harm to an entire generation  
4 is too great to wait, especially in the face of what the Surgeon General described as “*ample*  
5 indicators that social media can [] have a profound risk of harm to the mental health and well-  
6 being of children and adolescents.”<sup>77</sup> Therefore, the Surgeon General issued a call in his 2023  
7 advisory to “urgently take action to create safe and healthy digital environments that minimize  
8 harm and safeguard children’s and adolescents’ mental health and well-being during critical  
9 stages of development.”<sup>78</sup>

10 74. The White House echoed these concerns, announcing in May 2023 that the  
11 “United States is experiencing an unprecedented youth mental health crisis” and “there is now  
12 *undeniable* evidence that social media and other online platforms have contributed to [this] youth  
13 mental health crisis.”<sup>79</sup> The White House explained that “online platforms often use manipulative  
14 design techniques embedded in their products to promote addictive and compulsive use by young  
15 people to generate more revenue.”<sup>80</sup> The White House also specifically recognized the impact on  
16 school districts, noting that “[s]ocial media use in schools is affecting students’ mental health  
17 and disrupting learning.”<sup>81</sup>

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

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21 <sup>75</sup> *Id.*

22 <sup>76</sup> *Social Media and Youth Mental Health: The U.S. Surgeon General’s Advisory* at 11, U.S.  
23 Dep’t Health & Hum. Servs. (2023), [https://www.hhs.gov/sites/default/files/sg-youth-mental-](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf)  
24 [health-social-media-advisory.pdf](https://www.hhs.gov/sites/default/files/sg-youth-mental-health-social-media-advisory.pdf) [<https://perma.cc/39QN-NAY7>].

25 <sup>77</sup> *Id.* at 4 (emphasis added).

26 <sup>78</sup> *Id.*

27 <sup>79</sup> *Fact Sheet: Biden-Harris Administration Announces Actions to Protect Youth Mental Health,*  
28 *Safety & Privacy Online*, The White House (May 23, 2023),  
[https://www.whitehouse.gov/briefing-room/statements-releases/2023/05/23/fact-sheet-biden-](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/)  
[harris-administration-announces-actions-to-protect-youth-mental-health-safety-privacy-online/](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).

<sup>80</sup> *Id.*

<sup>81</sup> *Id.*

- 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[;]”<sup>82</sup>
- b. Design platforms and algorithms to prioritize health and safety as the first principle;<sup>83</sup>
- c. “[A]void design features that attempt to maximize time, attention, and engagement[;]”<sup>84</sup>
- 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[;]”<sup>85</sup>
- e. “Share data relevant to the health impact of platforms and strategies” with the public and independent researchers;<sup>86</sup>
- f. “Conduct and facilitate transparent and independent assessments of the impact of social media products and services on children and adolescents[;]”<sup>87</sup>
- 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;<sup>88</sup> and
- h. “Adhere to and enforce age minimums...that respect the privacy of youth users.”<sup>89</sup>

**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.

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<sup>82</sup> *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>].

<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*



1           77. Defendants each run and operate social media platforms. The interactive features  
2 Defendants provide on their platforms are similar in many respects. For example, Facebook,  
3 Instagram, Snap, TikTok, and YouTube all offer tailored “feeds” of content curated by complex  
4 algorithms intended to learn users’ interests; ways to publicly express affirmation for such  
5 curated content through “likes,” comments, and sharing or reposting the content; and, in fact,  
6 each is known to copy the designs and features of one another.<sup>90</sup> The salient features of  
7 Defendants’ social media platforms are described in more detail below.

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

13           79. Defendants view their population of adolescent and even pre-adolescent users as  
14 one of their most valuable commodities. Young users are central to Defendants’ business model  
15 and advertising revenue as an audience for advertisements because children are more likely than  
16 adults to use social media. Today, 95% of children ages 13–17 have cellphones,<sup>91</sup> 90% use social  
17 media,<sup>92</sup> and 28% buy products and services through social media.<sup>93</sup>

18           80. To profit from these young users, Defendants intentionally market their platforms  
19 to youth and adolescents. For children under 13, the Children’s Online Privacy Protection Act  
20 (“COPPA”)<sup>94</sup> regulates the conditions under which platforms like Defendants’ can collect and  
21

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22 <sup>90</sup> See, e.g., Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of*  
23 *Flattery*, Gizmodo (Aug. 16, 2022), [https://www.gizmodo.com.au/2022/08/for-sites-like-](https://www.gizmodo.com.au/2022/08/for-sites-like-instagram-and-twitter-imitation-is-the-only-form-of-flattery/)  
[instagram-and-twitter-imitation-is-the-only-form-of-flattery/](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>].

24 <sup>91</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,  
25 2022), [https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/)  
[2022/](https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/) [<https://perma.cc/BH7W-ZUPM>].

26 <sup>92</sup> *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-](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx)  
[Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx) [<https://perma.cc/VF8P-9UNT>].

27 <sup>93</sup> Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021),  
28 [tinyurl.com/89ct4p88](https://www.piper-sandler.com/89ct4p88) [<https://perma.cc/XL9U-WH57>].

<sup>94</sup> See 15 U.S.C. §§ 6501-6506.



1 use their information.

2 81. COPPA requires platforms that either target children under age 13 or have actual  
3 knowledge of users under age 13 to obtain “verifiable parental consent” prior to collecting and  
4 using information about children under age 13.<sup>95</sup> Defendants have blatantly violated COPPA or  
5 turned a blind eye to younger users on their platforms by leaving users to self-report their age.

6 82. Seeking to capture even younger audiences, Defendants have each offered “kid  
7 versions” of their platforms, which, while not collecting users’ information, are “designed to fuel  
8 [kids’] interest in the grown-up version.”<sup>96</sup>

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

14 84. One way Defendants maximize the time users spend on their platforms involves  
15 the design of feeds—whether of photos, videos, or sponsored or promoted content. Each  
16 Defendant uses algorithms to serve users personalized content for them to consume ad nauseum.  
17 Google’s former design ethicist, Tristan Harris, explained that this never-ending stream is  
18 designed to “keep [users] scrolling, and purposely eliminate any reason for [them] to pause,  
19 reconsider or leave.”<sup>97</sup> Defendants’ feeds take “an experience that was bounded and finite, and  
20 turn it into a bottomless flow that keeps going.”<sup>98</sup> This “flow state,” as psychologists describe it,  
21 “fully immerse[s]” users, distorts their perception of time, and “has been shown to be associated  
22 with problematic use of social networking sites.”<sup>99</sup>

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23  
24 <sup>95</sup> *Id.*

25 <sup>96</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022),  
<https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-> [<https://perma.cc/RGX9-3JWC>].

26 <sup>97</sup> 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-](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html)  
27 [1104237.html](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html) [<https://perma.cc/E328-D8WY>].

28 <sup>98</sup> *Id.*

<sup>99</sup> 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

85. A second way social media platforms manipulate users is through social reciprocity. “Reciprocity,” from a psychology perspective, refers to the powerful social phenomenon of how people respond to positive or, conversely, hostile actions. Reciprocity means that in response to friendly actions, people respond in a friendly manner and vice versa.<sup>100</sup> 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.<sup>101</sup> Those people, whom he had never met or communicated with before, reciprocated, flooding him with holiday cards.<sup>102</sup> The majority of the responses did not even ask Mr. Kunz who he was.<sup>103</sup> 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.<sup>104</sup> 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

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Psych. 10, 279 (2022), <https://doi.org/10.1186/s40359-022-00990-7> [<https://perma.cc/Z3K2-ZWRC>].

<sup>100</sup> 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](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>].

<sup>101</sup> 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)].

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> 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>].

1 rewarded every time. Slot machines are the classic example of how IVR works.<sup>105</sup> With each pull  
2 of the lever on a slot machine, the user may or may not win a prize. Slot machine winnings are  
3 intermittent and vary in value. As casino owners know, IVR creates behaviors that are very hard  
4 to stop, even when the rewards are no longer given out.

5 88. The neurobiology behind the effectiveness of IVR is well understood. IVR works  
6 by spacing out dopamine-triggering stimuli with dopamine gaps—allowing for anticipation and  
7 craving to develop, which strengthens the desire to engage in the activity with each release of  
8 dopamine.

9 89. Defendants integrate IVR into the design and operations of their respective  
10 platforms by “link[ing] a user’s action (like pulling a lever) with a variable reward.”<sup>106</sup> For  
11 example, when “we swipe down our finger to scroll the Instagram feed, we’re playing a slot  
12 machine to see what photo comes next.”<sup>107</sup> Meta also delays the time it takes to load the feed.  
13 “This is because without that three-second delay, Instagram wouldn’t feel variable.”<sup>108</sup> Without  
14 that delay, there would be no time for users’ anticipation to build. In slot machine terms, there  
15 would be “no sense of *will I win?* because you’d know instantly. So the delay isn’t the app  
16 loading. It’s the cogs spinning on the slot machine.”<sup>109</sup> Each of the Defendants’ platforms  
17 exploits this biochemical reaction among its users, typically using “likes,” “hearts,” or other  
18 forms of approval that serve as the reward. *See infra* Section IV.D.1–4.

19 90. “Everyone innately responds to social approval, but some demographics, in  
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21

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23 <sup>105</sup> See, e.g., Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17,  
24 2017), [https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-](https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction)  
[addiction](https://perma.cc/2HES-Y3AB) [<https://perma.cc/2HES-Y3AB>].

25 <sup>106</sup> 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-](https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html)  
[1104237.html](https://perma.cc/E328-D8WY) [<https://perma.cc/E328-D8WY>].

26 <sup>107</sup> *Id.*

27 <sup>108</sup> 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>  
28 [<https://perma.cc/2HES-Y3AB>].

<sup>109</sup> *Id.*

1 particular teenagers, are more vulnerable to it than others.”<sup>110</sup>

2 91. Youth are especially vulnerable both to the ways in which Defendants manipulate  
3 users to maximize their “watch time,” and to the resulting harms. Children’s brains undergo a  
4 fundamental shift around age 10 that makes “preteens extra sensitive to attention and admiration  
5 from others.”<sup>111</sup> Consequently, for young users of social media, Defendants’ use of IVR,  
6 reciprocity, and other “rewards” taps into this heightened sensitivity at a critical time in their  
7 development.

8 92. Adolescence is a period of rapid growth and development in the human brain,  
9 second only to infancy in that regard. As a result of many of these changes during adolescence,  
10 preteens and teens are highly sensitive to both positive and negative social stimuli. The structures  
11 of the brain “closely tied” to social media activity and that drive instinctual behavior begin to  
12 change.<sup>112</sup> The ventral striatum is one of those structures. It receives a rush of dopamine and  
13 oxytocin, known as the “happy hormones[,]” whenever we experience social rewards.<sup>113</sup>  
14 Between the ages of 10 and 12, the receptors for those happy hormones begin to multiply in this  
15 region of the brain, which makes compliments on a new hairstyle, laughter from a classmate, or  
16 other social rewards “start to feel a lot more satisfying.”<sup>114</sup>

17 93. These biological changes incentivize kids and teens to develop healthy social  
18 skills and connections. “But arriving at school in a new pair of designer jeans, hoping your crush  
19 will smile at you in the hallway, is worlds away from posting a video on TikTok that may get  
20 thousands of views and likes,” according to Mitch Prinstein, Chief Science Officer for the  
21 American Psychology Association.<sup>115</sup>

22 94. Part of what makes interactions on social media so different is that they are often

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23 <sup>110</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016),  
24 <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html> [<https://perma.cc/E328-D8WY>].

25 <sup>111</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass’n  
26 (Aug. 25, 2022), <https://www.apa.org/news/apa/2022/social-media-children-teens>  
27 [<https://perma.cc/J68J-JZPE>].

28 <sup>112</sup> *Id.*

<sup>113</sup> *Id.*

<sup>114</sup> *Id.*

<sup>115</sup> *Id.*

1 permanent and public in nature. There is no public ledger tracking the number of consecutive  
2 days you have spoken to someone, like there is for Snap “streaks.” Similarly, “[a]fter you walk  
3 away from a regular conversation, you don’t know if the other person liked it, or if anyone else  
4 liked it[.]”<sup>116</sup> Conversely, on Defendants’ platforms, kids, their friends, and even complete  
5 strangers can publicly deliver or withhold social rewards in the form of likes, comments, views,  
6 and follows.<sup>117</sup>

7 95. These social rewards release dopamine and oxytocin in the brains of youth and  
8 adults alike but there are two key differences, as Chief Science Officer Prinstein explained:  
9 “First, adults tend to have a fixed sense of self that relies less on feedback from peers. Second,  
10 adults have a more mature prefrontal cortex, an area that can help regulate emotional responses  
11 to social rewards.”<sup>118</sup>

12 96. Adolescents, by contrast, are in a “period of personal and social identity  
13 formation,” much of which “is now reliant on social media.”<sup>119</sup> “Due to their limited capacity for  
14 self-regulation and their vulnerability to peer pressure,” adolescents “are at greater risk of  
15 developing mental disorder.”<sup>120</sup>

16 97. Together, Meta, Snap, TikTok, and Google have designed, refined, marketed, and  
17 operated their social media platforms to maximize the number of youth who use their platforms  
18 and the time they spend on those platforms. Despite knowing that social media inflicts harms on  
19 youth, Defendants have continued to create more sophisticated versions of their platforms with  
20 features designed to keep users engaged and maximize the amount of time they spend using  
21

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22 <sup>116</sup> *Id.*

23 <sup>117</sup> *Id.*

24 <sup>118</sup> *Id.*

25 <sup>119</sup> Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety*  
26 *and psychological distress in adolescents*, Int’l J. Adolescence & Youth (202) 25:1, 79–93  
27 (Mar. 3, 2019),  
28 [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://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>].

<sup>120</sup> *Id.*

1 social media. Defendants' conduct in designing and marketing exploitive and manipulative  
2 platforms, youth spend excessive amounts of time on Defendants' platforms.

3 98. Defendants' efforts worked. The majority of teenagers use the same five social  
4 media platforms: YouTube, TikTok, Instagram, Snapchat, and Facebook.<sup>121</sup> Each of these  
5 platforms individually boasts high numbers of teenage users.

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

8 **a. The Meta Platform**

9 99. Meta platforms, including Facebook and Instagram, are among the most popular  
10 social networking platforms in the world, with more than 3.6 billion users worldwide.<sup>122</sup>

11 **(i) The Facebook Platform**

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

13 101. Facebook was founded in 2004 and has become the largest social network in the  
14 world. As of October 2021, Facebook had approximately 2.9 billion monthly active users,  
15 approximately 2 billion of whom use Facebook every day.<sup>123</sup>

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

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

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

24 <sup>121</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10,  
25 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/> [<https://perma.cc/BH7W-ZUPM>].

26 <sup>122</sup> Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, Statista (Oct. 29, 2021),  
27 <https://www.statista.com/chart/2183/facebook-mobile-users/> [<https://perma.cc/5NCB-AG9B>].

28 <sup>123</sup> *See id.*; S. Dixon, *Number of Daily Active Facebook Users Worldwide as of 3<sup>rd</sup> Quarter 2022 (in Millions)*, Statista (Oct. 27, 2022), <https://www.statista.com/statistics/346167/facebook-global-dau/> [<https://perma.cc/WC96-FA6Z>].

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

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

- 8           a. In 2009, Facebook launched the "like" button;
- 9           b. In 2011, Facebook launched Messenger, its direct messaging service, and started  
10 allowing people to subscribe to accounts outside of their "friends";
- 11           c. In 2012, Facebook started showing advertisements in its news feed and launched  
12 a real-time bidding system through which advertisers could bid on users based on  
13 their visits to third-party websites;
- 14           d. In 2014, Facebook's facial recognition algorithm (DeepFace) reached near-human  
15 accuracy in identifying faces;
- 16           e. In 2015, Facebook made significant changes to its news feed algorithm to  
17 determine what content to show users and launched its live-streaming service;
- 18           f. In 2016, Facebook launched games for its social media platform, so that users  
19 could play games without having to install new apps; and
- 20           g. In 2017, Facebook launched Facebook Creator, an app for mobile video posts that  
21 assists with content creation.

## 22                           (ii)     **The Instagram Platform**

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

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

28           109. After being acquired by Meta, Instagram experienced exponential user growth,

1 expanding from approximately 10 million monthly active users in September 2012 to more than  
2 one billion monthly active users worldwide today, including approximately 160 million users in  
3 the United States.<sup>124</sup>

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

7 111. For example, in August 2020, Instagram began hosting and recommending short  
8 videos to users, called Reels.<sup>125</sup> Like TikTok, Instagram allows users to view an endless feed of  
9 Reels that are recommended and curated to users by Instagram’s algorithm.

10 112. Instagram has become the most popular photo sharing social media platform  
11 among children in the United States—approximately 72% of children aged 13–17 in the United  
12 States use Instagram.<sup>126</sup>

### 13 **b. Meta Markets Its Platforms to Youth**

14 113. To maximize the revenue generated from relationships with advertisers, Meta has  
15 expended significant effort to attract youth, to its platforms, including designing features that  
16 appeal to a teen and preteen audience. Meta explicitly targets teenagers for multiple reasons. In  
17 part, Meta views teenagers as a way to attract other potential users, such as by using teenagers to  
18 recruit parents who want to participate in their children’s lives as well as younger siblings who  
19 look to older siblings as models for which social media platforms to use and how to use them.<sup>127</sup>

22 <sup>124</sup> S. Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista  
23 (May 23, 2022), <https://www.statista.com/statistics/183585/instagram-number-of-global-users/>  
24 [<https://perma.cc/6LZ4-BGGB>].

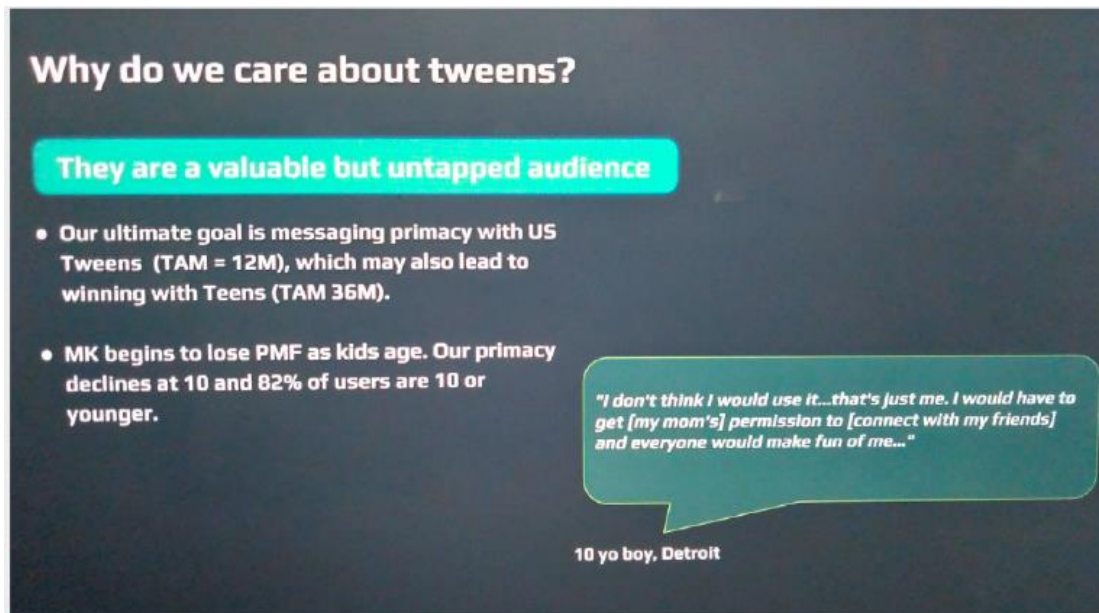
25 <sup>125</sup> *Introducing Instagram Reels*, Instagram (Aug. 5, 2020),  
26 <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>  
27 [<https://perma.cc/6FJX-3LV2>].

28 <sup>126</sup> 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>].

<sup>127</sup> 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-](https://www.nytimes.com/2021/10/16/technology/instagram-teens.html)  
<https://perma.cc/SSL6-QUN2>].



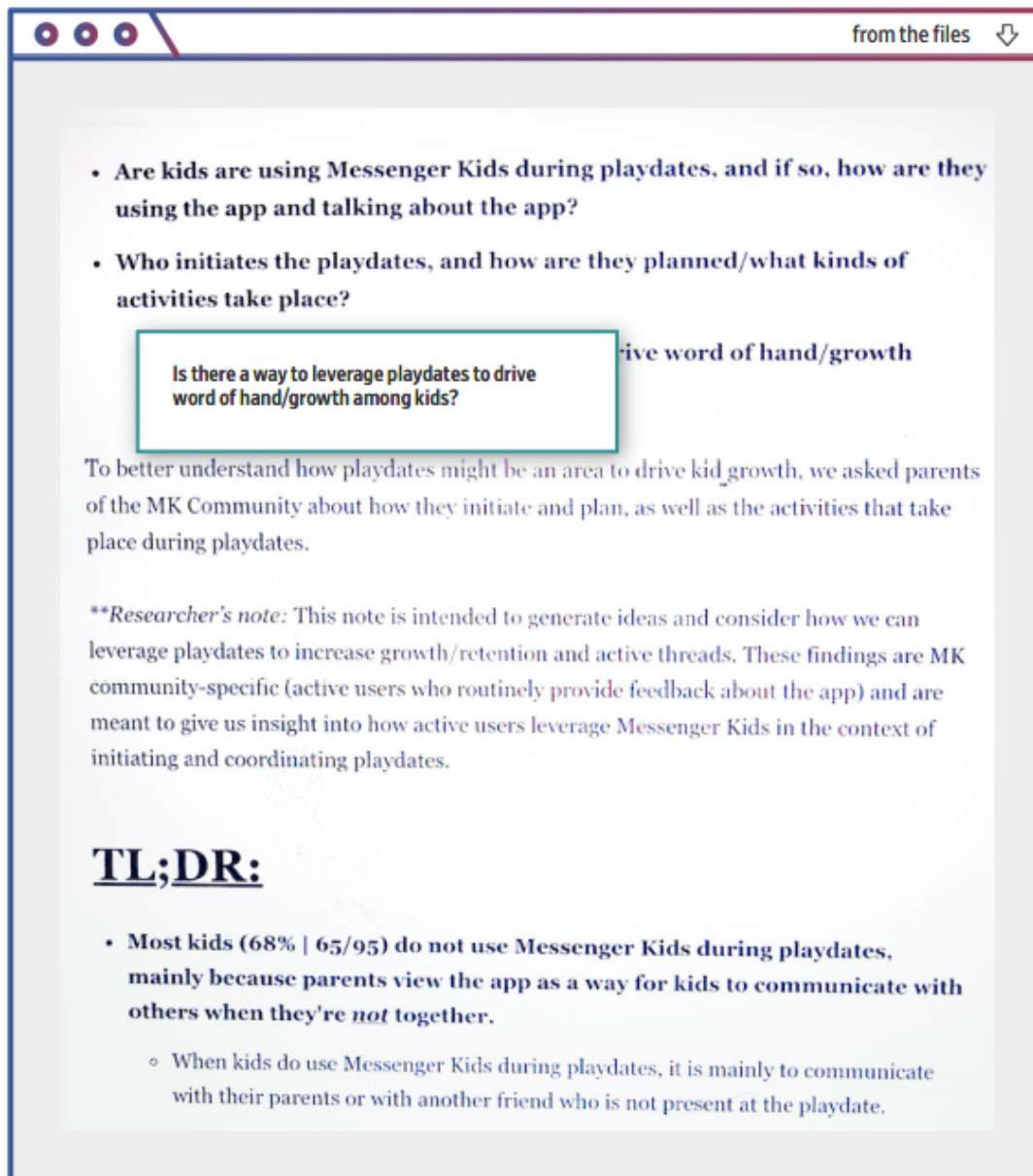
114. Most importantly, Meta recognizes that teenagers are the “pipeline” for the continued growth of the company. An internal Instagram strategy memo warned in 2020, “[i]f we lose the teen foothold in the U.S. we lose the pipeline”.<sup>128</sup> A 2018 marketing presentation declared the loss of teenage users to other social media platforms an “existential threat.”<sup>129</sup> In response, starting in 2018, Instagram devoted almost all of its annual marketing budget to attracting teenagers—hundreds of millions of dollars annually.<sup>130</sup>



<sup>128</sup> *Id.*

<sup>129</sup> *Id.*

<sup>130</sup> *Id.*



115. Meta also views preteens or “tweens” as a “valuable but untapped audience,” even contemplating “exploring playdates as a growth lever.”<sup>131</sup> Meta formed a team to study preteens, endeavored to create more products designed for them, and commissioned strategy papers regarding the “business opportunities” created.<sup>132</sup>

116. For these reasons, the Meta platforms are designed to be used by children and are

<sup>131</sup> *Id.*

<sup>132</sup> 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://perma.cc/3QRQ-NU4C>].

1 actively marketed to children throughout the Meta markets in the United States. Meta advertises  
2 to children through its own efforts as well as through advertisers that create and target  
3 advertisements to children. Internal Meta documents establish that Meta spends hundreds of  
4 millions of dollars researching, analyzing, and marketing to children to find ways to make its  
5 platforms more appealing to these age groups and to maximize the time they spend on its  
6 platforms, as these age groups are seen as essential to Meta’s long-term profitability and market  
7 dominance.<sup>133</sup> For instance, after Instagram’s founders left Meta in September 2018, “Facebook  
8 went all out to turn Instagram into a main attraction for young audiences,” and “began  
9 concentrating on the ‘teen time spent’ data point,” in order to “drive up the amount of time that  
10 teenagers were on the app with features including Instagram Live, a broadcasting tool, and  
11 Instagram TV, where people upload videos that run as long as an hour.”<sup>134</sup>

12 117. In fact, Meta’s acquisition of Instagram in 2012 was primarily motivated by its  
13 desire to make up for declines in the use of Facebook by youth, and Meta views Instagram as  
14 central to its ability to attract and retain young audiences. A Meta presentation from 2019  
15 indicated that “Instagram is well positioned to resonate and win with young people,” and “[t]here  
16 is a path to growth if Instagram can continue their trajectory.”<sup>135</sup>

17 118. Although Meta’s policy is that children younger than 13 cannot register an  
18 account, it lacks effective age-verification protocols—an issue long known to Meta. Since at  
19 least 2011, Meta has known that its age-verification protocols are largely inadequate, estimating  
20 at that time that it removed 20,000 children under age 13 from Facebook every day.<sup>136</sup> A decade

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21 <sup>133</sup> *Id.*

22 <sup>134</sup> Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*,  
23 N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html> [<https://perma.cc/SSL6-QUN2>].

24 <sup>135</sup> Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company*  
25 *Documents Show; Its own in-depth research shows a significant teen mental-health issue that*  
26 *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>].

27 <sup>136</sup> Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing*  
28 *Privacy Concerns?*, Fast Co. (Mar. 22, 2011),  
<https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns> [<https://perma.cc/8228-YGS7>].

1 later, in 2021, an Instagram executive acknowledged that users under 13 can still “lie about  
2 [their] age now,” to register an account.<sup>137</sup>

3 119. Meta has yet to implement protocols to verify a users’ age. Meta also has  
4 agreements with cell phone manufacturers and/or providers and/or retailers, who often pre-install  
5 its platforms on mobile devices prior to sale and without regard to the age of the intended user of  
6 each such device. That is, even though Meta is prohibited from providing the Meta platforms to  
7 users under the age of 13, Meta actively promotes and provides underage users access to its  
8 platforms by encouraging and allowing cell phone manufacturers to pre-install the platforms on  
9 mobile devices indiscriminately. Consequently, approximately 11% of United States children  
10 between the ages of 9 and 11 used Instagram in 2020,<sup>138</sup> despite Meta claiming to remove  
11 approximately 600,000 underage users per quarter.<sup>139</sup>

12 120. Ultimately, as discussed above, Meta’s efforts to attract young users have been  
13 successful. *See supra* Section IV.A.

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

15 121. Once users begin using its platforms, Meta employs a variety of strategies to keep  
16 them there, using features that exploit the natural human desire for social interaction and the  
17 neurophysiology of the brain’s reward systems to keep users endlessly scrolling, posting,  
18 “liking,” commenting, and counting the number of “likes” and comments to their own posts. As  
19 discussed above, the rapidly developing adolescent brain, highly attuned to social rewards, is  
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21 <sup>137</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram*  
22 *Kids, Documents Show; It has investigated how to engage young users in response to*  
23 *competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J. (Sept.  
24 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>  
25 [<https://perma.cc/3QRQ-NU4C>].

26 <sup>138</sup> Brooke Auxier *et al.*, *Parenting Children in the Age of Screens: 1. Children’s engagement*  
27 *with digital devices, screen time*, Pew Rsch. Ctr. (July 28, 2020),  
28 [https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-](https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/)  
[screen-time/](https://perma.cc/U7LH-D62Q) [<https://perma.cc/U7LH-D62Q>].

<sup>139</sup> 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 28, 2021), <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>  
[<https://perma.cc/3QRQ-NU4C>].

1 particularly vulnerable to such exploitation.

2 122. Many of the features Meta has designed utilize the well-established principle of  
3 intermittent variable rewards or IVR, discussed above, including one of its most defining  
4 features: the “Like” button. Meta knows “Likes” are a source of social comparison harm for  
5 many users, as detailed below. Several Meta employees involved in creating the Like button  
6 have since left Meta and have spoken publicly about the manipulative nature of Meta’s platforms  
7 and the harm they cause users.<sup>140</sup>

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

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

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

24 126. The Meta platforms are designed to encourage users to post content and to like,  
25 comment, and interact with other users’ posts. Each new post that appears on a user’s feed can  
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27 <sup>140</sup> See, e.g., Paul Lewis, ‘Our minds can be hijacked’: the tech insiders who fear a smartphone  
28 dystopia, Guardian (Oct. 6, 2017),  
[https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-](https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia)  
[dystopia](https://perma.cc/8DU4-MLJA) [<https://perma.cc/8DU4-MLJA>].

1 function as a dopamine-producing social interaction in the user’s brain. Similarly, likes,  
2 comments, and other interactions with the user’s posts function as an even stronger dopamine-  
3 producing stimulus than does seeing new posts from other users. This in turn drives users to post  
4 more content they expect will generate even more likes and comments. In this regard, Meta has  
5 designed its platforms to effectively trap users—especially youth—in endless cycles of what  
6 Facebook whistleblower Frances Haugen called “little dopamine loops.”<sup>141</sup>

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

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

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

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27 <sup>141</sup> Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big*  
28 *mistake with social media*, Today (Feb. 7, 2022),  
<https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256>  
[\[https://perma.cc/7P7V-CDNH\]](https://perma.cc/7P7V-CDNH).



1 prioritization.<sup>142</sup>

2 129. Meta’s current use of algorithms in its platforms is driven and designed to  
3 maximize user engagement. Over time, Meta has gradually transitioned away from chronological  
4 ranking, which organized the interface according to when content was posted or sent, to  
5 prioritize what Meta calls “Meaningful Social Interactions” (“**MSI**”), which emphasizes users’  
6 connections and interactions such as likes and comments and gives greater significance to the  
7 interactions of connections that appeared to be the closest to users. In order to do this, Meta  
8 developed and employed an “amplification algorithm” to execute engagement-based ranking,  
9 which considers a post’s likes, shares, and comments, as well as a respective user’s past  
10 interactions with similar content, and exhibits the post in the user’s newsfeed if it otherwise  
11 meets certain benchmarks.

12 130. Although Meta claims that the goal of this engagement-based ranking is “helping  
13 you have more meaningful social interactions,”<sup>143</sup> Meta’s algorithms covertly operate on the  
14 principle that intense reactions invariably compel attention. Because these algorithms measure  
15 reactions and contemporaneously immerse users in the most reactive content, these algorithms  
16 effectively work to steer users toward the most negative content, because negative content  
17 routinely elicits passionate reactions. In other words, the algorithm is designed to prioritize the  
18 number of interactions rather than the quality of interactions.

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

24 132. Meta’s shift from chronological ranking to algorithm-driven content and

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25 <sup>142</sup> See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8,  
26 2021), [https://about.instagram.com/blog/announcements/shedding-more-light-on-how-](https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works)  
27 [instagram-works](https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works) [<https://perma.cc/8MTZ-238X>].

28 <sup>143</sup> Mark Zuckerberg, Facebook (Jan. 11, 2018, 4:28 PM),  
<https://www.facebook.com/zuck/posts/10104413015393571?pnref=story>  
[<https://perma.cc/F8VD-U6JU>].

1 recommendations has changed the Meta platforms in ways that are profoundly dangerous and  
2 harmful to children. Meta’s algorithms exploit vulnerabilities that are heightened in preteens and  
3 teens due to their social and psychological development—and Meta designs its platforms with  
4 these specific vulnerabilities in mind.

5 **e. Meta’s Harmful “Feeds”**

6 133. Both Facebook and Instagram show each user an algorithm-generated “feed” that  
7 consists of a series of photos and videos posted by accounts that the user follows, along with  
8 advertising and content specifically selected and promoted by Meta.

9 134. These feeds are virtually bottomless lists of content that enable users to scroll  
10 endlessly without any natural end points that would otherwise encourage them to move on to  
11 other activities. In this regard, “[u]nlike a magazine, television show, or video game,” the Meta  
12 platforms only rarely prompt their users to take a break by using “stopping cues.”<sup>144</sup> Meta’s  
13 “bottomless scrolling” feature is designed to encourages users to use its platforms for unlimited  
14 periods of time.

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

19 136. As Senator Richard Blumenthal, Chair of the Subcommittee on Consumer  
20 Protection, Product Safety, and Data Security, explained during one of a series of Senate  
21 hearings in 2021 on “Protecting Kids Online,” Meta utilizes private information of its child users  
22 to “precisely target [them] with content and recommendations, assessing what will provoke a  
23 reaction,” including encouragement of “destructive and dangerous behaviors,” which is how  
24 Meta “can push teens into darker and darker places.”<sup>145</sup> Whistleblower Frances Haugen testified

25 \_\_\_\_\_  
26 <sup>144</sup> See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?*, Am. Psych. Ass’n  
27 (Dec. 2, 2021), <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects>  
[<https://perma.cc/XV58-GHJ4>].

28 <sup>145</sup> 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->



1 that Meta’s “amplification algorithms, things like engagement based ranking . . . can lead  
2 children . . . all the way from just something innocent like healthy recipes to anorexia promoting  
3 content over a very short period of time.”<sup>146</sup> Meta thus specifically selects and pushes this  
4 harmful content on its platforms, for which it is then paid, and does so both for direct profit and  
5 also to increase user engagement, resulting in additional profits down the road.

6 137. As part of the Senate Subcommittee’s investigation into social media companies,  
7 Senators Richard Blumenthal, Marsha Blackburn and Mike Lee tested and confirmed the fact  
8 that Meta’s platforms’ recommendation-based feeds and features promote harmful content by  
9 opening test accounts purporting to be teenage girls. Senator Blumenthal stated that, “[w]ithin an  
10 hour all our recommendations promoted pro-anorexia and eating disorder content.”<sup>147</sup> Likewise,  
11 Senator Lee found that an account for a fake 13-year-old girl was quickly “flooded with content  
12 about diets, plastic surgery and other damaging material for an adolescent girl.”<sup>148</sup>

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

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

23 140. Further, Instagram also features another feed called “Reels,” which presents short

24 [children-social-media-use-full-senate-hearing-transcript \[https://perma.cc/WML5-286H\]](https://perma.cc/WML5-286H)  
25 (statement by Mr. Chairman Blumenthal).

26 <sup>146</sup> *Id.* at 37:34 (statement by Ms. Frances Haugen).

27 <sup>147</sup> Vanessa Romo, *4 Takeaways from Senators’ Grilling of Instagram’s CEO About Kids and*  
*Safety*, NPR (Dec. 8, 2021, 10:13 PM),  
28 [https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-](https://www.npr.org/2021/12/08/1062576576/instagrams-ceo-adam-mosseri-hears-senators-brush-aside-his-promises-to-self-poli)  
[brush-aside-his-promises-to-self-poli \[https://perma.cc/3CH4-GWJW\]](https://perma.cc/3CH4-GWJW).

<sup>148</sup> *Id.*

1 video posts by users not previously followed. These videos play automatically, without input  
2 from the user, encouraging the user to stay on the app for indefinite periods of time. As with  
3 other feeds, Reels content is selected and presented by an algorithm designed by Meta to  
4 maximize the amount of time a user spends on the app.

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

6 141. In an internal slide presentation in 2019, Meta’s own researchers, studying  
7 Instagram’s effects on children, concluded, “**We make body image issues worse for one in**  
8 **three teen girls[.]**”<sup>149</sup> This presentation was one of many documents leaked by former Meta  
9 employee Frances Haugen to journalists at the *Wall Street Journal* and federal regulators in  
10 2021.<sup>150</sup> The *Wall Street Journal*’s reporting on the documents began in September 2021 and  
11 caused a national and international uproar.

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

16 143. Upon information and belief, at least as far back as 2019, Meta initiated a  
17 Proactive Incident Response experiment, which began researching the effect of Meta on the  
18 mental health of today’s children.<sup>151</sup> Meta’s own in-depth analyses show significant mental-

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20 <sup>149</sup> Georgia Wells *et al.*, *Facebook Knows Instagram Is Toxic for Teen Girls, Company*  
21 *Documents Show; Its own in-depth research shows a significant teen mental-health issue that*  
22 *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-](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739)  
23 [documents-show-11631620739](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739) [<https://perma.cc/3VKL-UW94>].

24 <sup>150</sup> The *Wall Street Journal* and *Digital Wellbeing* published several of these documents in  
25 November 2021. See Paul Marsden, *The ‘Facebook Files’ on Instagram Harms—All Leaked*  
26 *Slides on a Single Page*, Digit. Wellbeing (Oct. 20, 2021), [https://digitalwellbeing.org/the-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/)  
27 [facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/)  
28 [<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-1848702919>  
[<https://perma.cc/7K26-G7GF>].

<sup>151</sup> See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5,  
2021), [https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook)  
[regulate-facebook](https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook) [<https://perma.cc/5QN2-MKRX>].

1 health issues stemming from the use of Instagram among teenage girls, many of whom linked  
2 suicidal thoughts and eating disorders to their experiences on the app.<sup>152</sup> In this regard, Meta’s  
3 researchers have repeatedly found that Instagram is harmful for a sizable percentage of teens that  
4 use the platform.<sup>153</sup>

5 144. In particular, the researchers found that “[s]ocial comparison,” or individuals’  
6 assessment of their own value relative to that of others, is “worse on Instagram” for teens than on  
7 other social media platforms.<sup>154</sup> One in five teens reported that Instagram “makes them feel  
8 worse about themselves.”<sup>155</sup> Roughly two in five teen users reported feeling “unattractive,” while  
9 one in ten teen users reporting suicidal thoughts traced them to Instagram.<sup>156</sup> Teens  
10 “consistently” and without prompting blamed Instagram “for increases in the rate of anxiety and  
11 depression.”<sup>157</sup> And although teenagers identify Instagram as a source of psychological harm,  
12 they often lack the self-control to use Instagram less. Also, according to Meta’s own researchers,  
13 young users are not capable of controlling their Instagram use to protect their own health.<sup>158</sup>  
14 Such users “often feel ‘addicted’ and know that what they’re seeing is bad for their mental health  
15 but feel unable to stop themselves.”<sup>159</sup>

16 145. Similarly, in a March 2020 presentation posted to Meta’s internal message board,  
17 researchers found that 32% of teen girls said that “when they felt bad about their bodies,  
18 Instagram made them feel worse.”<sup>160</sup> 66% of teen girls and 40% of teen boys have experienced

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19 <sup>152</sup> See Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company*  
20 *Documents Show*, Wall St. J. (Sept. 14, 2021, 7:59 AM),  
21 [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)  
22 [documents-show-11631620739?mod=hp\\_lead\\_pos7&mod=article\\_inline](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline)  
23 [\[https://perma.cc/3VKL-UW94\]](https://perma.cc/3VKL-UW94).

24 <sup>153</sup> *Id.*

25 <sup>154</sup> *Id.*

26 <sup>155</sup> *Id.*

27 <sup>156</sup> *Id.*

28 <sup>157</sup> *Id.*

<sup>158</sup> *Id.*

<sup>159</sup> *Id.*

<sup>160</sup> *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-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)  
[content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)  
[Instagram.pdf](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf) [\[https://perma.cc/7D2X-363R\]](https://perma.cc/7D2X-363R); see also *Hard Life Moments-Mental Health*  
*Deep Dive* at 14, Facebook (Nov. 2019), <https://about.fb.com/wp->

1 negative social comparison harms on Instagram.<sup>161</sup> Further, approximately 13% of teen girl  
2 Instagram users say the platform makes thoughts of “suicide and self harm” worse, and 17% of  
3 teen girl Instagram users say the platform makes “[e]ating issues” worse.<sup>162</sup> Meta’s researchers  
4 also acknowledged that “[m]ental health outcomes” related to the use of Instagram “can be  
5 severe,” including “Body Dissatisfaction,” “Body Dysmorphia,” “Eating Disorders,”  
6 “Loneliness,” and “Depression.”<sup>163</sup>

7 146. Not only is Meta aware of the harmful nature of the Meta platforms, but the  
8 leaked documents also reveal that Meta is aware of the specific design features that lead to  
9 excessive use and harm to children. For instance, Meta knows that Instagram’s Explore, Feed,  
10 and Stories features contribute to social comparison harms “in different ways.”<sup>164</sup> Moreover,  
11 specific “[a]spects of Instagram exacerbate each other to create a perfect storm” of harm to users,  
12 and that the “social comparison sweet spot”—a place of considerable harm to users, particularly  
13 teenagers and teen girls—lies at the center of Meta’s model and platforms’ features.<sup>165</sup> In this  
14 regard, Meta’s researchers wrote that “[s]ocial comparison and perfectionism are nothing new,  
15 but young people are dealing with this on an unprecedented scale,” and “[c]onstant comparison  
16

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17 [content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf](https://perma.cc/6JNT-ZLJQ)

18 [<https://perma.cc/6JNT-ZLJQ>]; Paul Marsden, *The ‘Facebook Files’ on Instagram arms – all*  
19 *leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021)

19 [https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page)  
20 [single-page](https://perma.cc/XT2G-A77K) [<https://perma.cc/XT2G-A77K>] (hard life moment – mental health deep dive).

20 <sup>161</sup> *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*  
21 *U.S.* at 9, Wall St. J. (Sept. 29, 2021), [https://digitalwellbeing.org/wp-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)  
22 [content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-](https://perma.cc/7D2X-363R)  
23 [Instagram.pdf](https://perma.cc/7D2X-363R) [<https://perma.cc/7D2X-363R>].

22 <sup>162</sup> *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019),  
23 [https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-](https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf)  
24 [1.pdf](https://perma.cc/6JNT-ZLJQ) [<https://perma.cc/6JNT-ZLJQ>]; Paul Marsden, *The Facebook Files’ on Instagram arms –*  
25 *all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021),  
26 [https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-](https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page)  
27 [single-page](https://perma.cc/XT2G-A77K) [<https://perma.cc/XT2G-A77K>].

26 <sup>163</sup> *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the*  
27 *U.S.* at 34, Wall St. J. (Sept. 29, 2021), [https://digitalwellbeing.org/wp-](https://digitalwellbeing.org/wp-content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-Instagram.pdf)  
28 [content/uploads/2021/10/Facebook-Files-Teen-Girls-Body-Image-and-Social-Comparison-on-](https://perma.cc/7D2X-363R)  
29 [Instagram.pdf](https://perma.cc/7D2X-363R) [<https://perma.cc/7D2X-363R>].

30 <sup>164</sup> *Id.* at 31.

31 <sup>165</sup> *Id.* at 33.

on Instagram is ‘the reason’ why there are higher levels of anxiety and depression in young people.”<sup>166</sup>

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

### **a. The Snapchat Platform**

147. Snapchat was created in 2011 by Stanford University students Evan Spiegel and Bobby Murphy, who serve as Snap Inc.’s CEO and CTO, respectively.<sup>167</sup>

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

149. In 2012, Snap added video sharing capabilities, pushing the number of “snaps” to 50 million per day.<sup>168</sup> A year later, Snap added the “Stories” function, which allows users to upload a rolling compilation of snaps that the user’s friends can view for 24 hours.<sup>169</sup> The following year, Snap added a feature that enabled users to communicate with one another in real time via text or video.<sup>170</sup> It also added the “Our Story” feature, expanding on the original stories function by allowing users in the same location to add their photos and videos to a single

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<sup>166</sup> 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>].

<sup>167</sup> 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>].

<sup>168</sup> 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>].

<sup>169</sup> 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> [<https://perma.cc/25YP-T7W4>].

<sup>170</sup> 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>].

publicly viewable content stream.<sup>171</sup> At the same time, Snap gave users the capability to add filters and graphic stickers onto photos indicating a user’s location, through a feature it refers to as “Geofilters.”<sup>172</sup>

150. In 2015, Snap added a “Discover” feature that promotes videos from news outlets and other content creators.<sup>173</sup> Users can watch that content by scrolling through the Discover feed. After the selected video ends, Snapchat automatically plays other video content in a continuous stream, which does not cease until a user manually exits the stream.

151. In 2020, Snap added the “Spotlight” feature through which it serves users “an endless feed of user-generated content” that Snap curates from the 300 million daily Snapchat users.<sup>174</sup>

152. Today, Snapchat is one of the largest social media platforms in the world. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.<sup>175</sup> Snapchat reaches 90% of people ages 13–24 in over twenty countries and reaches nearly half of all smartphone users in the United States.<sup>176</sup>

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

153. Snapchat’s commercial success is due to its advertising. In 2014, Snap began running advertisements on Snapchat.<sup>177</sup> Since then, Snapchat’s business model has revolved

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<sup>171</sup> Laura Stampler, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014), <https://time.com/2890073/snapchat-new-feature/> [<https://perma.cc/E28M-8KLT>].

<sup>172</sup> 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>].

<sup>173</sup> 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>].

<sup>174</sup> 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> [<https://perma.cc/2HCW-KUFG>].

<sup>175</sup> *October 2022 Investor Presentation at 5*, Snap Inc. (Oct. 20, 2022), <https://investor.snap.com/events-and-presentations/presentations/default.aspx> [<https://perma.cc/8BDK-7S9V>].

<sup>176</sup> *Id.* at 6–7.

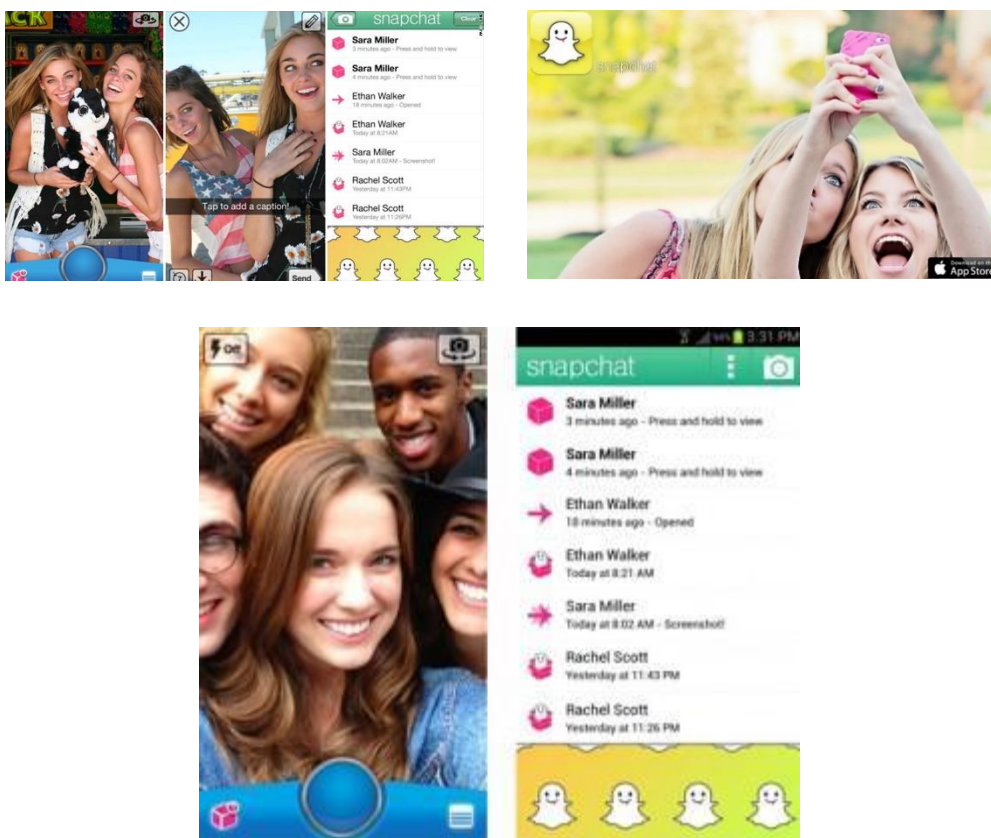
<sup>177</sup> Sara Fischer, *A timeline of Snap’s advertising, from launch to IPO*, Axios (Feb. 3, 2017), <https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279> [<https://perma.cc/7XTY-2AXS>].



1 around its advertising revenue, which has boomed. Snap now expects to generate \$4.86 billion in  
2 Snapchat advertising revenue for 2022.<sup>178</sup>

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  
5 ages of 13–34 as “critical” to Snap’s advertising success because of the common milestones  
6 achieved within that age range.<sup>179</sup>

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:



156. In addition to its marketing, Snap has targeted a younger audience by designing

<sup>178</sup> 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>].

<sup>179</sup> *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>].

1 Snapchat in a manner that older individuals find hard to use.<sup>180</sup> The effect of this design is that  
2 Snapchat is a platform where its young users are insulated from older users, including their  
3 parents. As Snap’s CEO explained, “[w]e’ve made it very hard for parents to embarrass their  
4 children[.]”<sup>181</sup>

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

8 158. Moreover, Snap added as a feature the ability for users to create cartoon avatars  
9 modeled after themselves.<sup>182</sup> By using an artform generally associated with and directed at  
10 younger audiences, Snap further designed Snapchat to entice teenagers and younger children.

11 159. In 2013, Snap also marketed Snapchat specifically to children under 13 through a  
12 feature it branded “SnapKidz.”<sup>183</sup> This feature—part of the Snapchat platform—allowed children  
13 under 13 to take photos, draw on them, and save them locally on the device.<sup>184</sup> Kids could also  
14 send these images to others or upload them to other social media sites.<sup>185</sup>

15 160. While SnapKidz feature was later discontinued and Snap purports to now prohibit  
16 users under the age of 13, its executives have admitted that its age verification “is effectively  
17 useless in stopping underage users from signing up to the Snapchat app.”<sup>186</sup>

18 161. Snap’s efforts to attract young users have been successful. *See supra*

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19 <sup>180</sup> See Hannah Kuchler & Tim Bradshaw, *Snapchat’s Youth Appeal Puts Pressure on Facebook*,  
20 *Fin. Times* (Aug. 21, 2017), [https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-](https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787)  
[e1c239b45787](https://perma.cc/D9A4-JFEA) [<https://perma.cc/D9A4-JFEA>].

21 <sup>181</sup> Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, *Bloomberg*  
22 (Mar. 3, 2016), <https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/>  
[\[https://perma.cc/DJT8-TK3L\]](https://perma.cc/DJT8-TK3L).

23 <sup>182</sup> Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, *Bus.*  
24 *Insider* (July 19, 2016), [https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-](https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7)  
[paid-more-than-100-million-for-2016-7](https://perma.cc/4PRE-VSW9) [<https://perma.cc/4PRE-VSW9>].

25 <sup>183</sup> Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, *Forbes* (June 23,  
26 2013), [https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-](https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a)  
[sandbox-for-kids-under-13/?sh=7c682a555e5a](https://perma.cc/ZQA9-F2VC) [<https://perma.cc/ZQA9-F2VC>].

26 <sup>184</sup> *Id.*

27 <sup>185</sup> *Id.*

28 <sup>186</sup> 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-](https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3)  
[verification-safeguards-are-effectively-useless-2019-3](https://perma.cc/V938-6AEG) [<https://perma.cc/V938-6AEG>].



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,<sup>187</sup> and almost 60% of children ages 13–17 use Snapchat.<sup>188</sup>

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

162. Snap promotes excessive use of its platform through design features and manipulative algorithms intended to maximize users’ screen time.

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

164. Snaps are intended to manipulate users by activating the rule of reciprocity.<sup>189</sup> Whenever a user gets a snap, they feel obligated to send a snap back. And Snapchat tells users each time they receive a snap by pushing a notification to the recipient’s cellphone. These notifications are designed to prompt users to open Snapchat and view content, increasing the amount of time users spend on Snapchat. Further, because snaps disappear within ten seconds of being viewed, users feel compelled to reply immediately. This disappearing nature of snaps is a defining characteristic of Snapchat and intended to keep users on the platform.

165. Snap also keeps users coming back to the Snapchat platform through the “Snapstreaks” feature.<sup>190</sup> A “streak” is a counter within Snapchat that tracks how many

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<sup>187</sup> Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 5, Common Sense Media (2022), [https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf) [<https://perma.cc/L6ND-X7VR>].

<sup>188</sup> 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>].

<sup>189</sup> Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015), <https://www.nirandfar.com/psychology-of-snapchat/> [<https://perma.cc/ZQC2-8W3M>].

<sup>190</sup> See 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 Virginia Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017),

1 consecutive days two users have sent each other snaps. If a user fails to snap the other user  
2 within 24 hours, the streak ends. Snap adds extra urgency by putting an hourglass emoji next to a  
3 friend's name if a Snapchat streak is about to end.<sup>191</sup> This design implements a system where a  
4 user must "check constantly or risk missing out."<sup>192</sup> And this feature is particularly effective on  
5 teenage users. "For teens in particular, streaks are a vital part of using the app, and of their social  
6 lives as a whole."<sup>193</sup> Some children become so obsessed with maintaining a Snapstreak that they  
7 give their friends access to their accounts when they may be away from their phone for a day or  
8 more, such as on vacation.<sup>194</sup>

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

16       167. Snap also designs photo and video filters and lenses, which are central to

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17 <https://www.cbc.ca/news/science/marketplace-phones-1.4384876> [<https://perma.cc/93PV-XE3E>]; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17,  
18 2017), [https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-](https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction)  
19 [addiction](https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction) [<https://perma.cc/2HES-Y3AB>].

20 <sup>191</sup> Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017),  
21 <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>  
22 [<https://perma.cc/V92N-WSGP>].

23 <sup>192</sup> *Id.*

24 <sup>193</sup> Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you*  
25 *in and get you 'addicted'*, Bus. Insider (Feb. 17 2018), [https://www.businessinsider.com/how-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)  
26 [app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13)  
27 [keep-you-hooked-13](https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13) [<https://perma.cc/5RE8-3PMA>]; see generally Cathy Becker, *Experts*  
28 *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-](https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296)  
[streaks/story?id=48778296](https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296) [<https://perma.cc/47HQ-7WVQ>].

<sup>194</sup> 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/WWR9-6E2P>]; Jon Brooks, *7 Specific Tactics Social Media Companies Use*  
*to Keep You Hooked*, KQED (June 9, 2017), [https://www.kqed.org/futureofyou/397018/7-](https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked)  
[specific-ways-social-media-companies-have-you-hooked](https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked) [<https://perma.cc/RDR2-TKDR>].

1 Snapchat's function as a photo and video sharing social media platform. Snap designed its filters  
2 and lenses in a way to further maximize the amount of time users spend on Snapchat. One way  
3 Snap uses its filters to hook young users is by creating temporary filters that impose a sense of  
4 urgency to use them before they disappear. Another way Snap designed its filters to increase  
5 screen use is by gamification. Many filters include games,<sup>195</sup> creating competition between users  
6 by sending each other snaps with scores. Further, Snap tracks data on the most commonly used  
7 filters and develops new filters based on this information.<sup>196</sup> Snap personalizes, designs and  
8 modifies these filters to maximize the amount of time users spend on Snapchat.<sup>197</sup>

9 **d. Snapchat's Algorithms Are Manipulative and Harmful**

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

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

16 170. Snapchat also contains "Discover" and "Spotlight" features that use algorithms to  
17 recommend content to users. The Discover feature includes content from news and other media  
18 outlets.<sup>198</sup> A user's Discover page is populated by an algorithm and constantly changes  
19 depending on how a user interacts with the content.<sup>199</sup> Similarly, the Spotlight feature promotes  
20 popular videos from other Snapchat users and is based on an algorithm that determines whether a  
21  
22

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23 <sup>195</sup> Josh Constone, *Now Snapchat Has 'Filter Games'*, TechCrunch (Dec. 23, 2016),  
24 <https://techcrunch.com/2016/12/23/snapchat-games/> [<https://perma.cc/U9UY-C5NR>].

25 <sup>196</sup> *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information>  
26 [<https://perma.cc/93WL-GSY8>] (last visited June 26, 2023).

27 <sup>197</sup> *Id.*

28 <sup>198</sup> 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>  
29 [<https://perma.cc/22ST-8HAL>].

30 <sup>199</sup> *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information>  
31 [<https://perma.cc/93WL-GSY8>] (last visited June 26, 2023).

1 user has positively or negatively engaged with similar content.<sup>200</sup> Snap programs its algorithms  
2 to push content to users that will keep them engaged for increased amounts of time on Snapchat  
3 and, thereby, worsen their mental health.

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

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

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

12 173. Snap should know that its conduct has negatively affected youth. Snap’s conduct  
13 has been the subject of inquiries by the United States Senate regarding Snapchat’s use “to  
14 promote bullying, worsen eating disorders, and help teenagers buy dangerous drugs or engage in  
15 reckless behavior.”<sup>201</sup> Further, Senators across the ideological spectrum have introduced bills  
16 that would ban many of the features Snapchat offers, including badges and other awards  
17 recognizing a user’s level of engagement with the platform.<sup>202</sup> Despite these calls for oversight  
18 from Congress, Snap has failed to curtail its use of streaks, badges, and other features that award  
19 users’ levels of engagement with Snapchat.

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21 <sup>200</sup> Sara Fischer, *Snapchat launches Spotlight, a TikTok competitor*, Axios (Nov. 23, 2020),  
22 <https://www.axios.com/2020/11/23/snapchat-launches-spotlight-tiktok-competitor>  
23 [<https://perma.cc/3FYB-C2DU>]; *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).

24 <sup>201</sup> Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and*  
25 *TikTok*, Nat’l Pub. Radio (Oct. 26, 2021),  
[https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-](https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing)  
26 [hearing](https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing) [<https://perma.cc/8GNJ-PLE9>].

27 <sup>202</sup> See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, Nat’l  
28 Pub. Radio (Aug. 3, 2019), [https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-](https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill)  
[curb-social-media-addiction-with-new-bill](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, 116<sup>th</sup> Cong. (2019); *Kids Internet Design and*  
*Safety Act*, S. 2918, 117<sup>th</sup> Cong. (2021).

1           174. Snap also knows or should know of Snapchat’s other negative effects on youth  
2 based on published research findings. For instance, researchers coined the phrase “Snapchat  
3 dysmorphia” after the pernicious effect Snapchat has had on how young people view  
4 themselves.<sup>203</sup> The researchers and doctors use this phrase to describe people, usually young  
5 women, who are seeking plastic surgery to make themselves look like the way they do through  
6 Snapchat filters.<sup>204</sup> The cause of this trend appears to be Snapchat’s and other social media  
7 platforms’ beauty filters, which create a “sense of unattainable perfection” that is alienating and  
8 damaging to a person’s self-esteem.<sup>205</sup> One social psychologist summed the effect as “the  
9 pressure to present a certain filtered image on social media can certainly play into [depression  
10 and anxiety] for younger people who are just developing their identities.”<sup>206</sup>

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

### 15           **3. TikTok Intentionally Marketed to and Designed Its Social Media Platform** 16           **for Youth Users, Substantially Contributing to the Mental Health Crisis**

#### 17           **a. TikTok’s Platform**

18           176. TikTok is a social media platform that describes itself as “the leading destination  
19 for short-form mobile video.”<sup>207</sup> According to TikTok, it is primarily a platform where users  
20 “create and watch short-form videos.”<sup>208</sup>

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21           <sup>203</sup> ‘Snapchat Dysmorphia’: When People Get Plastic Surgery To Look Like A Social Media  
22 Filter, WBUR (Aug 29, 2018), [https://www.wbur.org/hereandnow/2018/08/29/snapchat-](https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery)  
23 [dysmorphia-plastic-surgery](https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery) [<https://perma.cc/JDZ7-TUX7>].

24           <sup>204</sup> *Id.*

25           <sup>205</sup> Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty*  
26 *through filters*, ABC News (May 1, 2021), [https://abcnews.go.com/Technology/lines-blur-real-](https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989)  
27 [virtual-beauty-filters/story?id=77427989](https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989) [<https://perma.cc/KA79-G2PX>].

28           <sup>206</sup> *Id.*

<sup>207</sup> *About: Our Mission*, TikTok, <https://www.tiktok.com/about> [<https://perma.cc/3XS6-U99U>]  
(last visited June 26, 2023).

<sup>208</sup> *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).

1 177. TikTok’s predecessor, Musical.ly, launched in 2014 as a place where people  
2 could create and share 15-second videos of themselves lip-syncing or dancing to their favorite  
3 music.<sup>209</sup>

4 178. In 2017, ByteDance launched an international version of a similar platform that  
5 also enabled users to create and share short lip-syncing videos that it called TikTok.<sup>210</sup>

6 179. That same year, ByteDance acquired Musical.ly to leverage its young user base in  
7 the United States, of almost 60 million monthly active users.<sup>211</sup>

8 180. Months later, the apps were merged under the TikTok brand.<sup>212</sup>

9 181. Since then, TikTok has expanded the length of time for videos from 15-seconds to  
10 up to 10 minutes;<sup>213</sup> created a fund that was expected to grow to over \$1 billion within three  
11 years to incentivize users to create videos that even more people will watch;<sup>214</sup> and had users  
12 debut their own songs, share comedy skits,<sup>215</sup> and “challenge” others to perform an activity.<sup>216</sup>

13  
14 <sup>209</sup> Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app*  
15 *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>].

16 <sup>210</sup> Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug.  
17 1, 2018), [https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW)  
18 [musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW) [<https://perma.cc/EZ6K-3Q8B>].

19 <sup>211</sup> Liza Lin & Rolfe Winkler, *Social-Media App Musical.ly Is Acquired for as Much as \$1*  
20 *Billion; With 60 million monthly users, startup sells to Chinese maker of news app Toutiao*,  
21 Wall St. J. (Nov. 10, 2017), [https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-](https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123)  
22 [acquired-for-as-much-as-1-billion-1510278123](https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123) [<https://perma.cc/KXV7-C5HW>].

23 <sup>212</sup> Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug.  
24 1, 2018), [https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW)  
25 [musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW](https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW) [<https://perma.cc/EZ6K-3Q8B>].

26 <sup>213</sup> Andrew Hutchinson, *TikTok Confirms that 10 Minute Video Uploads are Coming to All*  
27 *Users*, SocialMediaToday (Feb. 28, 2022), [https://www.socialmediatoday.com/news/tiktok-](https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/)  
28 [confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/](https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/)  
[\[https://perma.cc/DY6R-A9QY\]](https://perma.cc/DY6R-A9QY).

<sup>214</sup> 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>  
[\[https://perma.cc/5HJ4-475H\]](https://perma.cc/5HJ4-475H).

<sup>215</sup> 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-](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html)  
[the-video-social-network-quickly-capturing-the-tween-and-teen-m.html](https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html)  
[\[https://perma.cc/452K-SEAS\]](https://perma.cc/452K-SEAS).

<sup>216</sup> 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-](https://perma.cc/82VQ-8VPF)  
[8VPF](https://perma.cc/82VQ-8VPF)].



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.<sup>217</sup>

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.”<sup>218</sup> 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.<sup>219</sup>

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.<sup>220</sup>

**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.<sup>221</sup>

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

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<sup>217</sup> *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>].

<sup>218</sup> *Id.*

<sup>219</sup> 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-8VPF>].

<sup>220</sup> 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>].

<sup>221</sup> 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           187. Alex Zhu and Louis Yang, the other co-founder of Musical.ly, raised \$250,000 to  
2 build an app that experts could use to create short three- to five-minute videos explaining a  
3 subject.<sup>222</sup> The day they released the app, Zhu said they knew “[i]t was doomed to be a failure,”  
4 because “[i]t wasn’t entertaining, and it didn’t attract teens.”<sup>223</sup>

5           188. According to Zhu, he stumbled upon the idea that would become known as  
6 TikTok while observing teens on a train, half of whom were listening to music while the other  
7 half took selfies or videos and shared the results with friends.<sup>224</sup> “That’s when Zhu realized he  
8 could combine music, videos, and a social network to attract the early-teen demographic.”<sup>225</sup>

9           189. Zhu and Yang thereafter developed the short-form video app that is now known  
10 as TikTok, which commentators have observed “encourages a youthful audience in subtle and  
11 obvious ways.”<sup>226</sup>

12           190. Among the more subtle ways the app was marketed to youth, are its design and  
13 content. For example, the Federal Trade Commission (“FTC”) alleged that the app initially  
14 centered around a child-oriented activity (*i.e.*, lip syncing); featured music by celebrities that  
15 then appealed primarily to teens and tweens, such as Selena Gomez and Ariana Grande; labelled  
16 folders with names meant to appeal to youth, such as “Disney” and “school”; included songs in  
17 such folders related to Disney television shows and movies, such as “Can You Feel the Love  
18 Tonight” from the movie “The Lion King” and “You’ve Got a Friend in Me” from the movie  
19 “Toy Story” and songs covering school-related subjects or school-themed television shows and  
20 movies.<sup>227</sup>

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22 <sup>222</sup> Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app*  
23 *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>].

24 <sup>223</sup> *Id.*

25 <sup>224</sup> *Id.*

<sup>225</sup> *Id.*

26 <sup>226</sup> 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-](https://www.nytimes.com/2016/09/17/business/media/a-social-network-frequented-by-children-tests-the-limits-of-online-regulation.html)  
27 [by-children-tests-the-limits-of-online-regulation.html](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>].

28 <sup>227</sup> 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           191. The target demographic was also reflected in the sign-up process. In 2016, the  
2 birthdate for those signing up for the app defaulted to the year 2000 (*i.e.*, 16 years old).<sup>228</sup>

3           192. TikTok also cultivated a younger demographic in unmistakable, albeit concealed,  
4 ways. In 2020, the *Intercept* reported on a document TikTok prepared for its moderators. In the  
5 document, TikTok instructs its moderators that videos of “senior people with too many wrinkles”  
6 are disqualified for the “For You” feed because that would make “the video . . . much less  
7 attractive [and] not worth[] . . . recommend[ing.]”<sup>229</sup>

8           193. In December 2016, Zhu confirmed the company had actual knowledge that “a lot  
9 of the top users are under 13.”<sup>230</sup>

10           194. The FTC alleged that despite the company’s knowledge of these and a  
11 “significant percentage” of other users who were under 13, the company failed to comply with  
12 the COPPA.<sup>231</sup>

13           195. TikTok settled those claims in 2019 by agreeing to pay what was then the largest  
14 ever civil penalty under COPPA and to several forms of injunctive relief.<sup>232</sup>

15           196. In an attempt to come into compliance with the consent decree and COPPA,  
16 TikTok made available to users under 13 what it describes as a “limited, separate app  
17 experience.”<sup>233</sup> The child version of TikTok restricts users from posting videos through the app.

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19 <sup>228</sup>Melia Robinson, *How to use Musical.ly, the app with 150 million users that teens are obsessed*  
20 *with*, Bus. Insider (Dec. 7, 2016), [https://www.businessinsider.com/how-to-use-musically-app-](https://www.businessinsider.com/how-to-use-musically-app-2016-12)  
21 [2016-12](https://www.businessinsider.com/how-to-use-musically-app-2016-12) [<https://perma.cc/2Q9R-F8TN>].

22 <sup>229</sup> Sam Biddle *et al.*, *Invisible Censorship: TikTok Told Moderators to Suppress Posts by*  
23 *“Ugly” People and the Poor to Attract New Users*, Intercept (Mar. 15, 2020),  
<https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>  
24 [<https://perma.cc/6YKN-G54N>].

25 <sup>230</sup> Jon Russell, *Muscal.ly defends its handling of young users, as it races past 40M MAUs at*  
26 *8:58–11:12*, TechCrunch (Dec. 6, 2016), [https://techcrunch.com/2016/12/06/musically-](https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/)  
27 [techcrunch-disrupt-london/](https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/) [<https://perma.cc/CCX9-WQDF>].

28 <sup>231</sup> See generally *Musical.ly Complaint*, *supra* note 226.

<sup>232</sup> 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-](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune)  
[settlement-requires-musically-change-its-tune](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune) [<https://perma.cc/S747-9RDD>].

<sup>233</sup> 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-](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law)  
[settlement-13-childrens-privacy-law](https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law) [<https://perma.cc/W2BQ-T5Y7>].

Children can still, however, record and watch videos on TikTok.<sup>234</sup> For that reason, experts fear the app is “designed to fuel [kids’] interest in the grown-up version.”<sup>235</sup>

197. These subtle and obvious ways TikTok markets to and obtained a young userbase are manifestations of Zhu’s views about the importance of user engagement to growing TikTok. Zhu explained the target demographic to the *New York Times*: “[T]eenage culture doesn’t exist” in China because “teens are super busy in school studying for tests, so they don’t have the time and luxury to play social media apps.”<sup>236</sup> By contrast, Zhu describes “[t]eenagers in the U.S. [as] a golden audience.”<sup>237</sup>

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

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

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

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

201. TikTok drives habitual use of its platform using design elements that operate on principles of IVR. For example, TikTok designed its platform to allow users to like and reshare videos. Those features serve as rewards for users who create content on the platform. Receiving a like or reshare indicates that others approve of that user’s content and satisfies their natural

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<sup>234</sup> *Id.*

<sup>235</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens-> [\[https://perma.cc/RGX9-3JWC\]](https://perma.cc/RGX9-3JWC).

<sup>236</sup> Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016), <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html> [\[https://perma.cc/2Q2L-DYWZ\]](https://perma.cc/2Q2L-DYWZ).

<sup>237</sup> *Id.*

1 desire for acceptance.<sup>238</sup> Studies have shown that “likes” activate the reward region of the  
2 brain.<sup>239</sup> The release of dopamine in response to likes creates a positive feedback loop.<sup>240</sup> Users  
3 will use TikTok—again and again—in hope of another pleasurable experience.<sup>241</sup>

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

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

13 204. TikTok’s defining features, its “For You” feed, is a curated, never-ending stream  
14 of short-form videos intended to keep users on its platform. In that way, TikTok feeds users  
15 beyond the point they are satiated. The ability to scroll ad infinitum, coupled with the variable  
16 reward pattern of TikTok induces a flow-like state for users that distorts their sense of time.<sup>242</sup>  
17 That flow is yet another way TikTok increases the time users spend on its platform.

#### 18 **d. TikTok’s Algorithms are Manipulative**

19 205. The first thing a user sees when they open TikTok is the “For You” feed, even if  
20

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21 <sup>238</sup> See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer*  
22 *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>].

23 <sup>239</sup> *Id.*

24 <sup>240</sup> Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the*  
25 *Development of Social Media Addiction*, 11(7) J. Neurology & Neurophysiology 507 (2020),  
[https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-](https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf)  
26 [development-of-social-media-addiction.pdf](https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf) [<https://perma.cc/3QWP-9N5A>].

26 <sup>241</sup> *Id.*

27 <sup>242</sup> Christian Montag *et al.*, *Addictive Features of Social Media/Messenger Platforms and*  
28 *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>].

1 they have never posted anything, followed anyone, or liked a video.<sup>243</sup>

2 206. The “For You” page presents users with a “stream of videos” TikTok claims are  
3 “curated to [each user’s] interests.”<sup>244</sup>

4 207. According to TikTok, it populates each user’s “For You” feed by “ranking videos  
5 based on a combination of factors,” that include, among others, any interests expressed when a  
6 user registers a new account, videos a user likes, accounts they follow, hashtags, captions,  
7 sounds in a video they watch, and certain device settings, such as their language preferences and  
8 where they are located.<sup>245</sup>

9 208. Critically, some factors weigh heavier than others. To illustrate, TikTok explains  
10 that an indicator of interest, such as “whether a user finishes watching a longer video from  
11 beginning to end, would receive greater weight than a weak indicator, such as whether the  
12 video’s viewer and creator are both in the same country.”<sup>246</sup>

13 209. TikTok claims it ranks videos in this way because the length of time a user spends  
14 watching a video is a “strong indicator of interest[.]”<sup>247</sup>

15 210. But Zhu offered a different explanation, he repeatedly told interviewers that he  
16 was “focused primarily on increasing the engagement of existing users.”<sup>248</sup> “Even if you have  
17 tens of millions of users,” Zhu explained, “you have to keep them *always* engaged.”<sup>249</sup>

18 211. The decisions TikTok made in programming its algorithms are intended to do just

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19 <sup>243</sup> Brian Feldman, *TikTok is Not the Internet’s Eden*, N.Y. Mag. (Mar. 16, 2020),  
20 <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>].

21 <sup>244</sup> *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020),  
22 <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>  
23 [<https://perma.cc/4DBQ-MCQY>].

24 <sup>245</sup> *Id.*

25 <sup>246</sup> *Id.*

26 <sup>247</sup> *Id.*

27 <sup>248</sup> Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween*  
28 *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/2VJM-NSSX>].

<sup>249</sup> 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>]  
(emphasis added).

1 that, as TikTok candidly explained in an internal document titled, “TikTok Algo 101.” The  
2 document, which TikTok has confirmed is authentic, “explains frankly that in the pursuit of the  
3 company’s ‘ultimate goal’ of adding daily active users, it has chosen to optimize for two closely  
4 related metrics in the stream of videos it serves: ‘retention’ — that is, whether a user comes back  
5 — and ‘time spent.’”<sup>250</sup>

6 212. “This system means that watch time is key.”<sup>251</sup> Guillaume Chaslot, the founder of  
7 Algo Transparency, who reviewed the document at the request of the *New York Times*, explained  
8 that “rather than giving [people] what they really want,” TikTok’s “algorithm tries to get people  
9 addicted[.]”<sup>252</sup>

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

13 214. The end result is that TikTok uses “a machine-learning system that analyzes each  
14 video and tracks user behavior so that it can serve up a continually refined, never-ending stream  
15 of TikToks optimized to hold [user’s] attention.”<sup>253</sup>

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

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

20 216. The Integrity Institute, a nonprofit consisting of engineers, product managers, data  
21 scientists, and others, has demonstrated how prioritizing user engagement amplifies  
22 misinformation on TikTok (and other platforms).<sup>254</sup> That pattern, the Integrity Institute notes, is

23 <sup>250</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021),  
24 <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>  
25 [<https://perma.cc/KTT2-UWTH>].

26 <sup>251</sup> *Id.*

27 <sup>252</sup> *Id.*

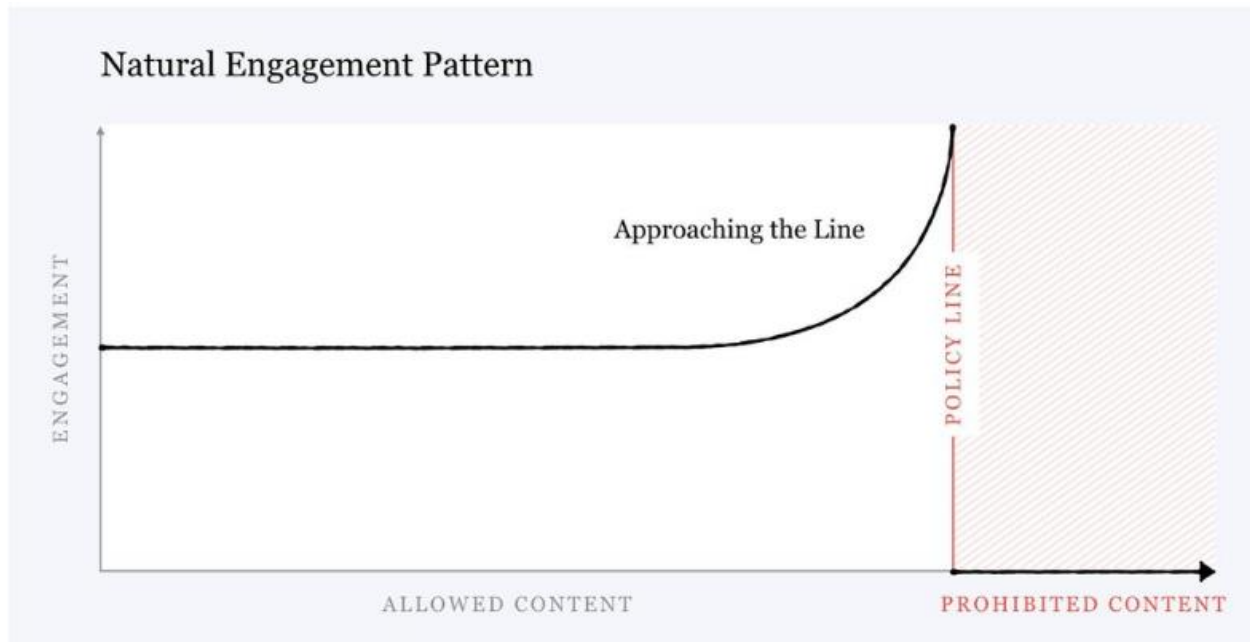
28 <sup>253</sup> Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019),  
<https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>  
[<https://perma.cc/YX85-ZFV6>].

<sup>254</sup> *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13,  
2022), <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation->

1 “true for a broad range of harms,” such as hate speech and self-harm content, in addition to  
2 misinformation.<sup>255</sup>

3 217. The Integrity Institute’s analysis builds on a premise Mark Zuckerberg described  
4 as the “Natural Engagement Pattern.”<sup>256</sup>

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



17 219. According to Zuckerberg “no matter where we draw the lines for what is allowed,  
18 as a piece of content gets close to that line, people will engage with it more on average[.]”<sup>257</sup>

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

21  
22  
23 [amplification-tracking-dashboard](https://perma.cc/59QV-BYVK) [<https://perma.cc/59QV-BYVK>]; see also Steven Lee Myers,  
24 *How Social Media Amplifies Misinformation More Than Information*, N.Y. Times (Oct. 13,  
25 2022), [https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-](https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html)  
26 [report.html](https://perma.cc/EA9U-UBZF) [<https://perma.cc/EA9U-UBZF>].

25 <sup>255</sup> *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13,  
26 2022), [https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-](https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard)  
27 [amplification-tracking-dashboard](https://perma.cc/59QV-BYVK) [<https://perma.cc/59QV-BYVK>].

27 <sup>256</sup> Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (Nov. 15,  
28 2018), [https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-](https://www.facebook.com/notes/mark-zuckerberg/a-blueprint-for-content-governance-and-enforcement/10156443129621634/?hc_location=ufi)  
29 [and-enforcement/10156443129621634/?hc\\_location=ufi](https://perma.cc/ZK5C-ZTSX) [<https://perma.cc/ZK5C-ZTSX>].

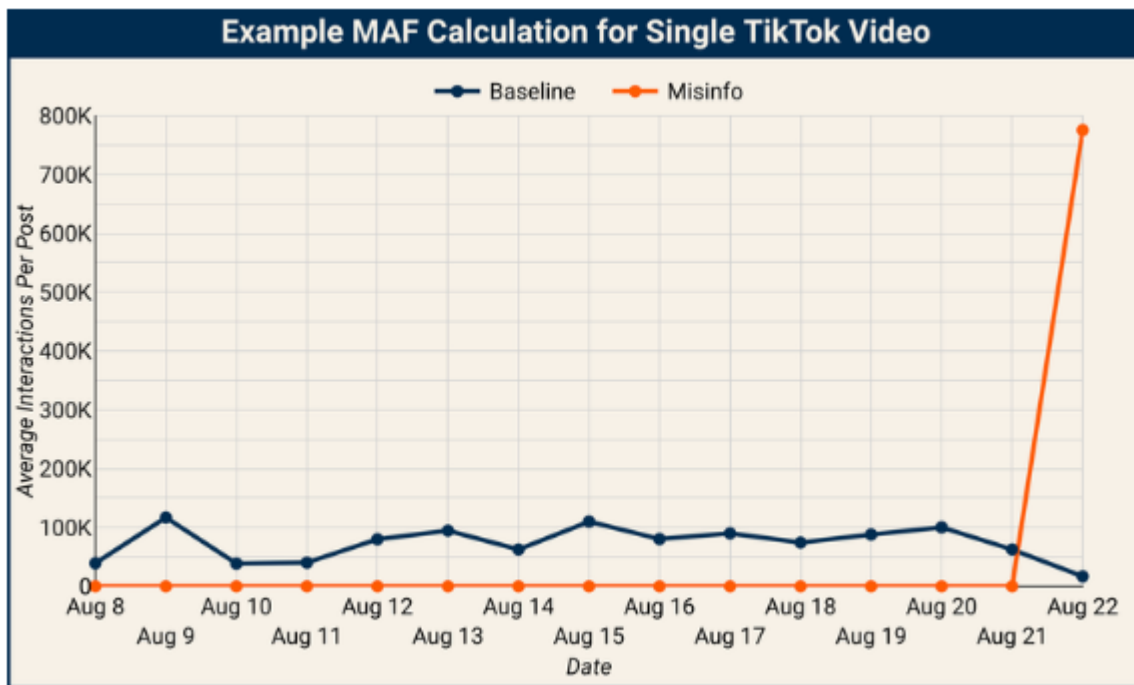
30 <sup>257</sup> *Id.*

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.<sup>258</sup>

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 creator.<sup>259</sup>

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.<sup>260</sup>



<sup>258</sup> *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>].

<sup>259</sup> *Id.*

<sup>260</sup> *Id.*



1           224. After analyzing many other posts from other users, the Integrity Institute found  
2 that TikTok on average amplified misinformation 29 times more than other content.<sup>261</sup>

3           225. A separate investigation by *NewsGuard* found TikTok’s search algorithm  
4 similarly amplified misinformation. TikTok’s search engine, like its “For You” feed, is a favorite  
5 among youth, with 40% preferring it (and Instagram) over Google.<sup>262</sup> Unfortunately, *NewsGuard*  
6 found that one in five of the top 20 TikTok search results on prominent news topics, such as  
7 school shootings and COVID vaccines, contain misinformation.<sup>263</sup>

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

11           227. In one investigation, the *Wall Street Journal* found TikTok’s algorithm quickly  
12 pushed users down rabbit holes where they were more likely to encounter harmful content. The  
13 *Wall Street Journal* investigated how TikTok’s algorithm chose what content to promote to users  
14 by having 100 bots scroll through the “For You” feed.<sup>264</sup> Each bot was programmed with  
15 interests, such as extreme sports, forestry, dance, astrology, and animals.<sup>265</sup> Those interests were  
16 not disclosed in the process of registering their accounts.<sup>266</sup> Rather, the bots revealed their  
17 interests through their behaviors, specifically the time they spent watching the videos TikTok  
18 recommended to them. Consistent with TikTok’s internal “Algo 101” document, the *Wall Street*  
19 *Journal* found that time spent watching videos to be “the most impactful data on [what] TikTok  
20 serves you.”<sup>267</sup>

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21 <sup>261</sup> *Id.*

22 <sup>262</sup> Wanda Pogue, *Move Over Google. TikTok is the Go-To Search Engine for Gen Z*, Adweek  
23 (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>].

24 <sup>263</sup> *Misinformation Monitor*, NewsGuard (Sept. 2022),  
25 <https://www.newsguardtech.com/misinformation-monitor/september-2022/>  
26 [<https://perma.cc/XH7X-RYZY>].

27 <sup>264</sup> *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021),  
28 <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>  
[<https://perma.cc/L3F2-DA4M>].

<sup>265</sup> *Id.*

<sup>266</sup> *Id.*

<sup>267</sup> *Id.*



1           228. Over the course of 26 minutes, one bot watched 224 videos, lingering over videos  
2 with hashtags for “depression” or “sad.”<sup>268</sup> From then on, 93% of the videos TikTok showed this  
3 account were about depression or sadness.<sup>269</sup>

4           229. That is not an outlier. Guillaume Chaslot, a former engineer for Google who  
5 worked on the algorithm for YouTube and the founder of Algo Transparency, explained that 90–  
6 95% of the content users see on TikTok is based on its algorithm.<sup>270</sup>

7           230. “Even bots with general mainstream interests got pushed to the margin as  
8 recommendations got more personalized and narrow.”<sup>271</sup> Deep in these rabbit holes, the *Wall*  
9 *Street Journal* found “users are more likely to encounter potential harmful content.”<sup>272</sup> For  
10 example, one video the *Wall Street Journal* encountered encouraged suicide, reading “Just go.  
11 Leave. Stop trying. Stop pretending. You know it and so do they. Do Everyone a favor and  
12 leave.”<sup>273</sup>

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

14           [T]he algorithm is able to find the piece of content that you’re vulnerable to. That  
15 will make you click, that will make you watch, but it doesn’t mean you really like  
16 it. And that 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.<sup>274</sup>

17           232. A follow-up investigation by the *Wall Street Journal* using bots found “that  
18 through its powerful algorithms, TikTok can quickly drive minors—among the biggest users of  
19 the app—into endless spools of content about sex and drugs.”<sup>275</sup>

20           233. The bots in this investigation were registered as users aged 13 to 15 and, as  
21 before, programmed to demonstrate interest by how long they watched the videos TikTok’s  
22

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23 <sup>268</sup> *Id.*

24 <sup>269</sup> *Id.*

25 <sup>270</sup> *Id.*

26 <sup>271</sup> *Id.*

27 <sup>272</sup> *Id.*

28 <sup>273</sup> *Id.*

<sup>274</sup> *Id.*

<sup>275</sup> Rob Barry *et al.*, *How TikTok Serves up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8,  
2021), [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>].

1 algorithms served them.<sup>276</sup> Videos that did not match their interests, the bots scrolled through  
2 without pausing.<sup>277</sup> The bots lingered on videos that matched any of their programmed  
3 interests.<sup>278</sup>

4 234. Every second the bot hesitated or re-watched a video again proved key to what  
5 TikTok recommended to the accounts, which the *Wall Street Journal* found was used to “drive  
6 users of any age deep into rabbit holes of content[.]”<sup>279</sup>

7 235. For example, one bot was programmed to pause on videos referencing drugs,  
8 among other topics. The first day on the platform, the “account lingered on a video of a young  
9 woman walking through the woods with a caption” referencing “stoner girls.”<sup>280</sup> The following  
10 day the bot viewed a video of a “marijuana-themed cake.”<sup>281</sup> The “majority of the next thousand  
11 videos” TikTok directed at the teenage account “tout[ed] drugs and drug use, including  
12 marijuana, psychedelics and prescription medication.”<sup>282</sup>

13 236. TikTok similarly zeroed in on and narrowed the videos it showed accounts  
14 whether the bot was programmed to express interest in drugs, sexual imagery, or a multitude of  
15 interests. In the first couple of days, TikTok showed the bots a “high proportion of popular  
16 videos.”<sup>283</sup> “But after three days, TikTok began serving a high number of obscure videos.”<sup>284</sup>

17 237. For example, a bot registered as a 13-year-old was shown a series of popular  
18 videos upon signing up.<sup>285</sup> The bot, which was programmed to demonstrate interest in sexual text  
19 and imagery, also watched sexualized videos. Later, “[i]t experienced one of the most extreme  
20 rabbit holes among the *Wall Street Journal*’s accounts. Many videos described how to tie knots  
21 for sex, recover from violent sex acts and discussed fantasies about rape.”<sup>286</sup> At one point, “more

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22 <sup>276</sup> *Id.*

23 <sup>277</sup> *Id.*

24 <sup>278</sup> *Id.*

25 <sup>279</sup> *Id.*

26 <sup>280</sup> *Id.*

27 <sup>281</sup> *Id.*

28 <sup>282</sup> *Id.*

<sup>283</sup> *Id.*

<sup>284</sup> *Id.*

<sup>285</sup> *Id.*

<sup>286</sup> *Id.*

1 than 90% of [one] account’s video feed was about bondage and sex.”<sup>287</sup>

2 238. At least 2,800 of the sexualized videos that were shown to the *Wall Street*  
3 *Journal*’s bots were labeled as being for adults only.<sup>288</sup> Yet, TikTok directed these videos to the  
4 minor accounts because, as TikTok told the *Wall Street Journal*, it does not “differentiate  
5 between videos it serves to adults and minors.”<sup>289</sup>

6 239. TikTok also directed a concentrated stream of videos at accounts programmed to  
7 express interest in a variety of topics. One such account was programmed to linger over hundreds  
8 of Japanese film and television cartoons. “In one streak of 150 videos, all but four” of the videos  
9 TikTok directed at the account, “featured Japanese animation—many with sexual themes.”<sup>290</sup>

10 240. The relentless stream of content intended to keep users engaged “can be  
11 especially problematic for young people,” because they may lack the capability to stop watching,  
12 says David Anderson, a clinical psychologist at the nonprofit mental health care provider, The  
13 Child Mind Institute.<sup>291</sup>

14 241. In a similar investigation, the *Wall Street Journal* found TikTok “flood[ed] teen  
15 users with videos of rapid-weight-loss competitions and ways to purge food that health  
16 professionals say contribute to a wave of eating-disorder cases spreading across the country.”<sup>292</sup>

17 242. In this investigation, the *Wall Street Journal* analyzed the tens of thousands of  
18 videos TikTok recommended to a dozen bots registered as 13-year-olds. As before, the bots were  
19 given interests. Bots scrolled quickly through videos that did not match their interests and  
20 lingered on videos that did.<sup>293</sup> The accounts registered as 13-year-olds were programmed at  
21

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22 <sup>287</sup> *Id.*

23 <sup>288</sup> *Id.*

24 <sup>289</sup> *Id.*

25 <sup>290</sup> *Id.*

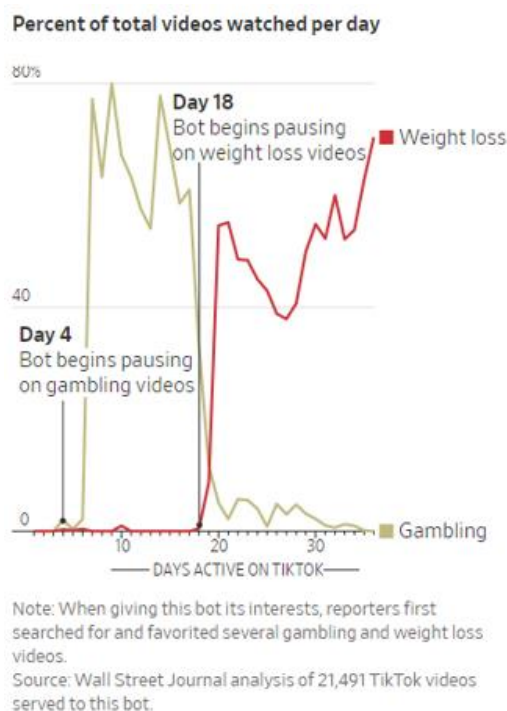
26 <sup>291</sup> *Id.*

27 <sup>292</sup> Tawnell D. Hobbs *et al.*, *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-*  
28 *Disorder Videos*, Wall St. J. (Dec. 17, 2021), [https://www.wsj.com/articles/how-tiktok-](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848)  
[inundates-teens-with-eating-disorder-videos-11639754848](https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848) [<https://perma.cc/TS8V-QQJX>]  
(some of the accounts performed searches or sent other, undisclosed signals indicating their  
preferences).

<sup>293</sup> *Id.*

different times to display interests in weight loss, gambling, and alcohol.<sup>294</sup>

243. “TikTok’s algorithm quickly g[a]ve[] users the content they’ll watch, for as long as they’ll watch it.”<sup>295</sup> 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.<sup>296</sup> When the bot began demonstrating interest in weight loss videos, the algorithm adapted quickly, as this chart demonstrates.<sup>297</sup>



244. After the change in programming, weight-loss videos accounted for well over 40% of the content TikTok’s algorithm recommended to the user.<sup>298</sup>

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.”<sup>299</sup> Some encouraged purging,

<sup>294</sup> *Id.*

<sup>295</sup> *Id.*

<sup>296</sup> *Id.*

<sup>297</sup> *Id.*

<sup>298</sup> *Id.*

<sup>299</sup> *Id.*

1 eating less than 300 calories a day, consuming nothing but water some days, and other hazardous  
2 diets.<sup>300</sup>

3 246. According to Alyssa Moukheiber, a treatment center dietitian, TikTok’s powerful  
4 algorithm and the harmful streams of content it directs at young users can tip them into unhealthy  
5 behaviors or trigger a relapse.<sup>301</sup>

6 247. Unfortunately, it has for the several teenage girls interviewed by the *Wall Street*  
7 *Journal*, who reported developing eating disorders or relapsing after being influenced by the  
8 extreme diet videos TikTok promoted to them.<sup>302</sup>

9 248. They are not alone. Katie Bell, a co-founder of the Healthy Teen Project, “said the  
10 majority of her 17 teenage residential patients told her TikTok played a role in their eating  
11 disorders.”<sup>303</sup>

12 249. Others, like Stephanie Zerwas, an associate professor of psychiatry at the  
13 University of North Carolina at Chapel Hill, could not recount how many of her young patients  
14 told her that “I’ve started falling down this rabbit hole, or I got really into this or that influencer  
15 on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody  
16 was doing that.”<sup>304</sup>

17 250. This trend extends nationwide. The National Association of Anorexia Nervosa  
18 and Associated Disorders has fielded 50% more calls to its hotline since the pandemic began,  
19 most of whom it says are from young people or parents on their behalf.<sup>305</sup>

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

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24  
25 <sup>300</sup> *Id.*

26 <sup>301</sup> *Id.*

27 <sup>302</sup> *Id.*

28 <sup>303</sup> *Id.*

<sup>304</sup> *Id.*

<sup>305</sup> *Id.*

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

3           **a. The YouTube Platform**

4           252. YouTube is a platform where users can post, share, view, and comment on videos  
5 related to a vast range of topics. The platform became available publicly in December 2005 and  
6 was acquired by Google in 2006.

7           253. YouTube reports that today it has over 2 billion monthly logged-in users.<sup>306</sup> Even  
8 more people use YouTube each month because consumers do not have to register an account to  
9 view a video on YouTube. As a result, anyone can view most content on YouTube—regardless  
10 of age.

11           254. Users, whether logged in or not, watch *billions of hours of videos every day*.<sup>307</sup>

12           255. Users with accounts can post their own videos, comment on others, and since  
13 2010 express their approval of videos through “likes.”<sup>308</sup>

14           256. Beginning in 2008 and through today, YouTube has recommended videos to  
15 users.<sup>309</sup> Early on, the videos YouTube recommended to users were the most popular videos  
16 across the platform.<sup>310</sup> YouTube admits “[n]ot a lot of people watched those videos[,]” at least  
17 not based on its recommendation.<sup>311</sup>

18           257. Since then, YouTube has designed and refined its recommendation system using  
19 machine learning algorithms that today take into account a user’s “likes,” time spent watching a  
20 video, and other behaviors to tailor its recommendations to each user.<sup>312</sup>

21           258. YouTube automatically plays those recommendations for a user after they finish

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22 <sup>306</sup> YouTube for Press, YouTube, <https://blog.youtube/press/> [<https://perma.cc/GC4P-PVBW>]  
23 (last visited June 26, 2023).

24 <sup>307</sup> *Id.*

25 <sup>308</sup> 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/>  
26 [<https://perma.cc/Y6S6-KGXX>].

27 <sup>309</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021),  
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>  
28 [<https://perma.cc/WM6C-D36J>].

<sup>310</sup> *Id.*

<sup>311</sup> *Id.*

<sup>312</sup> *Id.*

1 watching a video. This feature, known as “autoplay,” was implemented in 2015. YouTube turns  
2 the feature on by default, which means videos automatically and continuously play for users  
3 unless they turn it off.<sup>313</sup>

4 259. YouTube purports to disable by default its autoplay feature for users aged 13–  
5 17.<sup>314</sup> But, as mentioned above, YouTube does not require users to log in or even have an  
6 account to watch videos. For them or anyone who does not self-report an age between 13 and 17,  
7 YouTube defaults to automatically playing the videos its algorithm recommends to the user.

#### 8 **b. YouTube Markets Its Platform to Youth**

9 260. The primary way YouTube makes money is through advertising. In 2021 alone,  
10 YouTube made \$19 billion in ad revenue.<sup>315</sup>

11 261. “In 2012, YouTube concluded that the more people watched, the more ads it  
12 could run[.]”<sup>316</sup> “So YouTube . . . set a company-wide objective to reach one billion hours of  
13 viewing a day[.]”<sup>317</sup>

14 262. “[T]he best way to keep eyes on the site,” YouTube realized, was “recommending  
15 videos, alongside a clip or after one was finished.”<sup>318</sup> That is what led to the development of its  
16 recommendation algorithm and autoplay feature described above. *See supra* Section IV.D.4.a.

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

19 264. Yet, YouTube has not implemented even rudimentary protocols to verify the age  
20

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21 <sup>313</sup> Autoplay videos, YouTube Help,  
22 <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  
23 visited June 26, 2023).

24 <sup>314</sup> *Id.*

25 <sup>315</sup> Alphabet Inc., Annual Report, Form 10-k at 60 (2021),  
26 [https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-](https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm)  
27 [20211231.htm](https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm) [<https://perma.cc/9SJ8-FGW8>].

28 <sup>316</sup> 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-](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall)  
[executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall](https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall)  
[<https://perma.cc/98GG-VNSS>].

<sup>317</sup> *Id.*

<sup>318</sup> *Id.*

1 of users. Anyone can watch a video on YouTube without registering an account or reporting their  
2 age.

3       265. Instead, YouTube leveraged its popularity among youth to increase its revenue  
4 from advertisements by marketing its platform to popular brands of children’s products. For  
5 example, Google pitched Mattel, the maker of Barbie and other popular kids’ toys, by telling its  
6 executives that “YouTube is today’s leader in reaching children age 6–11 against top TV  
7 channels.”<sup>319</sup> When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other  
8 kids’ toys, Google touted that “YouTube was unanimously voted as the favorite website for kids  
9 2-12,” and that “93% of tweens visit YouTube to watch videos.”<sup>320</sup> In a different presentation to  
10 Hasbro, YouTube was referred to as “[t]he new ‘Saturday Morning Cartoons,’” and claimed that  
11 YouTube was the “#1 website regularly visited by kids” and “the #1 source where children  
12 discover new toys + games.”<sup>321</sup>

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

16       267. YouTube’s efforts to attract young users have been successful. *See supra*  
17 Section IV.A. A vast majority, 95%, of children ages 13–17 have used YouTube.<sup>322</sup>

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

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

24       269. Like the other Defendants’ social media platforms, Google developed features  
25

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26 <sup>319</sup> Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit A,  
27 *FTC v. Google LLC et al.*, No. 1-19-cv-02642-BAH (D.D.C. Sept. 4, 2019), ECF No. 1-1.

28 <sup>320</sup> *Id.* Exhibit B.

<sup>321</sup> *Id.* Exhibit C.

<sup>322</sup> *Id.*



1 that exploit psychological phenomenon such as IVR to maximize the time users spend on  
2 YouTube.

3 270. YouTube uses design elements that operate on principles of IVR to drive both  
4 YouTube content creators and YouTube viewers into habitual, excessive use. Google designed  
5 YouTube to allow users to like, comment, and share videos and to subscribe to content creator's  
6 channels. These features serve as rewards for users who create and upload videos to YouTube.  
7 As described above, receiving a like indicates others' approval and activates the reward region of  
8 the brain.<sup>323</sup> The use of likes, therefore, encourages users to use YouTube over and over, seeking  
9 future pleasurable experiences.

10 271. YouTube also uses IVR to encourage users to view others content. One of the  
11 ways Google employs IVR into YouTube's design is through subscriber push notifications and  
12 emails, which are designed to prompt users to watch YouTube content and encourages excessive  
13 use of the platform. When a user "subscribes" to another user's channel, they receive  
14 notifications every time that user uploads new content, prompting them to open YouTube and  
15 watch the video.<sup>324</sup>

16 272. One of YouTube's defining features is its panel of recommended videos.  
17 YouTube recommends videos to users on both the YouTube home page and on every individual  
18 video page in an "Up Next" panel.<sup>325</sup> This list automatically populates next to the video a user is  
19 currently watching. This recommended video list is a never-ending feed of videos intended to  
20 keep users on the app watching videos without having to affirmatively click or search for other  
21 videos. This constant video stream, comprised of videos recommended by YouTube's  
22 algorithms, is the primary way Google increases the time users spend on YouTube.

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24 <sup>323</sup> See, e.g., Lauren E. Sherman *et al.*, *The Power of the Like in Adolescence: Effects of Peer*  
25 *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>].

26 <sup>324</sup> *Manage YouTube Notifications*, YouTube,  
27 <https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop>  
28 [<https://perma.cc/6NT6-NQ9M>] (last visited June 26, 2023).

<sup>325</sup> *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/)  
[features/recommendations/](https://www.youtube.com/howyoutubeworks/product-features/recommendations/) [<https://perma.cc/WN7Y-F2ZH>] (last visited June 26, 2023).

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

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

6           274.   Google began building the YouTube recommendation system in 2008.<sup>326</sup> When  
7   Google initially developed its recommendation algorithms, the end goal was to maximize the  
8   amount of time users spend watching YouTube videos. A YouTube spokesperson admitted as  
9   much, saying YouTube’s recommendation system was initially set up to “optimize” the amount  
10   of time users watch videos.<sup>327</sup>

11          275.   Former YouTube engineer Guillame Chaslot has also stated that when he worked  
12   for YouTube designing its recommendation algorithm, the priority was to keep viewers on the  
13   site for as long as possible to maximize “watch time.”<sup>328</sup> Chaslot further stated that “[i]ncreasing  
14   users’ watch time is good for YouTube’s business model” because the more people watch  
15   videos, the more ads they see, resulting in an increase of YouTube’s advertising revenue.<sup>329</sup>

16          276.   Early on, one of the primary metrics behind YouTube’s recommendation  
17   algorithm was clicks. As YouTube describes, “[c]licking on a video provides a strong indication  
18   that you will also find it satisfying.”<sup>330</sup> But as YouTube learned, clicking on a video does not  
19

20   <sup>326</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021),  
21   <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>  
22   [\[https://perma.cc/WM6C-D36J\]](https://perma.cc/WM6C-D36J).

23   <sup>327</sup> Ben Popken, *As algorithms take over, YouTube’s recommendations highlight a human*  
24   *problem*, NBC (Apr. 19, 2018), [https://www.nbcnews.com/tech/social-media/algorithms-take-](https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596)  
25   [over-youtube-s-recommendations-highlight-human-problem-n867596](https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596) [\[https://perma.cc/2EV7-](https://perma.cc/2EV7-GUCT)  
26   [GUCT\]](https://perma.cc/2EV7-GUCT).

27   <sup>328</sup> William Turton, *How YouTube’s algorithm prioritizes conspiracy theories*, Vice (Mar. 5,  
28   2018), [https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-](https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories)  
29   [conspiracy-theories](https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories) [\[https://perma.cc/8VC9-AYZY\]](https://perma.cc/8VC9-AYZY).

30   <sup>329</sup> Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile’s Paradise*, Huffington Post  
31   (Mar. 20, 2020), [https://www.huffpost.com/entry/youtube-pedophile-](https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db)  
32   [paradise\\_n\\_5e5d79d1c5b6732f50e6b4db](https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db) [\[https://perma.cc/8GJ2-KXL4\]](https://perma.cc/8GJ2-KXL4).

33   <sup>330</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021),  
34   <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>  
35   [\[https://perma.cc/WM6C-D36J\]](https://perma.cc/WM6C-D36J).

1 mean a user actually watched it. Thus, in 2012, YouTube also started tracking watch time—the  
2 amount of time a user spends watching a video.<sup>331</sup> YouTube made this switch to keep people  
3 watching for as long as possible.<sup>332</sup> In YouTube’s own words, this switch was successful. “These  
4 changes have so far proved very positive -- primarily less clicking, more watching. We saw the  
5 amount of time viewers spend watching videos across the site increase immediately[.]”<sup>333</sup> And in  
6 2016, YouTube started measuring “valued watchtime” via user surveys to ensure that viewers are  
7 satisfied with their time spent watching videos on YouTube.<sup>334</sup> All of these changes to  
8 YouTube’s algorithms were made to ensure that users spend more time watching videos and ads.

9         277. YouTube’s current recommendation algorithm is based on deep-learning neural  
10 networks that retune its recommendations based on the data fed into it.<sup>335</sup> While this algorithm is  
11 incredibly complex, its process can be broken down into two general steps. First, the algorithm  
12 compiles a shortlist of several hundred videos by finding videos that match the topic and other  
13 features of the video a user is currently watching.<sup>336</sup> Then the algorithm ranks the list according  
14 to the user’s preferences, which the algorithm learns by tracking a user’s clicks, likes, and other  
15 interactions.<sup>337</sup> In short, the algorithms track and measure a user’s previous viewing habits and

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16 <sup>331</sup> *Id.*

17 <sup>332</sup> Dave Davies, *How YouTube became one of the planet’s most influential media businesses*,  
18 NPR (Sept. 8, 2022), [https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-](https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses)  
19 [of-the-planets-most-influential-media-businesses](https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses) [<https://perma.cc/JR2R-E7CF>].

20 <sup>333</sup> Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012),  
21 <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>  
22 [<https://perma.cc/5D2X-QUZP>].

23 <sup>334</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021),  
24 <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>  
25 [<https://perma.cc/WM6C-D36J>].

26 <sup>335</sup> Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018),  
27 [https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-](https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/)  
28 [works/575212/](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-](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf)  
[public-publication-data/pdf/45530.pdf](https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf) [<https://perma.cc/P3V7-BDNF>].

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

<sup>337</sup> *Id.*

1 then finds and recommends other videos the algorithm thinks will hold the consumer’s attention.

2 278. YouTube’s recommendation system “is constantly evolving, learning every day  
3 from over 80 billion pieces of information.”<sup>338</sup> Some of the information the recommendation  
4 algorithm relies on to deliver recommended videos to users includes users’ watch and search  
5 history, channel subscriptions, clicks, watch time, survey responses, shares, likes, dislikes, users’  
6 location (country) and the time of day.<sup>339</sup>

7 279. The recommendation algorithm can determine what “signals” or factors are more  
8 important to individual users.<sup>340</sup> For example, if a user shares every video they watch, including  
9 videos the user gives a low rating, the algorithm learns not to heavily factor the user’s shares  
10 when recommending content.<sup>341</sup> Thus, the recommendation algorithm “develops dynamically” to  
11 individual user’s viewing habits and makes highly specific recommendations to keep individual  
12 users watching videos.<sup>342</sup>

13 280. In addition to the algorithm’s self-learning, Google engineers consistently update  
14 YouTube’s recommendation and ranking algorithms, making several updates every month,  
15 according to YouTube Chief Product Officer Neal Mohan.<sup>343</sup> The end goal is to increase the  
16 amount of time users spend watching content on YouTube.

17 281. Because Google has designed and refined its algorithms to be manipulative, these  
18 algorithms are incredibly successful at getting users to view content based on the algorithm’s  
19 recommendation. Mohan stated in 2018 that YouTube’s AI-driven recommendations are  
20

21  
22 <sup>338</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021),  
<https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>  
23 [<https://perma.cc/WM6C-D36J>].

24 <sup>339</sup> *Recommended Videos*, YouTube, [https://www.youtube.com/howyoutubeworks/product-](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content)  
[features/recommendations/#signals-used-to-recommend-content](https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content) [[https://perma.cc/WN7Y-](https://perma.cc/WN7Y-F2ZH)  
25 [F2ZH](https://perma.cc/WN7Y-F2ZH)] (last visited June 26, 2023).

26 <sup>340</sup> *Id.*

27 <sup>341</sup> *Id.*

28 <sup>342</sup> *Id.*

29 <sup>343</sup> 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>  
30 [<https://perma.cc/2HWP-YSL4>].

1 responsible for 70% of the time users spend on YouTube.<sup>344</sup> In other words, 70% of all YouTube  
2 content that users watch was recommended to users by YouTube’s algorithms as opposed to  
3 users purposely searching for and identifying the content they watch.

4 282. Mohan also stated that recommendations keep mobile device users watching  
5 YouTube for more than 60 minutes at a time on average.<sup>345</sup>

6 283. Given that people watch more than one billion hours of YouTube videos daily,<sup>346</sup>  
7 YouTube’s recommendation algorithms are responsible for hundreds of millions of hours that  
8 users spend watching videos on YouTube.

9 **e. YouTube’s Conduct in Designing and Operating its Platform Has**  
10 **Harmed Youth Mental Health**

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

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

18 286. Research by the Tech Transparency Project (“TTP”) shows that YouTube Kids  
19 fed children content that involved drug culture, guns, and beauty and diet tips that could lead to  
20 harmful body image issues.<sup>347</sup> Among the videos TTP found were step-by-step instructions on  
21 how to conceal a gun, guides on how to bleach one’s face at home, and workout videos  
22

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23 <sup>344</sup> Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET  
24 (Jan. 20, 2018), [https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/)  
25 [mohan/](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/) [<https://perma.cc/Q6GM-SSDG>].

26 <sup>345</sup> *Id.*

27 <sup>346</sup> Shira Ovide, *The YouTube Rabbit Hole is Nuanced*, N.Y. Times (Apr. 21, 2022),  
28 <https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html>  
[<https://perma.cc/7NCH-GHBV>].

<sup>347</sup> 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-](https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers)  
[shows-videos-promoting-drug-culture-firearms-toddlers](https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers) [<https://perma.cc/UMK2-H43F>].

1 emphasizing the importance of burning calories and telling kids to “[w]iggle your jiggle.”<sup>348</sup> This  
2 research shows that YouTube Kids not only lets inappropriate content slip through its  
3 algorithmic filters, but actively directed the content to kids through its recommendation engine.

4 287. Similar examples abound. Amanda Kloer, a campaign director with the child  
5 safety group ParentsTogether, spent an hour on her child’s YouTube Kids profile and found  
6 videos “encouraging kids how to make their shirts sexier, a video in which a little boy pranks a  
7 girl over her weight, and a video in which an animated dog pulls objects out of an unconscious  
8 animated hippo’s butt.”<sup>349</sup> Another parent recounted that YouTube Kids’ autoplay function led  
9 her 6-year-old daughter to an animated video that encouraged suicide.<sup>350</sup>

10 288. Other youth are fed content by YouTube’s algorithms that encourages self-harm.  
11 As reported by PBS Newshour, a middle-schooler named Olivia compulsively watched YouTube  
12 videos every day after she came home from school.<sup>351</sup> Over time she became depressed and  
13 started searching for videos on how to commit suicide. Similar videos then gave her the idea of  
14 overdosing. Weeks later she was in the hospital after “downing a bottle of Tylenol.”<sup>352</sup>  
15 Ultimately, she was admitted into rehab for digital addiction because of her compulsive  
16 YouTube watching.<sup>353</sup>

17 289. According to the Pew Research Center, 46% of parents say their child has  
18 encountered inappropriate videos on YouTube.<sup>354</sup> And children are not encountering these videos  
19

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20 <sup>348</sup> *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency  
21 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>].

22 <sup>349</sup> Rebecca Heilweil, *YouTube’s kids app has a rabbit hole problem*, Vox (May 12, 2021),  
23 <https://www.vox.com/recode/22412232/youtube-kids-autoplay> [<https://perma.cc/C6BA-AU6E>].

24 <sup>350</sup> *Id.*

25 <sup>351</sup> 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>].

26 <sup>352</sup> *Id.*

27 <sup>353</sup> *Id.*

28 <sup>354</sup> 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 on their own volition. Rather, they are being fed harmful and inappropriate videos through  
2 YouTube's algorithms. Again, YouTube's AI-driven recommendations are responsible for 70%  
3 of the time users spend on YouTube.<sup>355</sup>

4 290. Other reports have also found that YouTube's recommendation algorithm  
5 suggests a wide array of harmful content, including videos that feature misinformation, violence,  
6 and hate speech, along with other content that violates YouTube's policies.<sup>356</sup> A 2021  
7 crowdsourced investigation from the Mozilla Foundation involving 37,000 YouTube users  
8 revealed that 71% of all reported negative user experiences came from videos recommended by  
9 YouTube to users.<sup>357</sup> And users were 40% more likely to report a negative experience with a  
10 video recommended by YouTube's algorithm than with a video they searched for.<sup>358</sup>

11 291. The inappropriate and disturbing content YouTube's algorithms expose children  
12 to has adverse effects on mental health. Mental health experts have warned that YouTube is a  
13 growing source of anxiety and inappropriate sexual behavior among kids under the age of 13.<sup>359</sup>

14 292. Even though much of the harmful content YouTube's algorithms feed to youth is  
15 harmful, it can activate the reward circuitry in the brain such that it encourages youth to spend  
16 more time watching videos on YouTube. According to Donna Volpita, founder of The Center for  
17 Resilient Leadership, watching "fear-inducing videos cause the brain to receive a small amount  
18 of dopamine," which acts as a reward and creates a desire to do something over and over.<sup>360</sup> This  
19 dopaminergic response is in addition to the reward stimulus YouTube provides users through  
20 IVR.

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21 <sup>355</sup> Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET  
22 (Jan. 20, 2018), [https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/)  
23 [mohan/](https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/) [<https://perma.cc/Q6GM-SSDG>].

24 <sup>356</sup> Brandy Zadrozny, *YouTube's recommendations still push harmful videos, crowdsourced*  
25 *study finds*, NBC News (July 17, 2021), [https://www.nbcnews.com/tech/tech-news/youtubes-](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355)  
26 [recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355](https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355)  
27 [<https://perma.cc/HT4Q-QSN5>].

28 <sup>357</sup> *Id.*

<sup>358</sup> *Id.*

<sup>359</sup> 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-](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html)  
[sexualization-in-young-children.html](https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html) [<https://perma.cc/CRQ9-6VJV>].

<sup>360</sup> *Id.*



1           293. Mental health professionals across the country have seen an increase in children  
2 experiencing mental health issues because of YouTube. Natasha Daniels, a child psychotherapist  
3 in Arizona, said she has seen a rise in cases of children suffering from anxiety because of videos  
4 they watched on YouTube.<sup>361</sup> Because of their anxiety, these children “exhibit loss of appetite,  
5 sleeplessness, crying fits, and fear.”<sup>362</sup>

6           294. In addition to causing anxiety, watching YouTube is also associated with  
7 insufficient sleep.<sup>363</sup> In one study on the effect of app use and sleep, YouTube was the only app  
8 consistently associated with negative sleep outcomes.<sup>364</sup> For every 15 minutes teens spent  
9 watching YouTube, they had a 24% greater chance of getting fewer than seven hours of sleep.<sup>365</sup>  
10 YouTube is particularly problematic on this front because the recommendation and autoplay  
11 feature make it “so easy to finish one video” and watch the next, said Dr. Alon Avidan, director  
12 of the UCLA Sleep Disorders Center.<sup>366</sup> In turn, insufficient sleep is associated with poor health  
13 outcomes.<sup>367</sup> Thus, YouTube exacerbates an array of youth mental health issues by contributing  
14 to sleep deprivation.

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

#### 18 **E. The Effect of Social Media Use on Schools**

19           296. School districts are uniquely harmed by the current youth mental health crisis.

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20 <sup>361</sup> *Id.*

21 <sup>362</sup> *Id.*

22 <sup>363</sup> Meg Pillion *et al.*, *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and*  
*sleep outcomes*, 100 *Sleep Med.* 174–82 (Dec. 2022),  
23 <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>  
[<https://doi.org/10.1016/j.sleep.2022.08.004>].

24 <sup>364</sup> *Id.*

25 <sup>365</sup> *Id.*

26 <sup>366</sup> Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022),  
[https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-](https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep)  
<https://perma.cc/L8HD-ZTZ2>].

27 <sup>367</sup> Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance*  
*Among Young Adults*, 85 *Preventive Med.* 36–41 (Apr. 2016),  
28 <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>  
[<https://doi.org/10.1016/j.ypmed.2016.01.001>].

1 This is because schools are one of the main providers for mental health services for school-aged  
2 children.<sup>368</sup> Indeed, over 3.1 million children ages 12–17 received mental health services through  
3 an education setting in 2020, more than any other non-specialty mental health service setting.<sup>369</sup>

4 297. Most schools offer mental health services to students. In the 2021–22 school year,  
5 96% of public schools reported offering at least one type of mental health service to their  
6 students.<sup>370</sup> But 88% of public schools did not strongly agree that they could effectively provide  
7 mental health services to all students in need.<sup>371</sup> The most common barriers to providing  
8 effective mental health services in public schools are (1) insufficient number of mental health  
9 professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate  
10 funding.<sup>372</sup> Student opinions also reflect that schools are unable to provide adequate mental  
11 health services. Less than a quarter of students in grades 6–12 report accessing counseling or  
12 psychological services when they are upset, stressed, or having a problem.<sup>373</sup> And of the students  
13 who access mental health services, only 41% of middle schoolers and 36% of high schoolers are  
14 satisfied with the services they receive.<sup>374</sup>

15 298. In part, schools are struggling to provide adequate mental health services because  
16 of the increase in students seeking these services. More than two-thirds of public schools  
17 reported an increase in the percent of students seeking mental health services from school since  
18 the start of the pandemic.<sup>375</sup>

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20 <sup>368</sup> *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020),  
21 <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables> [<https://perma.cc/NA32-JYQX>].

22 <sup>369</sup> *Id.*

23 <sup>370</sup> *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health*  
24 *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://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp) [<https://perma.cc/P4K9-4HF7>].

25 <sup>371</sup> *Id.*

26 <sup>372</sup> *Id.*

27 <sup>373</sup> *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2, YouthTruth  
28 (2022), [https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth\\_EMH\\_102622.pdf](https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf) [<https://perma.cc/UHV7-RNQ6>].

<sup>374</sup> *Id.*

<sup>375</sup> *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://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp) [<https://perma.cc/P4K9-4HF7>].

299. During this same period, adolescents increased their social media use, also raising levels of excessive and problematic use of digital media.<sup>376</sup> And these higher rates of social media use are related to higher “ill-being.”<sup>377</sup> 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 disturbances since the start of the pandemic.<sup>378</sup> 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.”<sup>379</sup>

301. Anxiety disorders are also up, affecting 31.9% of adolescents between 13 and 18 years old.<sup>380</sup> “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.”<sup>381</sup>

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.”<sup>382</sup>

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<sup>376</sup> 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>].

<sup>377</sup> *Id.*

<sup>378</sup> *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://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp) [<https://perma.cc/P4K9-4HF7>].

<sup>379</sup> 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://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html) [<https://perma.cc/X4YF-ZAB7>].

<sup>380</sup> *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).

<sup>381</sup> *Id.*

<sup>382</sup> *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

1           303. Schools are struggling not only to provide students with mental health services  
2 but also to deliver an adequate education because of the youth mental health crisis. Students in  
3 grades 6–12 identify depression, stress, and anxiety as the most prevalent obstacles to  
4 learning.<sup>383</sup> Most middle school and high school students also fail to get enough sleep on school  
5 nights, which contributes to poor academic performance.<sup>384</sup> These negative mental health  
6 outcomes are also the most common symptoms of excessive social media use.

7           304. The youth mental health crisis has also caused a wide range of other behavioral  
8 issues among students that interfere with schools’ ability to teach. In 2022, 61% of public  
9 schools saw an increase in classroom disruptions from student misconduct compared to school  
10 years before the pandemic.<sup>385</sup> In that same year, 58% of public schools also saw an increase in  
11 rowdiness outside of the classroom, 68% saw increases in tardiness, 27% saw increases in  
12 students skipping classes, 55% saw increases in the use of electronic devices when not permitted,  
13 37% saw an increase in bullying, 39% saw an increase in physical fights between students, and  
14 46% saw an increase in threats of fights between students.<sup>386</sup>

15           305. Further exacerbating school’s struggle to teach is the fact students are not  
16 showing up to school. Indeed, student absenteeism has greatly increased. In the 2021–22 school  
17 year, 39% of public schools experienced an increase in chronic student absenteeism compared to  
18 the 2020–21 school year, and 72% of public schools saw increased chronic student absenteeism  
19

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20 Health Measurement Initiative,  
21 <https://www.childhealthdata.org/browse/survey/results?q=7839&r=1&g=812>  
22 [<https://perma.cc/Y5ZQ-4XQN>] (last visited June 26, 2023)); and Véronique Dupèrè *et al.*,  
23 *Revisiting the Link Between Depression Symptoms and High School Dropout: Timing of*  
24 *Exposure Matters*, J. Adolescent Health 62 (2018) 2015–211 (Sept. 24, 2017),  
25 [https://www.jahonline.org/article/S1054-139X\(17\)30491-3/fulltext](https://www.jahonline.org/article/S1054-139X(17)30491-3/fulltext)  
26 [<https://doi.org/10.1016/j.jadohealth.2017.09.024>].

24 <sup>383</sup> *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2–3,  
25 YouthTruth (2022), [https://youthtruthsurvey.org/wp-](https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf)  
26 [content/uploads/2022/10/YouthTruth\\_EMH\\_102622.pdf](https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf) [<https://perma.cc/UHV7-RNQ6>].

26 <sup>384</sup> Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School*  
27 *Students-United States, 2015*, 67(3) Morbidity & Mortality Wkly. Rpt. 85–90 (Jan. 26, 2018),  
28 <http://dx.doi.org/10.15585/mmwr.mm6703a1> [<https://perma.cc/873Q-D5PC>].

27 <sup>385</sup> *2022 School Pulse Panel*, U.S. Dep’t Educ., Inst. Educ. Sci. (2022),  
28 <https://ies.ed.gov/schoolsurvey/spp/> [<https://perma.cc/364R-H5U4>].

<sup>386</sup> *Id.*

1 compared to school years before the pandemic.<sup>387</sup> Following suit, vandalism has increased in  
2 2022, with 36% of public schools reporting increased acts of student vandalism on school  
3 property.<sup>388</sup>

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

- 6 a. Hiring additional mental health personnel (41% of public schools added staff to  
7 focus on student mental health);<sup>389</sup>
- 8 b. Developing additional mental health resources (46% of public schools created or  
9 expanded mental health programs for students, 27% added student classes on  
10 social, emotional, and mental health and 25% offered guest speakers for students  
11 on mental health);<sup>390</sup>
- 12 c. Training teachers to help students with their mental health (56% of public schools  
13 offered professional development to teachers on helping students with mental  
14 health);<sup>391</sup>
- 15 d. Increasing disciplinary services and hiring additional personnel for disciplinary  
16 services in response to increased bullying and harassment over social media;
- 17 e. Addressing property damaged as a result of students acting out because of mental,  
18 social, and emotional problems Defendants' conduct caused;
- 19 f. Diverting time and resources from instruction activities to notify parents and  
20 guardians of students' behavioral issues and attendance;
- 21 g. investigating and responding to threats made against schools and students over  
22 social media;
- 23 h. Updating its student handbook to address use of Defendants' platforms; and
- 24 i. Updating school policies to address use of Defendants' platforms.

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26 <sup>387</sup> *Id.*

27 <sup>388</sup> *Id.*

28 <sup>389</sup> *Id.*

<sup>390</sup> *Id.*

<sup>391</sup> *Id.*

1 **F. Impact of Social Media Use on Plaintiff**

2 307. Plaintiff is a public school district in Deschutes County, Oregon. Sisters operates  
3 one elementary school, one middle school, and one high school.<sup>392</sup> In addition, Sisters also offers  
4 special programs to its students, including online classes. The District serves approximately  
5 1,170 students.

6 309. Sisters has been directly impacted by the mental health crisis among youth in its  
7 community arising from use of social media.

8 310. Defendants' social media platforms encourage excessive use, which leads to  
9 behavioral and emotional dysregulation. Indeed, there has been a surge in the proportion of youth  
10 in Plaintiff's community who use social media. There has also been a surge in this same  
11 population who say they cannot stop or control their emotions, including anxiety, who feel so sad  
12 and hopeless that they experience higher rates of negative thoughts, who struggle to maintain  
13 healthy relationships with their peers, and who are considering, planning, and attempting suicide.

14 311. Across Oregon, more and more youth are increasing their use of Defendants'  
15 platforms. As a result, youth in Oregon are experiencing a sharp increase in anxiety and  
16 depression. In 2016, an estimated 11.5% of children in Oregon had anxiety or depression.<sup>393</sup> By  
17 2020, this number had increased 40% to over 16% of Oregon children (117,000) experiencing  
18 anxiety or depression.<sup>394</sup>

19 312. In 2020, suicide was the second leading cause of death among Oregon youth  
20 under 25 years old.<sup>395</sup> Suicidal ideation and attempts also remained high among school-aged  
21 children. Indeed, 10% of 6th graders, 14% of 8th graders, and 17% of 11th graders reported  
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23 <sup>392</sup> *Schools*, Sisters Sch. Dist., <https://district.ssd6.org/> [<https://perma.cc/4RKQ-73CY>] (last  
24 visited Sept. 18, 2023).

25 <sup>393</sup> 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-](https://www.opb.org/article/2022/08/08/children-mental-health-pandemic-oregon-usa/)  
26 [oregon-usa/](https://www.opb.org/article/2022/08/08/children-mental-health-pandemic-oregon-usa/) [<https://perma.cc/GEX9-UNZZ>].

27 <sup>394</sup> *Id.*

28 <sup>395</sup> *2021 Youth Suicide Intervention and Prevention Plan Annual Report* at 39, Or. Health Auth.  
(Mar. 2022),  
[https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/1e8874\\_2021.pdf?utm\\_medium=e](https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/1e8874_2021.pdf?utm_medium=email&utm_source=govdelivery)  
[mail&utm\\_source=govdelivery](https://sharedsystems.dhsoha.state.or.us/DHSForms/Served/1e8874_2021.pdf?utm_medium=email&utm_source=govdelivery) [<https://perma.cc/6N5N-UTVV>].

seriously considering attempting suicide.<sup>396</sup> And 3% of 6th graders, 6% of 8th graders, and 5% of 11th graders reported attempting suicide at least once.<sup>397</sup>

313. These numbers are consistent with Deschutes County, where Plaintiff is located. Plaintiff's administrators, teachers, counselors, and staff have observed a significant increase in the use of social media. In 2022, over 9% of 6th graders, over 15% of 8th graders, and nearly 20% of 11th graders in Deschutes County reported engaging in self-harm.<sup>398</sup> Additionally, nearly 6% of 6th graders, over 9% of 8th graders, and nearly 16% of 11th graders reported seriously considering attempting suicide.<sup>399</sup> Even worse, over 2% of 6th graders and over 4% of 8th graders and of 11th graders attempted suicide at least once.<sup>400</sup>

314. Anxiety is also rampant in Deschutes County. In 2022, nearly 27% of 6th graders, nearly 29% of 8th graders, and nearly 35% of 11th graders reported feeling nervous, anxious or on edge at least several days a week.<sup>401</sup>

315. Anxiety and depression are significant issues among Plaintiff's students. Administrators, counselors, teachers, and other staff across Plaintiff's schools report that students are experiencing higher rates of suicidal ideation. Sisters' Superintendent, Curtiss Scholl, has witnessed how conflict with parents or guardians has grown due to the increasing pressure for schools to manage students' phone and social media use. Growing concerns around social media's impact on the social and emotional health of students and students' excessive use of social media has caused the District to communicate with parents and guardians on a more frequent basis to provide resources, support, and assistance. In fact, the District recently provided a social media campaign to parents and guardians, to educate them about the dangers of social media and to provide safety activities for them to complete with students. And while these

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<sup>396</sup> *Id.* at 49.

<sup>397</sup> *Id.*

<sup>398</sup> *Oregon SHS Student Health Survey: Data Tables Deschutes County* at 39, Or. Health Auth. (2022),

<https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/Documents/SHS/2022/Reports/County/Deschutes%20County%202022.pdf> [<https://perma.cc/JQQ6-EWT6>].

<sup>399</sup> *Id.*

<sup>400</sup> *Id.*

<sup>401</sup> *Id.* at 38.



1 problems were exacerbated by the pandemic, Plaintiff's challenges to address the impact of  
2 social media on students' mental health predated COVID-19.

3 316. Indeed, many of Plaintiff's students reported feeling anxious or depressed. In the  
4 2021–22 school year, Sisters reprioritized and diverted funding into developing and expanding  
5 mental health programs to address students' significant need for additional mental health  
6 support. This expansion included hiring counselors, behavioral specialists, and other staff to  
7 address student mental health.

8 317. Despite Plaintiff's students' increased need for services to treat anxiety and  
9 depression related to social media, large numbers of the District's students lack access to mental  
10 healthcare. In 2020, 14.5% of Oregon 8th graders reported having unmet emotional or mental  
11 healthcare needs due to being unable to access a healthcare provider.<sup>402</sup> These numbers are  
12 consistent in Deschutes County, where nearly 14% of 8th graders and 24% of 11th graders  
13 reported having unmet emotional or mental health care needs.<sup>403</sup>

14 318. In lockstep with these increases in anxiety, depression, and suicidal behavior,  
15 student behavior problems have also increased in Plaintiff's schools. The District has observed a  
16 growing trend in disciplinary incidents tied to social media.

17 319. Over the last few years, Plaintiff has noticed a drastic change in the trajectory of  
18 disciplinary patterns in students. Superintendent Scholl has noticed that incidents arising from  
19 social media have such a negative impact on students' relationships with each other that staff  
20 must regularly intervene. For example, the increase in social media use has led to an increase in  
21 fights breaking out in classrooms, which regularly disrupts the learning environment. Principals,  
22 vice principals, and administrators have convened groups of parents and students to deescalate

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24 <sup>402</sup> 2022 KIDS COUNT National Report and Oregon State Data Cards Release: Oregon's  
25 Progress on Child Well-Being Sees Some Improvement, but Many Children and Youth are  
26 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://ourchildrenoregon.org/2022-kids-count-national-report-and-oregon-state-data-cards-release/) [<https://perma.cc/3HFS-EJ9S>].

27 <sup>403</sup> Oregon SHS Student Health Survey: Data Tables Deschutes County at 48, Or. Health Auth.  
(2022),  
28 [https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/Documents/SHS  
/2022/Reports/County/Deschutes%20County%202022.pdf](https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/SURVEYS/Documents/SHS/2022/Reports/County/Deschutes%20County%202022.pdf) [<https://perma.cc/JQQ6-EWT6>].

1 these incidents arising from social media.

2       320. In addition, Plaintiff has noticed an increase in students' inability to pay attention  
3 in class due to the distractions of social media. Despite the District's rules mandating that phones  
4 be stored away during class, Plaintiff's administrators, teachers, and staff are fighting a losing  
5 battle against Defendants' platforms. Defendant's platforms are so addictive that students  
6 regularly violate the District's rules and access phones and social media during educational  
7 instruction. And despite the District blocking use of Defendants' platforms on their school's Wi-  
8 Fi network through a firewall, students have repeatedly figured out how to bypass the firewall  
9 and join the network through different IP addresses or access networks. This occurs so frequently  
10 that the District does not have the bandwidth to discipline every student that is accessing  
11 Defendants' platforms during class. Instead, the District continues to devote funds and staff time  
12 on technology and network support.

13       321. The increase in Plaintiff's students who report suffering from anxiety and  
14 depression and the increase in behavioral issues related to social media have not gone unnoticed.  
15 To try and curb these mental health and behavioral problems, the District has had to divert  
16 existing staff and administrators' time to develop and address social-emotional student resources.  
17 Principals, administrators, and staff spend a significant number of hours each week addressing  
18 issues that arise from students' use of social media, including regularly conducting interventions,  
19 investigations, mediating conflict, and deescalating fights.

20       322. The COVID-19 pandemic and the corresponding increase in time youth spend on  
21 Defendants' platforms only intensified the crisis and disruption to Plaintiff's educational  
22 mission.

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

25       a. Hire additional personnel, including counselors and medical professionals to  
26 address mental, emotional, and social health issues;

- 1           b.       Measure future changes to students’ mental, emotional, and social health across  
2 each of its schools to create District-wide goals and outcomes to reduce the effects of social  
3 media;
- 4           c.       Develop additional resources to address mental, emotional, and social health  
5 issues;
- 6           d.       Increase training for teachers and staff to identify students exhibiting symptoms  
7 affecting their mental, emotional, and social health;
- 8           e.       Train teachers, staff, and members of the community about the harms caused by  
9 Defendants’ wrongful conduct;
- 10          f.       Develop policies and train teachers and staff on monitoring students’ phones and  
11 use of Defendants’ platforms;
- 12          g.       Educate students about the dangers of using Defendants’ platforms;
- 13          h.       Update its student handbook to address use of Defendants’ platforms; and
- 14          i.       Update school policies to address use of Defendants’ platforms.

15          324.   Additionally, more of Plaintiff’s students have been involved in disciplinary  
16 incidents as a result of the decline Defendants have caused in students’ mental, emotional, and  
17 social health. As a result, Plaintiff has been forced to divert resources and expend additional  
18 resources to:

- 19          a.       Repair property damaged as a result of the exploitive and harmful content  
20 Defendants directed to students;
- 21          b.       Increase disciplinary services and time spent addressing bullying, harassment, and  
22 threats;
- 23          c.       Confiscate devices on which students were compelled by Defendants’ conduct to  
24 use while in class or school campuses to access Defendants’ platforms;
- 25          d.       Reform administration of discipline, including implementing protocols to track  
26 information on Defendants’ platforms during investigatory processes;
- 27          e.       Meet with students and the parents of students caught using Defendants’  
28 platforms at school;

- f. Monitor congregation of students during school hours on school property, facilitated by and through Defendants' platforms;
- g. Respond to requests for information by parents, guardians, and law enforcement related to students' use of Defendants' platforms;
- h. Divert time and resources from educational instruction to notify parents and guardians of students' behavioral issues and attendance; and
- i. Investigate and respond to threats made against schools and students over social media.

325. As of the 2022–23 school year, Plaintiff employs at least one full-time counselor at each of its three schools who is devoted to providing behavior and mental health support, primarily relating to social media related issues. In its commitment to provide mental health services to its students, Plaintiff also contracts with Care Solace to coordinate immediate mental health care needs—often within 24 hours of a referral. With the surge in student mental health needs, Plaintiff applied for and received a grant to continue providing the Care Solace program to address the compounding impact of social media on the District's students.

326. All of Plaintiff's schools have direct access to a network of positions developed and funded for the purpose of addressing the mental health crisis resulting from Defendants' platforms, including mental health providers and behavioral specialists on site at each school.

327. In addition, Plaintiff has diverted existing staff time and resources to investigate and address issues arising from students' behavioral misconduct. The District's administrators, teachers, and staff frequently conduct investigations and spend several hours each week meeting with students, parents or guardians, and law enforcement, to investigate and address health and safety concerns stemming from Defendants' platforms. The District has also spent many hours and resources repairing property damage as a result of the exploitive and harmful content Defendants directed to students, including replacement of stolen or damaged items as part of viral social media challenges directed towards youth in their school environments. For example, in the 2022–23 school year, the District had to make extensive repairs after a student set a bathroom on fire. In addition, a student broke into the high school after hours and streamed the

1 incident on Defendant’s platforms, causing Plaintiff to spend time and resources communicating  
2 with law enforcement and other emergency response services.

3 328. Even with these costly and labor-intensive resources in place, Plaintiff cannot  
4 keep up with the increased need for mental health services because of the youth mental health  
5 crisis.

6 329. And while the District has received some desperately needed grants to fund  
7 mental health support, those resources are insufficient. The District regularly reallocates  
8 resources previously used and intended to further the District’s educational goals to address  
9 needs related to the impacts of Defendants’ platforms. The funding needed to address these  
10 harms should not fall at the foot of the public. Rather, Defendants must bear the burden of  
11 remedying their wrongs.

12 330. Ultimately, Plaintiff requires significantly greater and long-term funding to  
13 address the nuisance Defendants have created, along with abatement and injunctive relief. It is  
14 time, as President Biden declared, to get “all Americans the mental health services they need.”<sup>404</sup>

## 15 **V. SECTION 230 IS NO SHIELD FOR DEFENDANTS’ CONDUCT**

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

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

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

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28 <sup>404</sup> 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>]).

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

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

5           336. Section 230 does not shield Defendants’ conduct because, among other  
6 considerations: (1) Defendants are liable for their own affirmative conduct in recommending and  
7 promoting harmful content to youth; (2) Defendants are liable for their own actions designing  
8 and marketing their social media platforms in a way that causes harm; (3) Defendants are liable  
9 for the content they create that causes harm; and (4) Defendants are liable for distributing,  
10 delivering, and/or transmitting material that they know or have reason to know is harmful,  
11 unlawful, and/or tortious.

12           337. First, Plaintiff is not alleging Defendants are liable for what third parties have said  
13 on Defendants’ platforms but, rather, for Defendants’ own conduct. As described above,  
14 Defendants affirmatively recommend and promote harmful content to youth, such as pro-  
15 anorexia and eating disorder content. Recommendation and promotion of damaging material is  
16 not a traditional editorial function and seeking to hold Defendants liable for these actions is not  
17 seeking to hold them liable as a publisher or speaker of third-party content.

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

28           339. Third, Defendants are liable for the content they create. In addition to content

1 such as Snapchat filters which promote body dysmorphia, Defendants send emails and  
2 notifications to youth including material they create which often promotes certain harmful  
3 content.

4 340. Fourth, Plaintiff does not seek to hold Defendants liable as publishers or speakers  
5 of information provided by other content providers, but instead Plaintiff seeks to hold them liable  
6 for distributing material they know or should know is harmful or unlawful. *See Malwarebytes,*  
7 *Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13 (2020) (statement of Justice Thomas  
8 respecting denial of certiorari discussing the distinction between distributor and publisher  
9 liability); *cf. Restatement (Second) of Torts* § 581 (Am. Law Inst. 1977) (“[O]ne who only  
10 delivers or transmits defamatory matter published by a third person is subject to liability if, but  
11 only if, he knows or has reason to know of its defamatory character.”).

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

## 15 VI. CAUSES OF ACTION

### 16 COUNT ONE — PUBLIC NUISANCE

17 342. Plaintiff incorporates by reference all preceding paragraphs.

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

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

22 345. Defendants have created a mental health crisis in the Sisters School District 6,  
23 substantially interfering with public health and safety in Plaintiff’s community and interfering  
24 with the operations and learning environment of Sisters.

25 346. Defendants, by designing, developing, marketing, supplying, promoting,  
26 advertising, operating, and distributing their respective social media platforms for use by  
27 students in Plaintiff’s schools in the manner described above, have engaged in conduct that  
28 substantially and unreasonably interferes with the health and safety of the students of the



1 District, interferes with the educational mission and operations of the District, and harms the  
2 health, safety, and welfare of the District, its students, and its community. Defendants' conduct is  
3 ongoing and continues to produce permanent and long-lasting damage.

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

8 348. Each Defendant has created or assisted in the creation of a condition that is  
9 injurious to the health, safety, and welfare of the Sisters community and interferes with the  
10 educational environment for students, teachers, and administrators in Plaintiff's schools.  
11 Defendants have each created or assisted in the creation of a condition that significantly disrupts  
12 the daily operations and functioning of Plaintiff's schools. Defendants are jointly and severally  
13 liable.

14 349. The health and safety of the students and employees of the District, including  
15 those who use, have used, or will use Defendants' platforms, as well as those affected by others'  
16 use of their platforms, are matters of substantial public interest and of legitimate concern to  
17 Plaintiff.

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

20 351. This harm to youth mental health and the corresponding impacts to public health,  
21 safety, and the welfare of Plaintiff's community outweighs any social utility of Defendants'  
22 wrongful conduct. The benefit to Plaintiff and its students in abating the harm caused by  
23 Defendants far outweighs any hardship to Defendants, who have profited tremendously from  
24 their wrongful conduct.

25 352. Defendants' wrongful conduct has caused the damage and harm complained of  
26 herein. Defendants knew or reasonably should have known that their design, development,  
27 marketing, supply, promotion, advertisement, operation, and distribution of their platforms  
28 would cause students to use their platforms excessively, that their marketing methods were

1 designed to appeal to youth, and that their active efforts to increase youth use of their platforms  
2 were caused harm to youth and to schools, including to the District and its students.

3 353. Thus, the public nuisance caused by Defendants, and the resulting economic  
4 losses incurred by Plaintiff, were reasonably foreseeable.

5 354. Alternatively, Defendants' conduct was a substantial factor in bringing about the  
6 public nuisance even if a similar result would have occurred without it. By designing, marketing,  
7 supplying, promoting, advertising, operating, and distributing their platforms in a manner  
8 intended to maximize the time youth spend on their respective platforms—despite knowledge of  
9 the harms to youth from their wrongful conduct—Defendants directly facilitated the widespread,  
10 excessive, and habitual use of their platforms and the public nuisance affecting Plaintiff. By  
11 seeking to capitalize on their success by refining their platforms to increase the time youth spend  
12 on their platforms, Defendants directly contributed to the public health crisis and the public  
13 nuisance affecting Plaintiff.

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

18 356. Plaintiff has had to take steps to mitigate the harm and disruption caused by  
19 Defendants' conduct, including the following:

- 20 a. Hiring additional personnel to address mental, emotional, and social health issues;
- 21 b. Developing additional resources to address mental, emotional, and social health  
22 issues;
- 23 c. Increasing training for teachers and staff to identify students exhibiting symptoms  
24 affecting their mental, emotional, and social health;
- 25 d. Investing resources and funding into programs that respond to the problems  
26 created and exacerbated by student use of Defendants' platforms;
- 27 e. Training teachers, staff, and members of the community about the harms caused  
28 by Defendants' wrongful conduct;

- f. Developing lesson plans to teach students about the dangers of using Defendants' platforms;
- g. Educating students about the dangers of using Defendants' platforms;
- h. Addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct is causing;
- i. Increasing disciplinary services and time spent addressing bullying, harassment, and threats;
- j. Confiscating devices on which students use Defendants' platforms while in class or on Plaintiff's school campuses;
- k. 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;
- l. Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;
- m. Investigating and responding to threats made against Plaintiff's schools and students over social media;
- n. Updating its student handbook to address use of Defendants' platforms; and
- o. Updating school policies to address use of Defendants' platforms.

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

358. As detailed herein, Plaintiff has suffered special damage different in kind or quality from that suffered by the public in common. The damages suffered by Plaintiff has been substantial in character, greater in degree, and different in kind than the harm suffered by the general public. These injuries include, but are not limited to, costs arising from: expending, diverting and increasing personnel to provide mental health services; expending, diverting and increasing resources to address mental health issues; expending, diverting and increasing staff time to confiscate cell phones and other devices; expending, diverting and increasing staff time to communicate and engage with parents; expending, diverting and increasing staff time

1 associated with student discipline; expending, diverting and increasing staff time associated with  
2 routing students to counselors; expending, diverting and increasing staff time to train staff to  
3 identify students exhibiting symptoms affecting their mental health; expending, diverting and  
4 increasing resources for modifications to mental health curriculum; expending, diverting and  
5 increasing resources to repair property damage as a result of the exploitive and harmful content  
6 Defendants directed to students; and expending, diverting and increasing resources to investigate  
7 and respond to threats made against schools and students over social media.

8         359. As a result of Defendant's conduct, Plaintiff has incurred damages and is entitled  
9 to compensation therefor. Plaintiff requests all the relief to which it is entitled in its own right  
10 and relating to the special damage or injury it has suffered, including actual and compensatory  
11 damages in an amount to be determined at trial and an order providing for the abatement of the  
12 public nuisance that Defendants have created or assisted in the creation of, and enjoining  
13 Defendants from future conduct contributing to the public nuisance described above. Plaintiff's  
14 claim is not brought in any representative or *parents patriae* capacity on behalf of students.

15         360. Defendants' conduct, as described above, was intended to serve their own  
16 interests despite having reason to know and consciously disregarding a substantial risk that their  
17 conduct might significantly injure the rights of others, including Plaintiff, and/or Defendants  
18 consciously pursued a course of conduct knowing that it created a substantial risk of significant  
19 harm to others, including Plaintiff. Defendants regularly risk the health of youth using their  
20 platforms with full knowledge of the dangers of their platforms. Defendants consciously decided  
21 not to redesign their platforms, or to warn or inform the unsuspecting public, including Plaintiff's  
22 students or Plaintiff. Defendants were recklessly and outrageously indifferent to the highly  
23 unreasonable risk of harm that would result to Plaintiff and its students as the result of their  
24 actions, and acted with a conscious indifference to the health, safety, and welfare of the District  
25 and its students. Defendants' conduct therefore warrants an award of punitive damages.

## 26                                   **COUNT TWO — NEGLIGENCE**

27         361. Plaintiff incorporates by reference each and every preceding paragraph.

28         362. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of

1 harm, and to act with reasonable care as a reasonably careful person and/or company would act  
2 under the circumstances.

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

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

16 365. At all times relevant to this litigation, Defendants knew or, in the exercise of  
17 reasonable care, should have known of the hazards and dangers of their respective social media  
18 platforms and specifically, the health hazards their platforms posed to youth in particular,  
19 especially extended or problematic use of such platforms.

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

24 367. Defendants also knew or, in the exercise of reasonable care, should have known  
25 that consumers of Defendants' social media platforms were unaware of the risks and the  
26 magnitude of the risks associated with the use of Defendants' platforms, including but not  
27 limited to the risks of extended or problematic social media use and the likelihood that  
28 algorithm-based recommendations would expose child and adolescent users to content that is

1 violent, sexual, or encourages self-harm, among other types of harmful content.

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

11 369. Despite their ability and means to investigate, study, and test their social media  
12 platforms and to provide adequate warnings, Defendants have failed to do so. Defendants have  
13 wrongfully concealed information and have made false and/or misleading statements concerning  
14 the safety and use of Defendants' social media platforms.

15 370. Defendants' negligence includes:

- 16 a. Designing, researching, developing, marketing, supplying, promoting,  
17 advertising, operating, and distributing their social media platforms without  
18 thorough and adequate pre- and post-market testing; design, research,  
19 development, marketing, supply, promotion, advertisement, operation, and  
20 distribution;
- 21 b. Failing to sufficiently study and conduct necessary tests to determine whether or  
22 not their social media platforms were safe for youth users;
- 23 c. Failing to use reasonable and prudent care in the research, design, development,  
24 testing, marketing, supply, promotion, advertisement, operation, and distribution  
25 of their social media platforms so as to avoid the risk encouraging extended social  
26 media use;
- 27 d. Designing their social media platforms to maximize the amount of time users  
28 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.

371. 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.

372. 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.

373. 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.

374. 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.

375. 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

1 following:

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

1           o.       Updating school policies to address use of Defendants’ platforms.

2           376.   As a result of Defendants’ negligence, Plaintiff suffered harm and economic  
3 losses in an amount to be proven at trial.

4                               **COUNT THREE — GROSS NEGLIGENCE**

5           377.   Plaintiff incorporates by reference all preceding paragraphs.

6           378.   Defendants knew of the substantial risk of harm that their platforms posed to  
7 users’ mental health, particularly children and adolescents.

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

18          380.   Defendants’ gross negligence caused or was a substantial factor in causing  
19 foreseeable harm to Plaintiff and other economic losses in an amount to be proven at trial.

20          381.   Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of  
21 harm, and to act with reasonable care as a reasonably careful person and/or company would act  
22 under the circumstances.

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

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

7           384. At all times relevant to this litigation, Defendants knew or, in the exercise of  
8 reasonable care, should have known of the hazards and dangers of their respective social media  
9 platforms and specifically, the health hazards their platforms posed to youth in particular,  
10 especially extended or problematic use of such platforms.

11           385. Defendants' platforms were of the type that could endanger others, particularly  
12 youth, if negligently made, promoted, or distributed. Defendants knew the risks that young  
13 people would be attracted to their platforms yet unable to appropriately limit their use of  
14 Defendants platforms because of their still-developing brains. Further, Defendants knew the risks  
15 their platforms posted to youth, especially extended or problematic use of such platforms.

16           386. Defendants were grossly negligent in designing, researching, developing, testing,  
17 marketing, supplying, promoting, advertising, operating, and distributing their social media  
18 platforms.

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

25           388. Defendants disregarded or were indifferent to the rights of others, including  
26 Plaintiff's students and Plaintiff, and were indifferent to the probable consequences of designing  
27 their platforms to maximize the amount of time youth spend using social media. Defendants'  
28 indifference to the safety of others and indifference to the probable consequences of its acts

1 caused Plaintiff to suffer harm.

2 389. Defendants disregarded or were indifferent to the rights of others, including  
3 Plaintiff's students and Plaintiff, and were indifferent to the probable consequences of designing  
4 their platforms to maximize the amount of time youth spend using social media. Defendants'  
5 indifference to the safety of others and indifference to the probable consequences of its acts  
6 caused Plaintiff to suffer harm.

7 390. Defendants' indifference to the rights of others and the probable consequences of  
8 its acts includes, but is not limited to, the following:

- 9 a. Designing researching, developing, marketing, supplying, promoting, advertising,  
10 operating, and distributing their social media platforms without thorough and  
11 adequate pre- and post-market testing; design, research, development, testing,  
12 marketing, supply, promotion, advertisement, operation, and distribution;
- 13 b. Failing to sufficiently study and conduct necessary tests to determine whether or  
14 not their social media platforms were safe for youth users;
- 15 c. Failing to use reasonable and prudent care in the research, design, development,  
16 testing, marketing, supply, promotion, advertisement, operation, and distribution  
17 of their social media platforms so as to avoid the risk encouraging extended social  
18 media use;
- 19 d. Designing their social media platforms to maximize the amount of time users  
20 spend on the platform and causing excessive and problematic use of their  
21 platforms, particularly among youth, through the use of algorithm- based feeds,  
22 social reciprocity, and IVR;
- 23 e. Failing to implement adequate safeguards in the design and operation of their  
24 platforms to ensure they would not encourage excessive and problematic use of  
25 their platforms;
- 26 f. Designing and manufacturing their platforms to appeal to minors and young  
27 people who lack the same cognitive development as adults and are particularly  
28 vulnerable to social rewards like IVR and social reciprocity;

- g. Failing to take adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;
- h. Failing to provide adequate warnings to child and adolescent users or parents who Defendants could reasonably foresee would use their platforms;
- i. Failing to disclose to, or warn, Plaintiff, users, and the general public of the negative mental health consequences associated with social media use, especially for children and adolescents;
- j. Failing to disclose to Plaintiff, users, and the general public that Defendants' platforms are designed to maximize the time users, particularly youth, spend on Defendants' platforms and cause negative mental health consequences;
- k. Representing that Defendants' platforms were safe for child and adolescent users when, in fact, Defendants knew or should have known that the platforms presented acute mental health concerns for young users;
- l. Failing to alert users and the general public, including students at Plaintiff's schools of the true risks of using Defendants' platforms;
- m. Advertising marketing; and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, youth use of Defendants' platforms;
- n. Continuing to design, research, develop, market, supply, promote, advertise, operate, and distribute Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to youth mental health;
- o. Failing to modify Defendants' algorithms, 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

1           q.       Committing other failures, acts, and omissions set forth herein.

2           391.   Defendants breached the duties they owed to Plaintiff and in doing so were  
3 wholly unreasonable.

4           392.   Defendants breached their duties through their false and misleading statements  
5 and omissions in the course of designing, manufacturing, distributing, and marketing their social  
6 media platforms.

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

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

14          395.   Defendants made conscious decisions not to redesign, warn, or inform the  
15 unsuspecting public, including Plaintiff and Plaintiff's students. Defendants were recklessly and  
16 outrageously indifferent to the highly unreasonable risk of harm that would result to Plaintiff and  
17 its students as a result of their actions, and acted with a conscious indifference to the health,  
18 safety, and welfare of Sisters School District 6 and its students. Defendants' conduct therefore  
19 warrants an award of punitive damages.

20          396.   Defendants' reckless and outrageous indifference to a highly unreasonable risk of  
21 harm and conscious indifference to the health, safety, and welfare of others warrants an award of  
22 punitive damages.

## 23                                   **VII. PRAYER FOR RELIEF**

24           WHEREFORE, Plaintiff prays for judgment as follows:

25           1.       Entering an Order that the conduct alleged herein constitutes a public nuisance  
26 under Oregon law;

27           2.       Entering an Order that Defendants are jointly and severally liable;

28           3.       Entering an Order requiring Defendants to abate the public nuisance described

herein and to deter and/or prevent the resumption of such nuisance;

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

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

6. Awarding actual, compensatory, and punitive damages;

7. Awarding reasonable attorneys' fees and costs of suit;

8. Awarding pre-judgment and post-judgment interest; and

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

### VIII. JURY TRIAL DEMAND

Plaintiff hereby demands a trial by jury.

RESPECTFULLY SUBMITTED this 16th day of October, 2023.

KELLER ROHRBACK L.L.P.

By 

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